

ABSTRACT

EXPLORING HEGEMONIC PERSPECTIVES OF MIDWESTERN YARD-SPACES THROUGH ART EDUCATION

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This study investigated yard-spaces as artistic sites that are created and maintained through design processes involving aesthetic choices. The field of art education has grown to consider everyday objects and places worthy of exploration as important signifiers of cultural views, values, and expectations. Yard-spaces, as everyday places, are often taken for granted, and aesthetic choices that conform to social norms often have detrimental effects on the environment. This study investigated conformist and non-conformist aesthetic choices, the environmental effects of these choices, and the influences affecting design and maintenance choices for yard-space appearances.

A gap in knowledge was discovered for recognizing socially conformist aesthetic choices and social expectations for yard-space appearances. This gap was addressed by implementing a researcher-developed place-based environmental art curriculum with fifth grade students from my own teaching practice. Changes in students' attitudes and perceptions of the aesthetic choices affecting yard-space appearances indicated growth in aesthetic understanding and environmental concern. Introspection on the ways social norms are communicated through visual messages was transformational to my teaching practice as I developed a heightened awareness of social

influences on my students. Therefore, the curriculum developed for this study is offered as an example to art educators interested in raising students' social and ecological consciousness and also for art educators interested in raising their own awareness of the social influences affecting students' aesthetic choices.

Barriers to enacting change due to aesthetic attachment to appearances and psychological ownership of property impeded the willingness of participants to consider aesthetic changes for their yard-spaces. Research of these barriers is recommended for student learning to move beyond understanding of environmentally beneficial aesthetic choices to enacting these choices. New knowledge that was generated through this research revealed strategies for encouraging aesthetic and environmental understanding of yard-space appearances, but further research is necessary to understand the barriers that impede the enactment of social and ecological change.

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EXPLORING HEGEMONIC PERSPECTIVES OF MIDWESTERN YARD-SPACES
THROUGH ART EDUCATION

BY
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TABLE OF CONTENTS

	Page
LIST OF TABLES	xiii
LIST OF FIGURES	xiv
LIST OF APPENDICES	xviii
Chapter	
1. INTRODUCTION TO THE STUDY	1
Background and Context	2
Statement of the Problem and Purposes of the Study	6
Research Questions and Sub-Questions	8
Significance of the Study	9
Delimitations	9
Limitations	11
Bracketing the Researcher's Experience	12
Definition of Terminology	13
Theoretical Framework	15
Critical Theory	17
Eco-Theory	18

Chapter	iv Page
Semiotics, Visual Culture, and Material Culture Theories.....	19
Summary of Chapter 1.....	21
2. REVIEW OF RELEVANT LITERATURE.....	23
Environmental Art Education.....	23
Aesthetics.....	26
Environmental Aesthetics.....	27
Everyday Aesthetics.....	29
Place-Based Art Education.....	30
Yard-Care Activities/Art Connections.....	34
Summary of Chapter 2.....	37
3. METHODOLOGY.....	39
Rationale for Qualitative Research Design.....	41
Rationale for Narrative Inquiry.....	43
Rationale for Phase I Multiple Case Study Methodology.....	44
Rationale for Phase II Action Research Methodology.....	45
Phase I Participants and Location of Data.....	46
Participants.....	49
Ed.....	49
Kate.....	51

Chapter	v Page
Andy	53
Pamela	55
Ellie.....	58
Diana.....	61
Summary of Participants	63
Phase I Description of Data and Data Collection Procedures	63
Observations	64
Interviews	65
Visual Data	67
Yard-Space Photographs	67
Videotaped Recordings	68
Phase I Data Analysis Procedures	69
Phase I Transcription Procedures	70
Phase I Coding Procedures	71
Phase II Participants and Location of Data	74
Student Demographics.....	75
Phase II Description of Data and Data Collection Procedures.....	77
Environmental Art Curriculum Overview	78
Art-Making Lessons	80

Chapter	Page
Designing Environmental Changes in Personal Yard-Spaces.....	81
Nature Arrangements Inspired by the Artwork of Andy Goldsworthy.....	81
Powerful Environmental Messages Inspired by Jenny Holzer’s Truisms.....	82
Local Animal Research Inspired by the Artwork of Lynne Hull.....	82
Lessons Summary.....	83
Environmental Art Curriculum Data.....	83
Observations/Field Notes.....	85
Questionnaires/Worksheets.....	85
Pre- and Post-Questionnaire and End-of-Course Questionnaire.....	86
Pre- and Post-Photographs Interpretation Worksheets.....	86
Yard-Painting Reflection Worksheet.....	88
Videotaped Recordings.....	88
Digital Photographs.....	89
Phase II Data Analysis Procedures.....	90
Phase II Transcription Procedures.....	90
Phase II Coding Procedures.....	90
Visual Data Analysis.....	93
Videotaped Recordings.....	93
Digital Photographs.....	93

Chapter	vii Page
Ethical Considerations.....	94
Quality	95
Core Terminology	96
Criteria for Establishing Quality	96
Strategies for Ensuring Quality	97
Summary of Chapter 3.....	98
4. FINDINGS	100
Phase I: Homeowners Findings	100
Homeowners Finding 1-H: Opinions About and Social Expectations for Appearances.....	102
Homeowners with Natural Yard-Spaces	104
Ed.....	104
What Ed Thinks His Yard-Space Communicates	104
Ed’s Perception of What Others Think of His Yard-Space.....	105
Ed’s Judgment of Others’ Yard-Spaces	106
Kate.....	108
What Kate Thinks Her Yard-Space Communicates	108
Kate’s Perception of What Others Think of Her Yard-Space	109
Kate’s Judgment of Others’ Yard-Spaces	110
Homeowners with a Combination of Controlled and Natural Yard-Spaces	111

Chapter	viii Page
Andy	111
What Andy Thinks His Yard-Space Communicates	111
Andy’s Perception of What Others Think of His Yard-Space	112
Andy’s Judgment of Others’ Yard-Spaces	113
Pamela	115
What Pamela Thinks Her Yard-Space Communicates.....	115
Pamela’s Perception of What Others Think of Her Yard-Space	117
Pamela’s Judgment of Others’ Yard-Spaces	118
Homeowners with Controlled and Ordered Yard-Spaces	119
Ellie.....	120
What Ellie Thinks Her Yard-Space Communicates	120
Ellie’s Perception of What Others Think of Her Yard-Space	121
Ellie’s Judgment of Others’ Yard-Spaces	122
Diana.....	123
What Diana Thinks her Yard-Space Communicates.....	123
Diana’s Perception of What Others Think of Her Yard-Space	124
Diana’s Judgment of Others’ Yard-Spaces	125
Summary of Finding 1-H.....	127
Homeowners Finding 2-H: K-12 Formal Education and Informal Learning Influences	128

Chapter	ix Page
Social Influences	129
Consultants	129
Family Relationships/Memories.....	130
Functionality	135
Play	135
Safety/Accessibility	136
Food Sources	138
Literature	140
Careers	143
Summary of Finding 2-H.....	145
Homeowners Finding 3-H: Homeowners' Choices for Yard-Care Activities	146
Summary of Finding 3-H.....	152
Summary of Homeowners Findings	152
Rationale for Curriculum Development and Implementation	153
Phase II: Student Findings.....	154
Finding 1-S: Identifying Decisions for Yard-Space Appearances	155
Questionnaires and Worksheets	156
Yard-Spaces and the Environment Questionnaire.....	156
Statement Four.....	157

Chapter	Page
Question Five.....	157
Yard-Spaces End-of-Course Questionnaire.	158
Yard-Space Photographs Interpretation Worksheet	159
Summary of Questionnaires and Worksheet Responses	162
Classroom Discussions	162
Student Interviews	172
Summary of Finding 1-S	176
Finding 2-S: Envisioning Positive Environmental Changes in Yard-Spaces.....	177
Questionnaires and Worksheets	177
Yard-Spaces and the Environment Questionnaire.....	177
Yard-Spaces End-of-Course Questionnaire	180
Yard-Painting Reflection Worksheet	182
Animal Research Project Worksheet.....	183
Classroom Discussions	185
Student Interviews	187
Summary of Finding 2-S	188
Finding 3-S: Communicating Environmental Concern through Art	189
Designing Environmental Changes in Personal Yard-Spaces.....	189
Nature Arrangements Inspired by the Artwork of Andy Goldsworthy	194

Chapter	Page
Powerful Environmental Messages Inspired by Jenny Holzer’s Truisms	201
Local Animal Research Inspired by the Artwork of Lynne Hull	205
Critique and Discussion of Projects	215
Student Interviews	216
Summary of Finding 3-S	218
Summary of Student Findings	218
5. DISCUSSION, RECOMMENDATIONS, AND CONCLUSIONS	220
Analysis and Synthesis Categories	223
Recognizing the Gap in Knowledge	223
Psychological Ownership	228
Connections between Homeowners’ and Students’ Viewpoints	229
Expectations for Yard-Space Appearances	230
Addressing the Gap in Knowledge	232
My Teaching Practice	234
Barriers to Change	236
Hegemonic Perspectives and the Theoretical Framework	237
Critical Theory	238
Eco-Theory	238
Semiotics, Visual Culture, and Material Culture Theories	239

Chapter	xii
	Page
Recommendations	240
Place-Based Pedagogy.....	240
Pedagogical Problems	241
Teaching Variables.....	241
Curriculum Content Variables.....	242
Problems Associated with Social and Psychological Influences	242
Conclusion.....	243
REFERENCES.....	245
APPENDICES.....	253

LIST OF TABLES

Table	Page
1. Alignment of Research Questions with Data Collection Strategies	40
2. Phase I Data Collection Strategies	64
3. Phase I Coding Techniques	73
4. Phase I Codes for Data Analysis	73
5. Student Characteristics	76
6. Environmental Art Curriculum Sequence, Resources, and Purpose	79
7. Phase II Data Collection Strategies	84
8. Phase II Coding Techniques	91
9. Phase II Codes for Data Analysis	92
10. Quality Considerations	95
11. Examples of Student Growth for Question Three	178
12. Examples of Student Growth for Question Seven.....	179

LIST OF FIGURES

Figure	Page
1: Interconnectivity of theoretical framework.....	16
2: Research design and methodologies.....	42
3: Ed's home.....	49
4: Kate's home.....	51
5: Kate's yard-space areas.....	52
6: Andy's home.....	53
7: Andy's yard-space areas.....	54
8: Pamela's home.....	55
9: Pamela's yard-space areas.....	55
10: Pamela's yard-space areas.....	57
11: Pamela's tree.....	57
12: Ellie's home.....	58
13: Ellie's yard-space areas.....	60
14: Diana's home.....	61
15: Diana's yard-space areas.....	62
16: Tree photograph for triangulation.....	72
17: Ed's native prairie yard-space.....	104
18: Kate's yard-space.....	108

Figure

19: Andy's yard-space.....	111
20: Pamela's yard-space.....	115
21: Ellie's yard-space.....	120
22: Diana's front yard.....	123
23: Ellie's mowed yard-space.....	163
24: Ed's native prairie yard-space.....	163
25: Chart of students' yard-care activities.....	164
26: Goats as yard-care alternative.....	167
27: Statues.....	167
28: Topiary.....	168
29: Animal habitats and shelters.....	168
30: Ellie's mowed yard-space.....	169
31: Ed's native prairie yard-space.....	169
32: Expansive mowed yard-space.....	171
33: Flower meadow.....	172
34: Ed's native prairie yard-space.....	173
35: Kate's native prairie yard-space.....	174
36: Diana's controlled yard-space.....	174
37: Ellie's mowed yard-space.....	175
38: EPA statistics.....	186
39: Casey's yard-space painting.....	193
40: Jan's yard-space painting.....	193

Figure	Page
41: Dale's yard-space painting.....	194
42: Healthy forest.....	195
43: Damaged forest.....	196
44: Rowan Leaves & Hole.....	197
45: Photograph of leaves.....	197
46: Randy's nature arrangement.....	200
47: Elton's nature arrangement.....	200
48: Robert's nature arrangement.....	201
49: Holzer: Protect me from what I want.....	202
50: Mary's rock sculpture.....	204
51: Elton's rock sculpture.....	204
52: Adam's rock sculpture.....	204
53: Robert's eagle figurine.....	206
54: Lisa's cottontail figurine.....	206
55: Casey's skunk figurine.....	206
56: Dale's wolf spider figurine.....	206
57: Abby's chipmunk figurine.....	206
58: Collin's turtle figurines.....	206
59: Wall mural: View 1.....	207
60: Wall mural: View 2.....	207
61: Animals need protection and shelter slide.....	208

Figure	xvii
	Page
62: Lynne Hull’s “Raptor Roost”.....	209
63: Lynne Hull’s “Desert Hydroglyph”.....	209
64: Lynne Hull’s “Winter Butterfly Shelter”	210
65: Martin’s opossum drawing.....	212
66: Martin’s opossum figurine.....	212
67: Jan’s worms drawing.....	213
68: Jan’s worms figurine.....	213
69: Alan’s cardinal drawing.....	214
70: Alan’s cardinal figurine.....	214
71: Mary’s computer-generated work	217
72: Mary’s artwork statement.....	217
73: Collin’s computer-generated artwork.....	217
74: Collin’s artwork statement	217

LIST OF APPENDICES

Appendix	Page
A. HOMEOWNER INTERVIEW QUESTION LIST	253
B. ENVIRONMENTAL ART CURRICULUM	256
C. ANIMAL PROTECTION AND SHELTER POWERPOINT.....	288
D. YARD-SPACES AND THE ENVIRONMENT QUESTIONNAIRE	290
E. YARD-SPACES END-OF-COURSE QUESTIONNAIRE	292
F. YARD-SPACE PHOTOGRAPHS INTERPRETATION WORKSHEET AND WORD LIST	294
G. YARD-PAINTING REFLECTION WORKSHEET.....	297
H. RESEARCHER-ASSIGNED DEFINITIONS LIST	299
I. WHAT IS IN A YARD POWERPOINT	302
J. YOUR YARD AND CLEAN AIR HANDOUT	305
K. BENEFITS OF NATIVE PLANTS HANDOUT.....	308
L. YARD-SPACE ELEMENTS POWERPOINT	311
M. ANIMAL RESEARCH PROJECT WORKSHEET	314

CHAPTER 1

INTRODUCTION TO THE STUDY

This study investigates yard-spaces as designed sites, examines the decision-making processes homeowners use to create their yard-space appearances, and explores students' place-based learning experiences connected with yard-spaces. The purposes of this two-phased study are to explore educational experiences that influenced homeowners' creation of their yard-space sites and to examine the effects of a place-based environmental art curriculum on fifth grade students' viewpoints of yard-space appearances. It was anticipated that knowledge generated from this study would offer insights into hegemonic perspectives for creating conformist yard-space appearances, informing future art education practices that might encourage students' growth in environmental and social consciousness. In an effort to illustrate a wide-range of perspectives, this study employed qualitative research design and narrative inquiry methodology. Convenience sampling was used in choosing six homeowner participants for Phase I and a class of 21 fifth grade student participants for Phase II.

This chapter begins with an overview of the background and context that grounds the study. Following this overview, the next sections present the statement of the problem and purposes, the research questions that drive this investigation, and the significance of the study. Discussion of delimitations and limitations set the parameters and clarify the boundaries for the study. The section for bracketing of the researcher's experience discusses my own environmental concern and personal preferences for natural landscapes and the steps that were taken to prevent

researcher perspectives from swaying participants' responses. This chapter concludes with definitions of key terminology used in the study and a discussion of the theoretical framework that provides a structural model for guiding the research.

Background and Context

The field of art education has changed dramatically since its earliest roots. Efland (1990) explored important trends in Western art education through the late 1980s, noting how art making was once viewed as a pastime for the elite but regarded as a highly needed profession during other time periods. Efland, Freedman, and Stuhr (1996) explored modernist principles that value Discipline Based Art Education (DBAE) for teaching skills-based formalistic lessons and post-modernist concepts that challenge formalist traditions. Widely disparate views show that society's view of art is not static and past trends influence current practices in art education. With the present need to defend the value of art education in public schools, emphasis on skills-based lessons has been expanded to include concepts and meanings of art that promote critical thinking skills and address contemporary issues in society.

Currently, many art educators are working to broaden the field by creating learning environments that explore issues related to social constructs, environmental concerns, and local connections to everyday places and common items (Blandy & Hoffman, 1993; Duncum, 2002; Hicks & King, 2007; Inwood, 2010; Ulbricht, 1998). Visual and material culture studies have expanded conceptions of art to include "any and all human-constructed or human-mediated objects, forms, or expressions, manifested consciously or unconsciously through culturally acquired behaviors" (Bolin & Blandy, 2003, p. 249). Within a broader context, art education can

provide the tools to “investigate the makers, users, and preservers of these more common items of daily life” (Bolin & Blandy, 2011, p. 85).

Visual and material culture studies as current domains of study in formal art education settings are changing definitions of art related to contemporary practices. According to Quinn, Ploof, & Hochtritt (2012), arts education has expanded to include cultural realms, such as “the ways we have developed to live in community” (p. xxi), with aims toward “individual and collective transformation” (p. xxi). Transformation is possible through art education that addresses “significant concepts and prompt[s] viewers to think about them, perhaps for the first time” (Marshall & Donohue, 2014, p. 2).

Yard-spaces as everyday places contain common items worthy of investigation for their social and environmental implications. Studies by Bain (2011), Evans-Cowley and Nasar (2003), and Lai and Ball (2002) have examined yard art, but yard-space appearances and the aesthetic decisions involved in the creation of these spaces have not been explored within the field of art education. Due to the wider focus connecting art education with other fields, the study of yard-space appearances is a timely subject for investigation this study consequently fills a gap in existing research. Specifically, Midwestern yard-spaces in non-urban locations are the focus of this study.

To me, the Midwest region is home, and I find a particular beauty in natural areas of my rural Illinois homeland. Grassy fields line both sides of meandering country roads. In roadside ditches, periwinkle blue chicory plants, white Queen Anne’s lace, and pink clover grow together in living bouquets. I grew up in a family that treasured nature and art, and my concern for environmental issues stems from these passions. For my sixth grade science project, my uncle helped me identify wildflowers by leading a nature walk, pointing out native wildflowers, and

rattling off the Latin names of each species. Later, as Director of the Environmental Protection Agency of Kane County, Illinois, his knowledge was essential for his work in preserving native plant species and for authoring *Kane County Wild Plants and Natural Areas* (Young, 1986), which I collaborated on as illustrator. My mother also greatly influenced my appreciation for nature and art. An oil painter and organic gardener, she used her art skills to paint canvasses of surrounding fields and to build rock terraces in our yard. So strong was her love for the land, she requested William Savage Landor's poem be engraved on her cemetery marker

I strove with none; for none was worth my strife,
Nature I loved, and next to Nature, Art;
I warmed both hands before the fire of life,
It sinks, and I am ready to depart. (Speare, 1940, p. 135)

I was raised to cherish a deep connection to nature and art, but I learned these ideas through family interactions and stories, not through environmental art instruction in school. Without my family's influence, I might not understand the importance of a nature/art connection. Although my family appreciated the beauty of natural areas, we controlled and mowed areas of our yard-space without considering the detrimental effects of mowing on the environment. Even within a family attuned to environmental concerns, certain socially constructed activities were so ingrained that the effects of these activities were not considered. Examining the reasons for participating in yard-care activities and including environmental topics within art education curricula could raise students' environmental awareness and encourage understanding that natural areas need not be controlled to be aesthetically pleasing.

My love and aesthetic appreciation of rural areas coupled with my concern for harmful environmental practices sparked an interest in the yard activities I see on a daily basis. According to Straight and Behar (2005), "going to the field now often means . . . staying where you are and

trying to figure out what's there in front of your eyes" (p. ix). Therefore, this study focused on what was in front of my eyes on a daily basis, Midwestern yard-spaces in Illinois, and investigated the reasons homeowners make aesthetic choices within these spaces.

This study consisted of two phases. Phase I examined established yard-spaces and influences on homeowners' decision-making processes in creating their yard-space appearances. These decisions have been grouped into four researcher-determined categories related to the visual and environmental theoretical framework of this study: aesthetic choices, symbolic meanings, functionality, and environmental concern. Aesthetic choices often invoked emotional responses and represented homeowners' personal preferences, but these preferences were often influenced by social norms. Symbolic meanings were communicated through artifacts or landscape design that represented deeper meanings than just the visual appearance of the phenomena. Areas that were intended for children's play or practical purposes represented functional aspects of yard-space appearances. Environmental concern resulted in areas that were not manipulated or areas where native plant species were encouraged. Examining ways homeowners were influenced by these four concepts provided insight into their decision-making processes for creating their yard-space appearances.

Information gathered from Phase I was used in Phase II to plan and teach a fifth grade place-based environmental art curriculum. The purpose of this curriculum was to examine students' attitudes toward yard-space appearances prior to instruction and note growth in their understanding of the meanings associated with yard-space appearances after participating in environmental art coursework. Growth in students' environmental awareness and understanding of aesthetic decision-making processes could demonstrate meaningful learning strategies for art education curricula development.

Statement of the Problem and Purposes of the Study

The Midwestern climate supports a variety of native vegetative growth (Smith, Williams, Houseal, & Henderson, 2010) and encouragement of native plant growth and placement of culturally meaningful artifacts could add to the unique expressive qualities of each yard. However, it is curious to note striking similarities between individual yard-spaces. Initial observations of Midwestern yard-spaces suggested a widespread desire in both suburban and rural locations for closely mown lawns and controlled yard landscapes.

Sturken and Cartwright (2009) suggested cultural and representational issues are communicated through visual imagery and convey meanings about everyday life. Similarities in yard-space appearances indicate hegemonic perspectives exist within societal expectations for yard-space appearances (Bormann, Balmori, & Geballe, 2001; Jenkins, 1994; Robbins, 2007). According to Giroux (1981), “hegemony is rooted in both the meanings and symbols that legitimate dominant interests as well as in the practices that structure daily experience” (p. 23). Hegemonic practices are problematic because hidden or unrecognized powers at play can strongly influence public actions (Giroux). Often homeowners participate in yard-care activities without considering the reasons for their actions (Jenkins, 1994; Robbins, 2007). Greene (1978) referred to this taken for granted attitude as a lack of “wide-awakeness” (p. 42), which can have broader implications on the environment and the surrounding community.

Some Americans consider it a right to maintain privately owned land without considering broader implications (National Association of Rural Landowners, 2007-2012). While individual rights concerning land ownership are highly valued in American society, individual actions upon personally owned land areas often affect the greater community (Bormann, Balmori, & Geballe,

2001). Pesticides applied to one yard to keep lawns weed-free can seep into water tables and adjoining yards, affecting the health of neighbors and pets (Hirsch, 2010). This example shows how aesthetic decisions influencing yard-space design choices have a direct environmental impact.

Hegemonic aesthetic decisions and yard-care activities enacted to create socially acceptable appearances must be identified before they can be questioned. Everyday activities that appear to be natural occurrences need to be examined critically to reveal and challenge hegemonic perspectives (Giroux, 1981; Mirzoeff, 2011). Art education that incorporates critical pedagogy can be instrumental in exploring actions taken to create and maintain yard-space appearances, uncovering meanings associated with yard-space appearances, and recognizing effects yard-care activities may have on others in the community (Inwood, 2010).

Through art education instruction, students can learn critical thinking skills to uncover hidden meanings attached to visually perceived phenomena (Bolin & Blandy, 2011; Freedman, 2003; Smith-Shank, 2004). Once hidden meanings are revealed, a partnership of art education with environmental, aesthetic, and place-based education can help students think innovatively to see beyond ingrained hegemonic perspectives and social norms (Garoian, 1998; Song, 2009). Knowing that actions have an impact on personal spaces can motivate students to enact change (McWilliam, 2008).

This study fulfilled two purposes. The first purpose of this study was to examine Midwestern non-urban homeowners' aesthetic choices in their yard-spaces and to explore the educational experiences that influenced these choices. The second purpose was to investigate the influence of a place-based art education curriculum on fifth-grade students' ability to interpret visual messages communicated by yard-space appearances. This curriculum required students to

use critical thinking skills to interpret the meanings of these visual messages. Participation in critical thinking activities helps develop decision-making skills needed in adult life (Levine, 2006-2012). Although still in elementary school, fifth-grade students have a higher level of independence and maturity than lower grade levels, and are more likely to have success in applying critical thinking to their classwork. For these reasons, fifth-grade students were selected to participate in this research. Research questions that provided direction for investigating the problem and purposes of this study are outlined in the following section.

Research Questions and Sub-Questions

This study addressed the following research questions:

1. What classroom-based educational experiences influence Midwestern non-urban homeowners' decisions for their yard-space appearances with respect to aesthetic choices, symbolic meaning, functionality, and environmental concern?
2. What other educational experiences influence Midwestern non-urban homeowners' decisions for creating their yard-space appearances?
3. In what ways can place-based art education change fifth grade public school students' abilities to identify and analyze Midwestern non-urban homeowners' decisions for yard-space appearances?

Sub-question: How does place-based art education influence fifth-grade public school students' attitudes, perceptions, and aesthetic choices for art-making activities within non-urban yard-spaces?

Significance of the Study

As Blandy and Hoffman (1993) stated, there is a need for “critical analysis of taken-for-granted concepts within existing arts institutions that affect the environment” (p. 23).

Understanding how ideas about yard-care are assimilated and how visual messages of nature are interpreted benefits the field of art education in three ways. First, exploring aesthetic choices associated with everyday spaces strengthens relationships between art and nature. As stated by Blandy and Hoffman, the ultimate goal of an art education of place “promotes an understanding of the interdependence and interconnectedness of all things” (p. 28). Second, the important role of art education in teaching examination of visual messages is reinforced. As Freedman (2003) stated, “Unless people are given instruction, they may never get beyond the surface of the images and designed objects they see every day” (p. xi). Finally, environmental degradation and domination that occur when aesthetic choices are not enacted thoughtfully can be illuminated through investigation of yard-spaces. In the words of Gruenewald and Smith (2008), “Reversing a slide into social and environmental degradation will require a heightened awareness of place” (p. vii).

Delimitations

The target population for Phase I of this study was delimited to six Midwestern homeowners from northern Illinois non-urban areas. Initial observations and previous studies have shown evidence of controlled yard-space landscapes in both suburban and rural locations (Bormann et al., 2001; Jenkins, 1994; Robbins, 2007). Urban areas differ due to limited yard-space area and emphasis on built environmental structures. Therefore, urban yard-spaces were not a part of this study.

Yard-spaces were identified as fitting criteria through observation. Participants were chosen from non-urban areas of northern Illinois by convenience sampling (Mertens, 2009). Illinois Association of Realtors (National Association of Realtors, 2010) identifies the average age for first-time homebuyers in Illinois as 30 years old. It is assumed that living in the same home for several years increases the likelihood that homeowners have invested time and thought into their yard-space appearances. Therefore, all participants in this study are 35 years old or older and have resided in their homes for more than three years.

Sample size was small to allow for in-depth data collection (Yin, 2009). The target population consisted of six homeowners. To gain perspective on different types of yard-space appearances, interviews were conducted with two homeowners from each of the following sub-groups: yard-spaces with large areas of prairie or native plant growth; yard-spaces with a mixture of areas containing native plant growth and controlled areas; and yard-spaces with a majority of areas controlled or manipulated.

Population for Phase II was delimited to one fifth-grade class of 21 students to allow for in-depth data collection (Yin, 2009). Target population was chosen through convenience sampling from my own teaching assignment in a non-urban Illinois school district. Three fifth-grade classes were part of my teaching assignment during the time of this study. Of the three possible fifth-grade classes, the class with the greatest amount of scheduled art lessons during the fall semester of 2012 was chosen. More scheduled class meetings offered the opportunity for more instruction and data collection.

Limitations

One limitation for this study was the lack of diversity in Phase I participants' ethnic and economic status. According to population statistics (Kirschner, Berry, & Glasgow, 2006), non-Hispanic white people in non-urban Midwestern areas make up 93.2% of the population, while in metro areas, 77.1% of the population is non-Hispanic white. These statistics support the fact that all participants in Phase I are non-Hispanic white ethnicity. Findings are not generalizable to all ethnicities, and this study did not address variances across diverse cultural backgrounds. Also, findings from this study are not generalizable to all Midwestern non-urban homeowners.

This study was limited to homeowners with yard-spaces. Economic privilege associated with owning a home and land could affect homeowners' experiences. Non-homeowners' experiences could vary greatly from homeowners' experiences due to economic, social, and cultural differences. Non-homeowners' attitudes and perceptions of yard-spaces could be an area for future research. A variety of yard-spaces were included in this study to increase the probability of multiple perspectives, but homeowners' narratives are not representative of all Midwestern non-urban homeowners' perspectives.

There is also a lack of diversity within the school district chosen for Phase II of this study. According to the school district's website, 87.7% of enrolled students are racially classified as white.¹ The district is located in a city that is racially classified by the 2010 United States Census as 94.8% white, with a median household income of \$91,581 (U. S. Census, 2010). These indicators of above average affluence with little diversity in ethnicity could have

¹ Website reference omitted in order to preserve confidentiality of school district location.

affected student responses to curriculum intervention and are not representative of all Midwestern schools.

It was assumed that homeowners and students were honest in their responses to questions. Materials available for the curriculum intervention were limited by the art supply budget for 2012-2013, and time available for classroom instruction was limited by the art class schedule for that year. Final limitations for this study were student absences during the curriculum intervention. Limitations due to study being conducted by the researcher are discussed in the following section.

Bracketing the Researcher's Experience

As discussed in the introduction, my curiosity about the area in which I live led to an interest in conducting research with rural homeowners for Phase I. Personal preference for environmentally beneficial yard-care practices could have affected my reaction to homeowners' interview responses. To address this preference, homeowners were asked the same interview questions (Appendix A) and informed that their responses were valued as personal viewpoints. Member checking was conducted with each of the homeowners to verify their intended meanings were accurately reported.

Limitations also existed in Phase II due to my experience as an elementary art educator. At the time curriculum research was being conducted, I had been teaching elementary art for 13 years. Due to my background in elementary art education, I was interested in exploring elementary students' knowledge of environmental issues and students' capacity to change their perspectives through environmental art lessons. Knowledge of my own students' locale, the district's policies, the school's climate, and class dynamics provided valuable insight while

planning the curriculum. However, a dual role as researcher and teacher can have an influence on students' responses (Mertens, 2009). Limitations exist when students feel the need to gain teacher approval or have concerns about grading of responses. To address these issues, I encouraged sharing of multiple perspectives during open-ended questioning and discussion sessions. Instructions before written response work stated there were no right or wrong answers and that expression of personal views was expected. Written work was not graded and did not affect students' art grades for the semester.

Definition of Terminology

The following section defines terms used in this research study of yard-spaces.

Aesthetic Choices: An artistically pleasing appearance. Everyday aesthetics apply to this study as defined by Melchionne (2013) in that the aesthetic qualities are ongoing (as opposed to a single event), widely practiced, and widely shared (as in daily routines). Included in his definition are the dwellings in which people arrange the spaces. Yard-spaces as arranged and lived-in spaces are affected by everyday aesthetics, referred to in this study as aesthetic choices.

Environmental Education: For this study, environmental education was understood through Stapp's (1969) seminal definition of "producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution" (p. 30).

Hegemony: Gramsci's definition of hegemony was used for this study. According to Simon (1982), "Gramsci's concept of hegemony is that a class and its representatives exercise power over subordinate classes by means of a combination of coercion and persuasion" (p. 24).

Hegemonic practices have the appearance of being normal states of occurrences and therefore are not often questioned.

Midwestern Non-Urban Homeowners: Homeowners living within areas defined by the U. S. Census Bureau (2010) as Midwestern region states. In this particular study, homeowners resided in Illinois. Non-urban areas included suburban and rural areas defined by U. S. Census Bureau as “all territory, population, and housing units located outside of urban areas” having a population of less than 50,000 people.

Place-Based Art Education: Blandy and Hoffman (1993) conceptualized an “art education of place” (p. 23) in which art educators address environmental problems through a focus on local communities where environmental concerns can be personally felt.

Psychological Ownership: Pierce and Jussila (2011) defined psychological ownership as “possessive feelings that attach the individual to objects (material or immaterial in nature)” (p. 2). In this study, psychological ownership refers to feelings of attachment to yard-space appearances that affect the homeowners’ willingness to make changes to the appearances.

Visual Messages: “Images objectify meaning that is at once transitory and tightly bound to the object. The process of objectification emerges through interpretations of the relationship among what is represented, the object representing, and the representation” (Freedman, 2003, p. 5). For this study, yard-spaces were the identified objects and interpretations of the meanings attached to yard-space appearances were explored.

Yard-Care Activities: For this study, activities employed within yard-spaces that manipulate natural areas were identified as yard-care activities. Some activities related to art making and creating may have positive connotations for self-expression, such as gardening, path making, and

arranging art forms. Other activities may have a negative impact on the environment, including mowing, watering, and using pesticides/herbicides (Jenkins, 1994; Pollan, 1989; Robbins, 2007).

Yard-Spaces: Privately owned land surrounding homes for which homeowners have the privilege and responsibility to maintain and care (Pollan, 1989).

This definition list was developed in an effort to clarify meanings associated with key terminology used throughout this study. The theoretical framework for this study is outlined in the following section to present the structure used to guide thinking about the researched subject and the interpretive lens through which the data was viewed (Savin-Baden and Major, 2013).

Theoretical Framework

According to Brookfield (2005), “A theory is nothing more (or less) than a set of explanatory understandings that help us make sense of some aspect of the world” (p. 3). Held (1980) suggested that the purpose of theory is to examine the gap “between the actual and the possible” (p. 22). Based on these ideas, critical theory helps in making sense of theoretical models for this study of yard-spaces in that it proposes ways of envisioning change and grounds discussion of other pertinent theories to this study.

This study is built on an overarching framework of critical theory, which includes influences of eco-theory, semiotics, visual culture, and material culture theories. The guiding principles of critical theory are credited to theorists from the Frankfurt School and include identifying, challenging, and changing dominant ideology. Eco-theory addresses the control and domination of nature, which often causes detrimental effects on the environment (Blandy & Hoffman, 1993). Critical theory connects to eco-theory by examining human actions that affect the environment. These actions have underlying meanings and are influenced by “history,

identity, power, cultural production, and cultural consumption” (Cavallaro, 2001, p. x).

Semiotics, visual, and material culture theories inform this study by offering lenses to understand how and why interpretations and judgments are made from environmental visual messages (Bolin & Blandy, 2011; Freedman, 2003; Smith-Shank, 2004, Sturken & Cartwright, 2009). Visual messages are communicated through human-created artifacts and also through manipulated natural areas (Neperud, 1995). These theories are interwoven with a focus on human actions, underlying meanings, and communication of messages.

Figure 1 outlines the interconnectivity of each theory with critical theory as the overarching theory for this study. Subsections following Figure 1 describe how critical theory serves as the overarching framework for this research of yard-spaces and describe how other theories relate to critical theory.

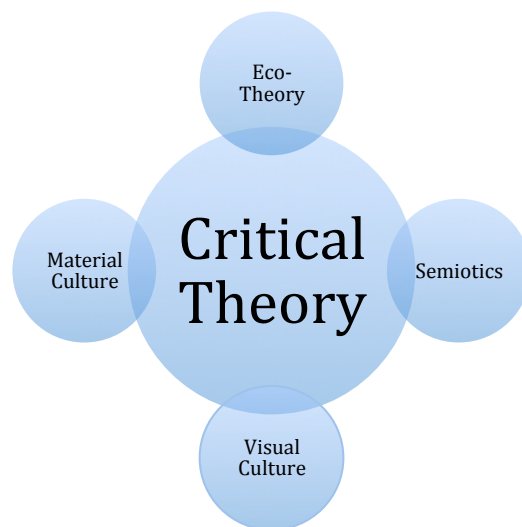


Figure 1: Interconnectivity of theoretical framework

Critical Theory

The origins and history of critical theory have led to the development of critical approaches to teaching through critical pedagogy. Theorists from the Frankfurt School were influential in developing concepts that examine and uncover hidden meanings related to dominant ideologies. Power systems exert control in both societal and educational structures and critical thinking skills are necessary to uncover hidden agendas that often seem to be normal states of existence. In relation to yard-spaces, critical theory concepts can help to identify the reasons aesthetic choices for appearances are perpetuated and challenge ideas that cause these appearances to seem normal. Through processes of identifying and challenging normal behaviors, alternative choices can be envisioned to promote environmentally conscious changes in yard-space appearances.

According to Brookfield (2005), “Critical theory views thinking critically as being able to identify, and then to challenge and change, the process by which a grossly iniquitous society uses dominant ideology to convince people this is a normal state of affairs” (p. viii). Critical thinking skills are necessary in this study of yard-spaces to help students identify yard-space appearances that may seem normal but cause environmental harm or social tensions and therefore require change. Identifying, challenging, and changing dominant ideology are key components of critical theory questioning processes.

Cavallaro (2001) discussed the importance of critical theory, stating, “Much as a culture - any culture - is shaped by its past, it must nonetheless be willing to question and modify past meanings and interpretations” (p. x). Yard-space appearances are shaped by cultural norms (Bormann et al., 2001); therefore, critical theory is important to this study in order to question

and modify the meanings and interpretations associated with yard-space appearances. Critical theory moves beyond critique of appearances and offers opportunities to challenge and change situations through critical pedagogy (Thurber, 2004).

In questioning dominant ideology and the meanings associated with yard-space appearances, eco-theory is an appropriate part of the theoretical framework for understanding environmental control.

Eco-Theory

There are many underlying reasons for control and domination of nature. Political and economic debate often separates and prioritizes either human or environmental concerns. Grunewald and Smith (2008) expressed concern “about the division between environmental educators and those who direct their attention to matters of social justice and equity” (p. vii). The authors suggested human welfare is dependent on reconciliation of these domains. Concern for human welfare coupled with concern for humans’ effect on the planet influenced the development of eco-theory, which bridges this gap between social and environmental concerns. As a supporting framework for the study of yard-spaces, eco-theory concepts encourage envisioning alternative appearances for yard-spaces that reflect both environmental concern and concern for human welfare.

According to Blandy and Hoffman (1993), “Eco-theory is not monolithic or homogenous” (p.24) but incorporates many philosophical perspectives that promote interdependent relationships among all living things. Many scholars recognize the importance of art making practices in emphasizing interdependence and raising environmental awareness (Blandy & Hoffman; Gablik, 1991; Hicks & King, 2007; Lippard, 1995; Orenstein, 1990;

Neperud, 1995). Eco-theory informs this study by emphasizing interdependence rather than control of nature and by examining the effects conformist aesthetic choices have on the environment.

Yard-care activities often involve consumption and waste of resources in attempts to create aesthetic appearances that resemble a social norm (Hirsch, 2010). These social norms are also symbolic codes of modern capitalism's "epharmaculture" (Luke, 1992, p. 72). Luke described epharmaculture as a "dependence on constantly increasing, wasteful mass consumption . . . [while ignoring] almost all concrete cultural ties to local land (p. 72). Luke suggested initiating ecological change through the subversion of symbolic codes, challenging activities that are imagined to be beneficial by revealing their actual costs to human survival if natural resources become depleted. This concept relates to this study of yard-spaces, in which students' perceptions were challenged through the investigation of symbolic meanings of objects and activities associated with yard-space appearances.

The following section builds on these ideas by discussing ways of investigating symbolic codes and meanings.

Semiotics, Visual Culture, and Material Culture Theories

Within current postmodernist contexts, critical theory stresses the need to unearth hidden agendas, especially in relationship to consumerism within a capitalist society (Baudrillard, 1998; Quinn, Ploof, & Hochtritt, 2012). Rapid changes in technology and increasing influence from visual media create a growing need to understand how visual information is often used to manipulate the public to desire or feel a need for certain objects, appearances, or ideas (Freedman, 2003). Knowing that the field of art education has always been affected by power

systems that privilege ideas of high art and the artist as genius, recent movements have formed to address issues related to power and to reveal the problems associated with this traditional thinking (Smith-Shank, 2004). Visual culture and material culture theories emerged as alternatives to modernist approaches in art education that emphasized the teaching of technical skills over conceptual meanings (Freedman, 2003).

Freedman (2003) described visual culture as “all that is humanly formed and sensed through vision or visualization and shapes the way we live our lives” (p.1). According to Smith-Shank (2004), “Informed consumption of all types of visual data is essential in a postmodern democracy . . . and there is no more appropriate vehicle for understanding visual information than semiotics” (p. vii). As defined by Danesi (1993), semiotics is the study of “anything we do and use to represent the world around us and to make messages about it” (p. 1). In discussing the natural partnership of visual culture and semiotics, Smith-Shank noted, “Proponents of visual culture education argue that ordinary objects, places, and events are visually loaded aesthetic signifiers, and they have the power to inform, modify desires, and educate” (p. vii). Yard-spaces recognized as ordinary places also contain visually loaded aesthetic signifiers. Visual culture juxtaposed with semiotics offers a framework to examine the signs and signifiers within yard-spaces as well as the visual messages that are communicated and interpreted.

Bolin and Blandy (2003) described material culture as “any and all human-constructed or human-mediated objects, forms, or expressions, manifested consciously or unconsciously through culturally acquired behaviors” (p. 249). According to Bolin and Blandy (2011), similarities exist between the fields of visual and material culture, but material culture studies offer a wider “range of topics, ideas, objects, and research methodologies” (p. x). As part of the framework for investigating yard-spaces, material culture theory provides a lens for

understanding the meanings communicated by everyday objects, activities, and behaviors associated with yard-space appearances.

Theories that inform the investigation of yard-space appearances are interconnected and focus on meanings that are often hidden or taken for granted. Critical theory challenges power systems' control over actions that seem normal and eco-theory applies these concepts to control of the environment, challenging interpretations of meanings that are visually communicated by yard-space appearances. Visual and material culture theories and semiotics provide ideas for discovering new interpretations of meanings attached to yard-space phenomena and encourage environmentally conscious decision-making processes.

The following section summarizes the content of this chapter.

Summary of Chapter 1

This chapter provided an overview of the major components of this study about yard-spaces and environmental art learning. Yard-spaces could have varied appearances showing evidence of aesthetic choices and environmental concern, yet many yard-spaces have similar controlled landscapes. Similarities in appearances reflect hegemonic perspectives, which is problematic because of the influence unrecognized powers have on public actions (Giroux, 1981). Through this study, it was hoped that hegemonic practices and the reasons these practices are perpetuated would be revealed. To examine hegemonic practices, an environmental place-based art curriculum intervention was taught to fifth grade students. The purpose of this curriculum was to teach students critical inquiry methods that would aid in evaluating yard-space appearances. It was hoped that through curricular learning experiences, the fifth grade students would understand the reasons for environmental aesthetic choices, become more aware of

detrimental environmental practices, and make environmentally conscious aesthetic decisions in their own lives. Indicators of these types of learning included discussions and written work showing recognition of environmentally conscious aesthetic decisions and detrimental environmental practices in different yard-space photographs; written and verbal suggestions of possible changes for yard-space appearances that would promote environmental care; and production of artifacts that communicated environmental concern and showed awareness of the impact aesthetic choices have on the environment. This study could have implications for improving practice in the development of art education curricula and broader societal implications of raising awareness about environmental aesthetic choices through art education.

The following chapter discusses literature that supports this investigation of yard-spaces within the field of art education.

CHAPTER 2

REVIEW OF RELEVANT LITERATURE

Although this study is situated within the field of art education, the topic of yard-spaces is relevant to other fields. Searches revealed articles containing discussion of theoretical implications but few empirical research studies within the art education field that applied to the topic of yard-spaces. Therefore, applicable studies from the environmental and social sciences were also included. The following sections include environmental art education, aesthetics, place-based art education, and yard-space activities/art connections. The first section examines the role environmental art education can play in promoting understanding of yard-space appearances.

Environmental Art Education

Whether viewed as a dominating species attempting to control nature or as an interconnected part of the natural world, ideas about humans' role in the world affect the amount of responsibility exhibited toward caring for natural areas (Warren, 1996). While literature exists exploring consumption of natural resources for economic gain, interconnected relationships that promote environmental care will be the focus for this literature review section. According to Blandy, Congdon, and Krug (1998), "cooperation rather than competitiveness contributes to ecological well being" (p. 241). Ecological well being is one goal of environmental art

education. The investigation of yard-spaces within this field could raise awareness about the impact of yard-care activities on the environment and foster a sense of ecological wellbeing.

While early programs of environmental education were situated within the context of environmental science, the importance of the arts in exploring creative solutions to environmental problems is now widely recognized (Blandy et al., 1998; Hicks & King, 2007; Inwood, 2010; McFee & Degge, 1977; Neperud, 1997; Ulbricht, 1998). According to Garoian (1998), art education is “vital to students’ awareness and understanding of how visual images influence their interaction with the environment” (p. 244). Yard-space appearances represent social values that are communicated through visual messages, which affect homeowners’ decisions for yard-space appearances (Lai & Ball, 2002). Homeowners must determine which yard-care activities are necessary to achieve desired appearances, and how activities will impact the environment (Hirsch, 2010). Environmental education provides tools to understand the consequences of these important decisions. Based on Stapp’s (1969) definition of environmental education, three main purposes of environmental art education emerge: to educate students through the arts about environmental problems, to explore creative solutions to the problems, and to motivate students to create solutions.

Song’s (2009) qualitative research study addressed these three main purposes of environmental art education. Using phenomenological case-study methodology, Song conducted multiple in-depth interviews and participated in a workshop with environmental artist Lynne Hull. Findings from Song’s study indicated that through the act of creating environmental art, workshop participants’ perceptions about humans’ role within nature changed. In relationship to the three purposes suggested by Stapp (1969), Song found that first, participants’ interest in environmental issues increased. Second, the creation of artistic habitats that sheltered wildlife

exemplified a creative solution to the environmental problem of animal protection issues.

Finally, Song reported that participants were motivated to continue working to protect the natural environment.

Song's (2009) study described practical curriculum applications that directly relate to curricular approaches for teaching about yard-spaces. Learning how environmental artists think and create, their reasons for considering the environmental effects of their artworks, and applying these concepts to their own personal yard-spaces could help students realize creative solutions to local environmental issues.

