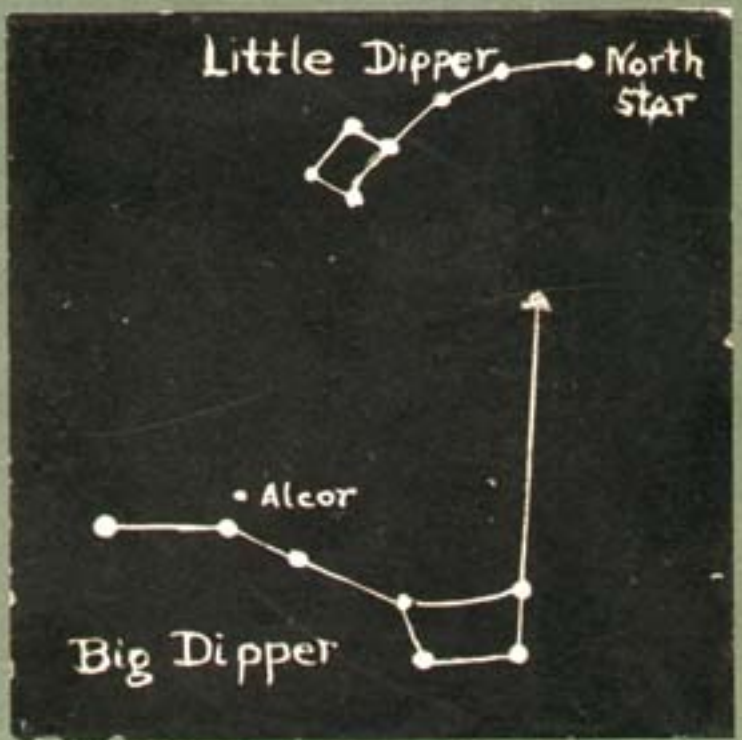
STAR STORIES FOR LITTLE FOLKS



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Star Stories for Little Folks

Star Stories *for* Little Folks

BY

GERTRUDE CHANDLER WARNER

Author of
"The House of Delight"

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BOSTON

GRATEFULLY DEDICATED
TO
Mrs. Frederick Jennings Daniels

PREFACE

A LETTER TO YOU

Dear _____

(Write your own name here.)

Before you read this little book, Dr. Lorry says I must tell you that the stars are not always in the same place in the sky. If you are not acquainted with them, it is easier to find them when they are just coming up in the east. So under the name of each group of stars, you will find the best time of year to look for it.

In the winter, I always had my lessons at seven o'clock, but after April it was so light that we changed the time to eight o'clock. Since then, there is a new plan to SAVE

DAYLIGHT, so from April to October while this plan lasts, you will have to go out at *nine* o'clock on the dates printed with each lesson.

Dr. Lorry laughed when he found that his pictures were going into a real Astronomy book, and said if he had known this, he would have been more particular. But I have been able to learn the stars from them very easily.

As soon as you find a constellation, write the date on the dotted line under its picture. Then you will know when you have earned your diploma. I hope you will have as good a time as I did, finding the fifteen constellations.

Your little friend,

HELEN.

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STAR STORIES FOR LITTLE FOLKS

I. THE TWO DIPPERS

Look for the Dippers early in November

Doctor Lorry had solemnly promised Helen that when she grew strong enough to go out in the yard at seven o'clock, he would come up on purpose to point out some of the most beautiful stars, and teach her their names.

Night after night Helen had tossed in her white bed by the window. It was only when the kind nurse had pushed the shade up—slip, slip, creak, creak,—and let Helen look out at the wonderful starry sky, that she had been able to rest at all.

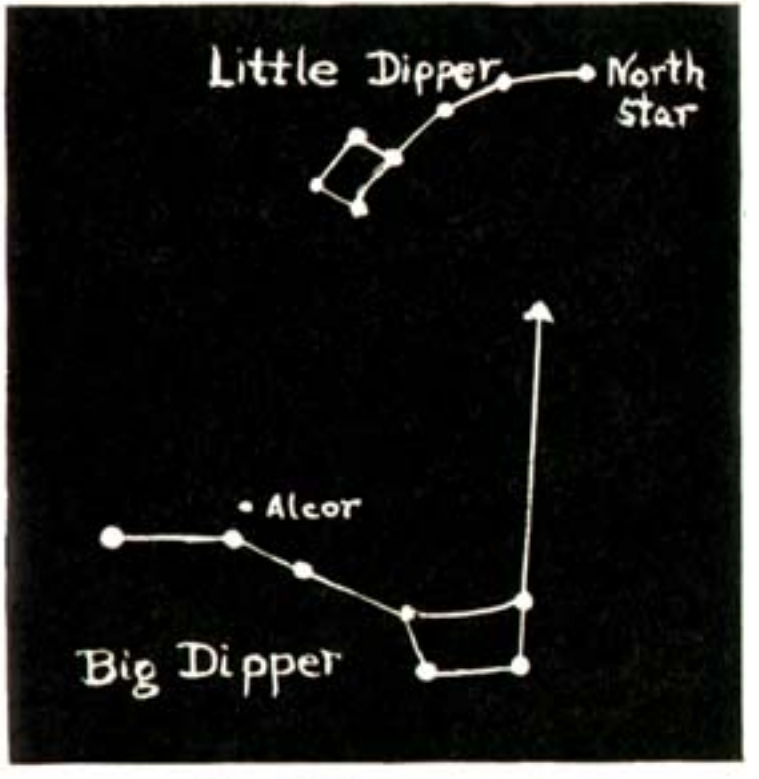
And now here she was down in the hall, dressed warmly from the top of her brown fur hat, with its scarlet rose, to her brown fur leggings, waiting for the big, burly doctor to keep his promise. And he kept it. He came chugging up in his long gray car, looking like a bear in his fur coat.

"Only fifteen minutes, sister," he said to Helen. "We mustn't take cold. We will go out to the garden path and face north, to get a view of the Big Dipper. No course of lectures is complete without the Big Dipper to start from."

"*Please* let it be a course of lectures," begged Helen.

"Very well," agreed Dr. Lorry, good-naturedly. "Now just take a look at this."

He turned a tiny flash-light on a black card with white stars dotted on it in the shape of the Dipper.



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"The Dipper is right side up, right above those trees. Four stars make the bowl and three the long handle."

"I see!" cried Helen.

"Now," continued the doctor, "the two stars through which the arrow was drawn are called Pointers, because they point *almost* to the North Star. Do you see it? A very faint star?"

"Yes," cried Helen again, "and it is the very tail of the Little Dipper's handle, exactly like the picture."

"Good!" said Dr. Lorry, very much pleased. "You have sharp enough eyes to see little Alcor, I think. If a person can see Alcor, he has very good eyes. Look in the handle of the Big Dipper, directly above the first star from the end. Alcor is the Rider, and the bright star below it is his Horse."

"I see both," said Helen. "My eyes are all right."

"Good! Now we must go in."

Helen went very obediently.

"How different the stars look when I'm outdoors!" she said.

But when she was lying in bed again, looking out at the starry sky, the Big Dipper already seemed like a dear old friend.

II. AURIGA, THE WAGONER