Upitis's (2009) qualitative research study also has applications for developing an environmental art curriculum. Her study examined an environmental professional development workshop and ways it modified art educators' ecological habits. Through various artistic experiences, participants explored consumptive practices, reliance on energy sources, and effects of these practices on the natural environment. Findings from Upitis's study indicated that learning experiences situated within the local environment provide powerful ways to educate about local environmental issues and practices. As in Song's (2009) study, findings revealed that environmental art experiences helped participants learn about environmental issues. By living off the grid, participants envisioned creative solutions to wasting energy in their own homes.

These studies by Song (2009) and Upitis (2009) relate to research of yard-spaces in two ways. First, curricular suggestions for environmental art education lessons could be applied to students' own yard-spaces. Second, participants' motivation to enact and continue environmental practices learned during the workshops indicates classroom-based environmental learning could carry over to actions taken on students' yard-spaces at home.

Both studies showed evidence that environmental art education can provide avenues for investigating yard-care activities and promote understanding of the impact activities have on the environment. However, the reasons homeowners participate in yard-care activities and desire specific appearances for their yard-spaces involves more than environmental knowledge. The following section will discuss the implications of aesthetic education on yard-space appearances.

Aesthetics

The field of aesthetics encompasses many theoretical perspectives. According to McWilliam (2008), “an aesthetic response is one in which perception results in the arousal of emotions” (p. 32). Dewey (1934) connected aesthetics to art experiences, noting that the “artist embodies in himself an attitude of the perceiver while he works” (p. 50). These descriptions of aesthetics apply to yard-spaces in two ways: perceptions of yard-space appearances arouse emotions in the viewer, and yard-space appearances are often created with consideration of others’ viewpoints.

Learning about aesthetic relationships through art education can increase understanding of emotional responses to visual stimuli in yard-spaces (Duncum, 1999). Emotions often drive actions, and understanding emotional responses can lead to changing actions. Within the field of aesthetics, two areas relate directly to yard-spaces: environmental aesthetics and everyday aesthetics. Although both areas of aesthetics are interconnected, each branch will be discussed separately in the following subsections.

Environmental Aesthetics

Environmental aesthetics focuses on developing environmental awareness through the senses (Kauppinen, 1990). Scholars have suggested the study of aesthetic relationships between art and the land can help students develop environmental consciousness (Foster, 1998; Garoian, 1998; Kauppinen). Aesthetic experiences involve more than a simple appreciation for beauty, but defining aesthetic experiences can be complicated (Foster).

Parsons (2008) argued that there is not a clear case for the consideration of aesthetics as a means to encourage environmental preservation. Parson's argument focused on a generalized view that natural lands are often thought of as aesthetically beautiful. He argued that beauty alone is not a rationale for environmental preservation since conceptions of beauty can be subjective. Although Parsons' argument is valid, aesthetic education that encourages environmental awareness involves more than teaching appreciation for the beauty of natural lands. Aesthetic education can help students develop a connection to the land through direct experiences with nature (McWilliam, 2008). Debate surrounding the merits of aesthetic education in promoting environmental consciousness supports the need for empirical research studies showing outcomes of environmental aesthetic learning.

McWilliam's (2008) findings attest to the positive effects of aesthetic education on students' understanding of environmental care. In McWilliam's study, higher education students examined and critiqued works of environmental artists, visited and responded to local art installations, and created artworks in natural areas using natural materials. Students discussed and reflected on their experiences through group meetings and journal writing. Findings included many reported instances of students being moved by aesthetic experiences to work harmoniously

with nature. Student narratives also reported strong feelings of frustration toward those that had not cared for and maintained the area's natural beauty. These examples indicate students developed strong feelings of concern and connection to the environment by learning critical inquiry methods and by becoming involved in environmental aesthetic experiences. Based on these findings, students' yard-spaces could be explored through similar art education practices to interpret meanings in personal outdoor environments.

Gargarella and Prettyman's (n.d.) qualitative research study evaluated a summer art education program for urban high school students. The program was designed to promote environmental awareness and community collaboration through the arts. Content of the course included student planning for the creation of public art in collaboration with conservation organizations, journaling about experiences, and creation of personal art for an installation.

Researchers' findings indicated that participation in aesthetic art-making activities encouraged students to connect with the environment. Through engagement in artistic activities, students reported experiencing strong bonding relationships with others, a sense of responsibility for environmental care, and cultural connections to their communities. Outdoor aesthetic experiences in nature motivated students to be part of a community creating change.

Strategies from McWilliam's (2008) and Gargarella and Prettyman's (n.d.) studies could be used to investigate yard-spaces. By examining and critiquing the work of environmental artists and engaging in artistic activities within yard-spaces, students could learn that yard-space appearances can be representative of values, both economic and environmental. By reflecting on aesthetic experiences while creating within yard-spaces, students could develop an understanding of the value of nature. Valuing natural areas and the aesthetic experiences that happen when

immersed in nature can help students avoid making yard-care decisions based solely on hegemonic practices that often permeate everyday places.

Yard-spaces as everyday places offer opportunities to explore aesthetic experiences that may differ from aesthetics associated with formal art encounters. A discussion of everyday aesthetics applicable to the topic of yard-spaces will be covered in the next sub-section.

Everyday Aesthetics

Everyday aesthetics differs from branches of aesthetics that focus on responses to out-of-the-ordinary experiences and exposure to exotic places. Duncum (1999) described the focus of everyday aesthetics as “objects, events, places, and experiences that . . . form part of ordinary, daily life” (p. 295). Duncum proposed two arguments for including everyday aesthetics in an art education curriculum that have direct implications on the investigation of yard-spaces. First, he argued that everyday aesthetic experiences hold more significance in forming identities and worldviews than experiences with fine art. Relationships with yard-spaces as everyday places are more familiar to students than many fine art experiences and familiarity could provide more meaning to students’ aesthetic experiences. Second, he argued that strong social, economic, and technological dynamics are associated with everyday aesthetics and that these influences on cultural lives are increasing. Bormann et al. (2001) stated that social and economic influences on yard-spaces affect the aesthetic choices made for yard-space appearances. Investigating these influences could help students understand the reasons for aesthetic choices.

Little empirical research exists within the field of everyday aesthetics that relates to the investigation of yard-spaces; however, Palega’s (2011) doctoral dissertation exploring the nature of everyday aesthetic experiences contains four key findings that have implications for yard-

space research. First, Palega found that everyday aesthetic experiences are important because these experiences increase the knowledge of self, which leads to an understanding of others. Second, these types of understanding can be meaningful but only if participants reflect on their experiences. Third, ideas about aesthetic experiences are not fixed but can change through engagement in the experiences. Finally, education through artistic engagement can increase self-awareness and concern for surroundings.

Both Palega (2011) and Duncum (1999) agreed that participation in these types of experiences aids in forming identity and worldview and should be included in art education curricula. These scholars also agreed that understanding of self and others can lead to an awareness of actions on the environment. These findings suggest that yard-spaces as sites of everyday aesthetic experiences could raise students' awareness of self and others and environmental issues.

Everyday aesthetic experiences are situated within familiar everyday sites. An increasing interest in the potential of everyday sites to motivate students has resulted in pedagogy that addresses local issues. The following section will discuss literature related to local, or place-based, pedagogy.

Place-Based Art Education

To provide students with meaningful art experiences, art educators are turning to local communities as sites for critical inquiry and art making. While many educational experiences teach students about the far away and exotic, place-based education “is grounded in the resources, issues, and values of the local community and focuses on using the local community as an integrating context for learning” (Powers, 2004, p. 17). Art education scholars have

suggested that focusing on local issues and experiences will motivate students to care for and enact positive changes within the community (Blandy & Hoffman, 1993; Garoian, 1998; Inwood, 2008a). Yards are both personal spaces and part of a larger community context. Therefore, community relationships affect and are affected by activities related to yard-space appearances.

Although place-based art education includes community relationships, studies focusing on community-based education will not be discussed in this review. Community-based education is a broad field that can focus on relationships unrelated to yard-spaces. Unlike community-based education, place-based art education has a strong focus on interdependency with nature, environmental issues, and critical inquiry of habits that are often taken for granted (Blandy & Hoffman, 1993). These concepts are directly related to yard-space appearances.

Place-based art education is important to research exploring yard-spaces for three reasons. First, personal connections to home and the surrounding landscape can reinforce learning that promotes interdependency with nature. Second, yard-spaces are personal spaces where the effects of environmental care or abuse will be personally felt. Finally, as ordinary everyday places, activities that take place in yard-spaces are often taken for granted and invite critical inquiry.

There are few place-based art education research studies, but several art education scholars have developed powerful theoretical arguments for involving students in local art making experiences. Blandy and Hoffman's (1993) article is important for introducing the concept of place-based education to the field of art education. Gradle (2007), Graham (2007), and Inwood (2008b) expanded on Blandy and Hoffman's concepts of exploring local natural areas by noting the importance of both natural and built environments. Built environments are

constructed objects and the spaces connecting them, described by Eriksen and Smith (1978) as “the physical framework of our activities and interactions and thus an important determinant of the shape of our lives” (p. 4). According to Inwood (2008a), investigating all facets of the environment provides a more holistic view of community and place. Since yard-spaces contain both natural and constructed phenomena, these articles provide theoretical arguments for using a place-based art educational model to explore all aspects of yard-space appearances.

Grounded in a place-based theoretical framework, three qualitative studies in the art education field presented findings related to yard-space appearances. Neperud’s (1997) study explored teachers’ experiences, Lai and Ball’s (2002) study focused on community member’s perceptions, and Powell’s (2010) study examined students’ coursework. Although contextual elements varied, all of the studies provided insights for approaching yard-space research using place-based ideology. While the first study was not described as place-based research, it did rely on local environments to explore environmental issues.

Neperud’s (1997) study described experiences of fifty teachers attending a five-day colloquium that formed linkages between art and the environment. Participants learned about local environments through guided nature walks, creation of restorative habitat sculptures for local wildlife, and examination of a successful environmental art education curriculum enacted by a local art teacher. Findings showed that it was important to have direct experiences with the local environment as part of the inquiry process. Neperud stated, “When one becomes involved and familiar with an environment, decisions that harm the environment are less likely” (p. 19). A curriculum involving direct experiences investigating personal yard-spaces could help students make thoughtful choices to avoid yard-care activities that harm the environment.

As students investigate local environments, such as yard-spaces, it is important to examine embedded cultural views and values. Neperud (1997) found that involving participants in discussion of cultural topics helped to clarify cultural conflicts and present views from more than one perspective. Within a diverse student population, discussion of yard-space appearances could help to clarify the reasons homeowners choose to change or maintain these appearances.

While Neperud's (1997) study focused on teacher perspectives of place-based art experiences, Lai and Ball's (2002) ethnographic research focused on community members' experiences. Through examination of residents' reactions to yard art in Moreau, New York, researchers found many social and ecological implications. Findings indicated that art elements within yards made public statements about the environment, socioeconomic class, and homeowners' identities.

Residents' narratives critiquing their own yard art and neighbors' yard art showed strong opinions about yard appearances. Through these narratives, Lai and Ball (2002) presented evidence that yard appearances were interpreted as symbols of social class. This evidence suggests investigation is warranted to determine how the public formulates and interprets social class symbols within yard-spaces.

While Lai and Ball (2002) noted the importance of seeking out artworks that are special within certain places or contexts, the researchers did not suggest investigating the surrounding sites. By extending this study beyond yard art to include yard-spaces, more information could be revealed about interpretations of social class symbols, hegemonic practices, and artistic decision-making processes. Exploring yard-spaces through place-based art education models could educate students and community members about the social implications of these spaces.

Powell's (2010) research focused on art teachers' and students' experiences within a place-based art educational model. Working with university students, Powell co-taught a class that focused on students as visual ethnographers. The purpose of the study was to bring about change and awareness in a Panamanian neighborhood that was affected by urban renewal practices. Findings from the study indicated place-based art education helped to connect students to the community and the environment through repeated contact with local sites.

Recommendations suggested visual methods for student research of place could transfer to secondary and elementary classrooms. According to Powell (2010), "The school in which students are situated [and] the neighborhoods in which students live . . . are viable, rich places for study" (p. 52). These findings suggest that yard-spaces could be valuable sites for conducting research and connecting students to the environment through a place-based art education model.

The previous studies described educational models that support the investigation of yard-spaces as familiar sites of hegemonic practices with a potential to promote change. The following section will examine activities that take place within yard-spaces that have connections to art making and art education.

Yard-Care Activities/Art Connections

Within the field of art education, studies involving yards often focus on yard art, which can be described as decorative elements placed within yard-spaces (Bain, 2011; Evans-Cowley & Nasar, 2003; Lai & Ball, 2002). According to Evans-Cowley and Nasar, yard art decorations are "not normally considered artistic . . . [but do] reflect the beliefs and values of their owners" (p. 98). Yard-spaces may contain objects that are considered to be yard art, but these objects will not be the primary focus of this study. Instead the following discussion will approach yard-

spaces holistically as created spaces showing evidence of learned behaviors and aesthetic decision-making processes.

Bormann et al. (2001) suggested goals are needed to “provoke new thinking about the lawn and its connection to the larger environment . . . [and] . . . propose a new aesthetic approach to its design” (p. 91). The authors suggested informal avenues for educating the public in new approaches but failed to note that art education is the primary educational field that discusses aesthetic relationships (Freedman, 2003). No studies were found within the field of art education that view yard-spaces holistically; however, the following studies from the social and environmental sciences view yard-spaces holistically to assess social implications of aesthetic choices and actions.

The first study, Hirsch’s (2010) doctoral dissertation, assessed the amount of public support for pesticide use, investigated the role social values play in toleration of risks, and documented antagonistic relationships neighbors reported due to pesticide use. Findings indicated that aesthetic preference for a weed-free lawn was a significant factor in pesticide use, and social context was considered more important than perceived risks. Supported by the findings of Feagan and Ripmeester (1999; 2001) and Robbins and Birkenholtz (2003), Hirsch found that “neighbourhood norms encourage mutually reinforcing behavior in order to achieve common aesthetic ideals and to avoid conflict” (p. 73). This finding suggests that further research of yard-spaces is needed to understand how aesthetic ideals and norms are established and reinforced to foster changes in behaviors.

Another study, von Trapp’s (2010) thesis, also focused on environmental issues and behaviors in yards and reported similar findings to Hirsch’s (2010) study. von Trapp’s study examined the driving factors of lawn care activities, focusing on lawn watering. Multiple

influences on residents' actions were noted, such as cultural expectations, neighborhood relationships, and household preferences. One key finding indicated that a green aesthetic for weed-free lawns was a driving factor for lawn care activities. Further research on yard-spaces is needed to uncover the reasons this green aesthetic is perpetuated.

The final study, Kosek's (2004) doctoral dissertation, compared perceptions of landscape attractiveness between environmental group members and non-members. The purpose of this study was to determine if patches of indigenous vegetation within residential landscapes were perceived as attractive. Goals of the study were to influence sustainable landscape design choices. A key finding indicated that environmental group members found designs with patches more attractive than non-members. This finding suggests that education about environmental issues may have an effect on the aesthetic preferences for landscape appearances

All three studies indicated a need for further research that investigates preferences for certain aesthetic appearances. These studies failed to note that aesthetic choices are often learned behaviors and that learning about non-conformist aesthetic choices could promote understanding of current hegemonic practices (Duncum, 1999; McWilliam, 2008).

Investigation of yard-space appearances could fulfill the need for research of aesthetic preferences and learned behaviors. Through examination of the reasons homeowners create different types of yard-spaces, students might understand the design and aesthetic choices for their own yard-spaces. By comparing their own yard-space appearances to their neighbors' yards, students might become aware of the existence of social norms. Through investigation of environmentally harmful yard-care activities enacted to create yard-space appearances that are deemed social normal, students could become more aware of the effects taken for granted activities have on the environment. By creating art that involves design choices and

communication of environmental messages, students might develop ecological and social consciousness. These ideas were the impetus for developing an environmental art curriculum that explored students' aesthetic preferences in hopes of encouraging students' ecological and social consciousness.

The following section concludes this review with a summary of key points from existing literature pertaining to the research of yard-spaces as sites of hegemonic perspectives and practices.

Summary of Chapter 2

Due to the changing role of art education to include local social and environmental issues, investigation of yard-spaces within an art education curriculum could challenge students' views of familiar spaces and issues. Although few research studies have investigated the implications of hegemonic practices within yard-spaces, pertinent literature revealed the following key points:

- Yard-spaces contain symbols of social values that are viewed and interpreted by the public. These interpretations influence judgments made about homeowners' social status (Lai & Ball, 2002).
- Neighborhood norms reinforce harmful environmental practices (Hirsch, 2010).
- New thinking about yard-space appearances and connections to the environment is needed (Bormann et al., 2001).
- Art making and aesthetic experiences that take place in natural environments increase self-awareness and concern for the environment (Gargarella & Prettyman, n.d.; McWilliam, 2008; Neperud, 1997; Song, 2009; Upitis, 2009).

- Ideas about the environment can change through art making and aesthetic experiences, and these experiences are motivational in creating changes in practices (Blandy et al., 1998; Garoian, 1998; McWilliam, 2008). These findings indicate that art education pedagogy that includes environmental aesthetic experiences encourages students to identify, challenge, and change detrimental practices.

Based on these findings, examining homeowners' reasons for aesthetic choices in their yard-spaces could reinforce the need for educating students about environmental aesthetics. Homeowners' lack of awareness about environmental aesthetic choices could pinpoint areas to target in an environmental art curriculum. A curriculum involving art making and aesthetic experiences within students' yard-spaces has the potential to increase self-awareness and concern for the environment and motivate students to make changes. Findings from this research study describing homeowners' interviews and students' experiences within such a curriculum appear in Chapter Four. The next chapter outlines the research design and data collection methodology for this yard-space research study.

CHAPTER 3

METHODOLOGY

The purpose of this two-phase study utilizing a qualitative research design was two-fold. The first purpose was to examine Midwestern non-urban homeowners' aesthetic choices in their yard-spaces and to explore the educational experiences that influenced these decisions. The second purpose was to investigate the influence of a place-based art education curriculum on fifth-grade students' ability to interpret visual messages communicated by yard-space appearances. It was hoped that homeowners' gaps in environmental art knowledge concerning yard-space design could be addressed through curriculum instruction to fifth grade students in an effort to raise students' environmental and social consciousness.

In seeking to understand influences on homeowners' knowledge base and effects of a place-based art curriculum on fifth-grade students' environmental concern, this study addressed three research questions and one sub-question.

1. What classroom-based educational experiences influence Midwestern non-urban homeowners' decisions for their yard-space appearances with respect to aesthetic choices, symbolic meaning, functionality, and environmental concern?
2. What other educational experiences influence Midwestern non-urban homeowners' decisions for creating their yard-space appearances?

This chapter opens with a rationale supporting the qualitative research design of this study. Rationales for narrative inquiry methodology with branches of multiple case study and action research methodologies are covered in the next sections. Following the descriptions of methodologies, the two phases of this study are discussed in separate sections. Each section covers participants and location of data, description of data and data collection procedures, and data analysis procedures. Discussion of quality measures for this study is followed by a summary of this methodology chapter.

The first section provides a rationale for qualitative research as an appropriate design for this study.

Rationale for Qualitative Research Design

In describing the perspective of qualitative research, Savin-Baden and Major (2013) stated, “Qualitative researchers focus on understanding people and their circumstances, and they consider how people see the world and make meaning of it” (p. 12). Through a qualitative approach, this study focused on understanding homeowners and students’ attitudes about yard-space appearances and the perceived meanings viewers believed yard-spaces communicated. O’Toole (2010) notes that “researchers can make sense of the physical environment in terms of unpacking elements of organizational culture” (p. 121). This study attempted to make sense of yard-space environments by deconstructing cultural meanings associated with yard-space elements.

The research design for this study uses qualitative methodology involving two phases of data collection. As Bogdan and Biklen (2003) noted, qualitative research involves “actual settings as direct sources of data” (p. 4) because actions are best understood within the context in

which they occur. In Phase I, homeowners' decisions for creating their yard-space appearances were investigated on site to access direct sources of data. In Phase II, research was conducted within the art classroom, the actual setting in which student learning occurred.

According to Bloomberg and Volpe (2012), qualitative research allows the researcher to “enter the world of others and attempt to achieve a holistic rather than a reductionist understanding” (p. 118). In Phase I, entering homeowners' environments and examining the narratives they shared revealed a holistic portrait of each homeowner. For Phase II, observing students' viewpoints and reactions to course content through multiple data collection strategies allowed a rounded picture of the researched class to emerge.

The following sections discuss methodologies used in this qualitative research study. See Figure 2 for the structure of the overall research design.

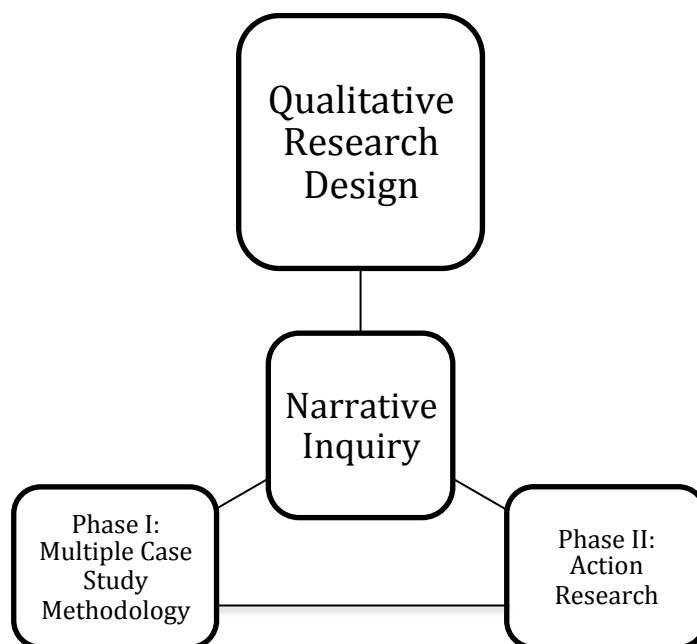


Figure 2: Research design and methodologies

Rationale for Narrative Inquiry

This study investigated the reasons people choose certain yard-space appearances and the experiences that influence their decision-making processes. A focus on lived experiences led to participants sharing their experiences through narrative, creating meaning through rich and complex stories of their lives. Clandinin and Connelly (2000) explained that narrative becomes “a way of understanding experience. . . . People live stories, and in the telling of these stories, reaffirm them, modify them, and create new ones. Stories lived and told educate the self and others” (p. xxvi).

Savin-Baden and Major (2013) describe the narrative approach as “the way in which researchers conceive, capture, and convey the stories and experiences of individuals” (p. 231). Based on narrative theory, narrative approaches reveal how people learn through sharing life experiences, making meaning from the experiences, and constructing knowledge through sharing the meaning of their lived experiences (Dewey, 1934; Geertz, 1973). In this study, sharing homeowners’ stories also helped students make meaning about homeowners’ perspectives and their reasons for creating certain yard-space appearances.

Reissman (2008) identified two areas of narrative inquiry that apply to this study: Narratives invite the audience to enter the perspectives of the narrator and “mobilize others into action for progressive social change” (p. 9). By investigating and reporting participants’ experiences through a narrative approach, the reader may enter into the story and determine the credibility of suggested connections between participants’ perspectives and social issues. Understanding social situations through story encourages exploration of both factual and nuanced emotional factors. Therefore, thick description (Geertz, 1973) was used to thoroughly

describe participants and their situations in an effort to include emotional qualities associated with responses.

As an umbrella methodology for this study, two other methodologies branched out under narrative inquiry to address the research questions related to each phase.

Rationale for Phase I Multiple Case Study Methodology

Phase I used phenomenological multiple case study methodology examining influences on homeowners' aesthetic choices for yard-space appearances. According to Yin (2009), the scope of the case study allows researchers to investigate "contemporary phenomena in depth and within its real-life context, especially when the boundaries between phenomena and context are not clearly evident" (p. 18). Given that boundaries between yard-space appearances and their communicated messages are not always clearly evident, a multiple case study design allowed in-depth examination of yard-space phenomena and the contexts in which visual messages are communicated.

Stake (1995) described the case study as "an opportunity to see what others have not yet seen, to reflect the uniqueness of our own lives, to engage the best of our interpretive powers" (p. 136). Given that this study investigated unseen influences on each homeowner's unique lived experience, multiple case study methodology provided an appropriate approach for investigating and interpreting homeowners' yard-space environments and cultural meanings associated with the spaces.

To apply information learned from homeowners' narratives in Phase I to teaching strategies for Phase II, a curriculum was developed and taught to fifth grade students through action research.

Rationale for Phase II Action Research Methodology

The lack of K-12 environmental art instruction reported by homeowners in Phase I influenced curriculum content for the second phase of this study. The place-based environmental art curriculum taught to students in Phase II of this study was implemented through action research methodology as a means of transforming students' environmental and social consciousness through art learning. Action research methodology was chosen as a model for examining and transforming normative teaching practices focused on in-school settings. Denzin and Lincoln (2005) stated, "Action researchers literally help transform inquiry into praxis . . . practical, reflective, pragmatic action – directed to solving problems in the world" (p. 34). For this study, inquiry into homeowners' reasons for creating their yard-spaces was transformed into classroom practice addressing environmental problems associated with yard-space design. By involving students' own yard-spaces as part of the inquiry process, my teaching practice was extended beyond the school walls to connect with local environmental issues.

According to Savin-Baden and Major (2013), action research requires "participants be empowered and stresses the importance of leading social change" (p. 245). The authors suggested using action research when researchers "want to examine a practical situation, make a change, and explore the consequences of that change" (p. 245). Given that the purpose of the environmental art curriculum is to empower students to become more environmentally aware, action research was an appropriate methodology for Phase II of this study. By transforming my teaching practice to include the examination of local environmental issues, I became part of the process of examining and implementing change. Through curriculum participation, both teacher and students explored practical solutions to harmful yard-care activities, envisioned making

environmentally beneficial changes, and discussed the reasons these changes would benefit the environment.

To understand the connections of methodology to data collection, each phase of this study will be discussed separately in the following sections.

Phase I Participants and Location of Data

To address Research Questions One and Two, homeowners with different types of yard-spaces were sought out and approached for interviews. Mertens (2009) described convenience sampling as choosing participants for a study from persons who are readily available. Through observation, several yard-spaces were researcher-identified as fitting the criteria for this study. Convenience sampling was used to choose participants from this pool who were readily available for interviews. These participants were chosen from non-urban areas within 25 miles of the Midwestern school district chosen for Phase II of this study. Close proximity to the school district increased the likelihood that Phase II student participants would be familiar with Phase I participants' types of yard-space appearances. Familiarity created connections between the two phases and helped to foster a connection to place. The distance from large urban areas and the researcher's personal familiarity with this non-urban location aided in locating participants that fit the criteria for this study. All of the sites were situated within rural areas or were close to symbolic identifiers of rural areas such as farm fields, although suburban sprawl appeared to be rapidly encroaching on some sites. It was hoped that homeowners residing at least 25 miles from urban areas would self-identify with non-urban living practices.

During the first interview, one of the participant's recommended his friend and advisor for participation in this study. Mertens (2009) described snowball sampling as the use of

knowledgeable key informants' recommendations to identify other people who may be knowledgeable about the topic being explored. Because the person who was recommended fit the criteria of the study, snowball sampling was used to identify and choose one of the participants.

Case-study participants were chosen from the initial observed yard-spaces through stratified purposeful sampling. Mertens (2009) described this sampling method as “a combination of sampling strategies such that subgroups are chosen based on specified criteria, and a sample of cases is then selected within those strata” (p. 263). In this case, three subgroups were formed: mostly natural yard-spaces; a combination of natural and controlled yard-spaces; and mostly controlled and ordered yard-spaces. Participants who create different types of yard-spaces were chosen to illuminate different perspectives homeowners have in making aesthetic choices. Two participants were chosen from each subgroup for a total target number of six participants. By choosing two participants from each subgroup, similarities and differences within and across categories could be compared.

The determining factor for identifying yard-spaces that fit within different subgroup categories was the researcher's visual comparison of spaces. The first subgroup included two non-urban homeowners who make few changes to the natural areas of their yard-spaces. For this study, natural areas were identified as areas that have a similar appearance to undeveloped land near yard-space sites, such as uncultivated fields and roadside ditches. The second subgroup included two non-urban homeowners who have an almost equal amount of natural and controlled areas within their yard-spaces. For this study, controlled areas were identified as areas that are manipulated by mowing or traditional formal gardening practices. The final subgroup included two non-urban homeowners who control the majority of their yard-space areas by mowing or formal gardening practices. Through stratified purposeful sampling, participants with different

yard-space appearances were chosen to engage in conversations about the reasons for their different choices and perspectives.

The Illinois Association of Realtors (National Association of Realtors, 2010) identified the average age for first-time homebuyers in Illinois as 30 years old. It was assumed that living in the same home for several years would increase the likelihood that homeowners had invested some time and thought into their yard-space appearances. Therefore, participants over the age of 35 were chosen for this study.

Given that the amount of land owned and the size of yard-spaces varied greatly between homeowners, only areas within one acre directly surrounding each home were investigated in this study. The rationale for this limitation was to focus on exterior spaces in close proximity to the homes and to keep the study size manageable. As O'Toole (2010) suggested, "by narrowing the researcher lens to an appropriately bounded range, the researcher can view phenomena in depth" (p. 121).

Participants who met criteria were contacted via face-to-face meetings, email, and telephone. A brief overview of the study was introduced, and then interview dates were scheduled. Participants were notified of their right to withdraw from the study at any time, were informed that all information would be kept confidential, and then signed consent forms indicating understanding of their rights as participants. Digital data was password protected, and physical data was kept in a secure location to ensure confidentiality. In discussion of findings and all other reporting, pseudonyms were used to protect the identities of participants.

The following section describes each participant's background information that informed their decisions in creating their yard-space appearances.

Participants

Interviews were conducted with six homeowners to gain insight into their thought processes for creating their yard-space appearances. In an effort to hear differing opinions on yard-space design, two homeowners were chosen from the following three categories: homeowners with natural yard-space appearances, homeowners with a combination of controlled and natural appearances, and homeowners with mostly controlled and ordered yard-spaces. Due to a lack of cultural diversity within the researched Midwestern area, all participants are Caucasian. The following section includes demographics and details of homeowners and their yard-spaces to paint a descriptive portrait of the participants in this study.

Ed



Figure 3: Ed's home.

At the time of our interview, Ed was 49 years old, had never married, and had no children. Ed claimed to have no background in art, but was interested in photography. His career as a self-employed structural engineer greatly influenced the design of his unique concrete house and yard-space. In 2000, Ed bought vacant farmland on a quiet gravel road surrounded by open fields and woodlands on three sides, approximately six miles from the nearest small city of 17,500 people. Ed completed construction of his home in 2006 and drew on his background in mechanical design and interest in environmental issues in planning the yard-space surrounding his home.

Located in a rural setting, Ed's yard-space was also unique to the area. While his closest neighbors had traditional mowed yard-spaces, Ed had planted native prairie plants and mostly native trees. A long gravel driveway bordered by tall plumed grasses and wildflowers led to Ed's house. Directly near the entrance to the house, Ed kept a small portion of his yard mowed. With very little area mowed and most of the yard-space supporting native prairie plant growth, Ed's yard-space is categorized in this study as a natural yard-space. The mostly natural landscape of Ed's yard-space had similarities to Kate's yard-space.

Kate

Figure 4: Kate's home.

Like Ed, Kate's yard-space had a mostly natural appearance with very few mowed areas, and there were no other similarly landscaped yard-spaces in the vicinity. Kate's nearest neighbor, her mother, had a traditionally mowed yard-space with very few plantings. At the time of our interview, Kate was 56 years old and had lived on her property for 18 years. Married with adult children and young grandchildren, Kate was eager to share the stories of planning and working on her yard-space.

Kate's property was approximately seven miles from the nearest small town of 7,600 people. While the setting was rural, a much-traveled highway bordered the front of her property. The thick vegetation in her front yard buffered the sound of passing traffic and mostly hid her house from view, even though it was only approximately 100 feet from the road. Tall native

prairie plants and small trees filled most of the yard-space, the only mowed areas being paths and a border area near the road. Amidst the tall grasses stood rustic birdhouses that were perched atop wood poles. Along the pathway leading to the house were rusted metal sculptures resembling spiders and many container planters fashioned from repurposed objects such as bathtubs and vintage school desks.



Figure 5: Kate's yard-space areas.

Although an interest in art led to her studying and obtaining certification to teach ceramics, Kate did not pursue a career in art. Self-identified as “artsy craftsy,” Kate felt her repurposed yard sculptures were an example of her creative self-expression. With an abundance of native plants and very few mowed areas, Kate's yard-space is categorized as a natural yard-

space in this study. While Kate and Ed maintained mostly natural yard-spaces, the following two homeowners had a combination of controlled and natural yard-spaces.

Andy



Figure 6: Andy's home.

During our interview, it was clear Andy had a fondness for nature, at times stopping mid-sentence to watch hummingbirds flitting around a feeder. At age 62, Andy had lived on his property for 17 years with his wife, Sue, and their three children. Now adults, his children continued to help with yard-care and contributed ideas for landscaping by drawing on learning from traditional landscape design classes. Although Andy had not taken landscape design classes, he had enjoyed college courses including formal art history and drawing. Andy said his interest in art and design began with drawing and modeling clay in his youth, but he wavered in deciding on how his art experiences may have influenced creation of his yard-space appearance.

Andy's property was situated on a quiet road in a rural setting, approximately six miles from the nearest small city of 17,500 people. His front yard had traditional plantings, including evergreen shrubs and annual flowers. Symbolic of her parents and childhood memories, Sue had placed a birdbath and garden globe statue within the front garden. The traditional areas gradually transitioned into drifts of native prairie plants. Mowed pathways meandered throughout the natural areas, with added details like a wooden bridge arching over a gully.

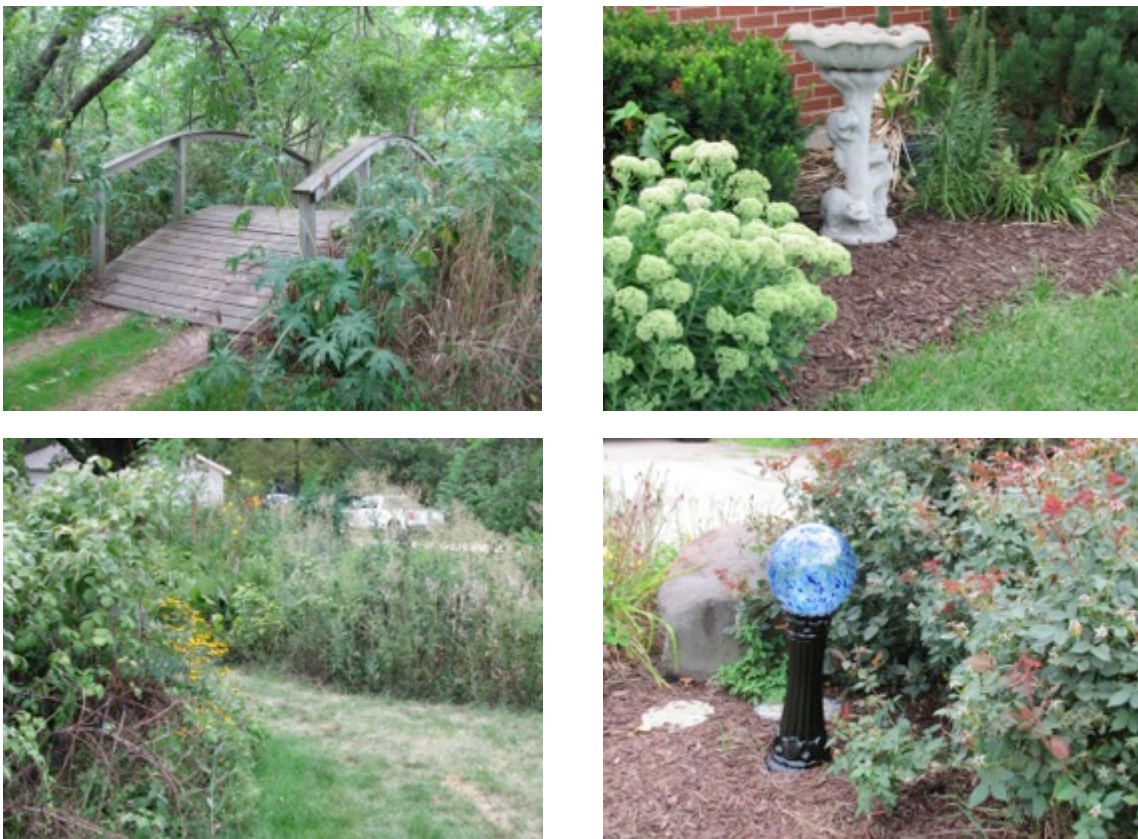


Figure 7: Andy's yard-space areas.

Andy described his occupation as ecological restoration. He had served as a consultant in the planning of Ed's yard-space, and Ed felt Andy's yard-space would be beneficial to this study due to the large amount of native plant species. While Andy had many acres containing a variety of different plant communities, the area in close proximity to his house was a combination of

traditional and natural areas. Andy explained how he had changed his yard-space design in recent years by adding traditional landscaping to his front yard in an effort to create a “neat appearance” near the entrance of his home.

With both traditionally landscaped and natural areas, Andy’s yard is categorized as a mixed area yard-space for this study. Although she had no annual flower plantings, Pamela’s yard-space shared commonalities with Andy’s yard-space by having a combination of controlled and natural spaces.

Pamela



Figure 8: Pamela’s home.

At 66 years old, Pamela had lived with her husband in their charming yellow farmhouse for 34 years, although it had been family-owned since 1850. Pamela was close to her adult

children who often visited the farm. She had seen many changes to the area and was saddened by the ways population growth was changing the appearance of the local area.

In a rural setting surrounded by open farmland, Pamela's property was merely five miles from the nearest rapidly growing village of 24,800 people. Differing from the other homeowners, Pamela's property was still rented out as a working farm. With farm machinery requiring access to outbuildings and entrance to the fields, Pamela kept several areas mowed. Other areas had a wild and natural appearance, with mature oak trees encompassed by tall feathery grasses. Pamela enjoyed walking through the natural areas of her yard, and mowed paths provided safe access throughout her yard-space.



Figure 9: Pamela's yard-space areas.

Pamela described her occupation as working for the county health department. With a focus on health and safety, her concern about the West Nile virus influenced her yard-space appearance. Although the area was experiencing a drought at the time of our interview, Pamela discussed the importance of eliminating areas of standing water. Otherwise, Pamela's focus was rooted firmly in the property's history, drawing on childhood memories to maintain her yard-space appearance as closely as possible to past appearances.



Figure 10: Pamela's yard-space areas.

It was evident that Pamela attached meaning to many of the visual elements of her yard. Pamela's husband and son were both artists, and she was proud that her former classmates considered her to be the best artist in her high school class. In discussing art, Pamela shared her opinions freely by saying, "I think a painting cannot tell you what kind of bugs are on that tree or what bird is sitting up there singing at you. As detailed as some of these renditions and paintings are, you have to read so much into them. To look at a tree, that's a piece of sculpture to me."

Pamela took an artistic view in describing many of the everyday objects on her property and from her past. To Pamela, walking sticks leaning against an oak tree and a plastic water bottle tossed at



Figure 11: Pamela's tree.

the base of the tree were symbols for her bond with an arborist who often came to help care for the trees. She considered the view of rocks and plants in her yard a work of art and the care taken to create objects an artistic process. “I think my mother was an artist,” she said, “in the way she canned pickles. It was artwork the way she combined the dill and the pickles. It was beautiful! Didn’t want to even open the jar up because it was so beautiful.”

Viewing her yard-space as an artistic creation, a container of memories, and a functional area for farming inspired Pamela to create a combination of controlled and natural areas in her yard-space. For these reasons, Pamela’s yard-space is categorized in this study as a mixed area yard-space. Differing from Andy and Pamela, the following homeowners chose to create yard-spaces with mostly controlled and ordered landscape designs.

Ellie



Figure 12: Ellie’s home.

At first, seeking out homeowners with mostly controlled and ordered yard-spaces proved to be a more difficult task than finding participants with other types of yard-spaces. Prior to contacting Ellie, I approached two other homeowners who both declined interviews. They stated their lives were “too busy” and that they “had too much to get done” to meet for interviews. Through their verbal responses, homeowners with highly controlled yards indicated they lived busy lives and observation supported the fact that many hours of labor were necessary to create and maintain their yard-spaces.

At first, Ellie appeared a bit guarded, politely declining to be interviewed by saying she “had too much to take care of.” However, as we discussed our backgrounds, Ellie realized her husband had a connection as my former teacher, and then she agreed to an interview.

When asked her age, Ellie avoided a concrete number and replied that she was “over 60,” declining to narrow the age-range any further. She had grown up on the property and had moved back to the homestead in 1985 with her husband and daughter. Ellie appeared most confident in expressing her viewpoints when she was talking about working for a landscape business and her knowledge about purchasing and planting shrubs and trees.

In designing her yard-space, Ellie did not feel influenced by formal education learning experiences. When I asked if she had an art background, interest in art, or if she made art, she replied, “No, no, and no.” She did not feel her yard represented personal expression or anything about her creativity. Practical in nature, Ellie did not question her yard-care activities. While she would not consider alternative types of landscaping, she found enjoyment in riding the lawn mower and planting her flower gardens.



Figure 13: Ellie's yard-space areas.

At the front of Ellie's expansively mowed lawn, formal gardens symmetrically bordered the long paved driveway. The house was set back approximately 200 feet from a busy interstate highway. Although she was only five miles from the nearest small city of 17,500 people, Ellie lived in a rural setting, surrounded on all sides by farmed fields. In contrast to fields bordered by scrub bushes and native grasses, Ellie's property was neatly mowed and trimmed.

Trees and gardens were bordered with bricks or purchased black garden edging and hardwood mulch discouraged weeds from disturbing the orderly appearance. Due to the trimmed,

bordered, and managed appearance, Ellie's property is categorized in this study as a controlled and ordered yard-space. Like Ellie, Diana's yard-space was very controlled and ordered.

Diana



Figure 14: Diana's home.

Diana's property was located on the main street that passed through a small village of approximately 600 people, and the town had few operating businesses. Farmland bordered both edges of the town, which retained a quiet rural atmosphere.

Both Diana and her husband, Mitch, identified Diana as the decision-maker for their yard-space appearance. Diana was quite eager to share all the stories of planning her yard-space. Diana was 55 years old at the time of our interview and had resided in her home with her husband and children for 17 years. Now adults, her children had moved into homes of their own, but Diana often baby-sat her grandchildren in her home.

Although Diana did not speak about her current occupation, she acknowledged influence from working at a garden shop. She reported learning about shrubs from the owner, but she also felt he relied on her knowledge of flowering plants. While Diana had no formal art background, she reported an interest in making homemade cards for birthdays and anniversaries. She felt the personal touches she added to her cards were similar to the personal touches she added to her yard-space, describing these forms of creating as her self-expression.



Figure 15: Diana’s yard-space areas.

Diana’s personality was evident throughout her small yard-space in her choice and placement of sculptures and plants. The small areas of grass were neatly mowed around the gardens that were bordered by bricks or garden edging. While Mitch did the mowing, Diana joked, “I take his lawn by adding more plants, and he has nothing left to mow!”

Each plant and sculpture had meaning for Diana, as symbols of her identity, as tributes to family members, or as visual representations of childhood memories. With the majority of her yard containing mowed or carefully planned sculpture garden areas, Diana's yard is categorized in this study as a controlled and ordered yard-space.

Summary of Participants

Five of the six homeowners were welcoming and eager to talk about their yard-spaces. Ellie, with a highly controlled and ordered yard, had reservations about being interviewed. In this way, she shared similarities with two other homeowners with highly controlled and ordered yard-spaces who declined to be interviewed. Possible explanations for the reluctance could relate to homeowners' time constraints due to large amount of time dedicated to mowing, personal feelings about privacy, or introverted and reserved personalities.

While homeowners' receptivity toward the interview process varied, all six homeowners shared stories of planning and caring for their yard-spaces and connected these yard-space stories to the stories of their lives. The following section describes the data collected in Phase I and the procedures used in the data collection process.

Phase I Description of Data and Data Collection Procedures

Data were collected from three sources in the multiple case study design of Phase I, including observations/field notes, interviews, and visual data sources. According to Yin (2009), "a major strength of case study data collection is the opportunity to use many different sources of evidence" (p. 97). Multiple methods of data collection provide opportunities to compare findings between and across categories. Data collection strategies for this study are aligned with the

research questions to provide insight into educational experiences that influenced homeowners' decisions for creating their yard-space appearances. Although some data collection strategies overlap and were used multiple times, each technique is discussed separately in the following sub-sections. Criteria used to establish the quality of data collection strategies is discussed in the concluding Quality section. Table 2 connecting each data collection strategy with the corresponding data recording methods and participants/phenomena is followed by descriptions of each data collection process.

Table 2
Phase I Data Collection Strategies

Data Collection Strategy	Data Recording Method	Participants/ Phenomena
Researcher Observations	Field Notes and Photographs	Yard-Space Phenomena
Homeowner Observations	Photographs	Yard-Space Phenomena
Interviews	Field Notes and Audio/Videotapes	Six Homeowners

Observations

The first two data collection strategies focused on recording information about homeowners' yard-spaces, landscaping, and physical elements of the bounded yard-space area. Merriam (1998) noted, "an observer will notice things that have become routine to the participants themselves, things which may lead to understanding the context" (p. 88). Given that this study explores yard-spaces and yard-care activities that may be thought of as routine habits, observations were important strategies in understanding the contexts in which these habits occur.

Researcher observations occurred during visits to yard-space sites. Field notes recording yard-space observations and researcher impressions were noted during and immediately

following each interview. de Laine (2000) noted connections of field notes to basic analysis procedures and discussed the importance of integrating field notes with other methods of data collection. Integrating field notes with videotaped recordings and photography of yard-space sites allowed observations to be recorded in multiple ways. Recording yard-space phenomena with different methods allowed meanings to emerge from visual perceptions, verbal descriptions, and researcher-participant interactions (de Laine). Akeroyd (1991), Bogdan and Biklen (2003), and Creswell (2007) discussed the importance of field notes in recording relationships between participants' behaviors, beliefs, and opinions. Often written words or audio recordings alone do not capture these impressions. In an effort to record participants' views of their yard-space phenomena, participants' observations of areas they believed symbolized aesthetic choice, symbolic meaning, functionality, and environmental concern were pointed out by the participants and photographed by the researcher. After photographing the participant-directed phenomena, field notes were used to capture researcher impressions of participants and their yard-spaces. As suggested by Merriam (2009), field notes were made as soon as possible after observations and interviews to validate this recording method as a means of accurately describing situations and events.

Interviews

Hamilton and Corbett-Whittier (2013) noted the importance of interviews in providing a "much greater depth of understanding" (p. 104) and richness of data in case study research studies. According to Kvale and Brinkmann (2009), "the qualitative research interview attempts to understand the world from the subjects' points of view, to unfold the meaning of their experiences, to uncover their lived world prior to scientific explanations" (p. 1). Seidman (2013)

referred to these experiences as stories and explained, “Telling stories is essentially a meaning making process” (p. 7). In this study, interviews allowed participants to tell their stories in their own words and revealed more information than observation alone. As Patton (1980) explained, “We cannot observe how people have organized the world and the meanings they attach to what goes on in their world – we have to ask people questions about those things” (p. 196).

To explore participants’ feelings about their yard-spaces and the meanings they attach to the spaces, one in-depth semi-structured interview of each participant was conducted at each site. Merriam (2009) described this type of interview as being guided by certain questions but flexible in allowing the researcher to respond to emerging ideas. This type of interview was chosen to establish basic consistent questioning strategies across cases. See Appendix A for interview question list. Semi-structured interviews also allowed participants ample opportunity to discuss yard-space information that was personally important to them.

Visits to the sites occurred during late summer of 2012. This timeframe was chosen because of the assumption that homeowners had greater opportunities to manage yard-space appearances during the summer months due to the Midwestern summer growing season. Prior to the interview meeting, each participant received an overview of the study via email or face-to-face conversations along with a request to photograph participant-identified meaningful yard areas. Interviews were conducted after observing and photographing yard-spaces. Homeowners’ participation in visual data recording minimized “status differences . . . [by] doing away with the traditional hierarchical situation in interviewing” (Adler & Adler, 1994, p. 370). Approaching interviews with open-ended questions was another strategy for encouraging participants to reconstruct their experiences (Seidman, 2013). For these reasons, interviews were important

strategies for capturing each homeowner's personal viewpoint about the decisions made in creating the yard-space appearance.

In-depth interview questioning lasted approximately 45 minutes, exploring participants' background information, reasons for aesthetic choices, and influences they believed affected their choices. Merriam (1998) suggested that some unstructured time could be beneficial to a study "so that fresh insights and new information can emerge" (p. 74). To promote the sharing of new information, approximately 15 minutes before and after each interview were scheduled for unstructured conversation. This allowed participants time to discuss their yard-spaces and any background information they wished to relate.

Interviews were recorded using digital video and audiotape recorders. This method of data collection is discussed in the Visual Data section.

Visual Data

The framework for this study is supported by theories involving visual perception, including visual and material culture theories and semiotics. Research questions examine yard-space appearances and visually communicated messages. For these reasons, visual data collection is an important component of this study.

Two types of visual data were collected for Phase I, including digital photographs of yard-spaces and videotaped recordings of interviews.

Yard-Space Photographs

Research Question One investigated influences on homeowners' decisions for their yard-space appearances with respect to aesthetic choices, symbolic meaning, functionality and

environmental concern. In an effort to remain neutral during the photography process, homeowners were asked to choose the areas they felt represented the aesthetic choices, symbolic meanings, functionality, and environmental concern communicated by their yard-space appearances, and these areas were photographed. After digital photographs were taken, homeowners viewed the recorded images through the camera's playback mode to ensure the framed image matched their viewpoints. In this way, appearances recorded in the images were as closely representative of homeowners' intended meanings as possible. These photographs were also used to situate yard-space sites within the sub-group classifications of natural, combined area, or controlled appearances. Between ten and twenty representative photographs were taken at each site to encourage selectivity and thoughtful observation of yard-space phenomena.

Field notes described reasons for taking each photograph and documented meanings participants associated with photographed phenomena. By including participants in selecting phenomena to photograph, important connections participants felt about their yard-spaces were explored, and researcher biases were minimized. Approximately 20 minutes were spent in choosing and photographing yard-space phenomena.

Videotaped Recordings

All interviews for this study were recorded using a digital video recorder and/or an audio recorder. Gilham (2005) noted that audio recordings may miss subtle "paralinguistic features such as tone, pace, and emphasis that further qualify the actual words people are using" (p. 88) and proposed the use of video recording to reveal the contextual meaning of spoken words. Video recordings are also important to qualitative studies using a critical theory framework to show evidence that participants have been encouraged to share personal perspectives. Critical

theorists encourage investigation of underlying meanings by shifting power hierarchies and allowing multiple perspectives to be heard. As Davies (1999) explained, visual representations have “a greater power to convince. They are granted a greater degree of trust, thus confidence in their validity is normally attained more readily than in the validity of the written word” (p. 118). For these reasons, video recording is an appropriate data collection tool for this study investigating homeowners’ different perspectives on creating yard-space appearances.

The following section describes data analysis procedures used for Phase I of this study.

Phase I Data Analysis Procedures

Although data collection and data analysis are discussed in separate sections, analysis occurred in conjunction with the collection process (Merriam, 1998; Mertens, 2009; Tesch, 1990). Insights gleaned from analyzing data during the collection phase led to modifications of data collection strategies, such as allowing more unstructured time for participants to share their life experiences. The flexibility to modify collection and analysis strategies as the study unfolds is one reason qualitative research is appropriate for this interpretive study (Mertens, 2009).

Stake (1995) discussed the importance of differences between case studies and general qualitative research. He recognized the benefits of qualitative research to “tease out relationships, to probe issues, and to aggregate categorical data, but those ends are subordinate to understanding the case” (p. 77). To understand meanings of the data collected in this multiple case study phase, data analysis involved transcription and coding procedures.

Phase I Transcription Procedures

Video/audiotape recordings were transcribed to transfer oral portions of the interviews into written words. Kvale and Brinkmann (2009) noted some investigators' preferences "to do their own transcribing in order to secure the many details relevant to their specific analysis" (p.180). As researcher, I transcribed the data; therefore, impressions made during the interview were reaffirmed or discounted, using the transcription process as an instrument to validate initial impressions. As the tape was replayed, conversations were transcribed verbatim, including pauses and emotional expressions. As noted by Kvale and Brinkmann, such manners of speech may have key importance in understanding contextual meanings of what was said.

As themes emerged during the transcription process, sections containing emerging themes were labeled and identified by the videotape time record. Transcriptions were reviewed multiple times to verify complete recording. Themes were color coded for ease of recognition and to easily identify repetition of themes. Repetition of themes helped to identify commonalities among interviews and areas worthy of further investigation.

Kvale and Brinkmann (2009) stated, "There is no true, objective transformation from the oral to the written mode" (p. 186), and therefore, transcriptions cannot easily be validated. However, careful attention to detail, precise recording of conversations, and comparison of transcriptions with the video/audio tapes are all procedures that were used to ensure the quality of this instrument.

Phase I Coding Procedures

Miles and Huberman (1994) noted that an inherent problem with qualitative research is the large amount of data to be organized. To avoid data overload, the authors advocated “creating a provisional ‘start list’ of codes prior to fieldwork” (p. 58) that is based on the theoretical framework and research questions. This provisional list facilitates the development of coding labels that describe the meaning nested in words.

Saldana (2009) described his approach to data analysis as “pragmatic eclecticism” (p. 47), ensuring an open mind during initial stages of data analysis before the researcher determines which coding procedures will be used. He also suggested Affective Methods, including Values Coding, to identify themes relating to participants’ personal viewpoints. Saldana’s approach to coding includes first and second cycles to encourage adjustment of codes as themes emerge.

Pink (2006) recommends using reflexive analysis of visual data to remain aware of social constructions and personal/academic agendas that may influence interpretations of meaning. While it is important to be reflexive with all forms of data, a reflexive approach is particularly warranted for visual data. When visual data is translated to words and then words are analyzed, there is a danger of changing or misinterpreting meaning of the original format (Pink). Therefore, in this study, visual data was triangulated with meanings verbally suggested by informants and researcher insights recorded in field notes. Codes from transcripts and field notes were analyzed to determine if they also related to visual data. The following photograph, transcript excerpt, and researcher’s field notes excerpt exemplify three types of data collected to describe symbolic meaning associated with one interview (see Figure 16).

Transcription Excerpt:

I love that tree! The arborist takes very good care of it for me. He walks through with his dogs, so we want to make sure that everything is safe out there.

Researcher's Field Notes Excerpt:

The water bottles at the foot of the tree are interesting. I viewed them as trash and wondered why Pamela didn't pick them up (neatness/laziness?) She viewed them as symbols of the arborist, along with the walking sticks he used. She has a strong sense of nostalgia and keeping items in place "as they were" to help keep her memories alive through visual imagery. Nostalgia and safety concerns seem to be recurring themes for her.



Figure 16: Tree photograph for triangulation

Coding procedures used in this study were based on a combination of suggestions from the aforementioned sources.

- An initial (provisional) code list informed by the theoretical framework and research questions was developed for first cycle coding (Miles & Huberman, 1994).
- Affective Coding strategies were used, including Values Coding to identify participants' attitudes and perceptions. After first cycle coding, second cycle coding was used to form new categories and identify emerging themes (Saldana, 2009).
- Reflexive analysis of visual data was used to link meanings between visual data and other data sources (Pink, 2006).

Color-coding helped to identify and connect themes and categories. Table 3 connects each data collection strategy for Phase I with coding techniques and rationale for using the techniques. Table 3 identifies code acronyms in each list and the reasons these codes were chosen for Phase I first cycle coding.

Table 3

Phase I Coding Techniques

DATA COLLECTION METHOD	CODING PROCESSES/TECHNIQUES	RATIONALE
Observations/Field Notes	Initial List 1 and Values Codes 1	As a starting point, Initial List 1 focused on the purpose of the study. Values Codes identified meanings related to participants' attitudes and perceptions.
Photographs of Yard-Spaces	Reflexive Analysis, Initial List 1, and Values Codes 1	Reflexive Analysis is inductive and allows meanings to emerge. Initial List 1 offered guidance for coding researcher's observations and thoughts about visual data. Values Codes 1 identified meanings related to participants' attitudes and perceptions.
Video/Audiotape of Interviews	Visual Data: Reflexive Analysis, Initial List I, and Values Codes 1	
	Audio Transcriptions: Initial List I and Values Codes 1	While part of visual data, audio transcripts focused on the spoken word and were coded the same way as other textual data in Phase I.

Table 4

Phase I Codes for Data Analysis

LIST NAME	BASED ON	CODE NAME		CODE ACRONYM	
Initial List I	Miles and Huberman (1994) and Research Questions 1 and 2	Learning Resources	Formal Informal	RES	FORM INF
		Aesthetic Choice		AES	
		Symbolic Meaning		SYM	
		Functionality		FUNC	
		Environmental Concern		ENV	
Values List	Values Coding (Saldana, 2009): Participants' attitudes and perceptions	Values		VAL	
		Attitudes		ATT	
		Perceptions		PERC	

As first cycle coding transitioned into the second cycle, social themes emerged and became a connecting thread in each of the homeowner's narratives. Second cycle themes were compared and contrasted within and across categories, and then synthesized into integrated explanations in the findings. The overall approach was similar to Bloomberg and Volpe's (2012) three-layered process: examining threads and patterns in categories, noting emerging themes and

making comparisons across categories, and situating the themes within issues “raised by the broader literature” (p. 124).

While Phase I and Phase II were separate sections of this study, these phases were also connected in several ways. In Phase I, gaps in knowledge reported by homeowners revealed areas to explore with students through curriculum instruction in Phase II. Additionally, Phase I participants’ lack of environmental concern or awareness suggested a need for addressing environmental issues through curriculum instruction in Phase II. A third important connection between the two phases involved viewing of homeowners’ yard-space photographs. These visual examples were used to compare Phase I participants’ intended meanings with Phase II participants’ perceptions of communicated meanings.

For this study, “the most important site at which the meaning of an image will be made is not the author, or indeed the production of the image itself, but its audiences” (Rose, 2001, p. 23) and the meanings they make from viewing the image. Therefore, meanings homeowners associated with photographs of their yard-spaces were compared with Phase II student responses to the same photographs. These meanings are explored in the discussion chapter to note the meanings of similarities or differences in visual interpretations.

The next sub-section will discuss the location of data for Phase II.

Phase II Participants and Location of Data

To address Research Question Three and its sub-question, student participants were chosen using convenience sampling for Phase II of this study. Participants for Phase II were fifth grade students from the Midwestern non-urban elementary school where I taught during the 2012-2013 school year. Investigations of students’ personal yard-spaces were sites for learning

experiences outside of the classroom. The school and students have been assigned pseudonyms to insure confidentiality. Prior to the start of the curriculum intervention, parents received a consent form introducing the study and notifying them of their right to withdraw their children from the study at any time without penalty. During scheduled class time prior to the start of curriculum instruction, students were given student assent forms notifying them of their right to withdraw from the study at any time without penalty. Parents and students were informed that all information would be kept confidential using the same precautions identified in Phase I.

The following section presents the demographics of the student participants in this study.

Student Demographics

Twenty-one students (nine girls and twelve boys) participated in the Phase II action research part of this study implementing a place-based environmental art curriculum. The researched class was representative of the school and district in its lack of ethnic diversity. All but one student were parent-identified as Caucasian, with one student (Alicia) being parent-identified as Asian Pacific ethnicity. All of the students' parents owned their homes with yard-spaces and earned household incomes within the range of middle, upper-middle, or above middle-class level. Although some students did not share their viewpoints during class discussions, all of the students participated in art making and writing exercises.

In Table 5, students have been grouped into categories to provide understanding of their level of measured growth through written, verbal, and art making experiences. Learner characteristics that might have affected their willingness to participate in class discussions and their abilities to communicate their viewpoints through written or art making experiences are identified. Categories were formed based on analysis of researcher field notes, transcripts of

class discussions, observations of students during art making, and results of student art

evaluations. Definitions for each category include

Difficulty with writing: Written responses contained spelling and grammatical errors, which hindered communication of viewpoints.

Strong writing skills: Viewpoints were clearly communicated through thoughtfully written responses including full sentences and detailed observations.

Reluctant to participate: Little or no participation in class discussions.

Insightful participation: Participated and clearly communicated viewpoints during class discussions.

Skill difficulties: Difficulties in communicating ideas through artwork due to fine motor skills issues or lack of confidence in abilities.

Skill strengths: Clearly communicating ideas through artwork, manipulating materials and exploring art media with confidence.

Table 5

Student Characteristics

Student	Gender	Growth	Learner Characteristics					
			Written Responses		Class Discussions		Art Making	
			Difficulty with writing	Strong writing skills	Reluctant to participate	Insightful participation	Skill difficulties	Skill Strengths
Jan	F	High			X			X
Alicia	F	High		X		X		X
Mary	F	High		X	X			X
Casey	F	High		X		X		X
Martin	M	High		X		X		X
Wayne	M	High		X		X		X
Lisa	F	High		X		X		X
Collin	M	High		X	X			X
Nick	M	Medium			X			
Abby	F	Medium		X		X		X
Ken	M	Medium		X		X	X	
Robert	M	Medium	X			X	X	

Table continued on next page

Table 5 cont. from previous page

Elton	M	Medium						X
Rita	F	Medium		X		X		
Alan	M	Medium		X		X	X	
Randy	M	Medium	X		X			X
Dale	M	Medium	X				X	
Jennifer	F	Medium	X			X		X
Adam	M	Medium		X		X	X	
Kalvin	M	Low	X				X	
Ally	F	Low	X			X		

Student categories give insight for understanding students' willingness to participate in class discussions and also provide a more rounded picture of each student's writing and art making strengths or weaknesses. The following section describes data and data collection procedures related to student participation in Phase II of this research study.

Phase II Description of Data and Data Collection Procedures

A researcher-developed place-based art education curriculum was taught to the researched class of twenty-one fifth grade students. Information from Phase I interviews influenced the structure of the art curriculum by pinpointing areas of environmental art instruction that had not been experienced by homeowners from Phase I. Based on several environmental art education studies that reported promising results for raising students' environmental awareness (Gargarella & Prettyman, n. d.; McWilliam, 2008; Song, 2009; Uptis, 2009), the outline for this curriculum included classroom discussions about aesthetics, investigation and critical inquiry of students' own yard-spaces, investigation of environmental artists' works, creation of environmental art, and reflection about student experiences. Each lesson lasted one or more hours, and the curriculum was completed within approximately 12

hours over a 12-week timespan. It was hoped that participation in environmental art curricular activities would raise students' environmental and social consciousness, encouraging students to make environmentally beneficial choices in their lives. An overview of this curriculum is presented in the following section.

Environmental Art Curriculum Overview

This environmental art curriculum was implemented with three fifth-grade classes at the public elementary school in which I have taught for eleven years. The reasons for conducting research within my own teaching practice were discussed in the Bracketing the Researcher's Experience section in Chapter 1. Data were collected from one of three possible fifth-grade classes, chosen for two reasons: a close working relationship existed between the students' classroom teacher and myself; and there were more available art class meetings scheduled. The close working relationship helped determine which students might be forthcoming for personal interviews. More scheduled art class meetings than the other two classes meant students would receive more instruction time.

A variety of researcher-developed resources and activities were used in this environmental art curriculum, including pre- and post-questionnaires, PowerPoint presentations, classroom discussions, poetry writing, art making, and face-to-face interviews. Table 6 identifies the sequence of instruction, resources and activities, and purpose of each phase.

Table 6

Environmental Art Curriculum Sequence, Resources, and Purpose

Sequence	Timeframe	Resources and Activities	Purpose
Introduction	Day 1 Total: 1 hour	<i>Yard-Spaces and the Environment</i> pre-course questionnaire <i>Yard-Space Photographs Interpretation</i> worksheet <i>What is in a Yard?</i> PowerPoint Classroom discussion	Gauge environmental concept knowledge prior to instruction. Introduce different types of yard-spaces, reasons for creating different yard-spaces, and yard-care activities necessary to maintain the appearances. Introduce harmful environmental effects of certain yard-care activities. Identify students' personal yard-space types and yard-care activities used to maintain the appearances.
<i>Designing Environmental Changes in Personal Yard-Spaces</i>	Days 2-4 Total: 2 ½ hours	<i>Yard-Space Elements</i> PowerPoint <i>Your Yard and Clean Air and Benefits of Native Plants</i> handouts Art making by designing and painting yard-space alterations <i>Yard-Painting Reflection</i> worksheet	Promote examination of students' own yard-spaces, envisioning of environmental changes, practicing designing and painting skills, and reflecting on learning.
<i>Nature Arrangements Inspired by the Artwork of Andy Goldsworthy</i>	Days 4-6 Total: 2 hours	Goldsworthy video clip Classroom discussion Art making by arranging natural materials and poetry writing	Examine artists' use of natural materials and ways artwork can communicate environmental messages. Communicate environmental messages through artwork and poetry.
<i>Powerful Environmental Messages Inspired by Jenny Holzer's Truisms</i>	Days 6-7 Total: 1 ½ hours	Jenny Holzer video clip Classroom discussion Art making with natural materials	Build on previous lesson, introduce artist who communicates through text. Communicate environmental messages through artwork and text.

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Table 6 cont. from previous page

<i>Local Animal Research Inspired by the Artwork of Lynne Hull</i>	Days 8-11 Total: 4 hours	<i>Animal Shelter Art</i> PowerPoint Classroom discussion Art making of 2-D animal drawings and 3-D clay animal sculptures <i>Animal Research Project</i> worksheet	Introduce artist who works to protect animal species. Learn about one local animal to become informed about local environment. Develop 2-D and 3-D art making skills. Envision art habitats for researched animal and reflect on learning.
Final Day of Course	Day 12 Total: 1 hour	Critique of artwork Classroom discussion <i>Yard-Spaces End-of-Course Questionnaire</i> <i>Yard-Space Photographs Interpretation</i> worksheet	Gauge growth and learning that occurred during curriculum instruction.
End of Year	5 months after course completed (20 minutes)	<i>Yard-Spaces and the Environment</i> post-course questionnaire	Gauge retention of learning five months after curriculum completion and note changes in responses that indicate growth

An overview of the four art-making lessons is presented in the following section. For detailed lesson plans containing conceptual/cognitive and artistic skill objectives, see Appendix B.

Art-Making Lessons

The overarching goal of this lesson sequence was to challenge students' perceptions and attitudes about the visual appearances of yard-spaces. It was hoped students could develop understanding that by participating in hegemonic practices, views of appearances outside socially accepted norms often seem strange and not up to community standards. Through understanding, it was hoped that students could overcome preconceptions about yard-space appearances and

develop social and environmental consciousness, thereby communicating conscientious messages through their art making design choices.

Designing Environmental Changes in Personal Yard-Spaces. The first lesson in this curriculum connected ideas about yard-space appearances and environmental care with students' own yard-spaces. By realizing ways their own yard-space activities and design choices adhered to a collective norm, students could begin to envision alternative choices for the appearances. Reasons for controlling the environment and symbolic meaning of placing items within yard-spaces were explored. Students created altered appearances by attaching acetate overlays to photographs of their yard-spaces and used design, drawing, and painting skills to create environmentally beneficial landscapes.

Nature Arrangements Inspired by the Artwork of Andy Goldsworthy. Andy Goldsworthy is a British artist who creates site-specific art by manipulating natural materials available at each site (<http://www.appstate.edu/~gotschce/sculptor/biography.html>). Students viewed a video slide show of Goldsworthy's works and discussed how the use of design concepts in arranging natural materials draws attention to the environment. Students considered how yard-spaces, which also use design concepts, might draw attention through the placement of items or areas kept in a natural state. Issues of consumerism and waste associated with purchased art materials were compared with the environmental benefits of using natural materials. Using local natural materials, students designed tabletop arrangements approximately 9" x 12" in size, which students photographed with a digital camera. After viewing color digital photographs of their arrangements, students wrote poems to accompany their artwork and communicate environmental messages.

Powerful Environmental Messages Inspired by Jenny Holzer's Truisms. Jenny Holzer is an American conceptual artist who creates Truisms, textual messages that are intended to provoke a response in the viewer (<http://www.pbs.org/art21/artists/jenny-holzer>). Students viewed a video clip of Holzer talking about her work and discussed ways text can be incorporated in artwork to communicate messages. With the knowledge that the finished rock sculptures could be placed in their own yard-spaces, students made connections to the design choices homeowners from Phase I made in placement of items in their yard-spaces. Students considered the placement of text in unexpected places as a way to draw the viewer's attention to the message. As a class, students suggested short phrases that could communicate environmental messages. Scaffolding from the previous lesson and the use of natural materials in art making, students covered rocks with copies of their nature arrangement photographs. Each student chose an environmental text message to apply over the nature photograph, and then applied waterproof sealant as a protective finish.

Local Animal Research Inspired by the Artwork of Lynne Hull. Lynne Hull is an American eco-artist who creates animal habitat sculptures to shelter endangered animals (<http://eco-art.org>). Her artwork was used in this lesson to engage students in thinking about animal protection. Conflicting views expressed by the homeowners from Phase I about controlling or protecting the fauna in their yard-spaces prompted the development of this lesson. While students often learn about endangered species in faraway places, examining animals from their own locale helped students feel a more personal connection to their research. This integrated research project had been taught with the fifth grade teachers for the past five years, but adaptations were made in this curriculum to focus learning on environmental protection. Students began this lesson with their classroom teacher by choosing animals that were native to

the local environment, and then students conducted research to determine factual information about the animals. In the art room, students created realistic animal portraits by drawing life-sized representations of their animals. They completed their artwork using a variety of art media including oil crayons, paint, and colored pencils. Animals were cut out and students worked together to arrange the animals in a hallway mural habitat. To experience another medium, students also created their chosen animals in three-dimensional format using clay and glazes. After viewing a PowerPoint presentation about Hull's animal habitat art (Appendix C), students created sketches of backyard habitat sculptures that could protect the animals they researched.

Lessons Summary

These four art lessons were developed to connect homeowners' aesthetic choices for their yard-spaces with student learning experiences that examined visual appearances and promoted environmental awareness. Specifics of classroom discussions, student participation during each lesson, and art-making activities are presented in the findings sections.

Environmental Art Curriculum Data

Through curricular learning experiences, fifth-grade students investigated the reasons environmental aesthetic choices are made, examined beneficial and detrimental environmental practices, and learned how to make environmentally conscious aesthetic decisions. Anticipated outcomes included abilities to recognize environmentally conscious aesthetic decisions and detrimental environmental practices in different yard-space photographs, abilities to suggest changes for yard-space appearances that promote environmental care, and creation of artwork that communicates environmental concern within students' community.

Class discussions, students' artwork and written work, and student interviews produced data for Phase II, which were recorded through observations/field notes, surveys/worksheets, videotaped recordings, and digital photographs. Table 7 connecting research questions with each data collection strategy, participants, and corresponding instruments/tools is followed by descriptions of each data collection strategy.

Table 7

Phase II Data Collection Strategies

Research Question #3: In what ways can place-based art education change fifth-grade public school students' abilities to identify and analyze Midwestern non-urban homeowners' decisions for yard-space appearances?				
Research Sub-Question #3: How does place-based art education influence fifth-grade public school students' attitudes, perceptions, and aesthetic choices for art-making activities within non-urban yard-spaces?				
Research Question	Data	Participants/Phenomena	Data Collection Strategy	Instruments/Tools
RQ and Sub-Question 3	Classroom activities	All students	Observations	Field Notes
			Videotaped Recordings	Transcriptions
RQ and Sub-Question 3	Students' written work	All students	Surveys/Worksheets	Pre-and Post-Questionnaires Yard-Painting Reflection Worksheets
				End-of-Course Questionnaire
				Pre-and Post-Photographs Interpretation Worksheets
				Yard-Painting Reflection Worksheets
Sub-Question 3	Students' artwork	All students	Visual Data	Photographs of Student Artwork
RQ and Sub-Question 3	Interviews	Two Students	Observations	Field Notes
			Videotaped Recordings	Transcriptions

Observations/Field Notes

Mertler (2006) described the process of self-reflection in action research by stating “this is where the teacher-researcher reviews what has been done, determines its effectiveness, and makes decisions about possible revisions for future implementations of the project” (p. 29). According to Creswell (2007), “Self-reflection contributes to the validation of the work” (p. 206). In this study, self-reflection was an ongoing process, which was enhanced by recording student and classroom observations with field notes. These field notes clarified connections between other data sources by recording impressions of classroom activities. Field notes also provided reference points for the discussion chapter evaluating the effectiveness of teaching practices, consideration of revisions, and validation of thinking processes.

While researcher impressions were recorded in field notes, data collection strategies for documenting students’ impressions included written surveys and worksheets. The following section describes these data collection strategies.

Questionnaires/Worksheets

Researcher-developed questionnaires and worksheets were used to monitor changes in students’ environmental attitudes and perceptions before and after participating in curriculum activities. According to Schmuck (1997), open-ended questions often reveal students’ thoughts and feelings, which the researcher may not have anticipated. For example, certain questions asked students to explain “Why or why not?” to encourage sharing of thoughts and feelings. Space in which students could write additional information was provided at the end of each

questionnaire and worksheet as another way to encourage sharing of ideas that might not have been anticipated by the researcher.

Pre- and Post-Questionnaire and End-of-Course Questionnaire. Students completed the *Yard-Spaces and the Environment* questionnaire (Appendix D) during the first class session prior to instruction about environmental issues. On the final day of curriculum participation, the *Yard-Spaces End-of-Course* questionnaire (Appendix E) was given to students to target reactions to and opinions about the course content. Five months after the final lesson, the pre-course *Yard-Spaces and the Environment* questionnaire was repeated to document changes in students' attitudes and perceptions and retention of learning. Prior to the start of the curriculum, three fifth-grade students outside of the sample group completed these questionnaires to gauge students' understandings of the questions before research participants completed the questionnaires. By testing the questionnaires before research began, changes could have been made to avoid potential misunderstandings.

McNiff and Whitehead (2005) suggested questionnaires can be useful "to get a sense of trends and perspectives" (p. 65) but cautioned against placing too much emphasis solely on questionnaires in gauging people's opinions. Therefore, this data collection technique was used in conjunction with worksheets to gain multiple perspectives and triangulate students' viewpoints.

Pre- and Post-Photographs Interpretation Worksheets. Nine photographs of Phase I participants' yard-spaces were arranged to create a pre- and post- *Yard-Space Photographs Interpretation Worksheet* (Appendix F). The purpose of the worksheet was to understand students' personal interpretations of visual messages communicated by various types of yard-spaces. During visits to Phase I yard-space sites, photographs were taken of the phenomena in

each yard-space. After visiting five sites, the *Yard-Space Photographs Interpretation Worksheet* was developed using images from each of the five yard-space sites. Due to time constraints, photographs of the sixth site were not available for inclusion in this worksheet.

Nine images were selected representing different characteristics of yard-space appearances. Images were labeled with letters A-I to avoid descriptive titles that could influence students' opinions. Students were asked to write an adjective describing characteristics of the homeowner and his or her yard-space under each photograph. A word list of adjectives accompanied the images as a writing prompt for students who struggled with idea development. A wide variety of adjectives was listed on the worksheet without assignments as "good" or "bad" values. This allowed students to draw on personal experiences and impressions in choosing adjectives without relying on predetermined values assigned by the worksheet. Space was available at the bottom of the worksheet for students to write additional impressions, observations, and interpretations of the images.

After completing the *Yard-Spaces and the Environment* questionnaire (Appendix D), students were given instructions for completing the *Yard-Space Photo Interpretation Worksheet* (Appendix F). Approximately 15 minutes of class time was allotted for viewing and writing personal impressions of the yard-space images. During the final lesson of this curriculum, the worksheet was given to students again to document any changes in perceptions that may have occurred during the course.

Three fifth-grade students from another elementary school completed the worksheet prior to administering it to the participants in this research. In this way, this worksheet was tested and determined to be an appropriate instrument for examining students' interpretations of visually communicated messages in yard-spaces prior to conducting research.

Yard-Painting Reflection Worksheet. After finishing the art-making portion of the first lesson, students completed a *Yard-Painting Reflection* worksheet (Appendix G) to reflect on art making and environmental learning. Mertler (2006) suggested that “teachers can gain a sense of students’ daily thoughts, perceptions, and experiences in the classroom” (p.99) through student reflective writing. To this end, students were asked to share thoughts about envisioning environmentally beneficial changes in their own yard-spaces. Creswell (2007) cautioned that some students might not be comfortable or be able to express their thoughts in written form. Therefore, multiple methods of communicating thoughts were used for this curriculum research, including written work, classroom discussion, personal interviews, and art making.

Videotaped Recordings

As in Phase I, videotape recordings were used as a data collection strategy for Phase II. Recordings were made during classroom discussions and student interviews to reveal meanings of spoken words. These recordings also served as evidence that students had been encouraged to relate personal perspectives and to increase the credibility of reported communications (Davies, 1999; Gilham, 2005). Additionally, McKernan (1996) stressed the importance of videotaped recording to reveal behaviors and interactions that may be missed by observation alone. By comparing multiple data points like videotaped recordings and observations through triangulation, understanding of participants’ meanings was broadened (Savin-Baden and Major, 2013).

Each lesson was recorded including class discussions, activities, and student interactions. By carrying the video camera, conversations were captured as I moved around the classroom. In

this way, an overall picture of classroom activities involving researcher and students was documented for ongoing analysis and interpretation.

Digital Photographs

Digital photography was used as a data collection method in three ways. First, students brought in photographs of their own yard-spaces to use in art making and to establish a personal connection to place. McKernan (1996) suggested student involvement in photography processes could be a motivational teaching tool. He noted that photographs can ground classroom discussion and should be linked to other forms of data. Therefore, student photographs were used to initiate classroom discussion about personal connections to yard-space appearances and to connect to other forms of data such as reflective writing.

The second photographic method used in this curriculum involved student art making. Given that one of the planned lessons involved creating temporary artworks, digital photographs captured the finished works before they were disassembled. These photographs then became artworks and copies were used as art elements in students' next lesson, establishing continuity between the lessons. Photographs of students' artwork were also displayed for critique on the final day of the course. As Pink (2006) suggested, viewing and discussing photographic displays offers another way of connecting visual and verbal knowledge.

Finally, digital photographs were used as a visual record of student-created artwork. In certain situations, photographs have the potential to record experiences, explore individual perceptions, and document creative collaboration (Pink, 2006). Each piece of student-created artwork was photographed after completion to connect with other classroom experiences.

Phase II Data Analysis Procedures

As in Phase I, data analysis procedures for Phase II were ongoing and occurred in conjunction with data collection (Merriam, 1998; Mertens, 2009). Working within the action research methodology of this phase, data was collected from multiple sources. The following sections describe the data analysis techniques used in this action research portion of the study including transcription, coding, and visual data analysis.

Phase II Transcription Procedures

Videotape recordings of classroom activities in Phase II curriculum instruction were transcribed using similar procedures previously discussed in Phase I, transferring oral communication into written words. Conversations were transcribed as the tape was replayed, and emerging themes were labeled and identified by the videotape's time record. Color-coding was used to identify repetition of themes, identifying commonalities within and across lessons of the curriculum.

Phase II Coding Procedures

Recorded observational data and transcriptions were analyzed using similar coding procedures previously discussed in the Phase I section of this study. Written notes and transcripts were closely examined, similarities and differences compared, and questions about the data constructed. Pre- and post-questionnaires and pre- and post-*Yard-Space Photographs Interpretation Worksheets* (Appendix F) were compared to note changes in students' attitudes and perceptions before and after curricular activities. Students reflected on art making through

the *Yard-Painting Reflection Worksheet* (Appendix G) and class critiques/discussions. These reflective sources were examined to identify main ideas and patterns. As in Phase I, emerging themes were coded into categories and appropriate data was entered in each category. See Table 8 for connections between data collection methods and coding techniques.

Table 8
Phase II Coding Techniques

DATA COLLECTION METHOD	CODING PROCESSES/TECHNIQUES	RATIONALE
Observations/Field Notes	Initial List 2 and Values Codes 2	As a starting point, Initial List 2 focused on purpose of study. Values Codes identified meanings related to participants' attitudes and perceptions.
Surveys and Worksheets	Initial List 2 and Values Codes 2	
Video/Audiotape Recordings	Visual Data: Reflexive Analysis, Initial List 2, and Values Codes 2	Reflexive Analysis is inductive and allows meanings to emerge. Initial List 2 offered guidance for coding researcher's observations and thoughts about visual data. Values Codes identified meanings related to participants' aesthetic choices, attitudes and perceptions.
	Audio Transcriptions: Initial List 2 and Values Codes 2	While part of visual data, audio transcripts focused on the spoken word and were coded in the same way as other textual data in Phase II.
Digital Photographs	Reflexive Analysis and Values List 2 and Environmental Concern	Coded similar to other visual data in Phase II with additional focus on communication of environmental concern

As in Phase I, an initial code list was developed for first cycle coding, based on the theoretical framework and research questions particular to this phase of the study (Miles & Huberman, 1994). These initial codes helped to identify students' views of others, their self-image and own activities, their views about art making, and expressions of environmental concern.

Values Coding, as described in Phase I, was also an important strategy used in Phase II. Students' feelings about aesthetic choices, attitudes, and perceptions were identified, assigned codes, and categorized. Second cycle coding was then used to compare and contrast categories and identify emerging themes (Saldana, 2009).

As in Phase I, reflexive analysis of visual data was used to connect visual data with other data sources (Pink, 2006). Reflexive analysis encouraged awareness of social constructions affecting students' responses and other influences on interpretations of meaning. See Table 9 for examples of codes used in the first coding cycle in Phase II.

Table 9

Phase II Codes for Data Analysis

LIST NAME	BASED ON	CODE NAME	CODE ACRONYM
Initial List 2	Miles and Huberman (1994), Research Question 3, and Sub-Question 3	Others	OTH
		Self	SEL
		Art Making	ART
		Environmental Concern	ENV
Values List 2	Values Coding (Saldana, 2009): Participants' attitudes and perceptions	Aesthetic Choices	AES
		Attitudes	ATT
		Perceptions	PERC

Visual Data Analysis

Visual data in Phase II includes videotape recordings of class activities and digital photographs of student work. Challenges of interpreting visual data for Phase I also existed with visual data analysis in Phase II. Critical analysis concerns outlined by Pink (2006) and Rose (2001) also informed visual analysis procedures in Phase II. Visual analysis procedures for each type of data are discussed in the following sub-sections.

Videotaped Recordings. Pink (2006) suggested that “visual logs and written transcripts provide easily accessible versions of the content of tapes, if they are also time coded, so that images can be easily located for reviewing” (p.136). Pink also noted that logs might be useful for analyzing subtleties in conversations.

Videotapes of classroom activities were transcribed to create written accounts of verbal conversations. Visual information was linked to other data in the study, including classroom and student interview transcriptions (Pink, 2006). These connections noted students’ attitudes, perceptions, and aesthetic choices, addressing research questions specific to Phase II. As themes emerged, coded data was categorized and compared within and between lessons for similarities or differences.

Digital Photographs. Digital photographs of student work served as visual records of classroom experiences, problem-solving solutions, and individual perceptions (Pink, 2006). Pink recommended a reflexive critical approach to analysis of photographs that does not rely solely on content. For this study, photographs of student work were examined along with student reflective writing, poetry, and verbal descriptions. In this way, student meaning of the work was considered, adding another perspective to researcher interpretations. Similarities or differences

between student work and across lessons were coded and categorized as themes emerged.

Researcher evaluations were compared with the evaluations of two other elementary art educators and one art educator from higher education to monitor accuracy of interpretations.

Analysis and synthesis of the collected data revealed key findings related to the research questions. Building on these findings, discussion, implications, and conclusions were formulated, as well as research-related recommendations. Throughout the research process, attention was focused on ethical considerations and ensuring quality. These issues are discussed in the following sections.

Ethical Considerations

Prior to beginning the research process IRB approval was obtained granting permission to conduct research with human subjects. To inform and protect participants, IRB guidelines were followed. Volunteer cooperation was ensured by informing participants of the right to withdraw from the study at any time without penalty. Obtaining signed consent forms ensured participants' understanding of these rights.

Names, significant identity factors, and characteristics describing organizations and institutions were kept confidential by assigning pseudonyms. To secure data containing participants' names and responses, cautionary measures were taken in the storage of research-related materials. Computer files were password protected and hard copies of data were stored in a secure location. Through these measures, the importance of protecting participants' confidentiality was established.

While ethical considerations were important guidelines for protecting participants' identities in this study, quality measures were important issues affecting the research process and product.

Quality

According to Savin-Baden and Major (2013), "literature abounds with debates about what quality is, how to recognize it, and what strategies to use to accomplish it when carrying out a study" (p. 469). The authors suggest asking three questions to develop a process for ensuring and documenting quality tailored to the specific research study, including "How do you view it? How will you (and others) know you accomplished it? What strategies will you use to ensure it" (p. 469)? Connections of these questions to this study are outlined in Table 10.

Table 10

Quality Considerations

Question	Approach	Rationale
How do you view quality?	Plausibility	Links knower and known. Truth negotiated through dialogue.
How will you (and others) know you accomplished quality?	Criticality	Showing an openness to possibilities
	Reflexivity	Showing awareness of social constructions
	Integrity	Interpretations grounded in data
What strategies will you use to ensure quality in the process?	Methodological Coherence	Connects research processes
	Member Checking	Matches interpretations with intended meaning
	Multiple Data Points	Establishes points for comparison
What strategies will you use to ensure quality in the product?	Researcher Positionality	Establishes role of researcher
	Dense Description	Provides sufficient information for reader's inspection

Considerations for ensuring quality will be discussed in the following sections describing core terminology, criteria for establishing quality, and strategies for ensuring quality.

Core Terminology

To express the researcher's philosophical view and the primary goal of hearing participants' multiple perspectives, plausibility was chosen as the core term for defining the quality of this study. Savin-Baden and Major (2013) stated, "*Plausibility* emphasizes the idea of ensuring quality with a reader, being compatible with the constructionism paradigm, which holds that the knower and the known are interlinked and truth is negotiated through dialogue" (p. 471). Given that the emphasis in this study is on interactions among participants, researcher, and the reader, plausibility serves as an overarching term for quality established through inspection of dialogue and interpretations. Several criteria were identified for determining the quality of this study.

Criteria for Establishing Quality

Criteria for establishing quality in this study refer to approaches taken during the research process. To this end, the following points established by Savin-Baden and Major (2013) served as "guides for researcher responsiveness" (p. 474).

- **Criticality:** With a theoretical framework based on critical theory, criticality was important during the research process to be aware of biases and to remain open to possibilities and alternative explanations.

- Reflexivity: As noted by Pink (2006), reflexivity as a concept encouraged the researcher to be aware of social constructions and maintain mindfulness toward personal or academic agendas that may have influenced interpretations of meaning.
- Integrity: One example of establishing researcher integrity was “by ensuring that interpretations are grounded within the data and reflected in the text” (Savin-Baden and Major, 2013, p. 475), thereby ensuring the quality of the research process. For this study, narrative inquiry methodology reported meanings through participants’ own words, allowing the reader to determine if the researcher’s conclusions were sound.

While these criteria ensure the quality during the research process, strategies were employed to ensure the quality of both the process and the product.

Strategies for Ensuring Quality

For this study, several strategies described by Savin-Baden and Major (2013) were used to ensure the quality of process.

- Methodological Coherence: By weaving a thread through and connecting research questions, methods, data, and analysis processes, coherence was established and served as a quality marker of the research process.
- Member Checking: Summaries of the findings were given to participants and feedback was requested to verify that the researcher’s interpretations matched participants’ intended meanings. In this way, the representational quality of the reporting process was verified.

- Multiple Data Points (Triangulation): By applying more than one theory, method, and data collection strategy, understanding of the subject was broadened by comparing and contrasting the differences.

Other strategies ensured the quality of the product.

- Researcher Positionality: As described in the Background and Context and Bracketing the Researcher's Experience sections in Chapter One, the researcher's positionality description established the researcher's role in creating the product. This allows the reader to determine if bias affected interpretations, thereby ensuring quality of the product.
- Dense Description of Methods, Context, and Findings: Dense description techniques provided sufficient information so that the reader is able to evaluate the research process and product and determine whether or not the findings are transferrable. For methods, descriptions of the various approaches were thoroughly described. For the context, information situating the research within the cultural contexts of Phase I homeowners' yard-spaces and Phase II students' classroom setting were described in depth. In the findings, dense description connected strings of data through the use of homeowners' and students' direct quotations.

The following section provides a summary of the content covered in this chapter.

Summary of Chapter 3

This chapter provided a description of the research methodology for this study.

Rationales for the qualitative research design and methodologies illustrated the appropriateness of methodology choices for each phase of this study. For both phases, criteria for choosing

participants and descriptions of the researched sites were followed by descriptions of specific data collected in each phase. Descriptions of data, collection procedures, and analysis procedures clarified the processes for managing large amounts of qualitative resources. Discussion of ethical considerations and quality measures concluded the chapter in an effort to portray thoughtful considerations that were applied throughout the research process.

The following chapter presents the findings that emerged from analysis of the data collected using this qualitative research design.

CHAPTER 4

FINDINGS

This study fulfilled two purposes. The first purpose of this study was to examine Midwestern non-urban homeowners' aesthetic choices in their yard-spaces and to explore the educational experiences that influenced those decisions. The second purpose was to investigate the influence of a place-based art education curriculum on fifth-grade students' ability to interpret visual messages communicated by yard-space appearances. Given two purposes, findings are reported in two separate sections. To identify findings from each phase, the letter "H" identifies findings related to homeowners in Phase I, and the letter "S" identifies findings related to students in Phase II. The first findings section addresses homeowners' choices and decisions and shows gaps in their formal learning background, establishing the need for environmental art classes within schools. The second findings section connects homeowners' responses to curriculum development and reports student growth related to that curriculum.

Phase I: Homeowners Findings

Research Questions 1 and 2 asked

1. What classroom-based educational experiences influence Midwestern non-urban homeowners' decisions for their yard-space appearances with respect to aesthetic choices, symbolic meaning, functionality, and environmental concern?

2. What other educational experiences influence Midwestern non-urban homeowners' decisions for creating their yard-space appearances?

Findings responded to Research Questions 1 and 2 by investigating homeowners' aesthetic and environmental choices and learning experiences. Separate sections that provide supporting evidence for each finding follow an overview of the findings. From in-depth interviews with six homeowners, three key findings emerged.

1. Homeowners had strong opinions about yard-space appearances and the social expectations connected to those appearances. Preconceptions, misunderstandings, and pressure to conform to social norms caused the majority of homeowners to experience social tension.
2. No formal K-12 classroom experiences informed homeowners' aesthetic choices and decision-making processes, and they sought out information on designing and maintaining their yard-space appearances through informal learning experiences. This gap in knowledge contributed to homeowners being influenced by informal learning experiences that were unpredictable as reliable resources.
3. All six homeowners participated in yard-care activities that had detrimental effects on the environment, as defined by the Environmental Protection Agency (EPA). One homeowner expressed no concern about harming the environment, while five homeowners expressed concern but felt their activities had minimal impact.

Findings are reported using "thick description" (Denzin & Lincoln, 2005), painting a vivid picture of homeowners' identities, their background experiences, and the yard-space appearances

they created. By reporting findings in a narrative manner, participants' different perspectives and the complexity of their situations are revealed. Through direct quotations from interview excerpts, confidence is established that interpretations accurately reflect the reality of each participant and situation (Bloomberg & Volpe, 2012).

In this first findings section, an opening paragraph introduces each finding, providing an overview of key elements to be presented. Following the overview, homeowners' direct quotations are presented as supportive documentation. Each finding concludes with a summary comparing and contrasting homeowners' responses on relevant issues. A summary of all three findings concludes the section about homeowners, synthesizing evidence that revealed homeowners' lack of formal education learning and establishing a need for environmental art classes in schools.

Homeowners Finding 1-H: Opinions About and Social Expectations for Appearances

The primary finding from the first phase of this study is that every homeowner expressed strong opinions about the aesthetic choices for yard-space appearances and the social expectations connected to yard-space appearances. This finding responded to Research Questions 1 and 2 by addressing non-classroom based influences that affected homeowners' aesthetic choices and environmental concern. Homeowners made aesthetic choices due to personal opinions that were often based on social expectations, and this became a recurring theme in all six interviews. Homeowners' opinions and judgments of yard-space appearances were also based on meanings they attached to visual cues. This is important because every type of yard-space appearance, including those that reflect social norms, communicated meaning to the homeowners about social expectations. One of the homeowners expressed curiosity about the

origins of social expectations for yard-spaces, but none of the homeowners openly acknowledged underlying societal pressures for conformity.

Parameters for social expectations in this finding covered three areas. First, homeowners discussed what they felt their aesthetic choices and yard-space appearances communicated to others. A wide variety of responses included pro-environmental stances, comfort and story telling, preferences for natural beauty, memories, and personal attributes of friendliness, hard work, and honesty. Second, homeowners discussed their perceptions of what others think of their yard-spaces. With the variety of yard-space appearances came a variety of responses including feeling misunderstood and the target of hostility, feelings that others would prefer to see neater mowed areas, and feelings of being admired or held in high regard. Finally, homeowners discussed their judgment of others' aesthetic choices for their yard-spaces. All six homeowners discussed or hinted at the tension between an individual's right to manage his or her yard-space according to personal wishes and the ways homeowners would really prefer others manage their yard-space appearances.

Homeowners' opinions and narratives about aesthetic choices and social expectations are organized in the following way: First, findings from homeowners with mostly natural yard-spaces are reported, followed by findings from homeowners with a combination of controlled and natural yard-spaces. Finally, findings from homeowners with mostly controlled and ordered yard-spaces are reported. Grouping homeowners' responses in this way clarified connections between and across categories.

Homeowners with Natural Yard-SpacesEd

Figure 17: Ed's native prairie yard-space.

What Ed Thinks His Yard-Space Communicates. His front yard a rolling sea of long tufted grasses entangled with colorful wildflowers, Ed admitted his yard-space appearance was rather unique and described it as “native prairie and restored woodland.” When asked to relate the message his yard-space communicated about him and his core values, Ed quickly responded, “That I’m pro-environment. And I’m green.” With a touch of sarcasm, he joked, “Isn’t that the new thing now, being green?” Switching to a serious tone, Ed continued. “But, you know, I had this whole native prairie yard going before the green movement started four or five years ago.” He paused and then added with a chuckle, “So, I’m ahead of my time!”

Applying current knowledge about environmental protection was important to Ed and influenced his aesthetic choices. “I’m into conservation. This used to be farmland, so I wanted to restore it to natural habitat for wildlife, and plant life, and mosquito life,” he laughed. “You’d be amazed at what’s out there. Pretty incredible. I love sitting out here in the evenings and watching

it. When a lot of the plants start to flower up, you see a lot more of the insects out there, it's really kind of cool to see that."

Beyond an appreciation for the appearance of native prairie, Ed felt it was important to keep his yard "as native to the area as possible." He said, "I wanted to make sure everything that was planted here was actually local genotypes so all the seed that was used for the plants here actually came from local plants. It wasn't shipped in from Wisconsin or Michigan; it was actually gathered from local forest preserves in the area."

Incorporating local plants into the design of yard-spaces had been slowly gaining popularity in recent years, but Ed's closest neighbors maintained a traditional mowed and controlled yard-space. Extreme differences of opinion on expectations for yard-space appearances caused tensions between Ed and his neighbor.

Ed's Perception of What Others Think of His Yard-Space. Speaking of the differences between his neighbors' yard-space appearance and his own, Ed confided, "I don't think there's anybody else around here that has a native prairie in their yard. In fact, the neighbors, when I planted it, they're all mad 'cause they thought it was just a bunch of weeds and they're still mad. They will always be mad, though, they're just like that." Although he recognized his neighbors' strong feelings about his yard, Ed did not feel pressured by their opinions to make changes to conform. "No way!" he stated vehemently. "If I did, it would be mowed. Everybody wants it mowed, but it's not."

Although Ed created his yard-space contrary to conventional norms, it was intentionally planned to promote environmental protection of native plants and animal species. His environmental concern fostered a strong connection to place. He described that connection as "your responsibility to take care of it and make it what you want it to be." When questioned if

that responsibility and sense of ownership affected his feelings toward his yard-space, he admitted, “Yea, I mean, you want it to look good.”

In comparing his own yard-space appearance to his neighbors’ yard, ideas about ownership and the responsibility to maintain a space that “looks good” made Ed pause. Recognizing the rights of individuals, Ed summarized his feelings. “I don’t care that he does what he does, but my neighbors’ opinion that I’m just growing weeds is what is weird. And I know for a fact that they are really upset about it, but I don’t care.”

Ed’s Judgment of Others’ Yard-Spaces. While Ed defended his yard-space appearance, he also had strong opinions about his neighbors’ aesthetic choices for his yard-space. “This guy next door, he’s got this 22-inch cut lawn mower, and he’s got five acres he mows, so he lives on his lawn mower. He’s out there every single day it seems like, he does the crisscross pattern.” Ed’s criticisms of his neighbors’ actions were connected to his strong pro-environmental stance. When asked how he thought others should care for their yard-spaces, Ed stated, “Well, I don’t care that he does what he does, but in general, people should not be mowing as much as they do. They should learn about the benefits of native prairie plants.”

Neighbors’ judgments and criticisms of his native prairie yard-space caused Ed to question the origins of society’s desire for mowed spaces. “Why do people even mow their lawns?” he asked. “I don’t get it. I mean, who cares if the grass is long? What difference does it make? The whole thing of spending money and burning fuel to cut grass . . . over the years, you think about it more and more, and why? Why mow the ditches? You know how much money is spent mowing ditches?” As a final thought on the subject, Ed speculated, “People just don’t understand. They don’t understand that there are weeds, and then there are native prairie plants, and I think that there is just a lack of education out there.”

Consideration of others' habits led to questions about possible changes for Ed's own yard-space. I asked Ed, if there were no obstacles, what he would do differently to the appearance of his yard. "Nothing," he replied. "I would keep it the way it is." He considered the small area directly around the house that was mowed, adding, "I don't know. I've got a half acre, maybe not even that much, around the house that's mowed and I've thought about stopping mowing. I think it would be cooler if the prairie came all the way up to the house."

Ed's responses revealed his aesthetic choice for native prairie landscaping directly related to his environmental concern. However, social norms for mowed yard-spaces in the surrounding area caused Ed's yard-space to have a unique appearance. Ed's aesthetic choice for a natural yard-space heightened his awareness of these social norms and caused him to question the reasons mowed yard-spaces were socially expected. Creating a yard-space outside the social norm caused tension between Ed and his neighbor with a traditionally landscaped yard-space. This tension appeared to relate to his neighbor's lack of understanding for Ed's native prairie aesthetic choice and the meanings the neighbor associated with yard-spaces that are not mowed. Ed felt his neighbors' viewpoints were due to a "lack of education." Although Ed recognized individuals' rights for mowed yard-spaces, he felt it would be environmentally beneficial for everyone to mow less and develop appreciation for native prairie appearances in yard-spaces.

While Ed's pro-environmental stance and desire for native prairie landscaping were unconventional in his area, Kate also spoke of those concepts as affecting her decision-making processes.

Kate

Figure 18: Kate's yard-space.

What Kate Thinks Her Yard-Space Communicates. Kate's prairie-style yard was created to fit in with nature and her "wilderness type house," which she affectionately called her "little house on the prairie." Environmental concern was the impetus for creating her yard-space appearance. Kate recounted, "The environment was probably the most influential thing, because I wanted to create a kind of little oasis. So many of our green areas are being developed or they are agriculture and they spray for insects and the herbicides and stuff. I wanted a little haven for stuff so it could live and exist."

Speaking about the initial creation of her yard-space, Kate said, "We built the house knowing that there could never be any houses on the other side of us because it's a flood plain. It would look silly if I had a perfectly manicured yard and then I had this overgrown swamp next to me. So, I kind of wanted to fit in with that." Having lived all her life in the same area, Kate stated, "For 56 years I have been here, and so I've seen it grow from very rural to not as rural. I kind of wanted to keep my little chunk of prairie here." To complement the prairie landscape, Kate collected cast off items and repurposed them as artwork in her yard. In her words, "I'm

concerned with repurposing and trying to make that as artistically interesting in my yard as I can.” Her eclectic mix of repurposed items and prairie plants created a unique yard-space appearance.

Kate was asked if she felt her aesthetic choices for her unique yard-space communicated something about her, her family, or her values. “Well,” she replied thoughtfully, “I guess that it communicates... I’m kind of loose, and comfortable, and I like to repurpose things. I like old things, so the older the better. They call me the rusty metal and the garbage lady because I’m always repurposing what I can. They call me if they are going to take a sink out or a toilet out or an old tub or something, ‘Yea, I want it! I want it! I want it!’” Kate laughed.

In addition to creating a comfortable appearance through repurposing, Kate also spoke of the importance of story. “My garden kind of explains myself, too, it’s loose, and it has old rusty things in it and it tells a story. I think that’s history, it can tell a tale then.” Connecting story with history, Kate continued. “I think back to the way it was a hundred or a hundred fifty years ago and the only mowing was done by a goat or sheep or a cow. The grass was used for a reason. It was food, it wasn’t pretty. And I just think we got away from that.” Kate summarized her thoughts by saying, “So, that’s why I chose what I chose. I let it do it’s own thing pretty much. I think we have to learn how to live with the environment rather than fight it.”

Living with the environment and creating a natural yard-space appearance was outside of conventional norms for Kate’s area. She spoke about her interactions with others and their reactions to her aesthetic choices for her yard-space.

Kate’s Perception of What Others Think of Her Yard-Space. When asked if she felt pressure to have her yard-space appearance conform to other people’s aesthetic ideals, Kate replied emphatically, “Nope! Not at all. My mom lives next door and she’s just fine with it.”

Kate added that passers-by had stopped to take photographs of her yard, but that she had never felt their actions were negative or judgmental. Kate's satisfaction with her own yard-space appearance prompted questions about her perceptions of other people's yard-spaces.

Kate's Judgment of Others' Yard-Spaces. In discussing other homeowners' yard-space appearances, Kate emphasized her own preferences while recognizing others' rights to differences of taste. "Actually, no, I have no opinion about others' yards. I see these well-manicured yards and lawns and think they're beautiful, but they're not me. I don't take away from the people that want to do that, I think that's wonderful, and if they want to do that with their yard, then that's fine." However, Kate also felt that homeowners could do more to help the environment, saying, "I think if everybody does a little something it would be better than nothing. People could be more conscientious." Balancing her desire for environmental protection with her recognition of individual rights, Kate explained why she tried to remain non-judgmental. "We just try to kind of get along with what we have and not stir up the pot too much."

When asked about making changes to her own yard-space, Kate stated, "I don't think I would do anything differently. I wish I had more time, that's mostly the thing, just more time." While Kate's yard-space had very few mowed areas, Kate admitted her husband did the mowing. "If it was up to me, I wouldn't mow anything." Her statement was indicative of the ways cohabitating couples negotiate the appearances and care of family yard-spaces.

Kate's aesthetic choice for native prairie landscaping related to her environmental concern and desire for a connection with nature. Unique in an area where mowed yard-spaces are the social norm, Kate reported no negative feedback or felt any tension between herself and her closest neighbor. She recognized individuals' rights to create traditionally mowed yard-spaces

and appreciated their aesthetic appeal, but Kate stated her preference was a yard-space that communicated comfort and told a story. Due to her environmental concern, Kate wished other homeowners would be more environmentally conscientious, but she preferred to be non-confrontational and let others make their own choices.

Homeowners with a Combination of Controlled and Natural Yard-Spaces

Ed and Kate described their yard-spaces as “native prairie” and “restored woodland.” While most of their yard-space areas appeared natural and uncontrolled, the following two homeowners’ yard-spaces had both controlled and natural areas.

Andy



Figure 19: Andy’s yard-space.

What Andy Thinks His Yard-Space Communicates. “Disheveled functionality” was the term Andy coined to describe his yard-space appearance. A mixture of both traditional landscaping and native plant communities, Andy said his yard-space was “a work in progress the whole 17 years we've been here. It looks a little wild, but that’s the way it can be I guess.

Disheveled, then wild, those can be interpreted, perceived as the same even though they're not the same. For now, it works fine for us.”

Andy felt the aesthetic choices for his yard-space communicated a message of being “prone to favor the natural beauty as opposed to created horticulture varieties.” The family’s preference for natural beauty was the impetus for creating “native plant communities away from the entrance of the house.” Sue, Andy’s wife, made decisions for the traditional landscaping, and Andy made decisions for the rest of the property by “using what was here and what is still here to represent the whole place.” Andy’s primary goal was ecological restoration, saying, “I am particularly focused on preserving, protecting and restoring flora and the fauna, the hummingbirds, and the natural beauties of our property here.”

To that end, Andy established different types of native plant communities throughout his property, from woodlands to marshes. He pointed to a small grouping of trees in his yard. “See those two oak trees there? Everything growing under them is either woodland or a savannah species that would grow under oaks in a natural setting and a natural area . . . same thing in the marsh, and on the woodland edge back there. I have taken out many weeds and non-native species and replaced them with native plants.”

Given the combination of both traditional and natural landscaping in his yard, Andy was asked if pressures from outside sources influenced his aesthetic choices for the creation of his yard-space appearance.

Andy’s Perception of What Others Think of His Yard-Space. “Ya know,” Andy confided, “the rest of the property here [the uncontrolled natural areas], we get a lot of compliments on it actually, even though it’s kind of clumpy and some people perceive it as weedy. A lot of people recognize it as, uh, it’s a park!” When asked if he thought this type of perception was changing,

Andy answered, “Yea, particularly more so as more and more people become aware of using native plants.” While Andy felt most of the feedback he received on his yard-space was positive, he still felt pressure to create a neat appearance. He admitted, “Once in awhile, like I don’t clean around the entrance to the house as often as I should, I think, oh! I should have done that yesterday.”

Andy’s ideas for presenting a neat appearance were repeated when he discussed his reasons for adding traditional landscaping near the entrance of his house. “We changed from the wild stuff to having it more traditional, it looked too weedy and, if you didn’t know any better, it looked like we just didn’t mow around the front of the house because of all the stuff. It was all native stuff, but that’s the way it grows, particularly in a garden setting. It tends to get tall and lop over, because it doesn’t have competition. So, we reversed course and put some of the front of the house into more traditional landscaping.”

Andy’s satisfaction with a combination of traditional and natural landscaping led to questions about his opinions of others’ yard-spaces.

Andy’s Judgment of Others’ Yard-Spaces. I asked Andy if he had an opinion on how others should care for their yards. He smiled and said, “Well, that’s an individual thing, isn’t it?” Pausing for a moment, he added, “ I think I would like to see, and I think it’s happening, that more and more people are aware or becoming aware that you can get a lovely effect in your landscaping using native plants and wildflowers as at least part of your landscaping, as opposed to everything being some import from Japan because it’s interesting and exotic or China or something like that. But, that’s something that’s an individual preference, although I think it’s changing a little now.”

When asked if he has had any experiences with people encroaching on personal space because of its appearance, he related this story. “A friend of ours has a neighbor that mows the field in between their two houses because our friend doesn’t mow it. It’s not the neighbor’s property, but he mows it because he likes to see a mowed thing around it. So, some people have that perspective, but not me.” I asked if Andy felt others should have the right to do what they want with their own yard-space and he agreed. “Except,” he added, “I kind of hate to see a lot of junk sitting around. It was here when we came in, junk looks like junk, whereas my yard might look weedy to some people, but I know what it is.”

When questioned about yard-space expectations, Andy suggested that most people have a common desire for the aesthetic appearance of orderliness and neatness. He stressed his dislike for an unkempt appearance, saying, “Pretty much everybody knows what a junky abandoned unkempt yard looks like.” Andy’s desire for a neat yard-space aesthetic was repeated when he spoke of possible changes he would consider if there were no obstacles. “I’d just keep everything a little neater, a little more trimmed, trim up the rough edges.” However, Andy did not consider mowed yard-spaces to be a symbol of neatness. “If it were just me here,” he said, “I’d have less mowed area. I’d still have some, like the buffered areas around the gardens.”

Although Andy’s aesthetic choices for his yard-space included both natural and traditional areas, he felt the message his yard-space communicated was a desire for ecological restoration and preservation of natural beauty. Andy received mostly positive feedback about the natural areas of his yard-space but still felt pressure to create a neat appearance. Like Ed, Andy felt people often did not understand the appearance of native prairie plant growth and perceived those areas as unkempt and weedy. While Ed was adamant about keeping the natural appearance

of his yard, Andy's belief that others misunderstood his yard-space appearance was one reason he changed the garden area at the front of his house to convey a more traditional neat aesthetic.

To promote ecological restoration, Andy would like people to use more native plants in their landscaping. He recognized the rights of individuals to showcase their personal tastes in their aesthetic choice for their yard-space appearances but did not like yard-spaces he perceived as "junky" or "unkempt." Environmental concern and desire for a socially acceptable neat appearance influenced Andy to create a yard-space with both controlled and natural areas, similar in appearance to Pamela's yard-space.

Pamela



Figure 20: Pamela's yard-space.

What Pamela Thinks Her Yard-Space Communicates. "Controlled chaos," Pamela laughed, when asked her to describe her yard-space. A mixture of mowed and natural areas, Pamela discussed her thoughts on creating that type of appearance. "We leave it alone. This is pretty much the way it was when I came. We selected areas that we wanted mowed, the rest of it was really wild."

Pamela had always lived in the Midwestern area and was “the third generation since 1850” living on her family’s property. Connection to place influenced the aesthetic choices for her yard-space. That strong connection was evident as she spoke about the meaningful messages she felt her yard-space communicated. “There’s a memory everywhere,” she explained. “Every leaf, every acorn... everything has a memory to me or an association.”

Memories and a concern for the local environment were the main reasons Pamela left many areas of her yard-space in a natural state. “The local environment is probably the most critical factor for leaving it the way it is,” she said. Several years earlier, a new housing development broke ground in a field adjacent to her property. The construction disturbed the local animal population and caused many animals to seek new habitats. “These lots that back up to our, how do I explain... well our environment that housed some unique species, they’re gone, they never will be back, and that really upsets me.”

Because of a ten-year drought and groundwater issues, Pamela was also concerned with water conservation. “Our trees are dying. Everything you look at will not be there in the next five years. I think we’re losing over half of our large trees, and that to me is just heartbreaking. I feel so bad when it’s so dry now. You don’t hear a tree scream or cry for water, but I feel it. It’s not a cartoon where it pulls up the roots and walks somewhere for water. It’s a terrible thing that any plant has to suffer. That’s why we tried to maintain what’s been here before because we’re losing it so quickly. Having see that happen, having been victims of that here, it’s really horrible.”

While Pamela left much of her yard-space uncontrolled and natural because of her concern for native animals and plants, she mowed other areas because of her concern for people’s health and welfare. “Although we minimized the mowing in the back, we do keep areas cut low because we have equipment that comes in and out. This is still a working farm so we try

to maintain areas that semi trucks, the large tractors, and combines navigate easily. We want to make sure that everything is safe out there.”

Related to safety, Pamela thought about insects and the diseases they may spread. Working for the county health department caused Pamela to be concerned about mosquitos that carry the West Nile virus. Certain areas, “primarily close to the house” were mowed “to keep mosquitos down.”

Pamela’s aesthetic choices for her yard-space, a mixture of natural and mowed areas, contrasted sharply with her nearest neighbors’ precisely manicured yard-space. Expectations for yard-space appearances that might create tensions between neighbors are discussed in the following section.

Pamela’s Perception of What Others Think of Her Yard-Space. When I asked Pamela if she felt any pressure to keep her yard mowed like her neighbors’ yard, she replied, “No, I don’t. When I go over there I always tell him, ‘Wow, you really keep this place immaculate.’ I know that for their family, I think, it’s an issue too, because he’s like mowing, and the family is like, well, we’d rather have *you* do this [mow her lawn]! It’s something that *he* does; it’s his whole life, but me? Wild and woolly, so we’re a balance!”

In comparing her yard to her neighbors’ yard, Pamela added, “When I go across to visit with them and look back at my place I think it really looks nice! I don’t get that perspective very often. The last time we were over they were showing us their garden. We were walking through their yard and it was really beautiful, what they’ve done. I looked back at my place and thought, ‘Yea, but my place looks pretty good too!’” Pamela admitted, laughing. “So there I was, looking over, and thinking okay, I’m not so bad!” Pausing, Pamela added, “But they’re very tolerant of me and they are good neighbors.”

Pamela's pride for her yard-space, sense of individuality, and care for her neighbors as social acquaintances led to questioning how she would like others to maintain their yard-spaces.

Pamela's Judgment of Others' Yard-Spaces. When asked if her neighbors' yard-space design influenced her in any way, Pamela said, "I think they influence me in the fact that I like to keep it this way. I see how much work and time that they spend on the yard and mine is something I can just go out and enjoy and not worry about pulling weeds. There was a time when I thought I should really take more effort but I have too many other things and interests in my life."

Pamela's satisfaction with her aesthetic choice for her yard-space was evident. I asked her if she had an opinion on how others should care for their yard-spaces. Thinking for a moment, Pamela stated, "I would like them just to be as green as possible. Less is more." Expanding on that idea, Pamela added, "I think so many people put so much effort trying for a finished product and their whole lives are focused around we've gotta have this plant or it's gotta be this way." After discussing her desire for more environmental concern and a focus on process over product, Pamela changed abruptly to ideas of individualism. She ended the conversation by declaring, "I don't impose myself on anyone else."

Pamela's desire for environmental care while not imposing her views on others led to questions about changes she may consider for her own yard-space. I asked Pamela if there was anything she would change about her yard-space if there were no obstacles. "No," she replied, "I know I wouldn't at all." Referring to the untamed areas of her yard, she added, "I used to resent the fact that I didn't have time, but now, I'm like, that's just the way it is. Plus, I was raised on a farm," she laughed, "and pulling weeds was not my favorite thing to do. Leave it go!"

Pamela felt the natural areas of her yard-space communicated messages of memories and also her concern for the local environment. While she reported feeling no pressure from her neighbors who maintained a traditionally mowed yard-space, she did realize they would prefer that she change her yard-space to a traditionally mowed appearance. By stating her neighbors “tolerated” her yard-space aesthetic, Pamela related her neighbors’ attitude of disapproval. This indicated a source of tension, even though it was not stated outright. Pamela wished others would be more environmentally concerned in creating their yard-space appearances, but did not want to impose her views onto others. Her satisfaction with aesthetic choices she made and her perception of a congenial social relationship with her neighbors may account for her acceptance of different social expectations.

Homeowners with Controlled and Ordered Yard-Spaces

While Pamela and Andy preferred yard-spaces with a combination of natural and mowed areas, the following two homeowners discussed their reasons for maintaining yard-spaces with highly controlled and ordered appearances.

Ellie

Figure 21: Ellie's yard-space.

What Ellie Thinks Her Yard-Space Communicates. With neatly trimmed gardens surrounding mature trees and an expansive mowed lawn, Ellie admitted that upkeep for her yard-space was very time-consuming. "Out here, it's lots of hours," she said. "We mow grass anywhere from 15-18 hours once or twice a week because we've got 15 acres to mow." While many hours each week were devoted to mowing and gardening, Ellie enjoyed these tasks. "I like to mow," she said, "and I enjoy going out and putzing in the garden. I was probably five years old when I started putzing in the garden with my dad."

Ellie's relationship with her father strongly influenced her aesthetic choices for her yard-space appearances. She stated, "This was my parents' home, and I'm an only child, so I feel a connection to this place." To Ellie, the yard-space was symbolic of her dad, who worked in the landscaping business. "I was really close to my dad," she said, "and the yard reminds me of him. I always wanted to go into what my dad did." Gesturing toward a tree with deep purple foliage, Ellie shared, "That purple-leaf beech tree is one of my favorites. It was one of my dad's."

I asked Ellie if she felt her yard communicated anything about the relationship with her father or her values. “That I’m honest,” she said. “I worked for a landscaper for plus nine years. The customers knew they could come to me because of my honest communication. My yard here shows I work hard. I grew up in the business so I know a lot about plants. Those Ginkgo trees?” she said, pointing to two small trees with fan shaped leaves. “They’re one of the oldest trees in the Bible.”

Ellie’s knowledge about plants fostered her sense of pride, and she also relied on that knowledge in choosing plants for her yard. She stated, “I like to see plants that will bloom at different times throughout the seasons. In other words, it’s a later spring, summer and early fall yard. We have it arranged so that’s what’s happening.” While Ellie planned this type of appearance for her own tastes, she felt that others also appreciated her efforts.

Ellie’s Perception of What Others Think of Her Yard-Space. “When I moved back home here,” Ellie said, “I changed the front, the way it used to look. My dad had five spruces on one side and three or four on the other. We took that apart.” I asked Ellie what prompted her to make those changes. “Well, with my dad, his ideas went along with his thoughts what should be up front and I have mine.” While her property had many trees, shrubs, and evergreens, removing the trees at the front of the property allowed space for the formal gardens that Ellie preferred.

I wondered if Ellie had felt any pressure to make those changes or to have her yard look a certain way. “Well,” she replied, “when I changed the front, I had a lot of people that noticed.” Her tone implied that her neighbors were upset to see changes to the property, but she quickly corrected the misunderstanding. “No, it wasn’t because of that. They could see that somebody else was living here. A lot of people saw that happening and thought, ‘Wow! That looks really nice!’”

Ellie was proud to have people notice the aesthetic changes that maintained the traditional appearance of her yard-space and to receive positive feedback about her yard; but she also felt strongly that other people did not influence the decisions she made for her yard-space appearance. "It's my property," she stated, "and generally my husband and I do what we want."

Ellie's Judgment of Others' Yard-Spaces. Ellie's sense of individual rights also affected her outlook on the way others care for their yard-spaces. She said, "I don't ever like to tell somebody what they should do or what they shouldn't do. I think it's the person that takes pride in their yard. Because you can have one person that is super sensitive . . . we know somebody that mows his grass every other day. He washes his truck every day, too. I think it's personal preference. You're going to get somebody that likes to do certain things certain ways."

While Ellie insisted that other homeowners had rights to personal preferences for aesthetic choices, she also admitted that she disliked native prairie yards. "We have one person in town, well, a couple of them, with those types of yards. One got rid of his lawn and the front is all garden. It's great that he can put in a garden, but put in a garden, not the whole front lawn! I think that's a little strange. People should take pride in their yards and take care of them." I asked Ellie if she would ever consider leaving part of her mowed area natural like the two yards she had seen. Ellie dismissed that idea quickly, saying, "We have to have it mowed."

Ellie felt her aesthetic choice for a neatly trimmed and controlled yard-space communicated messages of her personal honesty and hard-working values. She enjoyed the positive feedback she received from others, which gave her a sense of pride in her work. However, she also indicated a strong sense of independence about the maintenance of her yard-space and asserted she made aesthetic choices mainly for her own personal preferences. Ellie felt homeowners had rights to follow their own personal preferences in creating their yard-space

appearances, but she did not like native prairie yard-spaces. To Ellie, these yard-spaces were symbolic of neglect and a lack of pride in the yard-space appearance. She wished people would take pride in their yard-spaces and care for them. To this end, Ellie felt her yard must be mowed and neatly trimmed as a symbol of her care and pride in her work. Although not expressly stated, Ellie's perceived need to present a neatly mowed yard-space indicated tension and a sense of obligation to conform to social expectations.

The appearance of Ellie's yard-space shared commonalities with Diana's yard, which was another highly controlled and ordered space.

Diana



Figure 22: Diana's front yard.

What Diana Thinks her Yard-Space Communicates. It seemed that Diana had given much thought and consideration to every inch of her yard-space. Flowering potted plants, angel statues, and signs encouraging the viewer to "smile" and "bee happy" all shared stories of Diana's life. When asked about the messages she felt her yard-space communicated to the viewer, Diana replied, "Oh, I don't know, I guess it's more or less like the inside of my house. Homey, a comfortable feeling, maybe, and friendly. I had a gal come to my garage sale a couple of weeks

ago, and she said, 'I knew you, just by looking at your yard.' So, I guess, friendly describes it the best."

Describing the evolution of her yard-space design, Diana shared, "When we first moved here there were only two little garden beds in the front and one on the side on the north with some hostas. Now, I have different beds that have something blooming in them all the time." Although it took many hours each week to maintain the appearance of her yard, Diana admitted she found yard work enjoyable. "I like to do my weeding," she said. "Even though it's a lot of work, I don't really consider it a lot of work. I like doing it. I like trimming it all up, I like making it look nice, and it gives me my outside time."

Diana had strong opinions for her landscaping and admitted she liked the idea of her yard as a showplace. "I try to bring up colors that would really stand out with the gray house. I don't really go to grays, blacks, or whites, I like the brighter colors. That way, it's eye-catching." Along with colors that drew attention, Diana focused on adding personal touches to her yard. "The colors," she said, "and the personal touches, that's what I do, even if it's adding a little mushroom statue. I like it; I like to add something to a potted plant to kind of bring it to attention. I guess that would be a little bit of art touches."

When asked if the ideas for those personal touches came from her neighbors' yard-spaces, Diana smiled and said, "No, I don't think so, I kind of do my own thing. It's kind of funny, though. I'll notice that they do things that I have. I do what I like, but I think I kind of influence other people to keep their yards looking a little different, unique."

Diana's Perception of What Others Think of Her Yard-Space. When asked how she felt about others imitating her yard-space style, Diana shared this story. "The neighbor next door, she never did that much stuff. The other day I went for a walk, and she's got a ladder with a

birdhouse on it, little fences and stuff. She never had stuff like that before. To me, I feel complimented when she has that because I think, she likes this. It's a compliment."

Besides the influence she had on her neighbors, Diana also enjoyed the attention she received from a wider audience. "It's amazing how many people say, 'I'd love to see your yard.' I feel very privileged when they say that and always say, 'Well stop on by and see it!' Being known as the flower house, it's kind of nice, or the flower lady, that would be my self-expression, how people kind of know me. Also, I guess it kind of brings out my personality."

I asked Diana if she ever felt pressured by the attention she received to have her yard-space look a certain way. "No, I don't think so," she replied thoughtfully, "but I think you get to the point, well, because people compliment you and sometimes say, 'Your house makes me feel so good, your house is so pretty, the way you have your yard decorated!' You almost feel you have to keep up with that. We decorate our house for the holidays. We're known as the holiday house or the flower house, and we still decorate quite a bit, even for Halloween, even though we don't have small children. But, it's almost like once you've done things for years, people look forward to it and they'll say, 'I know what holiday it is when I go by your house.' So yea, not really pressure," Diana paused, and then laughed. "It's just something there that says you gotta do it!"

While the positive feedback Diana received gave her incentive to continue creating her yard-space appearance as a showplace, I wondered how she felt about the way others cared for their yard-spaces.

Diana's Judgment of Others' Yard-Spaces. At first, it seemed Diana valued individual rights over yard-space appearance, saying, "No, I don't care how others have their yards. I mean, to each his own." Without pausing, she quickly added

I don't like it when they don't take care of them. We had somebody next door that they had thistles that got really tall and seeded and blew all over the place. There is a town ordinance for that. The town did get after them for that because after it's about a foot high, you have to mow the weeds down. You have to take care of it. It would be nice if everybody took care of their yards. I don't care how they take care of their yards, if they like the modern look or something like that, that's fine. Everybody has their personal memories and personal touches. I don't care as long as they keep the weeds down and mow their lawns. Really basically take care of it! They don't have to have flowers in their yards. It's a preference. I like flowers, so I have flowers in my yard, that's my preference.

I asked Diana if she had seen any native prairie yards and her thoughts on the aesthetic choices for that type of yard. "Yea, I've seen them," she said. "It wouldn't be for me, wouldn't be my preference. I notice with the native plants there are a lot of weeds. There's one place that I go by, I think that's what her yard is. She's got a lot of native plants in there. When I go by there now, there used to be a lot of lilies, but you can't even see the lilies any more. It just looks like it's grassy weeds. And I just think if you don't take care of the grassy weeds, get the grass out of there and lay out some mulch or something, you're going to snuff out your flowers. It's almost like opposite of what I have. I have so many perennials, and they're so close together, with every year just plucking weeds out, I snuffed out the weeds. And now I have mostly flowers."

Comparing her yard to native prairie yards, Diana summed up her thoughts by saying, "Every once in a while I have a dandelion here or there, I really don't have a lot of weeds in my garden. My friends will tease me; a weed doesn't dare step foot in my yard! That's why, for me, I wouldn't like a native garden, an all-natural garden. I like to do my weeding!"

Diana felt her aesthetic choice for an elaborately planned and controlled yard-space communicated a friendly feeling to viewers. She considered her yard-space a showcase for her personality and felt complimented when others expressed admiration or imitated her style. Diana described the pressure she felt to maintain her yard-space appearance as a desire to meet others'

expectations. In spite of these expectations, Diana expressed a sense of independence by making her own choices for her yard-space appearance.

This sense of independence was extended toward others, and Diana believed other homeowners had rights to individual choices for their yard-space appearances based on personal preferences. However, she did not like the appearance of native prairie yard-spaces because she viewed these yards as weedy. To Diana, the appearance of plants she considered weeds symbolized homeowners' lack of care for their yard-space appearances. Diana wanted people to care about their yard-space appearances and associated mowing and weeding with acts of care.

These narratives exemplified the strong opinions these homeowners have about yard-space appearances, the social expectations for the appearances, and the ways in which personal aesthetic choices influenced homeowners' judgments of others' yard-spaces.

Summary of Finding 1-H

Finding 1-H responded to Research Questions 1 and 2 by exploring issues related to non-classroom based learning on homeowners' aesthetic choices and environmental concern. This finding presented the following evidence:

- All of the homeowners expressed personal opinions about the aesthetic choices for yard-space appearances.
- Often, opinions were based on misunderstandings or preconceptions of visual messages communicated by aesthetic choices and appearances outside of the social norm.
- Differing opinions and perceived expectations from others caused the majority of homeowners to feel tension.

- A lack of education about the reasons for designing non-conformist yard-space appearances outside of the social norm prevented some homeowners from recognizing these misunderstandings.

This evidence supports Finding 1-H by revealing homeowners had strong opinions about yard-space appearances and the social expectations connected to those appearances; and that preconceptions, misunderstandings, and pressure to conform to social norms caused the majority of homeowners to experience social tension.

The following section explored the influence of educational experiences on homeowners' aesthetic choices and decision-making processes for their yard-space appearances.

Homeowners Finding 2-H: K-12 Formal Education and Informal Learning Influences

Research Questions 1 and 2 questioned the influences of classroom-based and other educational experiences on homeowners' decisions for their yard-space appearances. The following section responded to both research questions and explored homeowners' classroom-based and informal learning experiences that influenced their yard-space design choices.

Although there were no reported K-12 formal education experiences that influenced the homeowners, all six homeowners sought advice for creating their yard-space appearances through informal learning experiences. Additionally, all six homeowners reported influences from these non-classroom-based experiences. This is important as it demonstrates homeowners' lack of formal environmental and aesthetic education contributed to a reliance on informal learning experiences. Homeowners' accounts of influential informal learning experiences revealed four areas that affected their decision-making processes: people and memories related to people, practical uses of yard-spaces, knowledge gained through reading materials, and job-

related information. Therefore, the following informal learning experiences have been grouped into four categories: social influences, as related to people and memories; functionality, as related to practical uses; literature, as related to reading materials; and career or job-related experiences.

Social Influences

All six homeowners described social influences that affected their decision-making processes for creating their yard-space appearances. Two homeowners sought out experts in the environmental field for advice, but other people who lacked expert knowledge also influenced the homeowners through emotional social relationships. These professional and emotional relationships have been described in the following two sub-groups: consultants and family relationships/memories.

Consultants

When planning and maintaining their yard-spaces, both Pamela and Ed relied on people they considered environmentally knowledgeable. Pamela described her experiences with an arborist who often visited her property to share his expertise. She said, “We appreciate having an arborist that walks through with his dogs and helps to maintain the old trees. At first we didn't bother with pulling up old fence wire, all the fencing that was out there. We didn't do it, thinking nobody was going to be out here, but when the arborist came, we wanted to make sure that everything was safe out there.” Ed, who also relied on professional advice for planning and maintaining his yard, echoed Pamela's appreciation for a reliable resource.

When asked who made the decisions for planning his yard-space appearance, Ed responded, “Andy, who’s a consultant and knows a lot about prairie plants and establishing native prairies on farmland. I have the final say, but most of the time I don’t even know what he’s talking about! I mean, he starts speaking the Latin names of all those plants and I’m just like, okay, that sounds good.” In describing his relationship with Andy, Ed stated, “When I think about friends that have influenced me, it’s Andy. He started out being the consultant, but now he’s a friend and a consultant.”

These comments showed how homeowners’ lack of knowledge prompted them to seek out advice from reliable experts. Pamela’s aesthetic choices were affected by the arborist’s care for her trees, but Pamela’s concern for the arborist’s safety also affected her maintenance of pathways. For Ed, a professional relationship formed through his seeking advice for creating his yard-space appearance led to a bond of friendship that increased his trust of Andy’s advice. Relying on input from friends or family relationships became a recurring theme for all of the homeowners.

Family Relationships/Memories

Ed, who was not married and had no children, was the only homeowner that did not discuss influences from family relationships. The only personal relationship influencing his yard-space decisions came from his consultant/friend Andy. All of the other homeowners relied on their families for advice or support in making aesthetic choices for their yard-space appearances. Many of these experiences with family members resulted in memories that also influenced the homeowners.

I asked Kate why she chose to live in the Midwest area and she replied, “I didn’t choose this area, my parents did and I never moved away. I guess that’s why I’m here, and now I have kids and grandkids that tie me here.” Kate’s connection to place and her family strongly influenced her preference to keep her yard as natural as possible. “I wanted to have an area for my boys to go. When they were younger, they camped down by the swamp, they fished down there, they played down there, and so I wanted to hopefully continue that for my grandkids. My yard is very kid and animal friendly. I don’t have that special Aunt Sophie’s’ rose or anything, anything that’s real touchy. My grandson picks all the flowers and brings them to me and I don’t care. It’s one of those kinds of gardens. You can go anywhere and do anything and it doesn’t bother me.” An appreciation for outdoor activities and connections to family also influenced Andy in designing his yard-space.

Andy described many family experiences that influenced his aesthetic choices for his yard-space. He credited his parents for instilling in him a fondness for nature and the environment, saying, “We lived on a farm when I was young, and my folks always had me out hunting mushrooms, picking berries, and even squirrel hunting with my dad, just doing outdoor kinds of stuff.” His enjoyment in being outside in a natural setting influenced his decisions for creating native prairie areas in his own yard.

Because he shared the planning of different yard areas with his wife, Sue, Andy noted that his in-laws were also influential. “Sue’s family always had flowers around in their yard, so it’s a mixture of influences.” Andy also pointed out sculptures in the front gardens that were important to Sue because they reminded her of her parents’ gardens when she was growing up and, therefore, held symbolic meaning to the family.

The importance of family to Andy was repeated several times as he discussed ways his children had taken part in the planning and yard-care. “Jon, my son, comes and helps us. He did the planning out front for the traditional landscaping. He took a landscape design class as part of his degree. That’s a nice thing to have. He drew these nice curves and he said, ‘This is the way you balance this.’ I didn’t have to think of it myself, although it would have been fun to think of it.” While Andy’s family relationships continued to influence the way he designed and cared for his yard-space, Pamela relied mostly on family memories to guide her.

Pamela’s focus was on keeping her yard-space the same as it had been during her childhood, and she felt her friends and family supported her decisions. When asked how they influenced her, she replied, “They’re encouraging. They always like the way it was when Grandma was here, when Auntie was here. Even my daughters, when they come out and walk around, they go, ‘Oh, I didn’t know you still had that! Oh, do you remember when . . .?’”

Pointing to the different areas of her yard, Pamela reminisced, “Memories are everywhere. I remember when my brother and I used to swing out here, sit on the step, or even the place we learned to play gin rummy with my grandmother. The family picnics! That’s why this little cement area here was really our playground. Those were the happiest days as a child, with my brother and myself. We made our own fun and did our own things, we were outside a lot.” By retaining the same symbolic areas in yard-space appearance, Pamela kept her family stories alive and continued to remember the happy times connecting her to place.

Ellie made it clear that she did not feel influenced by anyone other than her dad. “Just working with Dad. My dad was a landscaper, and I always wanted to go into what my dad did. But, he was a very . . . he wanted to do it himself. And he felt that that was not a woman’s job. It was a difference with the times, back then.”

Ellie felt her only social influence came from her dad, but Diana discussed many influences including her mother, her children, and grandchildren. “The reason I stayed in this area was to help out my mom and dad,” Diana explained. “I kind of felt a little guilty about moving away, I stayed for them. And then the kids came along and the kids liked it so you stay for the kids. I’ve always liked the area my whole life. I grew up here, I know so many people, they’re friendly. You kind of set your roots down.”

Diana’s connection to place and family had an influence on her aesthetic choices for the appearance of her yard-space. “Most of the influence, I would say, came from personal things: growing up with my mom, my family. A lot of my family and friends do the same thing. My sister, you go to her yard, you can tell we’re sisters. I try to give her things that I’ve got and she gives me things that she’s got. I have a couple of friends that it’s the same way, they buy the old buckets and stuff, put the plants in ‘em, have the ladders and the birdhouses, so it’s funny. My very close friends and my sister, we’re a lot alike.”

Memories of family members were also important to Diana. “I still have some plants that my mom took slips of,” she said. “Every year she started them in rainwater, put ‘em on her windowsill, had them all through the winter, and then took them out in the spring. I do the same thing, it reminds me of her.”

Remembering strong bonds with her mother, Diana dedicated a part of her garden to her mother’s memory. “One end of the garden bed is mostly about my mom and stuff. I’ve extended the garden for some of her favorite flowers. I put in that statue of a cardinal because that was her favorite, and there are some butterflies in the hostas. The butterfly symbol was my mom’s.” Symbols of childhood memories were featured in other areas of Diana’s yard. “When I can, I put things up with farm animals, anything that reminds me of the farm. We were farmers and I have

the milk machine and the water trough that cows drink out of. We had chickens so I have two or three chicken feeders. The wringer washer machine because my mom had a wringer washer for years with the washtub. I guess it reminds me of my childhood, growing up. Living next door to my grandparents, I brought some things over that they would have gotten rid of. I put those things in my yard and remember the grandparents.”

While family members and memories influenced the aesthetic choices Diana made for plants and sculptures in her yard, ideas for landscape design came from her son. “I had a son who took CAD, and he worked for a landscaper as a summer job. He would design yards and stuff so I got a lot of education from him at the time he was in it.”

These narratives showed how homeowners’ relationships with other people influenced their yard-space decision-making processes and caused homeowners to create and maintain areas that held symbolic meaning for them. All of the homeowners reported feeling a connection to place, and this connection was strengthened by memories for five of the six homeowners. These same five homeowners also reported feeling influenced by family members, including ancestors, children, and grandchildren. Although he lived alone without children or grandchildren, Ed also reported social influences from Andy, his friend/consultant.

While social influences affected homeowners’ aesthetic choices for their yard-space appearances, practical issues related to the use of yard-space areas were also influential. The following section presents the functional issues that affected homeowners’ decision-making processes for their yard-space appearances.

Functionality

All of the homeowners reported functional and practical reasons for the design and maintenance of certain areas within their yard-spaces. Three of the six homeowners with children and grandchildren viewed play areas as an important function in their yard-spaces. Four of the six homeowners discussed the importance of maintaining areas in their yard-spaces for safety and accessibility, and four of the six homeowners identified areas in their yard-spaces as important food sources. To understand the role functional concerns played on the choices homeowners made, these practicality issues have been categorized into sub-groups of play, safety/accessibility, and food sources. Andy, Kate, and Diana discussed the ways their yards were used for leisure and play.

Play

Part of the controlled space of Andy's yard featured a mowed sloping area leading to an above ground pool, a picnic table, and a swing set sheltered under two trees. Referring to that area, Andy said, "If it were just me here I might mow less, but we use this mowed area by the house a lot. It's functional."

Although Kate had a minimal amount of mowed area in her yard, she discussed how that area was negotiated with her husband. "My husband is the mower. He likes to have mowed paths and a few open areas for when my grandson comes to play and that. I feel that the play places in my yard are anywhere anyone would want to go in my garden. I don't care where they walk or what they do as long as they don't hurt the wildlife that might be there."

The potting shed was the one functional area Diana referred to as a former play place. She shared her reasons for keeping that structure in her yard, saying, “The potting shed is really important to me because it used to be my kid’s clubhouse. I didn’t want that torn down, so we ended up cutting it in half and making it into a potting shed.”

For Andy and Kate, negotiations within their families determined the amount of mowed areas in their yard-spaces for the purpose of play. Diana cherished the memory of her children’s clubhouse as a play place, and she repurposed the clubhouse into a potting shed to keep a visual reminder in her yard-space. These three narratives showed that homeowners with children and grandchildren felt the function of play was an important consideration for them and affected the appearance of their yard-spaces. While three of the homeowners reported areas for leisure activities and play were important to them, four of the six homeowners reported safety and accessibility as important factors in creating their yard-space appearances.

Safety/Accessibility

Ed preferred to have the majority of his yard thick with prairie plants, but he discussed practical reasons for mowing areas close to his house. “The drawback with bringing the prairie all the way up to the house is that immediately around your house you have a lot of utilities that run through the ground. Here, I’ve got septic lines that come out of the house at different points that tie into the septic field. On the other side, there’s the telephone that comes in, the electric that comes in, there’s a gas line buried over there. It takes a few years to establish native prairie, and if you need to dig one of those things up, you’ve destroyed everything you’ve put in. Whereas, if you do grass, you put the soil back in and plant some grass over it.”

Accessibility was another reason Ed kept a small mowed area close to the house. “Even going out walking around the house doing something like changing a light bulb, you don’t want to have to be trying to struggle through the prairie,” Ed said. “Because, believe it or not, you walk out there, those prairie plants, some of them are like four feet high, and it’s really hard to make your way through that.”

Andy also reported that accessibility was important and influenced the decisions he made for his yard-space appearance. “All the mowed areas on the other side of the property are paths,” he said. “I have trails running through the property where we can access and view the different plant communities, so we can keep up on what’s happening in each of them and maintain them.”

Like Andy, Pamela maintained pathways throughout her property. Safety concerns prompted her to keep those areas mowed. “We have to keep the grass low on the paths,” she said, “because when I do walk out, well, we had a huge number of sticks this year just falling from the trees. So, that is an issue.” Like Ed, Pamela was also concerned with access to utilities. “Because we have septic,” she continued, “we have to know where our septic fields are, where our wells are. We have underlying electrical lines here. We have to know where it all is because if there were something that were to happen, we need to be able to identify quickly if we were to have an emergency.”

Issues with emergency access were important to Pamela, and she shared the reasons for her concern. “Keeping access to the property for emergencies is really important. My husband had a heart attack, and I was glad that we had easy access for emergency vehicles here.”

Working for the county health department caused Pamela to be concerned with health and safety in her yard. Speaking about mosquitos that can carry diseases, Pamela said, “We cooperate with the local health department in putting out mosquito traps so they can test for West

Nile virus. We try not to put out the rain barrels unless we are going to be using it since standing water attracts mosquitos.”

Ellie’s only discussion of safety issues in her yard was also related to the West Nile virus. That concern led her to believe that she must keep the majority of her yard mowed. She stated, “We have it mowed because of the mosquitos and other bugs and critters. That West Nile virus, why do we have it so bad? Where is it coming from?” Keeping her yard mowed seemed to give Ellie a sense of control on an issue that felt very overwhelming to her.

For Ed, Andy, and Pamela, mowed areas allowed easy access for maintenance of plantings or utilities. Additionally, a concern for Pamela was the possibility of insect-borne illnesses, a concern shared by Ellie. While Pamela focused on removing areas of standing water to prevent West Nile virus, Ellie felt that mowing was important in preventing the disease. Homeowners’ comments showed how safety and accessibility concerns influenced their decisions for maintaining functional areas in their yard-spaces. Another functional concern that affected homeowners’ yard-space appearances involved areas that were recognized as food sources.

Food Sources

Four of the six homeowners described areas in their yards as sources of food. Andy, Kate, Diana, and Pamela viewed the production of food as a functional part of their yards.

Andy treasured both the beauty of his yard and the functional aspects. His family all participated in caring for their large vegetable garden that provided fresh vegetables all summer long. While Andy’s yard had a variety of traditional, natural, ornamental, and functional areas, he was comfortable with the purpose of each of those areas.

Kate discussed the tension between growing plants as a food source and growing plants as decorative elements of a yard. She said, “I have a vegetable and herb garden but the rest of my yard is prairie. Like I said before, grass used to be food for animals, it wasn’t pretty.” Chuckling a bit, she continued, “My dad said, ‘If you can’t eat it, it’s not worth anything!’” Pausing to think about that statement, she said thoughtfully, “If an animal or insect or a person can’t eat it, then it really isn’t worth a whole lot.” This statement shows how her family influenced Kate’s outlook and how her feelings of connecting rather than controlling the environment affected the appearance of her yard-space. While she appreciated the natural aesthetic, Kate also found the functionality of natural areas that served as animal habitats to be important.

Like Kate, Diana had also thought about elements of her yard as being either functional or decorative. When asked about the functional areas, Diana answered slowly, “The raspberries, I guess that’s functional, you can eat that.” Smiling, she shared a story of a discussion with her neighbor. “My neighbor used to tease me because he used to have a huge garden in the back. He would say, ‘Don’t grow anything you can’t eat!’ And I would say, ‘If you want to come over and eat my flowers you can!’” Explaining the difference between the two yards, Diana concluded, “Mine was an ornamental yard; his was a functional yard.” These excerpts describing Diana’s opinions of her yard-space appearance contrast starkly with Kate’s opinions. While Diana placed importance on the decorative appearance, Kate placed importance on the natural appearance, which she viewed as functional.

Pamela’s discussion of food sources in her yard revolved around memories from childhood. “Every acorn is a memory,” she said. “I remember as a kid I would eat them. They are edible, and people don’t know that. My grandmother would roast them and we would eat roast acorns.”

While Andy and Kate apportioned areas of their yards for the production of vegetables, herbs, or fruits, Diana considered her yard to be mainly ornamental with food sources more of an afterthought. Pamela viewed naturally occurring nut production in her yard as food because of childhood memories associated with eating the nuts. These varying viewpoints showed that conscious efforts to grow food, memories or ornamental fruit-bearing plants, and views of natural areas as wildlife food sources affected some homeowners' decisions for their yard-spaces,

Another avenue for gaining knowledge about ways to create their preferred aesthetics was through literature. The following section outlines influences homeowners reported from literary sources.

Literature

Five of the six homeowners relied on literary resources for gaining knowledge about plants, planning, or designing the appearances of their yard-spaces. Kate, Ed, and Pamela were influenced by literature on native species and the green movement; seed catalogs helped Andy with plant choices; and magazines influenced Diana's aesthetic choices for designing her yard-space appearance.

When Kate was asked how she learned to design her yard-space, she replied, "I guess, I researched it on my own. I looked for wildflower seeds and stuff that were more drought-tolerant and tolerant to the extremes in the weather here. And I tried some research of plants that were native to this part of the country as well as this area. So, that's why I chose what I chose."

Kate stressed the fact that she had not learned any of the information she needed from formal schooling. "No, I didn't learn these things in school. I just read, I just read. I bought

books on butterflies, I bought books on honeybees, and I bought books on birds and wildflowers and I just did my research that way.”

Like Kate, Ed relied on literature to gain the knowledge he desired. When asked about the educational experiences that influenced his decisions, Ed replied, “Just reading up on it. Books, magazines, that kind of stuff. I read up enough to understand that soybeans and corn have pretty much taken over Illinois, and it’s a really good idea to establish natural habitat wherever you can.”

Ed recognized that messages from the media often tried to influence homeowners to buy products. In speaking about the media, he said, “I would say that the advertisements that influence me are the ones that talk about being green. You know what I mean. Talking about getting on a plane and flying somewhere, the carbon that you are actually putting into the atmosphere, and you need to give back. So actually, having a native prairie gives you the green points. I’m actually taking a lot of carbon out of the air with the prairie because the roots go so deep, it drives the carbon into the ground.”

Pamela also liked to read about the benefits of natural landscaping. When asked if literature had influenced her, she said, “Probably, I get ideas. Or,” she added, laughing, “I get affirmation that what I’m doing isn’t so bad!”

Andy reported few literary influences but did note, “Seed catalogs and catalogs for the fruit trees. Those are the only things that impacts what we do here.” Andy felt these resources helped him make practical planning decisions for his yard-space appearance, but drew on his background knowledge in ecological restoration for the arrangement of these plants.

Inspirational ideas for decorating and arranging Diana’s yard-space came from magazines. “I have a subscription to *Country Living*,” she said, “and in the springtime they’ll

come out with these cottages or container plants. I like to buy magazines like that just to get ideas, what to put together. I get some color ideas, but I just look at them and then implement my own ideas.”

I asked Diana if she had received any other type of instruction to make her aesthetic decisions, but she replied, “No, just looking at magazines and seeing different colors that would stand out. I’ll see a turquoise or a pink and think, oh! Is that ever pretty! And I try it out because I love the colors that stand out.”

Given that no formal K-12 educational experiences addressed planning and design of yard-spaces, five of the six homeowners sought out literature to make planting decisions for their yard-spaces. Kate and Ed relied on books to provide information on native species and ways to work with their local environments. Pamela sought affirmation through literature to know her natural landscaping was environmentally beneficial. For practical ideas, Andy turned to seed catalogs, which affected the aesthetic choices he made for his yard-space landscaping, and Diana consulted magazines for aesthetic inspiration. These narratives showed that the five homeowners desired more knowledge about environmental, aesthetic, and practical planning concerns for their yard-spaces and relied on literary resources to inform their decisions. Environmental art classes that addressed these concerns might have provided an environmental, aesthetic, and practical knowledge base, which could aid homeowners in planning and designing their yard-spaces.

The final area that influenced homeowners’ decisions for creating their yard-spaces involved informal learning experiences through jobs or careers. The following section presents homeowners’ discussions of influential career experiences.

Careers

Four of the six homeowners reported being influenced by careers in creating their yard-space appearances. Andy's work in ecological restoration influenced his decision-making processes, while Ellie and Diana reported influences from working with landscaping businesses. Pamela's work with the county health department prompted her to consider ways to prevent mosquito population growth by eliminating standing water within her yard-space. The following interview excerpts reveal the influences of these careers on homeowners' choices for their yard-spaces.

When asked about the factors that influenced him to include native prairie areas in his yard, Andy said, "Mostly, it's my background working with native plants and working for the forest preserve district." Andy discussed how his business grew from that work, saying, "I was volunteering with the forest preserve district and then I liked it so much I started studying it. I went back to the biological sciences department as a graduate student-at-large and started taking specific classes that were things I needed to know to do ecological restoration. For the native plant landscaping I studied plant taxonomy, botany, and that kind of thing, and I did a naturalist program, too. When I started my business in ecological restoration, I stopped taking classes. Primarily I worked for the forest preserve district and corporations that needed it or individuals who wanted to do prairie or wetland or woodland restoration in their yards."

While Andy owned his own business, Ellie and Diana had worked for others in the landscape design business. Ellie discussed how working for a landscaper helped her make aesthetic decisions for her own yard. "I worked for a landscaper for more than nine years. I learned a lot about plants and trees there. Also, my dad was on the Illinois Nurseryman's

Association. He worked with the Landscapers' Association, too. Growing up in this type of occupation has always been something that you kind of follow through. Once you like trees, plants, and so on, it's easy to sell to the public.”

Diana also discussed how working for a landscaper continued to be a learning experience for her. “I'm even still learning things from working at the garden shop with the landscaper,” she said. “Working with him, I've learned more about shrubs. But, it was kind of funny. On the flowers side, he had me kind of guiding people with different things like that. I really liked working with him, and he let me talk to the customers about different things. It was kind of a nice learning experience for a couple of years.”

Pamela's work with the county health department heightened her safety concerns, which in turn affected her choices for her yard-space appearance. In her concern to slow the spread of West Nile virus, Pamela tried to prevent growth in the mosquito population by eliminating areas of standing water in her yard. She noted, “The West Nile virus is around us and it's becoming more evident, we need to get a vaccine for it.” Pamela also mowed areas close to the house because of the amount of insects that thrive in long grasses.

These narratives showed how informal learning experiences from homeowners' careers affected the aesthetic decisions they made for their yard-space appearances. While Andy relied on learning from formal higher education resources to start his ecological restoration business, hands-on informal learning that he experienced through his work helped him create the natural areas in his yard. Pamela's work within the county health department heightened her health concerns, prompting her to remove standing water areas from her yard. Both Ellie and Diana gained confidence about various trees and shrubs through their work in landscaping businesses and applied this knowledge in designing the appearance of their own yards-spaces.

The following section summarizes the evidence that was gathered from excerpts of homeowners' interviews and observations of their yard-space appearances.

Summary of Finding 2-H

Finding 2-H responded to Research Questions 1 and 2 by investigating the influence of formal classroom and non-classroom experiences on homeowners' yard-space design choices.

This finding presented the following evidence:

- While none of the homeowners reported influences from K-12 classroom-based learning experiences, non-classroom experiences strongly affected homeowners' aesthetic choices for creating and maintaining their yard-space appearances.
- Relationships or memories were powerful social influences that affected all six homeowners. Informal environmental and aesthetic learning through social situations was unpredictable and dependent on the predispositions and attitudes of those within homeowners' social circles.
- The functional use of areas within yard-spaces affected aesthetic choices all six homeowners made for their yard-space appearances. All homeowners reported mowing areas of their yards for functional reasons. For homeowners who preferred natural appearances, functionality outweighed aesthetic preferences for maintenance of portions of their yard-spaces.
- All of the homeowners reported K-12 formal educational experiences did not provide a knowledge base for designing and maintaining the types of yard-spaces they desired. Ed, Kate, Andy, Pamela, and Diana sought out practical, environmental, and aesthetic information through literary resources.

- Four of the six homeowners (Andy, Pamela, Ellie, and Diana) were influenced by information learned through their careers. While careers may offer beneficial learning experiences for homeowners, not all careers directly relate to aesthetic or environmental issues.

The following section discusses homeowners' choices for yard-care activities that affect the appearances of their yard-spaces.

Homeowners Finding 3-H: Homeowners' Choices for Yard-Care Activities

Research Question 1 explored homeowners' environmental concern as it related to yard-space appearances. To create desired yard-space appearances, all six homeowners participated in yard-care activities including some that are recognized by the Environmental Protection Agency (EPA) as having detrimental effects on the environment. Therefore, participation in environmentally harmful activities for the purpose of creating yard-space appearances is not considered representative of environmental concern. The following section reports the types of activities, homeowners' stated reasons for those activities, and homeowners' justification of their actions.

I asked Ed to talk about the types of yard-care activities he chose to create and maintain the native prairie habitat. "It was a lot of work to get it established," he admitted. "This was just vacant farmland, and I planted the trees and the prairie. Once you get them established, and the root system takes over every available space in the soil, then the weeds can't come up any more. You do have to go out and maintain a little bit, although the maintenance is still a lot less than if you had to go out and mow that every week. There are some weeds that no matter what, they

continue to be a pain. Canadian Thistle and Garlic Mustard are hard to control. You've got to keep after those and keep spraying them. They're really invasive. It's a problem."

Ed's concern for the environment and natural landscapes seemed at odds with the use of chemicals in his yard. I wondered how Ed felt about the use of herbicides. "I use Roundup on my yard and I do think about the environmental impact of it. But, according to Andy, it deteriorates in about two days, completely disintegrates. That's why they use it on corn and beans because it's non-toxic and it goes away quickly." Having learned contradictory information about the toxicity of Roundup, I asked Ed if he had researched the issue or had trusted in Andy's expertise. "I take his word for it," he said. "That was my research, asking Andy," Ed laughed. "He knows a lot about it. He's way into all that stuff."

Although native prairie filled the majority of Ed's yard, he did mow an area close to the house. I asked if he used a gasoline-powered mower and if he thought about the effects of mowing on the environment. "Yea, I think about that. In fact, I've thought about stopping mowing and just bringing the prairie all the way up to the house. But, because of the utilities that are buried there, it could cause problems. So, I've got a half acre, maybe not even that much, around the house that's mowed and I've thought about maybe doing less of it."

Kate had also thought about mowing less of her yard. She discussed her environmental concern and the way it affected her choice of yard-care activities. "Well, we probably do less mowing than most. We do little or no mowing, and we don't use any pesticides and very little herbicides. And, it's just in a spot where we use that, at the very base of a plant or something. We try to get rid of it organically first, by digging it out and that kind of thing." I asked Kate why she didn't like to use pesticides and she quickly replied, "Oh! Because I'm all about bugs!" Laughing, she continued, "Yup, I'm all about bugs. My spiders, I love the dragonflies, my

butterflies, the bees... yea, I like the bugs. Like I had said before, I think we need to live with the environment rather than fight it.”

While Kate avoided pesticides because of her environmental concern, she did mow small areas of her yard. I asked Kate if she used a gasoline-powered mower, and if she thought about the effects mowing had on the environment. “Yes, we do use a mower, but I just look at it this way. I don’t mow as much as some, and I do what I can to do the other things. I mean, we can’t totally go through life...” Kate paused, struggling to express her thoughts. “I suppose I could try to, but I, well, I drive a car too, so.... Anyway, we have ten acres here and I bet we don’t mow even one acre.”

With extensive knowledge about ecological restoration through his education and business experience, I wondered how Andy’s background affected his choice of yard-care activities. “I have taken out as many weeds as I can, or non-native species, and replaced them with native plants. I burn the prairie part every few years, and I cut out the worst invasive species like honeysuckles.” When asked if he included chemical products in his yard-care routine, Andy replied, “I do. There’s a functionality and a practicality where the amount of work it would take to get the same result outweighs the concern I have that I’m using an herbicide. And, if you talk to most people who work in ecological restoration, using primarily herbicides, which kill plants but generally don’t impact animals, it’s like a lot of times you just don’t have an alternative. It’s a losing battle if you don’t use herbicides.”

Addressing the environmental impact of pesticides and herbicides, Andy said, “I think about it, but it’s the way you use them too. You can’t just go out and blast everything and start over, although sometimes you sure feel like it. It’s a practical and limited use of those chemicals.”

Noting the traditionally landscaped areas in his yard, it was obvious that mowing was part of Andy's yard-care routine. I asked if he thought about the environmental effects of mowing and if it was a concern. "Well," he said, "I don't think about it too much. I recognize that it is an issue, and maybe if I were working on a smaller scale I would mow my yard with a reel mower like we did when I was a kid. But here, we mow, probably about an acre and a half, maybe two acres, and honestly, I don't think about it too much, even though I know those small combustion engines are some of the most polluting." Because he realized mowing was harmful to the environment, I was curious why Andy desired some mowed landscape. "If it were just me here," he said, "I'd have less mowed area. I'd still have some, but right now, again, it's functional, we use this out here a lot. And all the mowed areas on the other sides are paths or buffer areas around the gardens."

Pamela shared similar views with Andy when discussing mowed areas of her yard, but differed in her ideas of using herbicides. I asked if her environmental concern affected her yard-care activities. "Big time," she replied. "I don't use weed killer, they're either pulled up, or mowed down. Let 'em go. Something will eat them, so I want it just the way it is." Thinking of other environmental issues, Pamela continued. "But my real environmental concern is water, so I don't water, I don't irrigate. If we had a garden the last few years, I would have used water sparingly. I would have collected rainwater. That saves us a lot as far as the wells. It's also because the well, you have to pump. It costs electricity. So, the environmental factors are really big. Huge!"

Considering her great concern for water conservation and animal protection, I wondered why Pamela kept areas of her yard mowed and if she thought about the effects mowing had on the environment. "No, I don't think about it much. This year, we only mowed once," Pamela

laughed. “My husband mows fast, and we mow basically just to keep the grass low for walking, for safety reasons.”

Ellie’s views about the environment and yard-care activities contrasted dramatically with Ed’s, Kate’s, Andy’s, and Pamela’s views. I asked Ellie to share her thoughts about the environment as it related to her yard-care activities. “Well, for instance, mulch,” Ellie began. “I don’t believe in using mulch for all the real reasons. It’s dyed, added to the chips. Dye is no good because it stains and will kill the plants eventually.”

As Ellie thought about other environmental issues and practices that have changed over time, she discussed her views on the use of chemicals and the environment.

My dad used to do a lot of spraying since I was little. I grew up with my dad spraying chemicals. He used Malathion. Some of the different things nowadays you can’t buy the exact dose of things. And, the environment! They say, ‘Oh, you can’t spray because they’re chemicals, so bad for us!’ But sometimes, spraying isn’t that bad for the environment as people think. Well, they’re using it on produce out of the country but why can’t we use it here? People are uneducated about stuff like that. Maybe we should go back to some of the old ways, using chemicals more. And yet, you’re going to find somebody that’s going to argue it, that it’s not good for you.

Ellie had mentioned that a well on her property provided her drinking water. I asked if she thought about the pesticides from surrounding fields or from her yard contaminating her well water. “We don’t, no. Because I told you, stuff like that doesn’t bother me.”

Although she kept fifteen acres mowed, Ellie was not concerned about the effects mowing had on the environment. I asked if she thought about gas-powered mowers and the emissions they produced. “No,” she answered, “I don’t, because of the fact that our one mower is gas and our one is diesel. When you have a big yard you would never consider using electric or solar or something like that.” She dismissed the possibility of mowing less of her yard, stating, “We have to have it mowed.”

Like Ellie's yard, the appearance of Diana's yard was very controlled with the grassy areas evenly mowed. But, Diana differed from Ellie in environmental concern and yard-care activities. Laughing, Diana confided, "I take his [her husband's] lawn and he has nothing left to mow! He just gets to mow what's left over."

I asked Diana how her environmental concern affected her yard-care activities and yard appearance. "I know I'm drawn to butterflies and the bees and the birds," she said. "I have bird feeders out and when I pick out some of my plants, I look for ones that attract butterflies. I also have a butterfly house in the back. I don't know if they use it, but I even kind of try to take care of the butterflies, too. I guess that's part of my contribution."

Diana was also concerned about the use of chemicals on her yard and spoke about home remedies versus commercial pesticides. "I try to use home remedies. I worked in a garden shop and we had a lady who told me about herb things that are good for bugs, things like that. And, I noticed one store carries a natural line that came in a green bottle. So, I try to use natural things instead of pesticides." I asked Diana if she ever used pesticides and she answered, "Very rarely. I have this bug and flower pesticide for Japanese beetles because they are kind of hard to get rid of. And usually, I have to spray my rose bushes a couple of times. But, I try to use the natural things. I've got grandkids, so I'm a little more cautious with using pesticides. I've got two cats and a dog that like to play with the flowers and the water when I bring them in, so I don't want them all getting into something that will harm them."

Because Diana's grass was very manicured and weed free, I asked if she used chemicals on the lawn. "Um," she considered, "my husband. He'll put a weed and feed on it in the spring. Other than that, no, we don't put anything on it." Considering the mowed spaces, I asked if Diana was concerned with the environmental effects of mowing. "We use a gas-powered

mower,” she said. “But, I think because our yard is so small, I guess if we had a larger yard or something, but being so small...” Diana paused. “We got a wider mower, so instead of being out on the lawn for over an hour, it takes my husband 35 minutes and he’s done. So, that would be less emissions in the air, I guess, so that would help. And, sometimes, I think, just like your cars, keeping things updated. They’re always making more energy efficient better things for the air. I think when you don’t have an old clunky thing and you have a newer thing, hopefully there are things on it that would help with pollution and the environment. That’s what I try to look for, too.”

Summary of Finding 3-H

All six homeowners participated in yard-care activities that had detrimental effects on the environment, but they varied in the amount of concern they felt about these activities. Ellie felt no concern about pesticide runoff in her drinking water, considered gas-powered mowers a necessity regardless of emissions, and wished for more lenient policies because of skepticism about the actual dangers of chemical use. All of the other homeowners recognized the harmful environmental effects of mowing and chemical use, but also felt their participation in harmful yard-care activities was minimal. Ed, Kate, and Andy had considered mowing less of their properties, but the need for access to utilities or consideration for their spouses’ viewpoints were reasons they expressed for not making these changes.

Summary of Homeowners Findings

This section presented three findings that were revealed through interviewing six homeowners with different types of yard-spaces. Findings were organized by research questions

and themes that emerged through the interview process. Data from observations and individual homeowners' responses to interview questions showed homeowners' varied perceptions of yard-space phenomena. Because of the qualitative research approach using narrative inquiry, quotations of homeowners' discussions were included. Accurate representation of homeowners' voices encouraged transparency of the investigated situations and ideas. In this way, confidence was established for the validity of the material by presenting homeowners' perceptions through their own words. From homeowners' responses, three key findings emerged.

The primary finding is that homeowners had strong opinions about yard-space appearances and the social expectations connected to yard-space appearances. The second finding is that none of the six homeowners reported influences from K-12 formal classroom experiences and did not draw on formal class learning in the design and maintenance of their yard-space appearances. The third finding is that all six homeowners participated in yard-care activities that had detrimental effects on the environment.

These findings support a need for developing understanding of yard-space visual appearances, expectations connected to the appearances, and yard-care activities and their effect on the environment. To address the needs and concerns that emerged from these findings, an environmental art curriculum was developed and taught to fifth grade students. The following section describes the rationale for creating that curriculum and includes relevant findings from that teaching experience.

Rationale for Curriculum Development and Implementation

Homeowners from the first phase of this study reported no formal K-12 learning experiences that influenced their decisions for creating their yard-space appearances, which

contributed to a gap in knowledge concerning visual appearances and the environment. These homeowners sought out information informally and were influenced by various informal learning experiences to participate in yard-care activities that were environmentally harmful. Because homeowners desired knowledge on creating yard-space appearances that was not taught in formal classroom settings, it was hoped that including aesthetic and environmental learning within the formal school setting might address this gap in knowledge for students as future homeowners. To this end, a place-based environmental art curriculum was developed and taught to fifth grade students with the purpose of promoting understanding of visual appearances as well as social and ecological consciousness through investigation of yard-space appearances.

The following sections present student findings from Phase II of this study.

Phase II: Student Findings

Findings for this section respond to Research Question 3 and its related Sub-Question.

Research Question 3 asked

In what ways can place-based art education change fifth grade public school students' abilities to identify and analyze Midwestern non-urban homeowners' decisions for yard-space appearances?

Sub-question: How does place-based art education influence fifth-grade public school students' attitudes, perceptions, and aesthetic choices for art-making activities within non-urban yard-spaces?

Data collected from students' classroom discussions, personal interviews, written questionnaire responses, and art-making activities revealed three key findings.

- The primary finding revealed the majority of students showed growth in their ability to identify and analyze homeowners' decisions for creating yard-space appearances, although some written responses were inconclusive in showing growth. For this study, growth is defined as recognizing hegemonic practices, recognizing reasons beyond conforming to socially acceptable aesthetics for making aesthetic choices in yard-spaces, and recognizing aesthetic choices related to environmental concern.
- The second finding relates to students' attitudes, perceptions, and aesthetic choices for their own yard-spaces. This finding revealed the majority of students demonstrated the ability to envision environmentally beneficial changes in their own yard-spaces.
- The third finding showed students used the environmental knowledge learned through class work to communicate environmental concern through their artwork.

Supporting evidence for each of these findings is presented in the following sections, including excerpts from student discussions that document students' viewpoints through their own words.

Finding 1-S: Identifying Decisions for Yard-Space Appearances

Finding 1-S responds to Research Question 3 by investigating students' abilities to identify and analyze decisions made for creating yard-space appearances. Through participation in place-based environmental art lessons, the majority of students were able to identify and analyze homeowners' decisions for created yard-space appearances, but some written responses were inconclusive in showing. Growth was evident in certain written responses, classroom discussions, application of concepts in art making, and personal interview responses. Evidence of

this growth is presented in the following sections including questionnaires and worksheets, class discussions, and interviews. Students' artwork and art making processes are presented in Finding 3-S.

Questionnaires and Worksheets

Prior to instruction and five months after curriculum instruction concluded, students completed the *Yard-Spaces and the Environment* questionnaire (Appendix D). The purpose of this evaluation tool was to measure students' prior knowledge before instruction and note changes at the end of the school year. As the course content unfolded through student participation, questions arose targeted at this particular student population. Therefore, students completed a researcher-developed *Yard-Space End-of-Course Questionnaire* (Appendix E) on the last day of the course. The purpose of this questionnaire was to note students' responses to course content by targeting issues related to mowing and natural yard-space appearances.

The *Yard-Space Photographs Interpretation* worksheet (Appendix F) was completed prior to instruction and again on the final day of the course. The purpose of this evaluation tool was to compare each student's attitude about and perception of different types of yard-space appearances before and after instruction. Details of these questionnaires and worksheets are discussed in the following sections.

Yard-Spaces and the Environment Questionnaire. For this finding, students' responses to two questions from *Yard-Spaces and the Environment* questionnaire (Appendix D) were compared prior to instruction and five months after the course was completed to note changes in responses. Twenty students' responses were evaluated because one student (Ken) was not in

attendance to complete the post-questionnaire. Responses to statement four and question five are discussed separately in the following sections.

Statement Four. Statement four instructed students to “Describe how your yard looks the same or different from your neighbors’ yards.” The purpose of this question was to note students’ recognition of neighborhood hegemonic practices before and after participating in the curriculum. Nine students (Jan, Alicia, Nick, Mary, Casey, Martin, Robert, Rita, and Adam) showed growth by comparing their pre- and post- questionnaire responses. Growth was shown through

- Changing responses to descriptions noticing visual similarities in spaces (Jan, Alicia, Nick, and Robert). Example - Jan: “Our yard is different from our neighbors because we have a soccer net and a patio” changed to “Our yard looks the same as my neighbors’ yard because we have similar spaces and plants.”
- Changing responses to include descriptions of mowed spaces (Mary, Casey, Martin, Rita, and Adam). Example – Mary: “We have toys and a playground,” changed to “My neighbors’ yard is plain and mowed like twice a week. Our yard is rarely mowed.”

Through their responses, almost half of the students appeared to show growth in noticing neighborhood hegemonic practices like mowing that resulted in similar yard-space appearances. The remaining eleven students in the class did not show growth by recognizing neighborhood hegemonic practices.

Question Five: Question five asked, “Do you think it is all right for yards to have different looks? Why or why not?” The simple wording of this question was chosen for elementary level readers’ comprehension in an effort to note students’ opinions about differences

in yard-space appearances. The majority of students (17 of 20) appreciated different types of yard-space appearances prior to instruction. Three students (Jennifer, Dale, and Randy) gave unclear responses or showed a lack of concern for different types of yard-space appearances.

Examples of written responses on the pre-questionnaire include

Jan: I think it is better to have yards look different so it is interesting.

Robert: Yes, because everybody has a different style.

Elton: Yes, it's okay because everything can't look the same.

When the same question was repeated at the end of the year, all twenty students present in class that day expressed appreciation for differences in yard-spaces. One student, Jan, included a pro-environmental response. Examples of student responses on the post-questionnaire include

Jan: I think it's okay because for example, if people don't mow their lawn then that could show they are helping the planet.

Robert: Yes, because it's your yard.

Elton: Yes, because it's your opinion how your yard should look.

Results from comparing responses before and after instruction indicated little change in students' responses, with the majority of students believing homeowners should create different types of yard-space appearances. Although the responses to this question revealed little change in students' attitudes about differences in yard-space appearances, these results show evidence that concern for individuals' rights is present even during childhood.

The next section presents students' ideas about others' yard-space appearances from the end-of-course questionnaire.

Yard-Spaces End-of-Course Questionnaire: Question five from *Yard-Spaces End-of-Course Questionnaire* (Appendix E) asked, "Do you think it is all right if a family in your neighborhood wants their yard to have a different look and doesn't mow their lawn? Why or why not?" Based on concepts covered in the course, this question focused attention to students'

personal spaces by adding an environmental element and a neighborhood location. The purpose of this question was to reveal students' opinions about non-conformist yard-spaces in their own locale.

In response to this question that is focused on the appearance of yards that are not mowed, nine students (Elton, Alan, Lisa, Collin, Ken, Nick, Dale, Randy, and Abby) indicated appreciation for differences in yard-space appearances; nine students (Jan, Alicia, Mary, Casey, Martin, Robert, Rita, Wayne, and Adam) included pro-environmental responses; and three students (Ally, Kalvin, and Jennifer) gave unclear responses or showed a lack of concern.

Examples of student responses to question five include

Jan: It is okay not to mow their lawn because it helps the earth.

Robert: Yes, because they care about the environment.

Elton: Yes, because it's their choice how they want their yard to look.

Through their responses, the majority of students seemed accepting of difference, and almost half of the students seemed able to identify the harmful effects of mowing or benefits of native prairie yard-spaces.

In addition to the questionnaire responses, students shared their viewpoints through written descriptions of yard-space photographs.

Yard-Space Photographs Interpretation Worksheet: To document changes in students' abilities to identify and analyze homeowners' decisions for creating their yard-space appearances, students completed a researcher-developed *Yard-Space Photographs Interpretation* worksheet (Appendix F) on the first and last day of the course. This worksheet consisted of nine photographs of Phase I homeowners' yard-spaces: four photographs (A, C, D, I) featured native prairie areas with natural uncontrolled appearances; two photographs (E, G) featured yard art displays; and three photographs (B, F, H) featured yard areas that were extensively mowed and

controlled. By comparing three types of yard-spaces for analysis, students could repeat or change their responses when examining yard-spaces with similar appearances.

First, students were asked to write an adjective below each picture that characterized their reactions to each homeowner and his or her yard-space. Second, students were asked to write the letter “E” next to any of the photographs that showed the homeowner cared about the environment. To ensure consistency between and across cases, adjectives written by students were assigned definitions by the researcher based on classroom discussions (Appendix H). For example, “wild” was defined as “strange, showing lack of concern and care” because of the way students used the term during classroom conversations. “Sloppy” was defined as “showing lack of concern for neatness,” and “open-minded” was defined as “showing an appreciation for differences.”

For this finding, three areas of student growth were evaluated: attitudes toward native prairie yard-spaces, attitudes toward mowed yard-spaces, and communication of environmental concern. Due to Nick’s absence on the final day of class, only 20 of the 21 students in class were evaluated on this worksheet.

Thirteen students showed growth through their analysis of native prairie yard-spaces, changing their adjectives from negative connotations to positive ones. However, only six students were consistent in describing more than two native prairie photographs positively.

Examples of three students’ responses include

Robert: “Sloppy” changed to “Open-minded”
Collin: “Careless” changed to “Hard-working”
Mary: “Messy” changed to “Unique”

These results indicate more than half of the class could identify positive aspects of native prairie yard-space visual appearances after completing the course, which relates to understanding

homeowners' reasons for creating non-conformist types of yards. However, less than half of the students showed consistency in identifying all native prairie photographs in a similar fashion.

Eight students showed growth through their analysis of mowed yard-spaces, changing descriptors from aesthetic to more analytic responses, but only two students were consistent in identifying more than two photographs of mowed yards in a similar fashion. Examples of three students' responses include

Casey: "Simple" changed to "Controlled"

Kalvin: "Peaceful" changed to "Controlled"

Alicia: "Calm" changed to "Controlled"

These results indicate less than half of the class thought beyond aesthetic appearances to consider environmental concerns when describing photographs of mowed yard-spaces.

When labeling photographs representative of homeowners' environmental concern, 15 students showed growth by changing their opinions of native prairie yards from "not showing environmental concern" to "showing environmental concern." Only five of these students were consistent in identifying more than two native prairie photographs the same way. These results indicate the majority of students could identify native prairie yards as symbols of homeowners' environmental concern, but were inconsistent in their responses. Nine students changed their opinions of mowed yard-spaces as "showing environmental concern" to "not showing environmental concern," and six of these students showed consistency in labeling other photographs of mowed yards in a similar fashion. These results indicate less than half the class believed mowed yards are not symbolic of environmental concern.

Overall, the majority of the students could describe and recognize some positive qualities of native prairie yards after completing the course, but inconsistency of responses required triangulation of other methods to verify that growth occurred. The majority of students still

found the appearance of mowed yards to be aesthetically pleasing after completing the course, but some students also believed mowed yards do not communicate environmental concern.

Summary of Questionnaires and Worksheet Responses

Through questionnaires and worksheets, students' responses revealed

- Almost half of the students appeared to show growth in noticing neighborhood hegemonic practices like mowing.
- Although students' attitudes about creating different types of yard-space appearances appeared to have little change, responses showed students seemed accepting of difference because of concern for individuals' rights.
- Almost half of the students seemed able to identify the harmful effects of mowing or benefits of native prairie yard-spaces, but student responses did not show consistency.

While some growth documented through worksheet responses was inconclusive, classroom discussions were more telling in revealing changes in students' viewpoints before and after instruction. Excerpts from these discussions are presented in the following section.

Classroom Discussions

After completing the pre-questionnaire *Yard-Spaces and the Environment* (Appendix D) and *Yard-Space Photographs Interpretation* worksheet (Appendix F), students viewed the PowerPoint presentation *What is in a Yard?* (Appendix I) and participated in classroom discussion.

NW: Has anyone seen a yard like that, with a lot of mowing? Raise your hand if you have (Figure 23).

(All of the students raised their hands.)

NW: Does that look normal to you, to see a mowed lawn like that?

(Students nod in agreement.)

NW: We see that quite a bit in our town don't we? In this area, in fact, in a lot of places in the Midwest, people mow their yards. Now, let's look at the next slide (Figure 24).

(A low buzz of murmuring increased in volume as students whispered to each other about the native prairie yard.)

NW: Have you seen a yard like this one?

Dale: No!

Ken: I call *that* wild!

Robert: Me too!

NW: What do you think about that type of yard?

Alicia: It looks natural, like they let everything grow, but it also looks kind of messy.

NW: Can you think about why they might have created a yard like that? Why would it look like that? What could some reasons be?

Jennifer: Maybe they didn't have a mower because they can't afford one?

Adam: Maybe they *want* it to look that way.

NW: Okay, why might they want it to look that way?

Adam: Maybe it's peaceful?

Ken: I thought it was kind of an uncontrolled, sloppy, messy yard, and the person really hasn't been mowing it and keeping it down.

Kalvin: I think it's too late for it to be mowed.



Figure 23: Ellie's mowed yard-space.



Figure 24: Ed's native prairie yard-space

This classroom discussion excerpt is one example of the students' struggle with conflicting feelings about nature. All students in the class had mowed yards, which is the socially accepted norm for their area. Students recognized beauty in natural areas, but had difficulty in adjusting their thinking to recognize natural area beauty when placed within a yard-space. As the

discussion progressed, students revealed more about their ideas for controlling yard-spaces and the types of activities necessary to create those spaces. A chart was made on large paper at the front of the room to compare students' participation in different types of yard-care activities (Figure 25). The purpose of this chart was to make students aware of the yard-care activities used to create their own yard-space appearances. The chart revealed all of the students mowed and watered their lawns, eight students used pesticides, and twelve used herbicides.

Activity	Count
Mowing	21
Trimming	21
Watering	21
Pesticides	8
Herbicides	12

Figure 25: Chart of students' yard-care activities.

After charting yard-care activities from their own yards, students viewed an environmental website showing the amount of pollution caused by gasoline-powered mowers, fuel consumption, and fuel waste from spillage when filling mowers.

Students reported trying to save gas by riding their bikes instead of being driven in a car, but had not thought about fuel consumption or pollution from mowers. By drawing attention to the environmentally harmful effects of many yard-care activities, students began to make connections between yard-space appearances and caring for the environment. An Environmental

Protection Agency (EPA) handout, *Your Yard and Clean Air* (Appendix J), reinforced content covered in classroom discussions about the environmental impact of yard-care activities.

The researcher-developed *Benefits of Native Plants* handout (Appendix K) was another introductory resource used in class. In this handout, information from the Lady Bird Johnson Wildflower Center describes the environmental benefits of using native plants in yard-spaces, and photographs of native flowering plants from students' locale show visual examples. After reading the information together, students discussed the content of the handout.

NW: This tells us some of the reasons why we might want to use native plants, plants that are originally from this area. What kinds of things did it tell us about why they are helpful?

Abby: You don't have to use pesticides.

NW: Good, you don't have to use the pesticides we talked about earlier that could be harmful to us. Native plants are naturally resistant to the pests that are here. What else?

Ken: Less weeding, because you don't have to attend to them that often.

NW: Okay, less weeding, maybe, less watering. All of those types of things help the environment.

By introducing students to the environmental benefits of native plants in yard-spaces, students began to think more deeply about the reasons homeowners might want natural yard-space appearances. Students were also receptive to and made positive comments about the visual appearances of flowering native plants.

The following week, students were not in attendance at school due to an outdoor educational field trip. Environmental learning that occurred on the field trip was reviewed during the next art class session along with other environmental issues associated with yard-spaces.

NW: I understand you learned some things about the environment during Outdoor Ed. What can you share?

Rita: We pulled out honeysuckle bushes.

NW: Why did you do that? Was it because they were ugly?

Rita: No, that's not the reason. A lot of them were growing.

NW: What's wrong with that?

Jennifer: They are an invasive species that took things like water away from the native plants.

NW: Yes, we learned about native plants last time. Native plants are important because they are normally here instead of being introduced. They are used to this climate, the heat of summer and cold of winter, and this kind of soil. They are also important habitats for animals. It is important to keep out the invasive species that harm native plants. With native plants in your yard, there is also less area to mow.

By reviewing activities from their outdoor educational field trip and applying that learning to elements covered in art class, students were encouraged to think beyond the appearances of yard-spaces to consider environmental meanings. Discussion continued as students viewed the *Yard-Space Elements* PowerPoint presentation (Appendix L).

NW: How do you think goats can help the environment (Figure 26)?

Abby: They eat up the weeds.

Wayne: Can they eat the grass instead of mowing?

NW: That's it exactly. I learned about a town in Vermont that is using goats instead of mowing because the people there are environmentally concerned. The goats eat the grass down only to a certain level so they don't have to mow it at all. That's something you might think about for your art. Do you want to include any animals in your artwork so you don't have to mow as much?

Alan: Like a cow!

Robert: Or horses!

(Students chattering excitedly)

Ken: I never knew goats could mow your lawn.

NW: You never thought about that before? Well, now you can! How about the next slide, why do people have statues in their yards (Figure 27)?

Collin: To decorate it. Turtles! Turtles!

NW: That's a good point, Collin. You can decorate, but also show your own personal expression, like something about yourself, by the things that you put in your yard. What do you think the turtle statue might say about somebody if they put it in their yard?

Alicia: Maybe they like animals?

Martin: Maybe they're slow!

Randy: Collin likes turtles, so maybe it's about him.



Figure 26: Goats as yard-care alternative.



Figure 27: Statues.

NW: Yes, sometimes we understand personal messages about people through their statues. Has anyone heard of topiary (Figure 28)?

(Excited chatter)

Ken: Whoa, wow, that's cool!

NW: Why do you think someone would do that to bushes or trees?

Abby: To put it into a design.

Adam: With the elephants, one is small and the other one is large. So it could be life, where you start out young and get older.

Rita: Maybe it stands for their family.

NW: Yes, all of these things we are seeing might have more meaning than just deciding to cut a bush to look like an elephant. The messages could be about family or personal interests. Now, here's something else you might see in a yard, animal habitats and shelters. Why would we want to do that (Figure 29)?

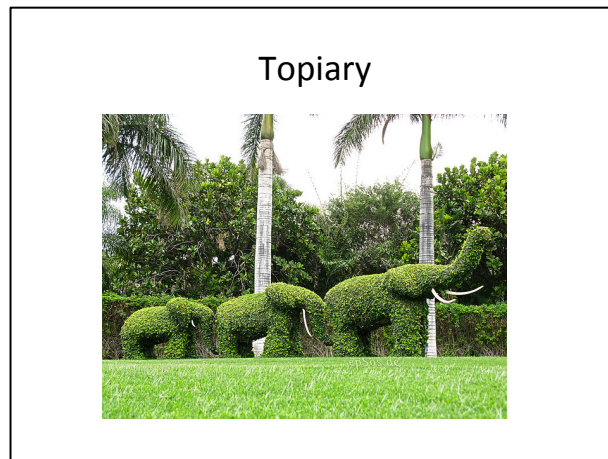


Figure 28: Topiary.



Figure 29: Animal habitats and shelters.

Wayne: To have more wildlife in your yard, to see more animals that are native?

Alicia: Because people are harming animals' natural habitats?

NW: Right. When they put in new subdivisions, they cut out habitats that are native to animals. The animals can come back and live here when you provide shelters like birdhouses for them in your yards.

These slides showed ways to include different elements within yard-spaces, encouraging students to think beyond the socially accepted mowed lawns in their area. Students began to understand how yard-spaces could communicate personal messages and environmental concern. Through PowerPoint presentations, handouts, participation in environmentally themed artwork, and accompanying classroom discussion, students explored homeowners' aesthetic choices for

yard-space appearances, yard-care activities, and the reasons homeowners might choose different appearances for their yard-spaces. Learning that occurred by participating in the curriculum was evident in the thoughts students shared during their final art class.

NW: We are going to look at the same slides from the beginning of the year; we've looked at these yards before. These pictures are from the yards of people I interviewed and I asked them why they have their yards look that way, what they are thinking about. This is a picture of part of a person's yard and she spends 15 hours a week mowing her yard (Figure 30). When you see a mowed area like that, what kind of message does it send? Do you think that she thinks about caring for the environment if she's mowing that much during the week?



Figure 30: Ellie's mowed yard-space.

Many Students: Nooooooooooooo!
Casey: If you mowed your lawn 15 hours a week, that could ruin things, or all the gas that you use, and the animals...

Dale: They just want to make it huge.

NW: Okay, they want to make it look that way, maybe thinking more about the appearance than the environment.

Wayne: They could use a push mower, but it would take too long of time.

NW: Yes, it would take a long time, but it's good that you are thinking about different things we could do to create an appearance besides mowing like that. For this next yard, the person I interviewed planted all native prairie plants, and we talked about those earlier (Figure 31).



Figure 31: Ed's native prairie yard-space.

Adam: Are there snakes in there?

Rita: It could be an animal's environment to them.

NW: Okay, like Lynne Hull made areas to shelter animals, this yard would be a good shelter for snakes, wouldn't it? Anything else native plants do for the environment?

Jennifer: They clean the air better because plants help with pollution.

NW: Good point, we have talked about the benefits of native plants. Do you think this person shows care for the environment by putting in native plants?

Many students: Yes, yes, yes!

These comments demonstrate how students' attitudes about yard-space appearances changed because of the environmental issues that were covered in class. Prior to instruction, many students agreed a mowed appearance seemed normal to them. After instruction, students involved in classroom discussion noted the harmful effects of mowing and considered alternative ideas. Prior to instruction, many students viewed natural yards as strange, wild, or messy. After instruction, students discussed the benefits of native prairie yards in sheltering animals and aiding air quality. Through these comments, students showed understanding of the reasons homeowners might choose natural appearances for their yard-spaces.

The following discussion from the last day of class demonstrates students' viewpoints on aesthetics and yard-space appearances that are often deemed socially normal.

NW: At the beginning of the year, we discussed how art helps us look at things we think of being normal, everyday, and things we don't really pay attention to. Can you think of something about your yard that you really didn't think about before, that you took for granted and thought of as normal?

Ken: Someone out mowing their yard.

Adam: Grass all over the lawn.

NW: Yes, those are examples of everyday things we just take for granted, but through art, we can recognize there are reasons why people make their yards look a certain way.

When we look at this slide, how many people think this is beautiful and why (Figure 32)?



Figure 32: Expansive mowed yard-space.

Jennifer: It's clean and well taken care of.

Alicia: There are a lot of trees in it.

Ken: They actually mow their grass.

NW: Expecting yards to look clean, well taken care of, and having mowed lawns, those are things we learn to think of as signs of beauty. As an example, if you think back to the past, cave dwellers wouldn't think about mowing their lawns, would they?

(Students speaking at the same time with responses of, "No," and, "Cavemen didn't have lawns!" and "They didn't have mowers!")

NW: Exactly. Ideas for having mowed lawns are learned. Can you think of some alternatives to mowed lawns?

Abby: You could put in a native plant garden.

NW: Why would we want that in our yard?

Adam: Because it gives it life.

NW: What do you mean by that?

Adam: It just makes it feel more alive. Instead of just having plain grass, to have native plants growing.

NW: I see. Now, let's look at the next picture (Figure 33).

How many people think this is beautiful and why does it look beautiful to you?

Ally: It's colorful and there are a lot of flowers.

Alicia: It's really big and open.

Adam: And it's just full of flowers and grasses.

NW: Okay, so those are two different scenes. They are both signs of beauty to us, but if we put the flower field in the yard, some might not think of that as being beautiful any more. We have different ideas about what is beautiful and where it should be. Those are learned things, like thinking that yards should be mowed.



Figure 33: Flower meadow.

While students appeared to understand that preferences for tidy and mowed yard-space appearances were learned ideas, some students struggled to accept yards that were not mowed as representations of beauty. By viewing a picture of a mowed yard that was representational of students' yards, and then viewing a field of flowers and grasses that students described as beautiful, students continued to question the reasons people find beauty in certain areas but make other aesthetic choices for their own yards.

Not every student entered into classroom discussion or shared their opinions freely during class time. Because some students are more comfortable expressing opinions in one-on-one situations, personal interviews were conducted with one boy and one girl from this class.

Student Interviews

To gain insight from two students that did not offer opinions during classroom discussions, Mary and Collin were interviewed separately in one-on-one meetings at the end of the year. These students were chosen after consulting the students' classroom teacher for suggestions of students who felt more comfortable discussing their opinions in one-on-one

situations than classroom discussions. The two chosen students' responses to interview questions have been combined into one report to facilitate comparison of their opinions.

NW: Do you think differently about how yards should look after doing our projects? Did you think about the appearance of yards before we did our projects?

Mary: No, not really, I didn't think about it much. I used to think, yea, we recycle, we compost, but now I know those things are really important. I don't think people should mow so much. Like, my neighbors, they mow three or four times a week. They mow a lot! And, I used to think native prairie yards were really messy, but they're not messy. They're native plants!

Collin: Before we did our projects, I would have just thought yards with native plants were messy. But, now I know that those people care about the environment and that they plant those there for a reason.

NW: Let's look at the pictures of different homeowners' yards that we viewed during class time. Can you describe what you think each homeowner finds important or cares about?

Mary: Well, these people (Figure 34) must care about the environment because they have native plants growing everywhere, and bushes, and trees.

Collin: The homeowners planted lots of native plants, so that shows they care about the environment.



Figure 34: Ed's native prairie yard-space.



Figure 35: Kate’s native prairie yard-space.

Mary: The next one (Figure 35), it looks good with all the bushes and trees.

Collin: It shows they like a lot of natural areas, and they also include some art with the scarecrow.



Figure 36: Diana’s controlled yard-space.

Mary: For this one (Figure 36), they have bushes, that’s good. The decorations, they really don’t do anything bad as long as they don’t fly away or something.

Collin: I think the people have a lot of art to try to say something about their personalities. You can tell they are happy and sunny, since they have messages like “smile” and lots of flowers.



Figure 37: Ellie's mowed yard-space.

Mary: And the last one (Figure 37), they look like they've mowed a lot. That's not very good, because mowing is probably worse for the environment than cars.

Collin: It just looks like they mow a lot, but they did plant a garden in one part. That might be trying to say something about them.

The personal interviews with Mary and Collin revealed changes in the ways they identified and analyzed homeowners' decisions for yard-space appearances. Before instruction, both students viewed native prairie yard-spaces as messy. Afterward, they both recognized the environmental benefits of native prairie yards. Mary recognized the harmful effects of mowing and felt mowed yards were not environmentally beneficial. Collin noticed mowed areas, but focused more on the personal meanings communicated by visual appearances of yard-spaces through artwork and landscaping. These topics were covered in the curriculum and appeared to have an effect on these students' understandings of homeowners and their yard-spaces.

The following section summarizes key points from Finding 1-S.

Summary of Finding 1-S

Through examination of students' written work, art making, class discussions, and interviews, the following points were revealed:

- All students expressed a strong belief in individual rights for different aesthetic choices in creating different types of yard-space appearances.
- Responses from questionnaires showed growth, but responses on the worksheet were inconclusive. A majority of the students could describe and recognize positive qualities of native prairie yards after completing the course but were inconsistent in identifying all native prairie yards in the same way.
- Students participating in discussions recognized the environmental benefits of alternative natural yard-space elements and also showed concern about environmental damage caused by certain yard-care activities. Through discussions, students demonstrated growth in their abilities to identify and analyze homeowners' decisions for creating and maintaining yard-space appearances.

While some written responses were inconclusive in showing student growth, triangulation with other data sources of classroom discussions and interviews showed that students appeared to demonstrate growth in their abilities to identify and analyze homeowners' decisions for creating and maintaining yard-space appearances. Through curriculum participation, students also appeared to raise their awareness of environmental issues associated with homeowners' yard-space appearances.

Changes in students' understanding of others' yard-spaces were also reflective of changes that occurred in students' views of their own yard-spaces. Finding 2-S reports learning that occurred through students' examination of their own yard-spaces.

Finding 2-S: Envisioning Positive Environmental Changes in Yard-Spaces

Through place-based environmental art lessons, the majority of students learned to envision environmentally beneficial changes in their own yard-spaces and expressed interest in making these changes. This finding responds to the Sub-Question portion of Research Question 3, which questioned students' attitudes and aesthetic choices for yard-space appearances. Envisioning these changes broadened students' attitudes and perceptions about the aesthetic choices made within yard-spaces. Evidence of this learning and students' interest in making changes is presented in the following sections including questionnaires and worksheets, classroom discussion, and student interviews.

Questionnaires and Worksheets

The same questionnaires described in Finding 1-S were used to document student growth for Finding 2-S. Questions that pertained to this finding are outlined and described in the following sub-sections.

Yard-Spaces and the Environment Questionnaire. The *Yard-Spaces and the Environment* questionnaire (Appendix D) was completed by students prior to instruction and repeated five months after course completion at the end of the school year. Responses to questions three and seven were compared to note students' growth in envisioning changes for their own yards. Question three asked, "What activities do you or your family do to make the yard look this way?"

Do any of these activities affect the environment? Explain.” This question focused on students’ understanding of their own yard-care activities and environmental effects of the activities.

Question seven asked, “Are there things you could do to your yard to help protect the environment?” This question focused on students’ abilities to envision making environmental changes in their own yards. Students’ responses on the pre- and post-questionnaire were compared to document growth related to curriculum participation.

Before completing the post-questionnaire, Ken moved out of the district. Therefore, 20 students’ responses were evaluated. For question three, seven students (Alicia, Nick, Mary, Martin, Wayne, Alan, and Collin) showed growth in perceptions of yard-care activities by including descriptions on the post-questionnaire of environmentally harmful activities used in their own yard-spaces. See Table 11 for three examples of students’ responses.

Table 11

Examples of Student Growth for Question Three

Question Three: What activities do you or your family do to make the yard look this way? Do any of these activities affect the environment? Explain.”		
	Pre-Curriculum	Post-Curriculum
Mary	Compost and garden.	We mow sometimes but I want grass that stops growing at a certain height.
Alicia	Our tree swing hits the tree and makes the bark scrape off.	We mow the lawn. This affects the environment by releasing harmful gasses into the air.
Alan	We rake leaves and trim the bushes.	We mow the lawn and gasoline pollutes the environment.

For question seven on the post-questionnaire, all but one student, Ally, were able to describe elements or activities that are environmentally beneficial in yard-spaces. In response to question seven, “Are there things you could do to your yard to help protect the environment?” twelve students (Alicia, Nick, Mary, Casey, Abby, Ken, Wayne, Alan, Lisa, Calvin, Dale, and Collin) showed the most growth by changing responses from “No” or “I don’t know” on the pre-

questionnaire to listing examples of environmentally beneficial ideas on the post-questionnaire.

See Table 12 for examples of three students' responses.

Table 12

Examples of Student Growth for Question Seven

Question Seven: "Are there things you could do to your yard to help protect the environment?"		
	Pre-Curriculum	Post-Curriculum
Alicia	No	Not mow as much and pull or dig up weeds instead of using weed killer.
Casey	I don't know	We can mow our lawn less and put some statues in our yard. We can plant more flowers.
Collin	Not sure	There is one thing my family should do: have a hand-powered mower so we don't pollute.

Students' responses showed that all but one student recognized environmentally beneficial ways to manage yard-space appearances after completing the course.

Beyond identifying and envisioning changes, questions were asked to ascertain students' attachment to their yard-space appearances and willingness to make changes. Question six on the *Yard-Spaces and the Environment* questionnaire (Appendix D) asked, "Would you like your yard to look differently? Why or why not?" The purpose of this question was to investigate students' openness to changing the appearances of their yards. Like the other questions, responses were compared to document changes that occurred after curriculum participation. Results showed that prior to instruction, all twenty students that were evaluated liked the appearances of their own yards. Eighteen students did not want any changes, and two students (Casey and Jennifer) were open to making changes. At the end of the year, seventeen students liked their yard-space

appearances and did not want to make any changes, and three students (Mary, Alan, and Calvin) were open to making changes to their yard-space appearances. Only Mary gave environmentally beneficial reasons for wanting to change her yard-space appearance. Little change in students' appreciation for and desire to change their own yard-space appearances points to a sense of satisfaction and attachment to their yard-spaces.

Yard-Spaces End-of-Course Questionnaire. The *Yard-Spaces End-of-Course Questionnaire* was completed on the final day of the course to target specific course content areas of environmental learning, such as the harmful effects of mowing. The purpose of asking these targeted questions was to provide insight into students' thinking about course content immediately following course completion. Question two asked, "Do you mow, trim, use pesticides, or do anything else to make your yard look this way? How do these types of things that you do affect the environment, and do you care how the environment is affected?" This question targeted student-identified yard-care activities from class discussion and recorded students' attitudes about the environmental effect of these activities.

In response to question two on the end-of-course questionnaire, 14 students (Alicia, Nick, Mary, Casey, Abby, Ken, Martin, Elton, Rita, Wayne, Alan, Randy, Jennifer, and Collin) perceived mowing and pesticide use as environmentally harmful. Seven students (Jan, Ally, Robert, Lisa, Calvin, Dale, and Adam) gave unclear responses to question six. Although not indicative of changes in perceptions, these responses show that on completion of the course, more than half of the class was aware that their families participated in certain yard-care activities that cause environmental damage.

Students' perceptions of yard-space appearances were closely related to their environmental attitudes. Question two also revealed information about students' environmental

attitudes, particularly students' responses to the part of question two that asked, "Do you care how the environment is affected?" Although ten students (Nick, Ken, Ally, Alan, Lisa, Randy, Alvin, Jennifer, Dale, and Collin) did not respond to that part of the question, 11 students showed concern after participating in the environmental art coursework. For the students that responded, two students (Robert and Wayne) did not give reasons. For the other students that showed concern, the following reasons were noted:

- One student (Jan) cared about harm caused to animals and plants.
- Four students (Mary, Casey, Elton, Adam) cared about the harmful effects of mowing and pesticides.
- Four students (Alicia, Abby, Martin, Rita) cared about harmful effects of pollution.

Although not indicative of changes in attitude, these responses show that approximately half the students demonstrated attitudes of concern for the environment after completing the coursework.

Question six asked, "Now that you have learned about ways to help the environment, are there things you could do to your own yard to protect the environment?" This question focused students' attention to classroom learning experiences about ways to help the environment. By developing environmentally concerned attitudes and perceiving mowing and pesticide use as environmentally harmful, students identified yard-space aesthetic choices that are environmentally beneficial. After completing the course, all but three students (Ally, Alan, and Collin) gave detailed answers about aesthetic choices they could make in their own yards to help protect the environment. Some students gave more than one response for a total of 35 responses. Responses included

- Mowing less: 14 students (Jan, Alicia, Mary, Casey, Abby, Martin, Robert, Elton, Wayne, Nick, Lisa, Calvin, Jennifer, and Adam)

- Adding more plants like flowers or trees: Eight students (Kalvin, Jennifer, Dale, Adam, Jan, Rita, Casey, and Mary)
- Adding native plants: Seven students (Martin, Abby, Casey, Mary, Lisa, Dale, and Adam)
- Adding animal shelters: Six students (Mary, Martin, Robert, Randy, Lisa, and Ken)

These results show that most of the students could identify and envision environmentally beneficial aesthetic choices after participating in the curriculum.

Question seven asked, “Would you like how your yard looked if you made environmentally friendly changes? Why or why not?” The purpose of this question was to note students’ reactions to environmentally beneficial changes discussed in class, connect aesthetic choices in yard-spaces with environmentally concerned choices, and to note students’ openness to making these changes in their own yards. At the end of the course, 13 of 20 students believed they would like their yard-space appearances with added environmentally beneficial changes. Four students (Abby, Alan, Randy, and Kalvin) were unsure or their answers were unclear. Three students (Ally, Elton, and Dale) did not want to make changes. These results showed that more than half of the students appeared to be willing to make environmentally beneficial changes to their yard-spaces at the end of the course.

In addition to these questionnaires and worksheets, students communicated their opinions through a yard-painting worksheet, which encouraged reflection on their art-making experiences.

Yard-Painting Reflection Worksheet. After students completed the *Designing Environmental Changes in Personal Yard-Spaces* art project, they reflected on their work by responding to a *Yard Painting Reflection* worksheet (Appendix G). In this project, students were allowed to add any type of environmentally beneficial elements to their yard-spaces, even if the

reality of actually adding these elements might be highly improbable. Question three asked students, “Which of your ideas would you like to try in your own yard?” The purpose of this question was to gauge students’ interest in making environmental changes to their yard-spaces.

All but one student, Nick (who gave no answer), showed interest in adding elements to their yard-spaces. Two students (Kalvin and Jennifer) wanted to add sprinklers and a hammock, elements that are not considered environmentally beneficial. Collin’s aesthetic choice of adding a statue was discussed in class as an aesthetic choice that communicates something about the homeowner’s identity and possibly reduces mowed areas. Student responses included

- Animal habitats/shelter: Nine responses (Casey, Abby, Martin, Ally, Alan, Lisa, Randy, Dale, Adam)
- Plants/Gardens: Five responses (Jan, Robert, Rita, Lisa, and Adam)
- Pathways/Rocks: Four responses (Casey, Ally, Elton, and Wayne)
- Goats: Three responses (Mary, Ken, and Elton)
- Native Plants: Two responses (Alicia and Abby)
- Statue: One response (Collin)

These responses indicate the majority of students were able to envision environmental changes in their own yards and also showed interest in making changes. Additionally, the majority of students’ attitudes showed openness to alternative aesthetic choices for yard-space appearances after completing this art project.

Some students indicated interest in adding animal habitats to their yards, like birdhouses and ponds. Envisioning animal habitats within yard-spaces was also encouraged through the animal research project.

Animal Research Project Worksheet. Through discussion and art making associated with their animal research projects, students learned about the destruction of animals’ natural habitats

and animals' need for shelter. To gauge students' attitudes toward animal protection, question three on the *Animal Research Project* worksheet (Appendix M) asked, "Could this animal find shelter in your yard? Why, or why not?"

The majority of students were able to identify the types of habitats their researched animal needed for protection and identify areas in their own yards that could provide animal shelter. Four students (Ally, Calvin, Jennifer, and Adam) did not respond to the question. Three students (Nick, Ken, and Randy) believed their researched animal could not find shelter in their yards. Their written responses stated

Nick: The deer could not find shelter because there are too many things in my yard.

Ken: The red fox could not find shelter because of the golf course.

Randy: The bear could not find shelter because there aren't any sticks in my yard to build a den.

The responses show these students understood the types of habitats their researched animal required and recognized these types of habitats were not available within their own yard-spaces.

The remaining 14 students identified the types of habitats their researched animal required for shelter and identified areas within their own yards that could be adapted for the animals' protection. Three examples of students' responses include

Lisa: The cottontail rabbit can live in a bush or burrow in the grass.

Casey: A skunk could find shelter in my yard under my deck.

Wayne: A garter snake could find shelter if I dug a hole for it near water.

Through their animal research and art making, the majority of students learned to envision their yard-space areas as more than aesthetic appearances by analyzing the potential of each area to serve as an animal habitat.

In addition to written responses, students communicated the ways they envisioned environmental changes to their own yard-spaces through classroom discussions.

Classroom Discussions

To connect ideas about yard-space appearances to students' own yards, classroom discussions began with identifying students' participation in various yard-care activities.

NW: What types of activities are necessary to make a yard look a certain way? What do you, or your family do to your own yard to make it look the way it looks?

Jan: We mow, water, and pick things up and make it tidy.

Abby: We trim the bushes so they don't look overgrown and messy.

Martin: We do raking to keep it neat.

Ken: My dad trims the weeds.

NW: I see, you have many ideas about keeping your yard neat and tidy. Does anybody put anything on his or her yard to make it look a certain way?

Wayne: Like pesticides?

NW: Yes. Pesticides are chemicals that are used to kill bugs, and herbicides are chemicals that kill unwanted weeds. Let's take a count. Nick, will you keep track? How many use pesticides in their yards?

Nick: Eight! (of 21 students)

NW: And how many use herbicides, spraying for weeds like dandelions that you don't want in your yard? Or sometimes, a company will spray the whole yard to make it green. That's an herbicide, too.

Nick: Twelve!

NW: Let's find out how many people mow their yards or hire somebody to mow their yards?

Nick: Everyone!

NW: And watering?

Nick: Everyone!

NW: Well, it looks like watering and mowing are done by everyone, and close to half the class uses pesticides and herbicides. We're going to look at some statistics on one yard-care activity, specifically mowing. Then, we'll go back and look at the slides of different yards again to discuss the reasons homeowners wanted their yards to look that way.

This classroom discussion served as an introduction to identifying the types of yard-care activities students enacted to create their own yard-space appearances. By charting the activities first, students could recognize how widespread and socially accepted certain activities like mowing were for their locality. After identifying the activities, students could then analyze the reasons for and the environmental effects of participating in the activities. An environmental

website that promoted reel lawnmowers and listed statistics from the Environmental Protection Agency (EPA) was shared with the students to reinforce the harmful effects of mowing (Figure 38).

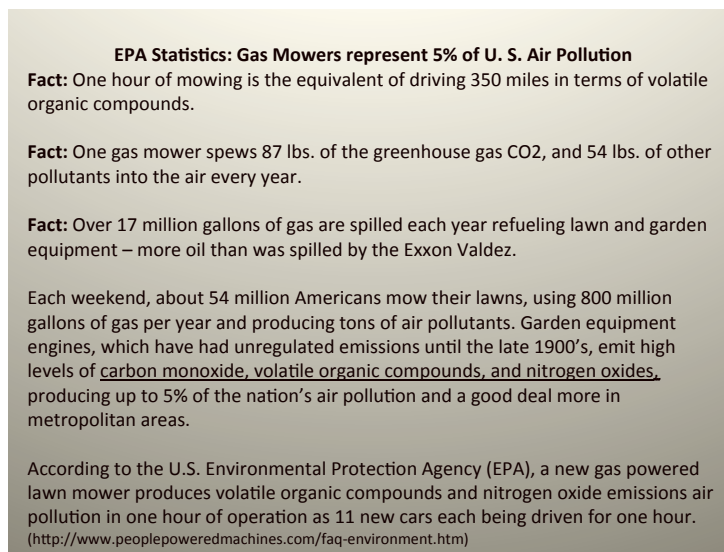


Figure 38: EPA statistics

NW: I want you to think about these activities we do in our yards like mowing. Did you know that, according to this website, there are 54 million Americans that mow their yards each week? By doing that, it causes five percent of our air pollution because of the emissions that come from a gas lawn mower. Is there a different kind of lawn mower you might use?

Wayne: It's called a push blade...

NW: Yes, it just spins like that and doesn't use gas, just human energy when you push it. Electric mowers don't give off emissions or pollution, but they still use electricity, which we are trying to cut down on, too. Did you know that using one lawn mower for an hour could pollute as much as eleven cars driven for an hour? People don't think about mowing as causing pollution, so the manufacturers of lawn mowers aren't concerned with keeping them from polluting.

Alan: My dad uses a lawn mower, and whenever he stops using it, the motor keeps running.

NW: Yes, and that burns a lot of gas. And think of how we are always trying to save gas by not driving as much or riding a bike. But, we don't often think how we are using a lot of gas with lawn mowers. So, that is something to start thinking about.

These classroom conversations laid the groundwork for students' investigation of their own yard-spaces and the environmental effects of their families' yard-care activities. By

understanding yard-care activities affect the appearances of yards, students could consider alternative appearances that communicated environmental concern.

Not every student participated in classroom discussion or shared their viewpoints with the rest of the class. To understand the viewpoints of two students who did not participate in classroom discussion, Mary and Collin were interviewed in separate one-on-one meetings.

Student Interviews

Interviews with Mary and Collin conducted at the end of the year revealed their opinions about art and their own yard-space appearances after participating in environmental art lessons. Their responses have been combined into one report to facilitate comparison of opinions.

NW: Do you think our art classes helped you think of more ways to protect the environment?

Mary: Yea, it has. I talked to my mom about getting the no mow grass that stops growing at a certain point. She's still thinking about that.

(Collin nods in agreement, but does not elaborate further.)

NW: Do you think young people are interested in learning about art and the environment in school?

Mary: I think it depends on the type of person they are, their personality, but I find it interesting.

Collin: Protecting the environment is important, and kids like art class. So combining the two is a good way to learn about it.

NW: Do you think young people can make a difference and influence others to make environmentally friendly changes to their yards? Or do you think parents will do what they want and it's really hard for a young person to make a change?

Mary: Young people can change adults, too.

Collin: Yes, young people care about the environment and can talk to their parents about ways to make changes. Parents will listen to young people, as long as you pick the right time to talk about it.

NW: When you are an adult, do you think you will use any of the ideas you learned in your own yard?

Mary: I'm probably going to get that no mow grass. Sometimes grass can be spikey, but that grass looks soft.

Collin: I have my yard planned out. I want to have an open space in the middle for playing games and plants around it. I really like sculptures, and I want to have a lot of sculptures in my yard that express my personality and tell people a lot about me.

NW: How important is art making in your life?

Mary: It's really important. I'm going to be an artist when I grow up. My sketchbook pictures are all about animals outside in nature, flowers, and trees. I think you should do these lessons every year because they are important.

Collin: Art is really important to me. It's a way to get your feelings out and express your feelings when you are sad or upset. I like to draw and I spend a lot of time on my drawings. I think I will always do art.

From these interviews, Mary and Collin's appreciation for and interest in art is apparent.

Both students found that connecting environmental and art learning was personally interesting.

Additionally, they both felt that young people can influence adults to make changes, and Mary had taken action in making environmental changes by asking her mother for a no-mow lawn. In looking to the future, both students envisioned their own yard-spaces including environmentally beneficial elements or artwork that communicates personal messages. These conversations show that participation in this curriculum motivated and empowered two students to envision and take action toward environmentally beneficial yard-space design.

The following section provides a summary of key points from Finding 2-S.

Summary of Finding 2-S

Through place-based environmental art learning, the majority of students learned to envision environmentally beneficial changes in their own yard-spaces and expressed interest in making these changes throughout and on completion of the course. Five months after the course completion, the majority of students expressed preferences for not changing their yard-spaces. Students expressed attitudes of environmental concern, demonstrated perceptions of

environmental damage caused by certain yard-care activities, and identified environmentally beneficial aesthetic choices for yard-spaces.

While many students demonstrated environmentally concerned attitudes, perceptions, and aesthetic choices, they also drew on new knowledge to communicate environmental concern through their art.

Finding 3-S: Communicating Environmental Concern through Art

Through place-based environmental art lessons, the majority of students learned to communicate environmental concern through their artwork. This finding responds to the Sub-Question portion of Research Question 3, showing how students' attitudes and aesthetic choices for art making were influenced by the curriculum. This researcher-developed curriculum (Appendix B) consisted of four art projects: *Designing Environmental Changes in Personal Yard-Spaces*; *Nature Arrangements Inspired by the Artwork of Andy Goldsworthy*; *Powerful Environmental Messages Inspired by Jenny Holzer's Truisms*; and *Local Animal Research Inspired by the Artwork of Lynne Hull*. The following section describes the activities associated with each lesson, connecting student learning processes with final products. Each art project is discussed separately, concluding with a summary of environmental learning from all of the art projects.

Designing Environmental Changes in Personal Yard-Spaces

The purpose of this lesson was to introduce different types of yard-spaces and homeowners' reasons for creating their yard-spaces, identify environmental harm caused by creating yard-space appearances, and connect these concepts to students' own yard-spaces and

activities. For this project, students brought in pictures of their own yard-spaces, planned environmentally beneficial changes to the spaces, and painted the changes on acetate overlays applied to their pictures. Prior to beginning the design portion of this project, students viewed the *What is in a Yard?* PowerPoint presentation (Appendix I), which features homeowners' yard-spaces from Phase I.

During the presentation, students discussed reasons for creating each type of yard-space. Discussion of the harmful effects many yard-care activities have on the environment drew attention to activities that many of the students had taken for granted as being normal. Students compared their own yard-spaces with classmates' yard-spaces and charted classroom participation in different types of yard-care activities. Alternative environmentally beneficial landscape design choices were explored by viewing the PowerPoint presentation, *Yard-Space Elements* (Appendix L). Students discussed how certain elements that are placed within yard-spaces communicate personal meanings connected to the homeowners' lives. Other resources covering harmful yard-care activities and alternative beneficial landscape choices included handouts: *Your Yard and Clean Air* (Appendix J), containing information distributed by the Environmental Protection Agency (EPA), and *Benefits of Native Plants* (Appendix K), containing information distributed by the Lady Bird Johnson Wildflower Center.

After reviewing previous discussions, students were introduced to the art project through the following dialogue.

NW: For this project, you are going to be thinking about your own yards and using the plastic overlay to make changes to your photographs. You are going to be thinking about changes that can make your yard more environmentally friendly. You might think about what you can do so you don't have to mow as much, or to communicate personal meaning, maybe putting in more artistic elements like statues. I'm giving you a handout that we'll read first. It explains why people have native plants in their yards instead of

mowing the whole thing. It also has pictures of local native plants to help you with drawing.

Students read the *Benefits of Native Plants* handout (Appendix K) together and then shared their thoughts about native plants. Through reading the handout and participating in class discussion, students were introduced to the importance of native plants in yard-spaces as a part of environmentally beneficial landscaping. Students also noted the aesthetic effect flowering native plants have on the visual appearances of yard-spaces.

Following this discussion, instructions were given for beginning the artwork sketches. Students were encouraged to think of alternatives to mowed grassy areas, like no-mow grass, native plant gardens, rock paths, and sculptures. The purpose for suggesting these alternatives was to reduce areas that require mowing by gas-powered mowers, while encouraging personal aesthetic choices within the yard-spaces; thus, disrupting conformist appearances of mowed yard-spaces. Drawing methods for portraying native plants and grasses were demonstrated on the classroom white board, and then students began creating their artwork. For details of this lesson plan, see Appendix B.

After completion of their artwork, students reflected on their work using the *Yard Painting Reflection Worksheet* (Appendix G). The researcher-developed *Yard-Painting Rubric* (Appendix B) was used to score learning related to Conceptual Objective Four: Students will recognize alternative design choices that are beneficial to the environment. Students' work was rated on the addition of environmentally beneficial items to their paintings and communication of environmental concern through the artwork and written work. Scores for all of the projects were verified by comparison with two elementary art educators' evaluations and one evaluation from an art education instructor from higher education.

Nineteen students' written work described additions of environmentally beneficial elements, while two of the 21 students (Kalvin and Jennifer) described elements that are not environmentally beneficial (sprinklers and a hammock). Through their written responses, eighteen students clearly identified the environmental benefits of the changes they made, while three students (Randy, Jennifer, and Dale) did not answer or give clear reasoning. Although Kalvin, Jennifer, Randy, and Dale described non-beneficial elements and/or gave unclear reasoning, they did include at least one environmentally beneficial element in their paintings and identified at least one beneficial environmental change to their yard-spaces. Therefore, the results from these evaluations show that through their artwork, all of the students were able to make and identify at least one environmentally beneficial change for their yard-spaces.

The following photographs with accompanying text from students' written responses are examples of high, medium and low rated artwork and written responses. Casey's artwork (Figure 39) received a high score of 15 points because she added more than three environmentally beneficial elements to her yard-space, described more than three of these elements in her written work, and her reasoning matched her description. Jan's artwork (Figure 40) received a middle score of nine points because she added two environmentally beneficial elements and described these elements, but her description of the elements' benefits to the environment was unclear. Dale's artwork (Figure 41) received a low score of three points because he added one environmentally beneficial element to his picture, described one element that was beneficial, and did not include reasoning in his description.

Casey: "I added a pond for animals, flowers that are native, more bushes, a birdbath, and a walkway. These changes help the environment because the native plants, the bushes, the pond, and the path take up space so you don't have to mow as much.



Figure 39: Casey's yard-space painting.

Jan: "I made flowers and pots and I put a goat in it. It helps to plant more things to help the environment."



Figure 40: Jan's yard-space painting.

Dale: “I made waterfalls in my yard. I made a bird house.”



Figure 41: Dale’s yard-space painting.

After completing the yard-painting project, students continued their aesthetic and environmental learning by exploring ways artists use natural materials in creating their artwork.

Nature Arrangements Inspired by the Artwork of Andy Goldsworthy

The second project in this curriculum related to the artwork of Andy Goldsworthy. For details of this lesson plan, see Appendix B. Students viewed a images of Goldsworthy’s artwork and discussed the reasons he creates his work. Students reviewed this discussion at the beginning of the next class.

NW: Do you remember anything about Andy Goldsworthy?

Rita: He likes doing his pictures with nature.

NW: Yes, he uses natural materials. Why does he do that? Why should it matter if we use natural materials or not?

Alan: He’s being artistic.

Ally: And he liked being outside and being an artist, so he wanted to combine them.

NW: He combined two things that he liked, very good.

Martin: And, he saved money.

NW: Okay, he didn't have to spend money on his supplies. Good, he thinks about the environment and not wasting resources, not purchasing supplies to make his work, only using local materials he finds at the site. We're going to be making nature arrangements today. As you work, I want you to think about the message your artwork can communicate about the environment. Let's talk about that. Why do we care what the environment looks like? Why should that be something we think about?

(No response)

NW: Let me show you some pictures to help you think about it. When you see a forest like this, what do you think about, how does it look (Figure 42)?



Figure 42: Healthy forest.

Kalvin: Healthy and green.

NW: And how about this picture (Figure 43)?

Students exclaim audibly and gasp.

Martin: Is that the same forest?

NW: It might not be the same forest, but it's pretty close. That's why I chose these pictures. What is it about these pictures that makes us gasp and say, "Oh!"?



Figure 43: Damaged forest.

Dale: That one is all barren, and the other one is green and healthy.

NW: Right. The second one looks like a forest fire or something has happened to destroy it, an unhealthy thing. That's one reason the first picture is more pleasing to us, we don't want our world to look like the second picture. A healthy environment is more attractive. That's why appearances have an effect on us. So, what I want you to think about is how can art make people pay attention and care about the environment?

By viewing photographs of a landscape that had suffered environmental damage and comparing it to a healthy green landscape, students began to understand the power of visual impressions. The discussion expanded from concepts of environmental appearances to ways environmental messages can be communicated through art. Students were shown Goldsworthy's *Rowan Leaves & Hole* (www.morning-earth.org) and a photograph of leaves that had fallen from trees (idoleaves.com). See Figures 44 and 45.



Figure 44: Rowan Leaves & Hole.



Figure 45: Photograph of leaves.

NW: What is the difference between artwork that is created with leaves and a photograph of random leaves? Which one do you think people are going to pay more attention to? (Students point to the Goldsworthy piece.)

Robert: The one that is arranged.

NW: And why is that?

Robert: Because it looks cooler.

Rita: And it looks artistic.

NW: The photograph of leaves, we might just take for granted, which means it looks normal to us. Even though we may think it's beautiful, we don't think about it much. Goldsworthy's piece draws our attention because it is designed. So, maybe your artwork can draw attention and communicate something when you do your nature arrangements. Think about the environmental message you might be able to say through your artwork today. Questions?

Dale: What did he use for the black space?

NW: It's very dark, isn't it, and it draws your attention to it. It really makes you think. What do you think he used?

Dale: Maybe a hole?

NW: Yes, he could have dug a hole in the dirt, and then arranged leaves around it, so no light gets in.

Ken: He could do it in the evening when it's starting to get dark and he could put the leaves over a hole.

Adam: Maybe he used ashes.

NW: Maybe. You had some really good thoughts about the materials he used. We are going to be using natural materials for our arrangements, too. When you have completed your arrangements, we will photograph them. These arrangements are temporary, you won't take the leaves home with you. When we are done, I'm going to take all this material and return it to the earth where I got it. The idea is to think about nature while you are working and the environmental message you can send by your choice of colors and accents.

Students' great interest in Goldsworthy's design process and the types of materials he used is evidence of environmental art drawing the viewer's attention. This discussion shows how nature arrangements can be a useful source for communicating an environmental message. During the remaining class time, students created their nature arrangements and used a digital camera to take photographs before they dismantled their arrangements.

The following week, students viewed the photographs of their nature arrangements and engaged in discussion about the work.

NW: Our theme has been about getting people to think about the environment and sending a message. What can you say about the pictures you looked at today?

Nick: I really liked how there were all different versions, like some were all packed together and some were all spread out.

Casey: They all had a place where your eye goes to, a place for your eye to focus.

NW: Very good, a focal point that draws your attention. Anything else?

Alan: They are all creative and they don't look like anything real at all. They were all different and they weren't really copying anything.

NW: Yes, they were all unique even though we all used some of the same natural materials. Because they were arranged, they aren't like the photograph of leaves on the ground. You can take a photograph and make it into art, but we used nature to grab peoples' attention because they don't normally see nature presented that way. You were the artist that arranged it and you thought about how to draw attention to it.

Through their analysis of the artwork, students verbalized an understanding that each art piece was unique and drew the viewer's attention to a focal point. These concepts related to the idea that yard-spaces could be unique sites that draw attention because of the elements within the sites and the overall visual appearances.

Building on the discussion of their nature arrangements, students were drawn into a conversation about using poetry to accompany artwork. A haiku format was chosen because students had learned about haiku in their fourth grade curriculum and had some knowledge about the relationship of haiku poetry to nature and the senses. Before beginning the writing process, the steps for creating haiku poetry were reviewed.

NW: We are going to write a poem to go along with our pictures. The reason for that is sometimes in art, we use words to send a message. The first thing to think about is the meaning of the poem. The meaning should try to persuade or try to let people feel nature, feel the environment, think about what they're doing, and pay attention. These are all the things we've been thinking about with our yards. What could we do differently? How can we get people to notice? How can we understand everybody else? With this poem, we are going to try to speak to your senses. That means what you see, smell, taste, or hear with your picture. For the first line, I want you to look at your picture and describe the colors, textures, or the way it's designed in five syllables. The last two lines call out to people about nature and the environment.

A researcher-developed poem was presented to students as an example of a haiku with an environmental message. This haiku also gave students a visual example of the syllabic structure for their poems. During the remaining class time, students worked on creating the haiku poems to accompany the photographs of their nature arrangements.

Student artwork and poetry were evaluated using the researcher-developed *Nature Arrangements Rubric* (Appendix B). Students were scored on the effort they put into choosing and arranging their natural materials to create aesthetically pleasing arrangements, their haiku's environmental message, and the relationship of the poem to the artwork. These ideas relate to Conceptual Objective One: Students will understand reasons for using natural materials in art making including ideas of consumerism and communication of environmental concern and Artistic Skill Objective Three: Students will show careful attention in choosing and arranging the natural materials.

All 21 students received scores of at least nine points or higher on a 15-point scale. Scores These ratings indicate all of the students had some success in designing and arranging natural materials and communicating environmental concern through their artwork. The following pictures show examples of student work.

Randy's work received a high rating of 15 points (Figure 46), Elton's work received a middle rating of 11 points (Figure 47), and Robert's work received a middle rating of nine points (Figure 48).



Figure 46: Randy's nature arrangement.

Randy: Leaves falling off trees.
Protect the environment.
And keep the world clean.



Figure 47: Elton's nature arrangement.

Elton: Leaves are falling down.
Carving pumpkins in the fall.
Colors are around.



Figure 48: Robert's nature arrangement.

Robert: I am a circle.
There are a lot of leaves
And a lot of red.

After completing their nature arrangement artwork and poetry, students continued their aesthetic and environmental learning by building on the including text in artwork to the consideration of text as art.

Powerful Environmental Messages Inspired by Jenny Holzer's Truisms

Building on concepts learned through the nature arrangements project, students were introduced to the next project, which featured text as artwork. For details of this lesson plan, see Appendix B. Students viewed a video clip of Jenny Holzer and her artwork and then searched for meaning in her work through class discussion.



Figure 49: Holzer: Protect me from what I want (KCAI.edu, n.d.)

NW: Looking at the sign that says, “Protect me from what I want,” what might that mean (Figure 49)?

Elton: Like, telling a person that takes drugs, he wants to, but they want to save him?

NW: Okay, maybe what we want isn’t always what is good for us; protect me from certain things I shouldn’t really want. You picked up on that. How does that one relate to the environment, to things we do or think about?

Alicia: Like, you want to do something, like you want to drive a car, but you can easily ride a bike. It’s a lot better for the environment to ride a bike, but you want to drive a car.

Abby: Or maybe, protecting everything around us. Sometimes you want to take something from the environment, and you don’t need that.

NW: Those are good examples. Sometimes we don’t think about things we could be doing, or we could be doing more not to waste things. We are going to use these ideas and come up with your own Truism, your own message. It should be a short phrase of what you would like to say about the environment. It should not be more than a few words; it might even be one word. For example, if you saw the words, “Pay attention,” what would that make you think?

Dale: Pay attention to nature.

Adam: Pay attention to what you’re doing.

Ken: Pay attention because your actions have an effect on nature.

NW: Good, so, through those words, you’re telling people hey, what you are doing is affecting what you are seeing. We are doing this is for our next project, but before we begin, you need to have your phrase first.

These students’ analyses of Holzer’s Truisms showed they understood that short phrases can communicate powerful messages. After students had been given time to think of their

phrases and write them on slips of paper, they were called to gather around the demonstration table.

NW: We've done a few two-dimensional projects, but our next project is going to be three-dimensional. We will use natural materials, something that's a part of nature, but we will add other elements. Each of you will choose a rock. You are going to use a smaller copy of your nature arrangement pictures to cover the rocks. Next, you will coat your rocks with Outdoor Mod Podge because then, you can put them outdoors. It can rain on them, and it won't hurt them. Next week, you will put your messages on your rocks so that they will get people's attention. You will be able to put them in your yard, or garden, or the school garden if you want to donate them.

The remaining class time was spent completing written phrases, choosing rocks, and applying copies of nature arrangement photographs to the rocks. Prior to the start of the next class, student phrases were typed in various font styles and printed. During the next class time, students chose the font styles they preferred and applied the phrases to their rock art.

Photographs of students' rock art were evaluated for the strength of the environmental message communicated through the artwork, which related to Artistic Skill Objective Three: Students will show careful consideration of text application to draw attention to artwork and communicate an environmental message. A check system was used to indicate a clear message, a somewhat clear message, or an unclear message. Sixteen students communicated a clear environmental message, and four students communicated a somewhat clear message through their artwork. One student, Adam, applied the message to the bottom of his rock, so the message could not be easily viewed. His message, *Don't tread on me*, had an unclear connection to the environment. Therefore, Adam's artwork received a lower rating for communicating an environmental message. Overall, this evaluation revealed almost all of the students (20 of 21) were successful in communicating an environmental message through their artwork.

The following examples of students' work were evaluated as a clear message (Mary: Figure 50), a somewhat clear message (Elton: Figure 51), and an unclear message (Adam: Figure 52).



Figure 50: Mary's rock sculpture.



Figure 51: Elton's rock sculpture.



Figure 52: Adam's rock sculpture.

The focus for students' final project in the curriculum changed from using natural objects as components of environmental art to exploring factors affecting the protection of animals.

Local Animal Research Inspired by the Artwork of Lynne Hull

The final project in this curriculum integrated two artworks with students' classroom animal research. For details of this lesson plan, see Appendix B. The purpose of this lesson was to consider how control of local animals affects the appearances of local environments, including the ways animal habitats are diminishing due to land development. Homeowners from Phase I expressed differing views on designing their yard-spaces to promote or control the presence of wildlife in their yard-spaces, and this lesson encouraged students to consider how concern for animals affects choices for yard-space appearances.

With the help of their classroom teacher, students chose a local animal and participated in research and writing activities in the classroom. In art classes, students created likenesses of their animals in two-dimensional and three-dimensional formats. Three-dimensional animal figurines were displayed in a hallway display case. For examples of students' figurines, see Figure 53 (Robert's eagle), Figure 54 (Lisa's cottontail rabbit), Figure 55 (Casey's skunk), Figure 56 (Dale's wolf spider), Figure 57 (Abby's chipmunk), and Figure 58 (Collin's turtles). Students arranged their two-dimensional animals on two entrance walls of the school, creating two murals representative of local animal habitats (Figures 59 and 60).



Figure 53: Robert's eagle figurine.



Figure 54: Lisa's cottontail figurine



Figure 55: Casey's skunk figurine.



Figure 56: Dale's wolf spider figurine.



Figure 57: Abby's chipmunk figurine.



Figure 58: Collin's turtle figurines.



Figure 59: Wall mural: View 1.



Figure 60: Wall mural: View 2.



Figure 61: Animals need protection and shelter slide.

After completing their artworks, students viewed the *Animal Shelter Art PowerPoint* (Appendix C) and participated in class discussion.

NW: Today, we're going to think about why we should care about the animals we researched, because I really think your projects show that you put a lot of care into them, and I think you thought about the animals a lot. Animals do need protection and they need shelter. These are some reasons why (Figure 61). What do you think is meant by "destruction of habitat"?

Wayne: Say, there's these woods and some builder comes and knocks it all down and makes a subdivision in these woods. It affects the animals because they don't have enough space any more.

NW: Very good, so that's one-way humans destroy an animal's habitat, so we need to think about those kinds of things that affect animals. How about pesticides, herbicides, and pollutants? How could these affect animals?

Abby: Different chemicals could hurt the animals if they breathed it in.

Ken: That could make the air they breathe unhealthy.

NW: Okay, that's something we are doing that affects the animals and we might need to think about those things, too. Also, what about if you put chemicals on your lawn and then it ran off? How would that affect an animal? Can you think of another way besides just breathing?

Rita: It could eat it, maybe?

Adam: Or, it could drink it in the water.

NW: Yes, and those could poison the animal. So, we had breathing, drinking, and eating the chemicals. How could hazards from vehicles and road traffic affect an animal?

Adam: Um, maybe like a car could hit an animal.

NW: Exactly, most of you have seen animals by the side of the road because a car hit them. Yes?

Adam: The exhaust from a car. It could choke on the exhaust.

NW: Okay, that's another pollutant, very good. You're thinking about those things and how they affect animals. Alan, did you have something to say?

Alan: I was looking at the next one, about collisions with windows and buildings.

Pelicans, they can't see the windows, so they just fly into them and fall to their death.

NW: Okay, pelicans, and many other birds, too.

Ken: I saw this cardinal. He saw his reflection and he started flying and hitting the window thinking it was another cardinal. When we came back, the cardinal was laying on the ground.

NW: Aw, that's really sad. They don't, or can't think of them as windows like we do, right? Do you know what you can do to help with that, prevent birds from flying into the windows?

Kalvin: I think there's a kind of reflective tape?



Figure 62: Lynne Hull's "Raptor Roost."



Figure 63: Lynne Hull's "Desert Hydroglyph."

NW: Close, see that outline of a bird on the screen? That's called a silhouette and you can put those stickers in the windows. Birds think it's another bird and that helps them from flying into it. So, thinking about all those things, like if the habitat was destroyed or if there were pesticides around, think about how they might affect the animal you researched. And, animals need shelter if their habitat is being destroyed. So, I want you to think about, can your animal find shelter in your yard? While you're thinking about that, I have an artist to show you who makes animal shelter art. Her name is Lynne Hull and her artwork is meant to shelter and protect animals that are endangered. Why do you think she may have made a sculpture like that for birds (Figure 62)?

Alicia: Maybe they can sit and rest on the statue?

NW: You're right, some birds that are migrating have to fly a long way and need a place to rest. With a lot of trees being chopped down, there were fewer places for migrating birds to rest, so, predators were killing them. Also, some were landing on utility poles that carry electricity and the poles weren't always grounded. That means it wasn't safe for the birds to land on them. Lynne Hull built these raptor perches so they can rest as they are migrating. What do you think is the purpose of this next one (Figure 63)? One clue is that it's in the desert.

Jennifer: Since it's in the desert, I'd guess they collect water.

NW: You're right; she made the sculptures like the phases

of the moon, but their purpose is to collect water. With the desert being very dry, the animals may have trouble finding water, and these hold the water a bit longer so animals have a place to drink. This next one is the last sculpture I'm going to show you. What is the purpose of this one (Figure 64)?



Figure 64: Lynne Hull's "Winter Butterfly Shelter."

Dale: It could be an animal's home.

NW: Yes, by twisting a bundle of sticks together, all intertwined, it gives protection to butterflies. Did you know that some butterflies migrate just like birds? This makes a place for butterflies to hide and rest while they are migrating so that predators can't eat them. So, that's how Lynne Hull's artwork helps animals by protecting them. Next, I have a worksheet for you to think about how you can help to shelter animals with your art. First, just tell one thing special about the animal you researched that you would like to share. Second, tell why your animal needs protection or shelter. Think back to those points we just talked about, like destruction of habitat, or pollutants, and what affects your animal. For number three, could the animal find shelter in your yard? If you have time, number four gives you a space to design artwork that you could build in your own yard to shelter the animal or give it some protection.

By discussing environmental concerns for animals and Hull's animal shelter art, students were able to make connections to personal experiences involving animals and the environment. Students were encouraged to connect these experiences to the animal each of them researched, helping them to communicate animal concern through their artwork.

While the *Animal Research Project* worksheet (Appendix M) had four parts, only the first two questions were used for evaluation purposes. Seventeen of 21 students completed questions

one and two. Due to time, restrictions, only 13 of 21 students began questions three and four about designing an animal habitat. Of the 13 students who began the drawing portion, only four completed it. Therefore, only questions one and two accompanied by photographs of students' artwork were chosen for evaluation.

Evaluations addressed Conceptual Objective One: Students will understand that animals are a part of our local environment and need protection and shelter, and consisted of highlighting one of three choices for each student: evidence of animal concern and need for protection; some evidence of animal concern and need for protection; and little or no evidence of animal concern and protection. Four students (Ally, Calvin, Jennifer, Adam) were not evaluated because they did not respond to question two about environmental protection. Two students, Ken and Alan, received the lowest score because they showed little concern for their animals and believed their animals did not need protection. The overwhelming majority of students who completed questions one and two (15 of 17) showed evidence or some evidence of concern for animals and the need for their protection through the artwork and written responses. Therefore, these evaluations present evidence that through this lesson, students were able to create artwork that communicated environmental concern. Examples of three students' animal drawings and sculptures represent "showing evidence of animal concern and need for protection" (Martin: Figures 65 and 66); "showing some evidence of animal concern and need for protection (Jan: Figures 67 and 68); and showing little or no evidence of animal concern and need for protection (Alan: Figures 69 and 70).



Figure 65: Martin's opossum drawing.

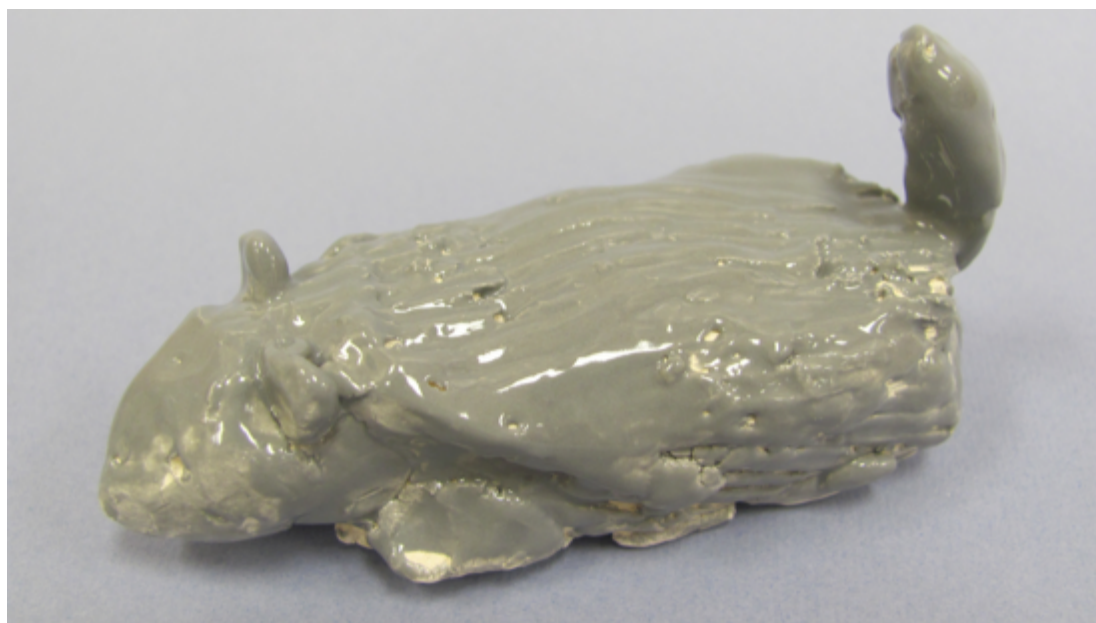


Figure 66: Martin's opossum figurine.



Figure 67: Jan's worms drawing.



Figure 68: Jan's worms figurine.



Figure 69: Alan's cardinal drawing.



Figure 70: Alan's cardinal figurine.

When all projects were completed, class discussion and review of each project allowed students to share their thoughts about art making processes and the learning that occurred.

Critique and Discussion of Projects

During the final class of the curriculum, students viewed and discussed the four lessons and all of the artwork they completed.

NW: When we look at your local animal mural and your animal sculptures, what do you think they can tell people about nature?

Casey: To pay attention and not to hurt them. They live here.

NW: Exactly. Instead of just reading words, it shows people what the animals look like, where they live, and how they fit within their habitats. It draws attention to all of the little details about them. That goes along with Lynne Hull and her artwork. What kind of art does she make?

Alan: She does art to help the animals.

Rita: Also, for animals' habitats.

NW: For their habitats and to give them shelter. What do you think about when you look at her artwork, Robert?

Robert: I think about it helping the animals.

NW: Okay, good. And then, we have our rock art with messages. Jenny Holzer had words in her artwork, too. What do you remember about Jenny Holzer?

Ken: It's words in different and unusual places, like on floors and walls. I think that it's kind of amazing how she does that because it reminds you of stuff- but in unusual places. You might think to see it on a billboard but instead you get reminded everywhere you go.

NW: Yes, and you used the same ideas by putting your messages on rocks. How did those get people to pay attention, Rita?

Rita: To take better care of the earth.

NW: Why would that make people take better care of the earth?

Rita: It's like a message to them.

NW: Yes, it is a message to them. If you were walking along and you saw this rock on the ground, would you think that's a normal rock that just happened to be there?

Dale: I think it would tell you something.

NW: Yes, it tells you something, sends you a message, and gets you to pay attention. Even though a rock is a part of nature, as the artist, you took the pictures and you picked out the message. It sends a message through your art, it's communicating. Next, we have our Goldsworthy inspired pictures to talk about. What do you remember about Andy Goldsworthy?

Dale: He used things from nature.

NW: Why do you think he makes his artwork?

Abby: So people pay attention to nature.

NW: And, how do your nature arrangement photographs make people pay attention to nature?

Wayne: They are like formations of nature that normally wouldn't be there. It kind of catches someone's eye.

NW: And also your poems get people to notice the environment, too.

Overall, students who participated in the discussion demonstrated that they understood how three contemporary artists communicated messages through their artwork. Students were able to identify the artists' reasons for creating their work and the messages the artwork communicated. Students who participated in the discussion also showed an understanding that their own artwork communicated environmental messages by attracting the viewer's attention.

Because some students were not forthcoming during classroom discussions, one boy and one girl were interviewed separately in one-on-one meetings to understand their perspectives. The purpose of these interviews was to hear the viewpoints of students who may not have been comfortable in sharing their thoughts during group conversations. The two students chosen were recommended by their classroom teacher for the ability to share thoughts in one-on-one situations.

Student Interviews

Mary and Collin, who did not contribute to the dialogue during classroom discussion, were interviewed in separate one-on-one meetings at the end of the school year. The conversations provided insight into their thinking about the curriculum and their artwork. Part of their discussions involved a computer-generated art lesson that was taught after completion of the environmental art curriculum. Both students chose an environmental theme for that project, although it was not part of the assignment. To facilitate comparing and contrasting their opinions, both interviews have been combined into one report.

NW: Do you think art can make a difference in understanding others and communicating a message?

Mary: You talked about Lynne Hull, who made really cool art, and one of them was to keep animals protected from the predators. Some art keeps the animals protected and helps you care more about the environment.

Collin: Yes, you showed us how art can say something about our personality by having sculptures that tell people about us.

NW: Your computer-generated art picture had an environmental message. Did our lessons last fall influence you in choosing that message for your artwork?

Mary: You said my picture was really powerful; I'm really good at doing those. Taking care of the environment has been on my mind, and I've been thinking about it more with those lessons (Figures 71 and 72).

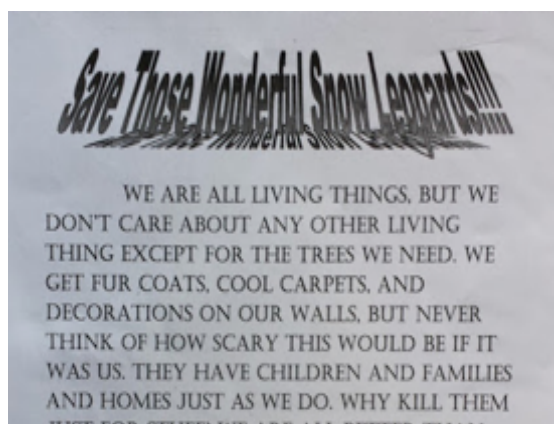


Figure 71: Mary's computer-generated work. Figure 72: Mary's artwork statement.

Collin: Yes, you taught us how we send messages through our artwork and I really like turtles. Leatherback turtles are endangered, and when we did the writing part for the artwork, I knew I could let people know about it that way (Figures 73 and 74). I also really liked doing the artwork with our yards and thinking about the way our own yards look.

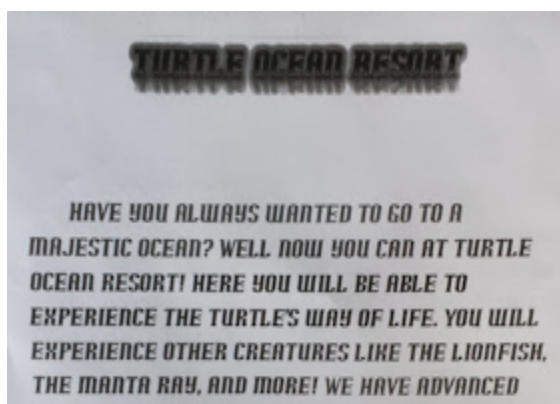


Figure 73: Collin's computer-generated artwork. Figure 74: Collin's artwork statement.

These interviews revealed both Collin and Mary believed that through their art making their understanding and communication of environmental issues increased. Choosing environmental messages for their artwork even though that theme was not assigned shows one way these students displayed their concern. These personal interviews were one tool used to gauge students' abilities to communicate environmental concern through their artwork. The following section summarizes all of the key points from Finding 3-S.

Summary of Finding 3-S

While only a portion of the students participated in class discussion, evidence of learning for every student was gathered in many ways: through observation, artwork, written and verbal responses, and personal interviews. These avenues for gauging growth showed students seemed to use the environmental knowledge learned during class time to successfully communicate environmental concern through their artwork.

Learning that occurred through participation in this environmental art curriculum revealed three points: the majority of students appeared to develop an understanding of environmentally beneficial elements in the design of yard-spaces; successfully communicated environmental concern through their artwork; and developed and communicated concern for animals.

The following section summarizes all of the student findings.

Summary of Student Findings

This chapter presented evidence of student learning that supports three findings:

1. The majority of students experienced growth in their abilities to identify and analyze homeowners' decisions for creating yard-space appearances. Growth was shown through triangulation of data including written responses, classroom discussions, art making, and interviews.
2. The majority of students demonstrated the ability to envision environmentally beneficial changes in their own yard-spaces by designing and altering the appearances through art making.
3. Students drew on environmental knowledge learned from course work to communicate environmental concern through their artwork.

Meanings derived from these findings are discussed in the following chapter.

CHAPTER 5

DISCUSSION, RECOMMENDATIONS, AND CONCLUSIONS

This study fulfilled two purposes. The first purpose of this study was to examine Midwestern non-urban homeowners' aesthetic choices in their yard-spaces and to explore the educational experiences that influenced these choices. The second purpose was to investigate the influence of a place-based art education curriculum on fifth-grade students' ability to interpret visual messages communicated by yard-space appearances. It was hoped this study would reveal the influences causing homeowners to create highly manipulated yard-space appearances with little concern for environmental effects. By understanding these influences and incorporating these ideas in an environmental art curriculum, it was hoped that students' attitudes and perceptions could be changed to appreciate and understand the reasons for creating non-conformist yard-space appearances.

The first phase of this research involved narrative inquiry and multiple case study methodologies, collecting qualitative data by conducting in-depth interviews with six homeowners. Following this research phase, a place-based environmental art curriculum was developed and implemented with fifth grade students within my own teaching practice. Through action research methodology, changes in students' attitudes and changes to my own teaching practice were noted and analyzed.

Findings in the previous chapter revealed all of the homeowners had personal opinions about the visual appearances of yard-spaces and the social expectations for the appearances. This

finding is supported by Lai and Ball's (2002) research in which residents of one community showed strong opinions about their neighbors' yard-space aesthetic choices and the messages these choices communicated to the residents. In this study, no formal K-12 learning experiences influenced homeowners' design choices for their yard-space appearances and environmental knowledge appeared to be learned informally. Even though some homeowners developed environmental concern through informal learning experiences, all of the homeowners participated in yard-care activities that had detrimental effects on the environment in creating their yard-space appearances.

Findings from the second phase of this study revealed information about student growth through participation in a place-based environmental art curriculum. Prior to instruction, students showed little awareness of yard-space design choices or the effects yard-care activities had on the environment. Through curriculum participation, the majority of students experienced growth in their abilities to identify and analyze homeowners' decisions for creating yard-space appearances. The majority of students also demonstrated the ability to envision environmentally beneficial changes for their own yard-space appearances and learned to communicate environmental concern through their artwork. These findings are in agreement with researchers who found that students developed connections with the environment through aesthetic and environmental art-making activities (Foster, 1998; Garioian, 1998; Kauppinen, 1990; McWilliam, 2008; Song, 2009; Upitis, 2009).

Despite this growth in students' attitudes and perceptions, the majority of students did not seem willing to make aesthetic changes to their own yard-spaces after participating in environmental art activities. This resistance to making changes is contradictory to other studies in which environmental art education motivated participants to enact changes in practices

(McWilliam, 2008; Palega, 2011; Song, 2009; Upitis, 2009). Reasons for the participants in this study resisting changes in the socially accepted aesthetic of their area will be explored in depth in this chapter.

The purpose of this chapter is to categorize and interpret the findings from the previous chapter, discuss the meanings of the interpretations, demonstrate how the findings shed new light on the theoretical framework of this study, and present recommendations for the field of art education. The first section in this chapter describes how the findings were analyzed and synthesized to develop categories for interpretation. Three categories emerged from analysis and synthesis of the findings. The first category, *Recognizing the Gap in Knowledge*, interprets the meaning of the lack of aesthetic understanding for yard-spaces, which affected homeowners and students. The second category, *Addressing the Gap in Knowledge*, interprets the meanings of student outcomes from participation in the environmental art curriculum. Sections within this category include changes that occurred in students' attitudes and perceptions of yard-space appearances and changes that occurred in my own teaching practice. The third category, *Barriers to Change*, interprets the meanings of the barriers affecting homeowners' and students' willingness to make changes to their aesthetic choices for yard-space appearances. This chapter concludes with presentation of researcher recommendations for the field of art education and concluding remarks about the research.

The following section explains how the analytic categories for interpretation were developed.

Analysis and Synthesis Categories

Through analysis of the findings and examination of data supporting the findings, themes and patterns emerged. Comparison of homeowner and student participants' viewpoints within and across categories revealed three key analytic categories:

- A gap in knowledge for designing and maintaining environmentally beneficial yard-space appearances and for understanding the meanings communicated by yard-space visual appearances appeared to exist for both homeowner and student participants.
- A place-based environmental art curriculum appeared to be effective in addressing this gap in knowledge in students. Students' attitudes and perceptions of homeowners' non-conformist aesthetic choices changed from negative judgments to understanding of homeowners' environmental concern communicated through environmental aesthetic choices.
- Barriers related to social expectations and psychological ownership appeared to impede the willingness of both homeowners and students to make environmentally beneficial changes to their yard-space appearances.

Each analytic category is discussed in the following sections, including the research questions and findings related to each category.

Recognizing the Gap in Knowledge

Research Question 1 asked, "*What classroom-based educational experiences influence Midwestern non-urban homeowners' decisions for their yard-space appearances with respect to aesthetic choices, symbolic meaning, functionality, and environmental concern?*" Research

Question 2 asked, “*What other educational experiences influence Midwestern non-urban homeowners’ decisions for creating their yard-space appearances?*” Through analysis of interviews with six homeowners, Finding 2-H answered these questions by revealing no formal K-12 classroom experiences seemed to influence any of the homeowners’ decision-making processes for creating and maintaining their yard-space appearances. The lack of formal classroom experiences appeared to contribute to a gap in knowledge about aesthetic choices and environmental concern. With no formal learning experiences to draw on, homeowners relied on informal learning experiences and social influences in making decisions for their yard-space appearances.

While homeowners showed consideration for aesthetic choices, symbolic meaning, functionality, and environmental concern in designing their yard-spaces, belief systems and meanings associated with both socially conformist and non-conformist aesthetic choices seemed to drive the choices homeowners made. Aesthetic choice in creating their preferred yard-space visual appearances seemed to be important for all of the homeowners as a representation of their identities and the rights associated with property ownership. Research conducted by Neperud (1997), Evans-Cowley and Nasar (2003) and Lai and Ball (2002) corroborate these ideas that embedded cultural views and values affect identity and therefore, opinions and choices.

The gap in knowledge also appeared to affect homeowners’ expectations for yard-space appearances, which were often based on beliefs and emotional factors rather than critical analytical responses. Homeowners considered ideas imparted through social relationships and information learned through careers to be reliable, but these were unpredictable resources for gaining factual environmental and aesthetic knowledge. While homeowners with pro-environmental stances preferred a natural aesthetic, functional use of yard-space areas

superseded aesthetic preferences in determining the maintenance of these functional areas.

Homeowners with natural aesthetic preferences might have been more reluctant to participate in environmentally detrimental activities, such as mowing areas for functional use, if these activities weren't so widely accepted and deemed socially normal. By mowing some areas of their yards, homeowners' with natural yard-spaces maintained a small social connection with members of their communities. This echoes Hirsch's (2010) suggestion that social norms are reinforced through participation in behaviors that create similar aesthetic appearances and help in avoiding conflict with others.

Relationships and memories also had a strong influence on homeowners' aesthetic and environmental choices. Without a background in environmental and aesthetic education, some homeowners viewed environmentally harmful ideas learned from parents and other relationships as normal and socially acceptable. This was true for Ellie and Diana, who were influenced by their parents' aesthetic choices and yard-care activities to continue a tradition of maintaining highly controlled yard-space appearances. Ed, Kate, Andy, and Pamela developed environmental concern through their relationships, but were also influenced to make some socially conformist aesthetic choices for their yard-spaces. These examples indicate that environmental and aesthetic learning left to chance is unpredictable and dependent on emotional choices, as well as the attitudes and outlook of others. As Duncum (1999) noted, emotions can often drive aesthetic choices and actions, and learning about aesthetic relationships through art education can increase understanding of emotional reactions to visual appearances.

Environmental and aesthetic education in schools could ensure that a wider population learns the importance of environmental concern in considering visual appearances, as previous research has suggested (Blandy, Congdon, & Krug, 1998; Garoian, 1998; McWilliam, 2008).

Through formal school learning, children growing up in environments where highly controlled yard-spaces are deemed to be normal and preferable to natural yard-spaces would have access to aesthetic and environmentally conscientious viewpoints that might not be experienced through informal learning situations.

As noted in finding 3-H, all six homeowners participated in yard-care activities that had detrimental effects on the environment, and five acknowledged these activities by expressing some sense of environmental concern. One homeowner, Ellie, expressed no concern about harming the environment. She reported being aware that government sources consider certain activities like mowing and pesticide use to be harmful, but she felt the sources exaggerated the actual harm of these practices. Ellie's mistrust of reliable resources is one example of the way social norms and belief systems can outweigh other sources of knowledge and influence aesthetic choices.

Five homeowners (Ed, Andy, Kate, Pamela, and Diana) expressed concern but continued to use environmentally harmful practices in creating and maintaining their yard-space appearances. The continuation of environmentally harmful practices could relate to three different explanations.

- Homeowners were not aware of the detrimental effects their aesthetic choices and actions had on the environment when creating their yard-space appearances.
- Homeowners were not aware of alternative aesthetic choices and activities they could select for designing and maintaining their yards.
- Homeowners were reluctant to change and accept more personal responsibility for their aesthetic choices and activities because yard-space appearances held more importance for them than their environmental concern.

Each of these points will be discussed separately to tease out the possible influences on homeowners' choices and build the case for addressing these areas through environmental art education.

In considering homeowners' awareness of the detrimental effects their yard-care activities have on the environment, it appears that the five homeowners were aware of environmental effects; but aesthetic choices for appearances were more important than their environmental concern. Homeowners admitted knowing their actions affected the environment but avoided thinking about the effects or justified their actions. In these ways, homeowners avoided or shifted responsibility for the activities they used to create their yard-space appearances. While all five homeowners expressed awareness that their aesthetic choices involved environmentally harmful yard-care activities, all five seemed reluctant to change their actions. These examples of homeowner's aesthetic choices and environmental awareness indicate that strong influences, such as social norms and psychological ownership, outweigh environmental concern when considering changes to yard-space appearances.

In considering the possibility that the five homeowners did not know of alternative aesthetics and activities they could choose for their yard-spaces, it appears that all five homeowners did have some awareness of alternative ecological ideas for maintaining their yard-space appearances. These homeowners reported steps they had taken to create environmentally beneficial areas in parts of their yards but adhered to socially accepted aesthetic choices for other areas of their yards. Conforming to traditional aesthetics within parts of their yard-spaces maintained social connections described by Hirsch (2010) as part of the cycle for reinforcing social norms. Maintaining these social connections appeared to outweigh homeowners' environmental concern for alternative aesthetics and activities, indicating the reluctance for

changing aesthetic choices and harmful environmental practices is tied to homeowners' social and psychological attachments to appearances.

Given some homeowners' apparent awareness of detrimental activities and alternative ecological practices they could use, it appears there are barriers to homeowners embracing more ecological practices in designing and caring for their yard-spaces. According to Warren (1996), the view we have of our role in the world affects the amount of responsibility and care we show toward natural areas. When assuming the role of community member, an understanding exists that publicly viewed personal property will adhere to social norms of the community. Therefore, responsibility toward maintaining a socially acceptable appearance may conflict with responsibility for showing environmental concern. This idea points to the premise that social factors and feelings of psychological ownership affect homeowners' actions for creating and maintaining their yard-space appearances and also affect their willingness to change the appearances.

Psychological Ownership

Pierce and Jussila (2011) defined psychological ownership as "possessive feelings that attach the individual to objects (material or immaterial in nature)" (p. 2), and added, "While the object lies outside of the individual's physical self, it has come to be experienced as a part of the extended self" (p. 3). Feelings of ownership as attachments to property, land, or a particular territory are represented by aesthetic choices for arranging and decorating yards in a community, and "signs of possessions dot the landscape (fences, keep out and private property signs, and the name of the resident at the drive-way entrance)" (Pierce & Jussila, p. 11). These visual symbols of attachment and possession can be situated within visual and material culture studies. While

Pierce and Jussila focus investigations of psychological ownership on management and business situations, psychological ownership can also provide explanations for attachment to appearances within visual and material culture, such as yard-space design. Attachment to aesthetic choices informing yard-space design seemed to be a connecting thread between the two phases of this study.

Connections between Homeowners' and Students' Viewpoints

Several other threads connected homeowners' viewpoints with the viewpoints of students. Given that all of the students and their families also participated in environmentally harmful activities in creating their yard-space appearances, the same explanations that were considered for homeowners' outlook and choices were considered for student participants' outlook and choices. Comparison of students and homeowners' viewpoints in relationship to detrimental effects of yard-care activities, consideration of alternative aesthetic choices and practices, and attachment to visual appearances revealed several similarities and differences.

Whereas homeowners seemed to have some awareness of the detrimental effects their yard-care activities had on the environment, students did not express awareness prior to curricular instruction. After completing the coursework, students appeared to have developed ecological awareness concerning the creation and maintenance of yard-space appearances. However, like the homeowners, students expressed reluctance to making changes to their yard-space appearances. Attachment to property due to social influences and feelings of psychological ownership seemed to affect both homeowner and student participants' willingness to enact aesthetic and environmental change. For students, reluctance may also have stemmed from attachments to family values or lack of empowerment associated with youth.

Through curricular instruction, students seemed to develop awareness for alternative aesthetic choices and environmentally beneficial choices they could use in the design of their yard-spaces; and yet, all of the students expressed a desire to maintain the existing aesthetic choices for their yard-space appearances five months after completing the course. As with the homeowners, attachment to socially conformist appearances and yard-care activities appeared to hold more importance than environmental concern. This is important because a goal of raising social and ecological awareness through aesthetic and environmental education is to create change (Blandy, Congdon & Krug, 1998; Garoian, 1998; McWilliam, 2008). Identifying the factors triggering this reluctance to change is important in overcoming the barriers to enacting change; and for children, attachment to parental values that inhibit willingness to create change is an important area worthy of investigation.

Expectations for Yard-Space Appearances

While social influences affected the aesthetic choices homeowners and students made for their own yard-spaces, social influences also affected the expectations homeowners and students had for other people's yard-space appearances. All four homeowners whose yard-spaces contained some natural areas (Ed, Kate, Andy, Pamela) felt their yard-spaces communicated an aesthetic preference for natural beauty and concern for the environment. These same homeowners felt there was a lack of understanding among the general public about environmentally beneficial landscaping. In fact, both homeowners with controlled yard-spaces (Ellie, Diana) did show a lack of aesthetic understanding for natural yard-space appearances and felt natural landscapes communicated aesthetic messages of neglect and represented the homeowner's lack of pride in appearance. Comparison of these viewpoints indicates there is a

lack of education about the environmental benefits of natural landscapes in yard-spaces and that negative judgments about the aesthetics of natural yard-spaces are based on visual perceptions and social cues.

Class discussions and students' written responses verified that many students also had negative aesthetic perceptions of natural yard-space appearances prior to instruction and believed natural yard-spaces were messy and were representative of the homeowners' lack of care. Like the homeowners in this study, the majority of students seemed to have emotional responses about visual appearances prior to instruction. Duncum (1999) suggested learning about aesthetic relationships through art education could increase understanding of emotional responses to visual appearances. In agreement with Duncum's suggestions, the majority of students in this study did increase their understanding of emotional responses to visual appearances through aesthetic and environmental learning. Through participation in environmental art activities, students showed growth in their aesthetic thinking that went beyond emotional responses, increasing their knowledge about and acceptance of environmentally designed non-conformist yard-spaces.

Recognizing a gap in knowledge related to both homeowners' and students' understanding of yard-space appearances prompted the examination of ways to address this gap. As Bormann, Balmori, and Geballe (2001) suggested, new thinking about environmental issues associated with the aesthetic choices for yard-space appearances is needed to address misunderstandings associated with appearances and to "propose a new aesthetic approach to its design" (pg. 9). In this study, new thinking was introduced to students by implementing an environmental art curriculum in the hope of raising their environmental and social consciousness as they envisioned new aesthetic choices for their yard-spaces.

Addressing the Gap in Knowledge

Stemming from a lack of formal aesthetic and environmental education, an apparent gap in knowledge exists for designing and maintaining environmentally beneficial yard-spaces. To address this gap in knowledge, a place-based environmental art curriculum was designed and implemented with fifth grade public school students. The purpose of this curriculum was to address this gap in knowledge and to raise students' environmental and social consciousness. The results of student participation in this curriculum addressed Research Question 3 and its sub-question:

In what ways can place-based art education change fifth-grade public school students' abilities to identify and analyze Midwestern non-urban homeowners' decisions for yard-space appearances?

Sub-questions: How does place-based art education influence fifth-grade public school students' attitudes, perceptions, and aesthetic choices for art-making activities within non-urban yard-spaces?

The majority of students had not considered the appearances of yard-spaces prior to curriculum instruction. While homeowners' participation in environmentally harmful yard-care activities included some awareness and avoidance of taking responsibility, students demonstrated little awareness of the environmental harm caused by certain socially accepted yard-care activities prior to instruction. Through participation in environmental art activities, the majority of students appeared to show growth in understanding the reasons why homeowners might make different aesthetic choices for their yard-space appearances and the environmental effects of yard-care activities used to create the appearances. This growth aligns with suggestions that art

making and aesthetic experiences focusing on nature increase students' self-awareness and concern for the environment (Gargarella & Prettyman, n.d.; McWilliam, 2008; Neperud, 1997; Song, 2009; Upitis, 2009).

Concern for environmental practices that developed through art learning could be enhanced through integration with the field of science. Science and technology, integrated through engineering, arts, and math concepts (STEAM) (stemtosteam.org) is an important framework for teaching across disciplines, applicable to this study because of the environmental focus. By integrating the importance of understanding aesthetic choices in the field of art education with the importance of sound environmental decisions within the field of science, interdisciplinary learning could support changes within both fields. A more complex and comprehensive art curriculum, integrated with the field of science, could encourage and motivate students to enact aesthetic and environmental changes. For this change to occur, attitudes about hegemonic aesthetic and environmental practices need to be challenged.

Many students' attitudes prior to instruction shared similarities with some of the homeowners' attitudes in believing the visual appearance of natural yard-spaces communicated a lack of concern and neglect. Through curriculum participation, the majority of students' attitudes about the aesthetic choices for natural yard-space appearances changed to attitudes of appreciation, acceptance, or understanding. As suggested by Duncum (1999) and McWilliam (2008), examining non-conformist aesthetic choices did promote students' understanding of hegemonic practices. Students recognized that maintaining similar yard-space appearances with their neighbors represented an effort to fit in with the community. While few students were receptive to changing aesthetic choices for their own yard-spaces to resemble a more natural

aesthetic, understanding of others' choices and their reasons for creating different visual appearances is part of the process toward greater environmental and social awareness.

My Teaching Practice

Implementing action research methodology requires thoughtful reflection on transformations that occurred in both the students and the teacher (Savin-Baden and Major, 2013). In conducting this research, I developed a greater awareness of my own environmental preferences and concerns. While usually employing a constructivist teaching style in the past, I found myself stressing environmental concepts diligently and lecturing more than usual. Reflecting on this, I realized my teaching style had changed during curriculum instruction for several reasons.

Taken for granted concepts, such as aesthetic choices related to hegemonic appearances of mowed yard-spaces, can be difficult for adults to recognize. In considering the age of my students and their lack of world experiences, I was unsure of their capabilities to recognize their own acceptance of social norms. Given homeowners and students immersion in a society in which aesthetic choices for yard-space appearances and yard-care activities are taken for granted, I found it necessary to stress that other types of yard-space appearances exist and have environmental benefits over the socially accepted neatly mowed yards. While students seemed to raise their levels of environmental concern and awareness through this type of teaching style, there was apparently little effect on students' desire to make aesthetic changes in their own yard-spaces. This finding points to the strong hold social norms and psychological ownership of property have in creating a desire to conform and not change aesthetic appearances. Other types

of instruction or learning activities might have motivated students to go beyond envisioning change to enacting change.

Curriculum development changed my teaching practice as I looked for connections between art making and the understanding of visual appearances. By questioning my own yard-care actions and interactions with my neighbors, challenging my own acceptance of the mowed yard-space aesthetic, and contemplating the benefits of natural areas within yard-spaces, I became immersed in the ways information is communicated through visual imagery. Transferring these ideas to my teaching, I became more aware of how students might accept or make judgments if not encouraged to question the meanings of visually communicated messages. As Freedman (2003) noted, it is important to look beyond surface appearances to reflect on the way designed objects communicate visual messages about identity and culture.

As with any teaching practice, reflecting on the curriculum revealed changes I would consider for future curricular instruction. For example, ambiguity of students' intended meanings in one-word responses on the Yard-Space Photographs Interpretation Worksheet made charting and analysis difficult. Meanings of written responses on other questionnaires were more easily understood. For this reason, fully written responses describing the photographs on the worksheet could have helped to clarify students' intended meanings.

Through discussions, written responses, and art making activities, students demonstrated growth in accepting different visual appearances but were reluctant to enact changes in the aesthetic choices for their own yard-space appearances. Barriers hindering homeowners' and students' receptivity to making aesthetic and environmental changes are discussed in the following section.

Barriers to Change

While a gap in knowledge appeared to affect aesthetic choices for the planning and designing of environmentally beneficial yard-spaces, the larger issue in this study involved misunderstandings of visual appearances and the meanings associated with yard-space appearances. Homeowners with controlled yard-spaces were strongly opposed to the appearances of natural yard-spaces because they perceived these appearances to be messy and representative of the homeowner's lack of care. Through participation in this environmental art curriculum, students' improved their abilities to analyze reasons beyond aesthetic choices, such as demonstrating understanding that a neatly ordered aesthetic fits in with social norms. Students' growth in understanding visual messages and development of environmental concern were two areas in which the goals of teaching this curriculum were satisfied. However, given the reluctance shown by both homeowners and students to change their own yard-space appearances, attention needs to be focused on attachment to visual appearances and the reasons environmental concern did not motivate participants to enact changes in their yard-spaces.

Lai and Ball (2002) found that yard appearances were often seen as symbols of social class. This idea of the well cared-for yard as a symbol of social status appeared to be prevalent in both the homeowners' and the students' responses. The majority of homeowners and students expressed an appreciation for neat appearances and disapproval for messy or "junky" yard-spaces. Neat yard-space appearances, exemplified by yards that were mowed, seemed to communicate messages of high social status and a strong work ethic. Because natural yard-spaces lack controlled orderliness, often these types of appearances were perceived as uncared for and messy. These viewpoints were exemplified by Jennifer's conjecture that the owner of a

natural yard-space hadn't mowed because he couldn't afford a mower. In considering the mostly upper-middle and higher income level area in which student participants lived, reflecting social status through visual appearances seemed to be an important part of their identity construction.

Homeowners and students appeared to form attachments to their yard-spaces. Because of these attachments and unseen responsibilities related to property ownership, viewer's approval of the yard-space appearances and homeowners' aesthetic choices seemed to bolster the participants' self-esteem, while negative judgments created tension. These findings seem to suggest that participants viewed their yard-space appearances as an extension of their identities, one characteristic of psychological ownership. Attachment to appearances as an extension of personal identity may account for the reluctance of participants to change the aesthetic choices for their yard-space appearances and yard-care activities used to create the appearances.

While recognizing a gap in knowledge, addressing the gap, and identifying barriers to enacting change were important areas in this study that were revealed through the findings, discussion of the theoretical framework that supports this study is also important to understand the meanings of hegemonic perspectives in yard-spaces.

Hegemonic Perspectives and the Theoretical Framework

For this study, critical theory was the overarching theory that provided a lens for understanding information revealed in the findings. Other theories that supported this study included eco-theory, semiotics, visual culture, and material culture theories. Each of these theories will be discussed in the following sub-sections to connect ideas of hegemony in yard-spaces with these supporting theories.

Critical Theory

The guiding principles for critical theory that emerged from the Frankfurt School include identifying, challenging, and changing dominant ideology (Brookfield, 200f). These principles also apply to the place-based environmental art curriculum in this study, in which students were encouraged to recognize environmental and aesthetic problems, envision changes to the problems, and then enact changes (Blandy & Hoffman, 1993; Garoian, 1998; Inwood, 2008a). Because cultural norms are shaped by the past (Cavallaro, 2001), applying critical theory principles in this study encouraged students to question hegemonic aesthetic choices for yard-space appearances that evolved from historical ideals. Further inquiry into the roots of these aesthetic ideals could reveal the power systems that exert control in perpetuating socially conformist yard-space aesthetic ideals.

Socially conformist yard-space aesthetics involve manipulation and control of nature, which are the guiding principles of eco-theory.

Eco-Theory

Eco-theory promotes interdependent relationships among all living things (Blandy & Hoffman, 1993). By examining hegemonic practices enacted to create conformist aesthetic choices for yard-spaces, students were able to recognize the effects of environmentally harmful yard-care activities that were taken for granted prior to curriculum instruction. Ideas of interdependence were promoted through environmental art lessons, and students reported feelings of concern about environmentally harmful yard-care activities. Questions arose concerning students' motivation to act on their environmental concern, because adhering to

conformist aesthetic choices appeared to outweigh students' willingness to enact environmentally beneficial aesthetic changes.

Luke (1992) suggested investigating symbolic codes related to capitalism to challenge harmful environmental practices. While consumerism within capitalistic societies was not a primary focus of this study, yard-spaces were important sites for investigating symbolic codes and their visual meanings.

Semiotics, Visual Culture, and Material Culture Theories

Critical theory encourages inquiry into the influence of power systems, and the field of art education has long been affected by power systems that privilege ideas of fine art over everyday experiences (Smith-Shank, 2004). Emerging theories in the field of art education focus on understanding visual information that is not confined to formalist ideas or aesthetics. For this study of yard-spaces, semiotics, visual culture, and material culture theories were influential in encouraging students to look for symbolic meaning in the objects and areas within yard-spaces, interpret the meanings communicated by both conformist and non-conformist aesthetic choices, and recognize yard-spaces as everyday sites that are designed through aesthetic decisions. Through art learning processes, hegemonic practices of mowed and controlled aesthetics were understood as problematic because of environmental harm caused by yard-care activities, and students' interpretations of non-conformist yard-spaces changed from negative responses to attitudes of understanding. These changes in attitudes and perceptions challenged power systems controlling expectations for yard-space aesthetics, although the historical evolution for acceptance of conformist aesthetic ideals was not investigated. Further research into the history

of social norms and the acceptance of conformist aesthetic ideals could be beneficial in shedding light on reasons for adhering to social norms.

Through the process of forming interpretations and deriving meanings from the data and exploring hegemonic perspectives related to the theoretical framework, recommendations for the field of art education surfaced. These recommendations are outlined in the following section.

Recommendations

In this study, the apparent gap in knowledge for designing and understanding visual messages communicated by yard-space appearances was addressed by implementing a place-based environmental art curriculum with fifth grade students. The majority of students showed growth in recognizing reasons for design choices in yard-spaces and developed understanding of the effects yard-care activities have on the environment. Therefore, this curriculum could be helpful for art educators who are interested in addressing misunderstandings associated with the communication of visual messages and improving students' environmental knowledge through art learning. However, homeowners' and students' reluctance to enact aesthetic changes in their own yard-spaces indicates attachment to appearances may be a more difficult barrier to overcome when encouraging environmentally beneficial design changes.

Place-Based Pedagogy

Despite students' reluctance to make changes to their yard-space appearances, participating in place-based art lessons appeared to be engaging for the students. Connections to the local area and concern for local animals developed through animal research art lessons seemed to be benefits of implementing a place-based curriculum. In agreement with

McWilliam's (2008) suggestions, students developed concern and made connections to the environment by learning critical inquiry methods and by becoming involved in environmental aesthetic experiences. Therefore, art educators' use of these types of place-based art lessons could aid in encouraging students to form connections to their local environment.

However, several researchers have noted the value of place-based pedagogy in motivating students to enact environmental changes, contradictory to the findings in this study (Blandy & Hoffman, 1993; Garoian, 1998; Inwood, 2008a; Powers, 2004). In considering implementation of place-based pedagogy in this study, two possible reasons for students' reluctance to enact changes are postulated: problems with pedagogy (including variables connected to method of instruction and curricular content); and problems associated with complex social and psychological influences. Each of these problem areas will be discussed in the following sections.

Pedagogical Problems

Issues associated with the teaching of place-based pedagogy are connected to two areas: problems with the method of teaching, and curricular content. These two areas are discussed in the following subsections.

Teaching Variables. As reported in the section discussing my teaching practice, personal reflection revealed diligent attempts to demonstrate different aesthetic approaches for yard-space design and the reasons homeowners might choose these different aesthetic choices. Whereas students did appear to learn and recognize the benefits of non-conformist environmentally beneficial aesthetic choices, they reverted to preferring conformist choices five months after the completion of instruction. Therefore, it is recommended that multiple teachers provide

instruction using the same place-based environmental art content to establish flaws within my teaching method, or to establish other reasons for students' reluctance to enact aesthetic changes outside of the social norm within their own yard-spaces.

Curriculum Content Variables. A second consideration is that the content of this curriculum was not effective in motivating students to enact environmentally beneficial aesthetic changes in their yard-spaces. Given that students understood the reasons for aesthetic choices for yard-space appearances and claimed to be environmentally concerned after participating in curricular environmental art activities, it is possible that a gap for motivating students to enact aesthetic and environmental change exists within this curriculum.

Whereas aesthetic and environmental choices for yard-space appearances were stressed within this curriculum, the focus on these content areas may account for changes in students' attitudes and growth in their recognition of aesthetic choices for yard-space appearances. Instruction on the reasons for developing attachments to property and the idea of yard-spaces as an extension of identity were not included in this curriculum. Addressing these areas during instruction may help students recognize these social and psychological attachments and aid motivate students to overcome their reluctance to change.

Problems Associated with Social and Psychological Influences

While the complexities of psychological ownership have gained recognition and are being addressed in the business world, similar attachments and feelings related to property ownership can be noted with homeowners and their yard-space visual appearances. Art education research exploring the ties between visual appearances and property ownership as an extension of the homeowner's identity could uncover ways of understanding these attachments to

appearances. By learning that identity can be communicated through informed aesthetic choices and personal expression, homeowners may not feel pressured to conform to socially acceptable aesthetics. Understanding the connections between visual appearances, property ownership as an extension of self, and willingness to make changes to appearances and identity could suggest approaches to overcoming the reluctance to enact environmentally beneficial changes to yard-space appearances.

A final recommendation concerns students' views of art making as a unique form of personal expression. While the majority of students expressed feelings of environmental concern, barriers prevented them from enacting changes. Further research into yard-spaces as designed sites that communicate artistic expression could bridge this gap between envisioning change and enacting change. Students seemed to understand ways art making is often a unique experience in which the artist presents visual information in a personal way. If further research could establish aesthetic choices and design of yard-spaces as an art making experience, the desire to create unique yard-spaces representing the individual's personal expression could gain value over appearances that conform to social norms.

The following section presents concluding remarks for this study.

Conclusion

Yard-spaces, as created and designed spaces, serve as valuable art learning sites for examining hegemonic practices that are reinforced by social norms. By exploring everyday practices and taken for granted design choices, reasons for creating different visual appearances were discovered. For students, understanding seemed to lead to appreciation, acceptance, or

tolerance of different visual appearances. Through understanding, social tensions associated with creating different types of yard-spaces could be eased.

By examining hegemonic practices in designing and maintaining yard-space appearances, new knowledge was generated for helping students become more environmentally and visually aware. The influence of social norms and attachment to visual appearances appeared to be barriers to following through on environmental art learning and actually enacting yard-space design changes. Further research into attachments to visual appearances and other influences on the willingness and motivation of people to enact change could be helpful in understanding these barriers.

Key implications for the field of art education involve improving practice in development of environmental art curricula, with attention paid to enacting change. Previous research involving place-based environmental art learning indicated participants became motivated to enact change through their environmental learning and art making processes (McWilliam, 2008; Neperud, 1997; Song, 2009). Participants' reluctance to enact change in this study is contrary to previous research, and further research is recommended to explore the reasons for this reluctance to make changes to habits and aesthetic choices.

A final implication for the field of art education is the connection between environmental learning in art and environmental learning in the science field. While homeowners reported no K-12 formal learning experiences that influenced their aesthetic choices, environmental learning within the science field that is integrated with art learning could have promising results in raising awareness to hegemonic aesthetic practices and hegemonic environmental practices. Integrating learning between the two fields of art education and science is recommended to raise awareness and encourage responsible and sustainable environmental art practices.

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APPENDIX A

HOMEOWNER INTERVIEW QUESTION LIST

Background Information

1. How long have you lived in this home and in the Midwestern area?
2. Why do you live in this area (i.e. grew up here/home, moved from urban area for “country living,” to be close to work, etc.)?
3. Do you feel a connection to your home and its appearance?
4. How long have you spent developing your yard-space surrounding your home?

Physical Appearance and Influences

5. How would you describe the physical appearance of your yard-space surrounding your home?
6. Who makes the decisions concerning landscaping/exterior appearance for your home?
7. Do you care for the landscape yourself, or do you hire someone to do the work?
8. Do any of the following factors influence your decisions for the aesthetic appearance of your home’s exterior spaces?

Local homes/neighbors

Local environment (flora, fauna, climate zones, etc.)

Laws/Covenants

Family/Relationships

Friends

Media (movies, news reports, advertisements, etc.)

Time available to work on spaces

Money available

9. Do you feel your yard or items in your yard have symbolic meaning that communicates something about you, your family, or your values?
10. How important are the functional aspects of your yard (the way yard areas or items are used, such as play places for children or paths to access other areas)?
11. Do you feel pressure to have your yard appearance conform to certain perceived expected norms?

12. If there were no obstacles, what would you do differently to the appearance of your yard? Why?

Education (Formal and Informal)

13. What types of instruction did you receive in formal schooling situations that taught you how to develop your yard appearance?
14. What learning situations outside of formal school settings taught you how to develop your yard appearance?
15. Have you received any art instruction in or out of school settings that affects the way you decide your yard-space appearance?
16. What instruction do you wish you had received in school concerning yard-space appearances? How important would it be to include this type of instruction in schools today?
17. Do you have a background or interest in art or do you make art? Do you use artistic decision-making in your yard-care activities?
18. Do you relate any of your yard-keeping activities to art making?
19. Pollan (1989) described yard-spaces as “arenas of self-expression.” Do you think of your yard as a way to express your personal creativity?

Environmental Concern

20. How does your environmental concern affect your yard-care activities and yard appearance?
21. Do you use chemical products (i.e. pesticides/herbicides) in your yard? If so, do you think about the environmental impact of these products to your family? To your neighbors? Globally?
22. Do you mow any of your yard areas with a gasoline-powered mower? If so, do you think about carbon emissions and the effects of mowing on the environment?
23. Do you have an opinion on how others should care for their yard-spaces?

APPENDIX B

ENVIRONMENTAL ART CURRICULUM

Environmental Art Curriculum Description and Lesson Plans

Class Information

Grade Level: Fifth

Number of students: 21

Time available for curricular instruction: 12 weeks

Rationale

This curriculum was developed after interviewing six homeowners and investigating their reasons for designing and creating their yard-space appearances. All six homeowners reported no formal classroom learning that influenced their decision-making processes and, therefore, sought out yard-space design information informally. All six homeowners reported a strong attachment to the visual appearance of their yards and participated in varying degrees of socially conformist activities such as mowing their yards. Lessons in this curriculum were designed to challenge students' perceptions of yard-space visual appearances in hopes of encouraging socially and environmentally conscious yard-space design choices that might carry through into adult life.

Four art lessons were designed to explore ideas about nature, environmental concern, aesthetic choices, and the implications of participating in socially conformist design choices and yard-care activities. Following a description of the scope and sequence of this curriculum, each lesson plan is outlined.

Scope and Sequence

Introduction Phase

During the first class meeting, students participated in activities that documented their environmental concept knowledge prior to instruction. Homeowners' different types of yard-space appearances from Phase I were viewed to consider the possible reasons they might have created different appearances, such as to show their environmental concern or to conform to appearances of other socially accepted yard-spaces. Yard-care activities necessary to maintain appearances and the environmental effects of certain yard-care activities were discussed to raise awareness of possible hegemonic practices. To connect these ideas to students' own lives, students discussed the ways their families used areas of their yards, the yard-care activities used to maintain the appearances, and the ways their yards compared to the appearances of their neighbors' yards. Through these discussions, connections between yard-space appearances and ideas of social conformity were explored.

Lesson One: Designing Environmental Changes in Personal Yard-Spaces

Building on the introduction phase, the first lesson continued to connect ideas about yard-space appearances and environmental care with students' own yard-spaces. Reasons for controlling the environment and placing items within yard-spaces were explored. Through discussion and art making processes, students envisioned alternative appearances for their own yard-spaces. Students created altered appearances for their yard-spaces using design, drawing, and painting skills.

Lesson Two: Nature Arrangements Inspired by the Artwork of Andy Goldsworthy

Building on ideas explored in the first art lesson, students were introduced to the artwork of Andy Goldsworthy. Arrangements of natural materials and the materials' environmental effect from deterioration or decomposition were compared to purchased art materials that contribute waste to landfills when leftover supplies are thrown out. Consideration for consumption of materials and the temporal nature of Goldsworthy's work emphasized issues of caring for the environment through art media choices. Students considered ways the use of natural materials in art making could communicate environmental messages. Students learned about design choices and aesthetic considerations by arranging locally gathered natural materials into arranged compositions. Personal connections to the familiar appearances of local trees and other natural items in the Midwest landscape were fostered through student choice of local natural materials and student-composed poetry. Art concepts for arrangements included emphasis, focal point, repetition, pattern, color choice, and balance. The purpose of these art concepts was to encourage thoughtful consideration of elements in designing the arrangements and to encourage students' consideration of arranged appearances that might draw the viewers' attention. Written work in the form of haiku poems extended the environmental messages communicated by the nature arrangement photographs.

Lesson Three: Powerful Environmental Messages Inspired by Jenny Holzer's Truisms

Building on the idea of text as part of art making, students were introduced to Holzer's Truisms (short phrases that make profound statements). Through discussion, the students explored ways text has been used in artwork to communicate messages. The deliberate

placement of text in unexpected places was discussed as a way to draw the viewer's attention to the message. Students examined items homeowners from Phase I chose to include in their yard-spaces to consider possible meanings the items communicated visually. Photographs of students' nature arrangements from lesson two were used as a starting point for the art making process of creating rock art sculptural forms to be placed in students' yard-spaces. Students composed concise messages that they felt communicated environmental concern, and then these messages were applied to their rock art sculptural forms. Art skills included manipulation of materials with concern for composition and design and consideration of elements that may draw the viewer's attention to the artwork. Through these art design practices, students communicated environmental messages their artwork. Visual communication of meaningful art messages was connected to visual communication of meaningful yard-space messages because of the way yard-spaces are also planned and designed.

Lesson Four: Local Animal Research Inspired by the Artwork of Lynne Hull

This lesson continued to build on concepts of communicating environmental concern but expanded beyond visual appearances of yard-spaces. Some homeowners from Phase I considered areas of their yard-spaces as wildlife habitats, while others took steps to prevent or eliminate wildlife within their yard-spaces. Based on these conflicting ideas, students explored humans' relationships to animals through research and art making experiences. By learning about Lynne Hull's reasons for creating animal habitat artworks, students considered possibilities of their own yard-spaces serving as animal habitats. Students developed connections to their chosen animal through research and art concepts and skills of design and composition, drawing and painting, and skills associated with ceramics.

Summary

These four lessons were developed to connect homeowners' reasons and design choices for creating yard-space appearances with students' environmental art learning. It was hoped that through participation in these environmental art lessons, students would develop ecological and social consciousness that might influence the future yard-space design choices they make as adults. The following plans outline details for each lesson that compose this curriculum.

Lesson One: Designing Environmental Changes in Personal Yard-Spaces

Essential Questions

1. Why do homeowners create different types of yard-space appearances?
2. What appearances seem normal to you?
3. How do yard-care activities enacted to create these appearances affect the environment?
4. What alternative yard-space design choices are beneficial to the environment?

Art/Cultural Connections

Yard-spaces as designed and created sites are areas for exploring the reasons aesthetic choices are made. Social and cultural conventions that are often taken for granted influence aesthetic choices for yard-space appearances.

Teaching Resources

- What is in a Yard? PowerPoint
- Yard-Space Elements PowerPoint

- Your Yard and Clean Air Handout
- Benefits of Native Plants Handout

Objectives

Conceptual/Cognitive Objectives

1. Students will understand reasons for creating different types of yard-space appearances.
2. Students will recognize visual appearances of designed spaces that are often taken for granted and seem normal.
3. Students will understand that many activities enacted to create designed appearances have an effect on the environment.
4. Students will recognize alternative design choices that are beneficial to the environment.

Artistic Skill Objectives

1. Students will plan and design a yard-space composition by adding elements to photographs of their own yard-spaces.
2. Students will consider placement of items, repetition, balance, harmony, and emphasis in planning their compositions.
3. Students will show careful attention to drawing and painting skills in creating their artworks.

Assessment Criteria

Conceptual Criteria

1. Classroom discussions and Yard-Spaces and the Environment Post-Questionnaire
2. Classroom discussions and Yard-Spaces and the Environment Post-Questionnaire
3. Classroom discussions and Yard-Spaces and the Environment Post-Questionnaire
4. Classroom discussions, visual assessment of completed artwork, Yard-Painting Reflection Worksheet, and Yard-Spaces and the Environment Post-Questionnaire

Artistic Skills Criteria

1. Visual assessment of completed artwork
2. Visual assessment of completed artwork and Yard Painting Reflection Worksheet
3. Visual assessment of completed artwork

Media/Art Materials Needed

Student yard-space photographs	Acetate overlays	Permanent black markers
Tempera paints	Brushes	Tape
		Sketch paper

Instructional Procedures Outline

Teacher Activities	Student Activities
Present PowerPoints and engage students in classroom discussions	View PowerPoints and engage in classroom discussions
Introduce purpose of lesson and handouts	Read handouts and ask questions for clarification
Provide steps for art making	Ask questions to clarify directions
Demonstrate art making	View demonstration and ask questions
Assist in art making	Engage with materials in art making
Explain Yard-Painting Reflection worksheet	Complete Reflection worksheet

Instructional Procedures

- Students bring 8 ½” x 11” size photographs of their home yard-spaces to class or use provided yard-space photographs if home pictures are not available. Encourage students to walk around room to look at each other’s yard-space appearances and engage in discussion. What are the similarities? What are the differences?
- Show What is in a Yard? PowerPoint and engage students in discussion about the reasons people design different types of yard-space appearances (possible discussion points: for “neat” appearance, conformity/to fit in, for acceptance, for approval, to benefit the environment, or for symbolic meanings).
- Discuss environmentally harmful yard-care activities. Chart students’ participation in different types of yard-care activities.
- Engage students in discussions of ways to reduce environmentally harmful activities and add environmentally beneficial ideas to their existing yard-space designs. Show Yard-Space Elements PowerPoint and discuss.
- Read Your Yard and Clean Air and Benefits of Native Plants handouts and discuss.
- Teacher demonstrates drawing techniques for sketches, and then demonstrates how to draw on acetate with markers, remove acetate from photograph, turn acetate over, and paint on the reverse side.
- Students plan and sketch ideas to include in their altered yard-space designs, thinking of elements that add personal meaning or are environmentally beneficial.
- After the planning phase, students tape acetate overlays to their photographs and use markers and paint to alter their photographs.

- Upon completion of art making, students reflect on conceptual information and art making processes by completing the Yard-Painting Reflection worksheet.

Examples of Students' Artwork



Alicia's Yard-Painting



Mary's Yard-Painting



Wayne's Yard-Painting

Yard-Painting Rubric for Concept Objective Four

Conceptual Objective Four: Students will recognize alternative design choices that are beneficial to the environment.

Scoring: High (15-13), Medium (11-7), Low (5-3)

Instructions: Combined with artist's statement describing work, determine to what extent artwork communicates environmental concern.

	High	Medium	Low	Points
Artwork contains added environmentally beneficial elements	5 Contains three or more elements	3 Contains at least two	1 One or fewer, or added elements are not environmentally beneficial	
Description includes environmentally beneficial elements	5 Three or more elements	3 At least two elements	1 One or fewer elements or elements are not environmentally beneficial	
Description includes reasons added elements are beneficial	5 Reason(s) match description	3 Reasons are environmentally beneficial but may not match description	1 No reasoning or inaccurate reasoning	
				Total

Examples of and Reasons for Adding Environmentally Beneficial Elements

Element	Reason
Native Plants	Native to area, weed resistant, require less watering, require less mowing/gas/pollution
Plants	Provide oxygen, require less mowing/gas/pollution
Goats	Trim grass without mowers/gas/pollution
Long or No-Mow Grass	Requires less mowing/gas/pollution
Animal Habitats (Birdbaths, Bird houses, Ponds)	Shelter and protect animals
Statues	Require less mowing/gas/pollution
Pathways	Require less mowing/gas/pollution

Transition to Next Lesson

Discuss finished artworks. How were the yard-spaces altered? Which design elements are environmentally beneficial? Which design elements communicate symbolic or personal meanings? Which art techniques (repetition, emphasis, etc.) did you notice? How did these techniques help the composition? Which artworks communicate meaningful messages?

Lesson Two: Nature Arrangements Inspired by the Artwork of Andy Goldsworthy

Essential Questions

1. Why do artists use natural materials to create artworks?
2. Why do artists use found objects or site-specific materials?
3. What are the reasons for creating temporal works?
4. What arrangements create focal points and draw the viewer's attention?

Art/Cultural Connections

Use of natural materials in art making can connect the artist with the local environment and heighten awareness of available resources. Connecting to local culture can foster concern for the well being and preservation of the area.

Teaching Resources

- Examples of Goldsworthy's artworks
- Photographs of healthy and damaged natural landscapes
- Photograph of Rowan Leaves and Hole
- Photograph of scattered autumn leaves

Objectives

Conceptual/Cognitive Objectives

1. Students will understand reasons for using natural materials in art making including ideas of consumerism and communication of environmental concern.
2. Students will understand that site-specific natural objects create meaning by connecting to local culture and environment.
3. Students will understand that artists may create temporary works to focus on process over product or to symbolize changes in seasons and care for the environment.

Artistic Skill Objectives

1. Students will plan and design a natural arrangement with a focal point that draws the viewer's attention.
2. Students will consider placement of items, repetition, balance, harmony, and emphasis in planning their compositions.
3. Students will show careful attention in choosing and arranging the natural materials.

Assessment Criteria

Conceptual Criteria

1. Classroom discussions and poem
2. Classroom discussions and poem
3. Classroom discussions and poem

Artistic Skills Criteria

1. Classroom discussions and visual assessment of completed artwork
2. Visual assessment of completed artwork
3. Visual assessment of completed artwork

Media/Art Materials Needed

Containers Variety of local natural materials (sticks, rocks, pine cones, etc.)

9” x 12” natural background papers Digital camera Printer

Instructional Procedures Outline

Teacher Activities	Student Activities
Present video clips of Goldsworthy’s works and engage students in classroom discussions.	View video clips and engage in classroom discussions.
Introduce purpose of lesson. Show photographs of healthy and damaged landscapes and discuss why visual appearances are important to us.	Discuss importance of visual appearances and ask questions for clarification.
Discuss focal point, repetition, and other ideas for planning compositions.	Ask questions to clarify compositional ideas.
Show variety of natural materials and explain art-making procedures.	Ask questions for clarification.
Demonstrate how to use digital camera.	Ask questions for clarification.
Assist students with art making.	Engage with materials in art making.
Assist with photography of arrangements.	Use digital camera to photograph artwork.
Print photographs with color printer.	
Explain parameters for critique of photographs.	View photographs and develop questions or observations about photographs.
Explain haiku poem composition.	Ask questions for clarification.
Assist students in haiku poem creation.	Create poem.

Instructional Procedures

- Students view Goldsworthy's artworks and engage in classroom discussions. Why does Goldsworthy use natural materials? How does consumerism play a role in selecting art materials? What affect does using natural materials have on the environment? How do local natural materials foster a connection to place? Why do artists create temporal works? How can temporal works be recorded for preservation? What might be the symbolic meaning of temporal works?
- Show photographs of healthy and damaged landscapes. Why are visual appearances important to us? Introduce ideas for arranging natural materials to show care and concern. How can we use Goldsworthy's ideas to inspire us in creating meaningful artworks?
- What design ideas can we use to create successful compositions? Why does the focal point of a picture draw the viewer's attention? How can we use repetition, color choices, and other ideas in our artwork to create interest and meaning?
- Show variety of materials. How might we use these various materials? Why might we layer materials? In what ways can we use balance to create three-dimensional forms? Show background papers students may use to gauge approximate 9" x 12" size. Students may choose to arrange materials directly on tabletops instead of using background papers.
- Demonstrate usage of digital camera showing how to frame artwork within the screen. In creating temporal works, what is the purpose of photographing our works?
- Art making: Assist students in gathering materials and encourage thoughtful planning of arrangements.

- Assist with photography of arrangements.
- Print photographs with color printer and distribute. Encourage students in critique of photographs to notice focal points and other artistic design choices and meanings.
- Explain extension of meaningful communication through poem development. Discuss haiku format and connection of this poetry form to the environment and nature.
- Allow time for students to examine their nature arrangement photographs and develop haiku poems connected to their visual work in communicating environmental messages. Assist students with idea development or syllabic structural issues.

Examples of Students' Artwork



Rita



Wayne



Martin



Jan

Nature Arrangements Rubric for Conceptual Objective One and
Artistic Skill Objective Three

Conceptual Concept One: Students will understand reasons for using natural materials in art making including ideas of consumerism and communication of environmental concern.

Artistic Skill Objective Three: Students will show careful attention in choosing and arranging the natural materials.

Scoring: High (15-13), Medium (11-7), Low (5-3)

Instructions: Combined with poetry describing work, determine to what extent artwork shows careful consideration for planning and communicates environmental concern.

	Strong	Medium	Weak	Points
Artwork contains arranged natural elements	5 Aesthetically pleasing arrangement, invites viewer to pay attention	3 Somewhat aesthetically pleasing, invites viewer to pay attention	1 Little arranging, draws little attention	
Poem includes environmental message	5 Strong environmental message	3 Environmental message is somewhat clear	1 Unclear message or poem does not communicate a message	
Poem relates to artwork	5 Strongly relates to artwork	3 Somewhat relates to artwork	1 Little relation to artwork	
				Total

Transition to Next Lesson

Review meanings associated with design choices and environmental messages. Discuss ways that written text of poems clarified and extended the meanings communicated by the arrangements.

Lesson Three: Powerful Environmental Messages Inspired by Jenny Holzer's Truisms

Essential Questions

1. How can text be used as art to communicate messages?
2. How do the items we see in yard-spaces symbolize meanings and communicate messages visually?
3. How can text be added to natural materials to draw attention and communicate environmental messages?

Art/Cultural Connections

Text is prevalent in our society and is often taken for granted. Powerful messages can be communicated by placing text in unexpected places to draw the viewer's attention.

Teaching Resources

- Images of Holzer's artworks and video clip of Holzer discussing her art making processes.
- Photographs of homeowners' yard-spaces from Phase I

Objectives

Conceptual/Cognitive Objectives

1. Students will understand that text communicates meaning and is often taken for granted.
2. Students will recognize visual elements in yard-spaces as symbols that often communicate meaningful messages.

3. Students will understand that placement of objects within yard-spaces can communicate messages and environmental concern.

Artistic Skill Objectives

1. Students will plan and write out a short phrase that communicates an environmental message.
2. Students will combine natural materials and photographs using careful consideration for visual effect of photographic elements.
3. Students will show careful consideration of text application to draw attention to artwork and communicate an environmental message.

Assessment Criteria

Conceptual Criteria

1. Classroom discussions
2. Classroom discussions
3. Classroom discussions

Artistic Skills Criteria

1. Visual assessment of completed artwork
2. Visual assessment of completed artwork
3. Visual assessment of completed artwork

Media/Art Materials Needed

Student nature arrangement photographs (sprayed with fixative by teacher outside of class)

Rocks Outdoor Mod Podge Sealant Sketch paper Computer/Printer

Instructional Procedures Outline

Teacher Activities	Student Activities
Show video clip of Holzer discussing her art making processes. Show images of Holzer's work. Engage students in discussion.	View video clip and images. Engage in classroom discussions.
Introduce purpose of lesson.	Ask questions for clarification.
Engage students in suggesting environmental phrases.	Suggest environmental phrases.
Assist students in phrase development.	Compose written environmental phrases.
Demonstrate art-making processes.	View demonstration and ask questions for clarification.
Assist in art making.	Engage with materials in art making
Print student phrases and spray with fixative.	
Demonstrate processes for cutting and applying phrases to artwork.	View demonstration and ask questions.
Assist with application of phrases.	Apply phrases to artwork.

Instructional Procedures

- Students view video clip of Holzer describing her art making processes and images of her work. Engage students in conversations about the meaning of Holzer's works and ways text can be used to communicate messages.
- Show photographs of homeowners' yard-spaces from Phase I and examine different elements within each yard-space. Engage students in classroom discussion. What might the reasons be for including different elements within a yard-space? What messages do you feel these elements communicate about the homeowner, their personalities, or their

preferences? What visual cues draw your attention in making these observations?

- Discuss how natural elements and created elements may differ in the messages they communicate and the ways in which these elements draw attention. Discuss how text that appears in unexpected places draws the viewer's attention.
- Students brainstorm short environmental phrases and meanings the phrases could communicate if encountered in an unexpected place.
- Encourage students to compose a short environmental phrase on sketch paper and label with their names. Collect. If time allows, students may choose font styles for their phrases and print the phrases. If time constraints exist, teacher prints phrases in several fonts for students to choose during next class meeting. Outside of class, teacher sprays fixative on phrases to prevent bleeding of ink when sealant is applied.
- Teacher demonstrates application of photograph to rocks by applying Mod Podge sealant to rock, layering photograph over rock, creasing and overlapping folds to fit rock, tucking edges of photograph under rock, and applying more Mod Podge sealant over entire sculpture.
- Students apply photographs to rocks with Mod Podge sealant and place rocks on drying mat labeled with student names.
- The following week, teacher demonstrates how to cut around textual phrase and apply to rock sculpture. Students choose phrase in font style they prefer, cut around phrase, and apply to rock sculptures with another layer of Mod Podge sealant.
- Upon completion of art making, students view and critique sculptures and discuss areas within their yards to place the rock sculptures.

Examples of Students' Artwork



Wayne



Alan



Robert



Abby

Powerful Messages Assessment for Artistic Skill Objective Three

Artistic Skill Objective Three: Students will show careful consideration of text application to draw attention to artwork and communicate an environmental message.

The intended placement for these rock art sculptures is outdoors in unexpected places to draw attention to the environment. Students were instructed to keep messages short and concise to make the viewer think about the message. Environmental artwork on rock should enhance message.

Rate each piece for the ability to draw attention and cause viewer to think about the environment by placing a checkmark on one line.

Artwork communicates a message of environmental concern to the viewer (check one):

Clear (Message invites viewer to think about the environment or pay attention to surroundings)

Somewhat Clear (Message may or may not pertain to the environment or is somewhat clear)

Unclear (Unclear meaning of message or does not pertain to the environment)

Transition to Next Lesson

Discuss ways text appearing in unexpected places can draw viewer's attention and communicate messages. Brainstorm areas students may choose for placement of rock sculptures within their own yard-spaces. Review meanings associated with yard-space visual elements and the messages communicated by these elements. Encourage students to think beyond the visual elements within their yard-spaces to think of natural areas as living spaces for animals.

Lesson Four: Local Animal Research Inspired by the Artwork of Lynne Hull

Essential Questions

1. How can we think beyond the visual appearances of yard-spaces and envision areas within yard-spaces as animal habitats?
2. Why do animals need shelter and protection?
3. How can yard-space areas contribute to the shelter and protection of animals?
4. How can artwork communicate environmental concern for animals?

Art/Cultural Connections

Control of the environment extends to control over animals and often results in destruction of animal habitats. Yard-spaces as controlled areas often contribute in diminishing suitable areas for animal habitats. Animal habitat sculptures as art forms can aid in the protection and shelter of animals.

Teaching Resources

- Photographs of local animals for references
- Animal Research Project Worksheet
- Photographs of homeowners' yard-spaces from Phase I
- Animal Shelter Art PowerPoint

Objectives

Conceptual/Cognitive Objectives

1. Students will understand that animals are a part of our local environment and need protection and shelter.
2. Students will understand some of the ways animals and their habitats are being compromised.
3. Students will be able to envision areas of their yard-spaces as suitable habitats for local animals.
4. Students will understand that artworks and yard-spaces can have meaning beyond visual appearances and can also aid in the protection of animals.

Artistic Skill Objectives

1. Students will research one local animal and create a two-dimensional life-size drawing or painting of the animal.
2. Students will plan and construct a class mural containing all of the local animals by considering appropriate placement and overlapping techniques.
3. Students will build on knowledge learned through research, examination, and creation of two-dimensional animals to create three-dimensional animal sculptures from clay.
4. Students will plan and design an animal habitat art piece that could be built in their own yard-spaces.

Assessment CriteriaConceptual Criteria

1. Classroom discussions
2. Classroom discussions
3. Classroom discussions and Animal Research Project Worksheet
4. Classroom discussions and Animal Research Project Worksheet

Artistic Skills Criteria

1. Visual assessment of completed artwork
2. Visual assessment of completed artwork
3. Visual assessment of completed artwork
4. Animal Research Project Worksheet

Media/Art Materials Needed

Sketch paper	Colored paper of various sizes	Drawing and painting materials
Scissors and adhesive	Clay and clay tools	Glazes

Instructional Procedures Outline

Teacher Activities	Student Activities
Assist students in choosing a local animal for research.	Students choose local animal and research facts about the animal.
Demonstrate drawing techniques by visualizing simple shapes as starting point.	Ask questions for clarification.
Assist students in making sketches and drawing and painting animals.	Students sketch animals and then draw or paint the animals in a life-size format.
Assist students in constructing mural.	Students cut out animals, plan layout, and assemble mural composition.
Demonstrate clay hand building techniques.	View demonstration and ask questions for clarification.
Assist students in constructing clay animals.	Construct clay animals using drawings as references.
Teacher dries, and fires animals in kiln outside of class time.	
Demonstrate glazing techniques.	View demonstration and ask questions.
Assist with application of glazes.	Apply glazes to animal sculptures.
Teacher fires glazed animals in kiln outside of class time.	
Show Animal Shelter Art PowerPoint and engage students in discussion.	View PowerPoint and participate in class discussion.
Show pictures of homeowners' yard-spaces from Phase I and discuss the effects these types of yard-spaces have on animals.	View photographs and engage in discussion about yard-spaces and animal habitats.
Discuss elements of Animal Research Project Worksheet and assist students in completing the worksheet.	Ask questions for clarification of worksheet and complete worksheet, including design of animal habitat artwork for yard-space.

Instructional Procedures

- Each student chooses one animal to research, conducts research, and becomes familiar with facts about the chosen local animal.
- Provide students with photographs of their chosen local animals and demonstrate ways to draw the animals using simple shapes as a starting point. Students practice drawing their animals on sketch paper.
- Assist students as they draw or paint their animals in life-size formats.

- Assist students in constructing mural of all the local animals by planning placement, cutting out animals, and using adhesive to attach animals to prepared wall surfaces.
- Demonstrate clay building techniques and assist students in constructing their clay animals.
- Dry and fire clay animals in kiln.
- Demonstrate and assist students in glazing their clay animal sculptures.
- Fire sculptures in kiln.
- Show Animal Shelter Art PowerPoint and discuss reasons animals need shelter and protection. Discuss Lynne Hull's reasons for creating animal shelter art.
- Show photographs of homeowners' yard-spaces from Phase I and engage students in conversations about yard-space appearances and yard-spaces as areas for animal shelter.
- Discuss Animal Research Project Worksheet and encourage students to envision animal habitat art that could be constructed in their own yard-spaces.
- Assist students in completing worksheets and designing animal habitat art.

Examples of Students' Artwork



Alicia's Artwork



Lisa's Artwork

Animal Research Assessment: Conceptual Objective One

Conceptual Objective One: Students will understand that animals are a part of our local environment and need protection and shelter.

Through classroom animal research and art class learning, students were encouraged to develop concern for local animals and an understanding of animals' needs for shelter and protection. This evaluation considers to what extent students expressed these environmental concepts through their artwork and writing.

Each page contains two photographs of a student's work followed by the student's written responses to the questions:

1. Tell something special about the animal that you researched.
2. Why might this animal need protection and shelter?

At the bottom of each page is a rubric for that student. Scoring: Highlight one box on each rubric that shows the amount of concern for the animal and understanding of the animal's need for protection the student demonstrated through his or her artwork and written response.

(Highlight one)

Evidence of animal concern and need for protection	Some evidence of animal concern and need for protection	Little or no evidence of animal concern and need for protection
--	---	---

APPENDIX C

ANIMAL PROTECTION AND SHELTER POWERPOINT

Animals in Our Local Environment



Animals Need Protection and Shelter

- Destruction of habitat
- Pesticides, herbicides, and pollutants
- Hazards from vehicles and road traffic
- Collisions with windows in buildings



Artist Lynne Hull Makes Animal Shelter Art



eco-ART

-- Saving Species One Sculpture at a Time --

"Lynne Hull wants to restructure the stories people tell about their place in nature. Her artwork nurtures a multispecies dialogue" ... Peter Wardlaw, Whole Earth

"Hull's work is a matter of process and engagement rather than market product, with focus on strategy and a defiance of mainstream artistic authority replaced by an authority of spirit and confidence in purpose. It is a fervent expression of joy or praise for the natural world. She belongs to a community of activist artists who engage in an artistic intervention on behalf of the sustenance of life" ... Kim Bloom, Texas Text

"Lynne Hull's unique ecological artistic projects pioneer the creation of new models for trans-species cultural exchanges, biodiverse dialogues, and eco-communal relationships. She is mending western civilization's split between human and non-human nature by conferring on the human artist the role of curator of the Earth's living art gallery." ... Gloria Feman Orenstein



Can Animals Find Shelter in Your Yard?



APPENDIX D

YARD-SPACES AND THE ENVIRONMENT QUESTIONNAIRE

Yard-Spaces and the Environment

1. Describe the appearance of your yard (how it looks).

2. Why do you or your family want your yard to look this way?

3. What activities do you or your family do to make the yard look this way? Do any of these activities affect the environment? Explain.

4. Describe how your yard looks the same or different than your neighbors' yards.

5. Do you think it is all right for yards to have different looks? Why or why not?

6. Would you like your yard to look differently? Why or why not?

7. Are there things you could do to your yard to help protect the environment?

8. Do you think that creating the appearance of your yard could be art making? Describe why or why not.

Add any other ideas you might have on the back of this worksheet.

APPENDIX E

YARD-SPACES END-OF-COURSE QUESTIONNAIRE

Yard-Spaces End-of-Course Questionnaire

We have learned that people have reasons for making their yards look certain ways:

- To look like other yards and fit in
- To help the environment and native plants survive
- To shelter animals
- To communicate personal meaning

1. Describe how your yard looks and why you and your family make it look this way.

2. Do you mow, trim, use pesticides, or do anything else to make your yard look this way?
 _____ yes _____ no

How do these types of things that you do affect the environment and do you care how the environment is affected?

3. Do your neighbors mow their yards? _____ yes _____ no

4. Is there a yard in your neighborhood that is mostly native plants with little mowing?

_____ yes _____ no

5. Do you think it is all right if a family in your neighborhood wants their yard to have a different look and doesn't mow their lawn? Why or why not?

6. Now that you have learned about ways to help the environment, are there things you could do to your own yard to protect the environment?

7. Would you still like how your yard looked if you made environmentally friendly changes? Why or why not?

APPENDIX F

YARD-SPACE PHOTOGRAPHS INTERPRETATION WORKSHEET AND WORD LIST



A.



B.



C.



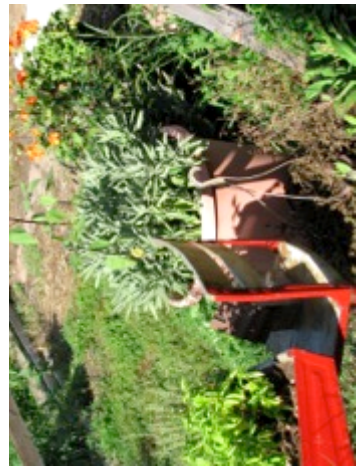
D.



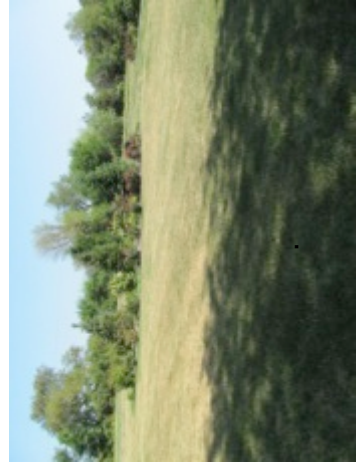
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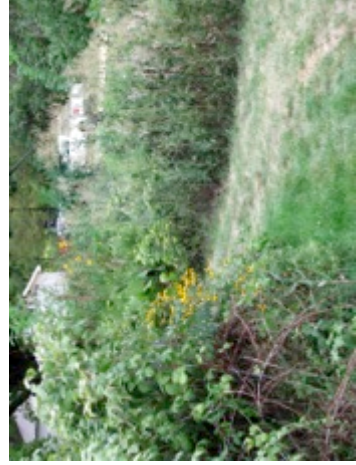
F.



G.



H.



I.

Name _____

Class _____

Looking at Yards

1. Use adjectives to describe the pictures of yards and the people who own the yards on the previous page. You may write the words under the pictures or use this sheet if you need more room (Example: Picture G looks _____). This worksheet is about your thoughts so please work alone. There are no right or wrong answers. If you need help thinking of adjectives, you may use words from the word list below.

Word List

Neat	Fussy	Wealthy
Peaceful	Careless	Messy
Poor	Organized	Busy
Exciting	Sloppy	Calm
Rebellious	Hard-Working	Obnoxious
Lazy	Tidy	Beautiful
Creative	Careful	Friendly
Green	Artistic	Open-Minded
Conformist	Natural	Simple
Controlled	Close-Minded	Unique
Wild	Non-Conformist	Elaborate

2. Put a capital E by the pictures of yards that you think show the homeowners care about the environment.

APPENDIX G

YARD-PAINTING REFLECTION WORKSHEET

Yard-Painting Reflection Worksheet

1. Describe the changes you made to your yard photograph.

2. How do these changes help the environment?

3. Which of your ideas would you like to try in your own yard?

4. Look at the list of art concepts below. Circle the art concepts that you used when planning your changes. Describe which parts of your artwork show these art concepts.

Art Concepts:

Composition (placement of items)

Repetition

Balance

Harmony (fitting in with surrounding items)

Emphasis (items that are accents or stand out)

5. Name a success and a challenge with this project.

APPENDIX H

RESEARCHER-ASSIGNED DEFINITIONS LIST

Photo Sheet Word Definitions
(related to classroom discussions)

Amazing: Yard-space is aesthetically pleasing
Annoying: Homeowners or appearance is bothersome
Art-like/Artistic: Homeowners appreciative of art, communicating artistic meaning
Beautiful: Yard is aesthetically pleasing
Big: Yard-space appearance is wide and open
Boring: Homeowners or appearances are not interesting
Busy: Homeowners place many elements within the yard/hard-working
Calm: Homeowners or appearances are peaceful and relaxed
Careless: Homeowners do not show concern for appearance
Clean: Homeowners show concern for neat appearance
Colorful: Yard-space has abundance of color
Country: Homeowners prefer natural appearances
Creative: Homeowners show artistic self-expression
Controlled: Homeowners overly manage appearances
Cute: Yard is aesthetically pleasing
Decorative: Homeowners add many artistic elements
Elaborate: Homeowners fill yard with many elements
Empty: Yard-Space lacks many elements
Environmental: Homeowners show environmental concern
Forestry: Yard-Space contains many trees
Free: Homeowners are not constrained by rules
Friendly: Homeowners are welcoming
Fun: Homeowners create for enjoyment
Fussy: Homeowners are overly particular about appearances
Good: Homeowners care about yard-space appearance
Green: Homeowners are environmentally concerned.
Hard Working: Homeowners work hard to create and maintain appearance
Healthy: Homeowners consider environmental health
Lazy: Homeowners do not put effort or care about appearance
Meh: Yard-space is not impressive
Messy: Homeowners are not neat and do not put effort into appearance
Mr. Perfect: Homeowners are overly concerned with neat appearance
Mystical: Homeowners are mysterious/fantastical
Nature/Natural: Homeowners appreciate nature and care about environment
Neat: Homeowners care about appearance/tidiness of yard
Non-Conformist: Homeowners do not follow societal rules
Normal: Homeowners follow social conventions
Nice: Homeowners are welcoming
Obnoxious: Homeowners or appearances are annoying
Okay: Homeowners do not make a strong statement either way
Open: Homeowners appreciate open (mowed) spaces

Open-Minded: Showing an appreciation for differences
Organized: Homeowners appreciate neat and orderly appearances
Overgrown: Yard shows lack of care
Peaceful: Homeowners and appearances are relaxed
Plain: Homeowners follow conventions, not unique
Plenty: Homeowners like many plants in yard
Poor: Homeowners are in poverty/lack wealth
Pretty: Yard-space is aesthetically pleasing
Rebellious: Homeowners are non-conformists
Reckless: Homeowners do not take care with their yard appearances
Sad: Homeowners are unhappy
Simple: Homeowners appreciate uncluttered appearance
Sloppy: Showing lack of concern for neatness
Swampy: Yard is not cared for/left alone
Tidy: Homeowners show care and concern for appearance
Unique: Homeowners do not follow social conventions
Wacky: Homeowners have strange tastes or personalities
Wealthy: Homeowners are affluent
Well-Kept: Homeowners show care for appearance
Wild: Strange, showing lack of concern and care

APPENDIX I

WHAT IS IN A YARD POWERPOINT

What is In a Yard?

Yard-Spaces,
the Environment,
and Art

Art Learning Helps Us Understand What We See

- Sometimes, things that we see every day are taken for granted because these things seem normal.
- Art learning helps us to look closely at things we may take for granted.
- Art learning can help us recognize that there are reasons we create appearances and there are different ways for things to look.

Looking at Yards: Have You Seen These Types of Yards?



Why Do Homeowners Create These Types of Yards?

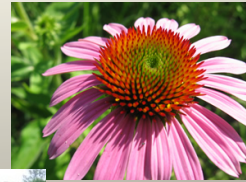


What Activities are Done to Make Yards Look This Way?

- Charting Yard Activities

Yard Alternatives

- Native plants
- No mow lawns
- Mowing less
- Digging out weeds



What Can You Imagine for Your Yard?

APPENDIX J

YOUR YARD AND CLEAN AIR HANDOUT

Your Yard and Clean Air

Small Engines are Big Polluters

EPA 420-F-94-002

Most people do not associate air pollution with mowing the lawn. Yet emissions from lawn mowers, snow blowers, chain saws, leaf vacuums, and similar outdoor power equipment are a significant source of pollution. Today's small engines emit high levels of carbon monoxide, a colorless, odorless, poisonous gas. They also emit hydrocarbons and nitrogen oxides, pollutants that contribute to the formation of ozone. While ozone occurs naturally in the upper atmosphere and shields the earth from harmful radiation, ozone at ground level is a noxious pollutant. Ground-level ozone impairs lung function, inhibits plant growth, and is a key ingredient of smog.

Emission control for small gasoline engines has not been a crucial design consideration until now. Consequently, small engines are big polluters. And power equipment users inadvertently contribute to the problem by carelessly handling fuel and by improperly maintaining their equipment.

The U.S. Environmental Protection Agency (EPA) and the power equipment industry are working to investigate and bring to market cleaner technology for small engines.

Pollution Prevention in Your Own Backyard

EPA anticipates that regulations now being developed will bring cleaner lawn and garden equipment to market within a few years. Meanwhile, consumers can make a difference by adopting practices that will help protect the environment now and in the future:

Avoid spilling gasoline.

Preventing spills and overfills is an easy and effective way for power equipment owners to prevent pollution. Even small gasoline spills evaporate and pollute the air.

Use a gasoline container you can handle easily and hold securely. Pour slowly and smoothly. Use a funnel, or a spout with an automatic stop device to prevent overfilling the gas tank. Keep the cap or spout and the vent hole on gasoline containers closed tightly. Transport and store gasoline and power equipment out of direct sunlight in a cool, dry place. Use caution when pumping gasoline into a container at the gas station.

FACT SHEET OMS-19 May, 1996

Maintain your equipment.

Follow the manufacturer's guidelines for maintenance. Change oil and clean or replace air filters regularly. Use the proper fuel/oil mixture in two-stroke equipment. Get periodic tune-ups, maintain sharp mower blades, and keep the under- side of the deck clean. Take time to winterize equipment each fall.

Consider cleaner options.

Ask your dealer about the new, cleaner gasoline equipment entering the market- place. Propane and solar options are also available for some types of equipment.

Electric equipment is cleaner than equipment powered by gasoline engines. Electrically-powered lawn and garden tools produce essentially no pollution from exhaust emissions or through fuel evaporation. However, generating the power to run electric equipment does produce pollution.

Use manual tools.

Tools that don't require electric or gasoline engines are especially handy for small yards or small jobs. Hand tools are available to meet a wide variety of lawn and garden needs, like lightweight, quiet, easy-to-use reel push mowers that generate no emissions.

Reduce mowing time.

Use low-maintenance turf grasses or grass/flower seed mixtures that grow slowly and require less mowing. Check with your local agricultural extension service or lawn and garden center about what is appropriate for your region.

Decrease lawn area. Plant additional trees and shrubs to reduce the energy costs of heating and cooling your house and to provide landscaping for wildlife. Native wildflowers and plants require little to no maintenance after planting.

Recycle old equipment.

Instead of selling or giving away your old lawn and garden power tools, take them to a recycling center where they can be converted into raw material for use in cleaner equipment and other products.

By combining these strategies, you can reduce your personal contribution to pollution. In addition, your yard equipment will last longer and you will save money.

For More Information:

The Office of Mobile Sources is the national center for research and policy on air pollution from highway and off-highway motor vehicles and equipment. You can write to us at the EPA National Vehicle and Fuel Emissions Laboratory, 2565 Plymouth Road, Ann Arbor, MI 48105. Our phone number is (313) 668-4333.

APPENDIX K

BENEFITS OF NATIVE PLANTS HANDOUT

Benefits of Native Plants

Wildflowers do much more than add beauty to the landscape. They help conserve water, reduce mowing costs, provide habitat for birds, butterflies and other wildlife, protect the soil and save money on fertilizer and pesticides. Also, as Lady Bird Johnson said, native plants "give us a sense of where we are in this great land of ours."

But North American native plants, defined as those that existed here without human introduction, are disappearing at an alarming rate due to human activities, such as urban development, agribusiness and the introduction of invasive species. The loss of native plant communities has reduced wildlife habitat and the genetic diversity necessary for balanced ecosystems.

Unlike many non-native plants, native plants introduced into landscape plantings are hardy, less susceptible to pests and diseases and unlikely to escape and become invasive. With properly selected native plants, it may not be necessary to modify soil characteristics at all to have thriving gardens. The great variety of plants native to any region give gardeners options that work well in any type of garden design. Because maintaining native plants requires less work, they provide excellent choices for large commercial landscapes as well as residential gardens.

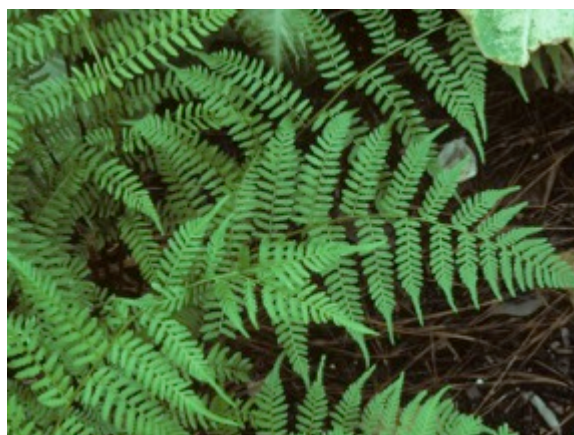
Of course, native plants have other benefits. They are a potential source of food and of traditional and new medicines.

So take up Lady Bird Johnson's "special cause" and help preserve the wildflowers and native plants that define the regions of our land. Once your wildflowers are established, you will not only save time, energy and money, but also preserve a sense of place and regional identity.

From <https://www.wildflower.org/whynatives/>



Swamp Milkweed



Ladyfern



Coreopsis



Purple Coneflower



Joepyeweed



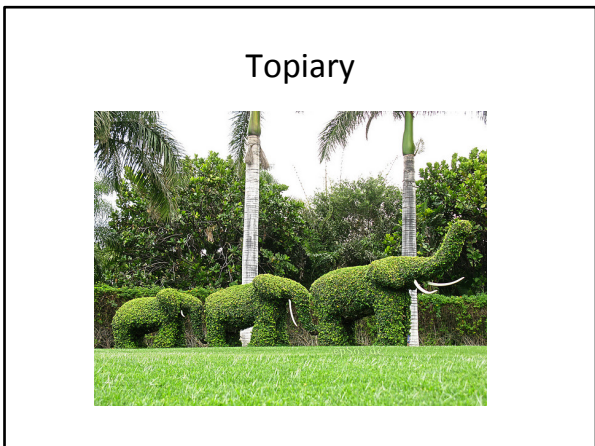
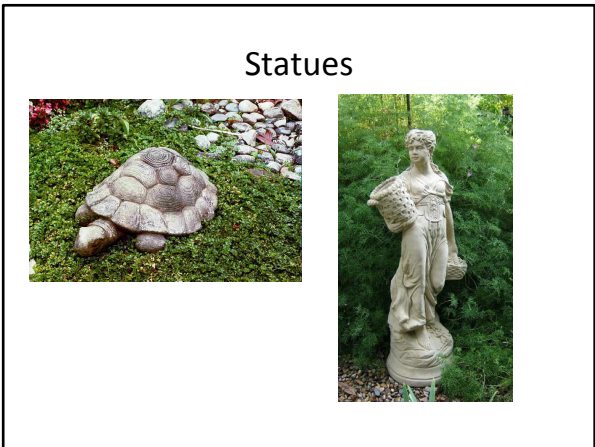
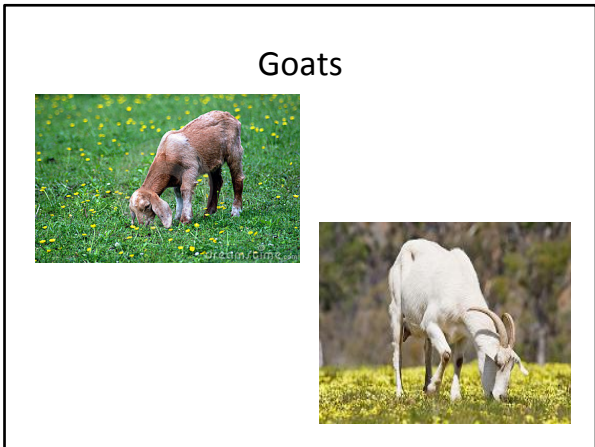
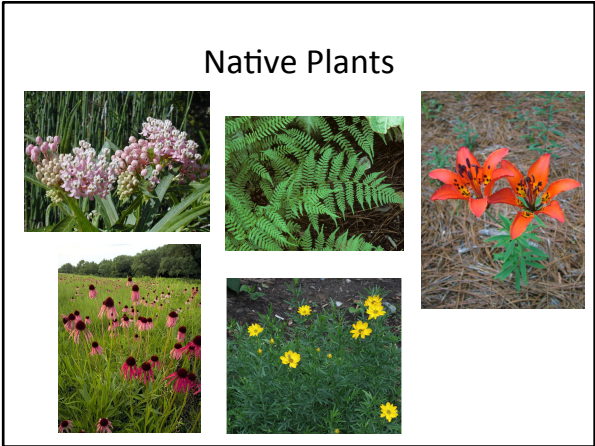
Wood Lily

APPENDIX L

YARD-SPACE ELEMENTS POWERPOINT

Yard-Space Elements:

Helping the Environment



Animal Habitats and Shelters



Steps

- Add yard elements that will help the environment.
- Think about perspective.
- Outline with Sharpie without filling in.
- Take overlay plastic off of picture. Flip over. Carefully paint elements. Let dry.
- Attach plastic to picture and add remaining details such as collage.

APPENDIX M

ANIMAL RESEARCH PROJECT WORKSHEET

Animal Research Project

1. Tell the name of the animal you researched and write something special about the animal.

2. Why might this animal need protection and shelter?

3. Could this animal find shelter in your yard? Why or why not?

4. Think about the type of habitat this animal requires and imagine a yard art sculpture that could shelter this animal. Draw a picture of the animal and the habitat sculpture in the space below.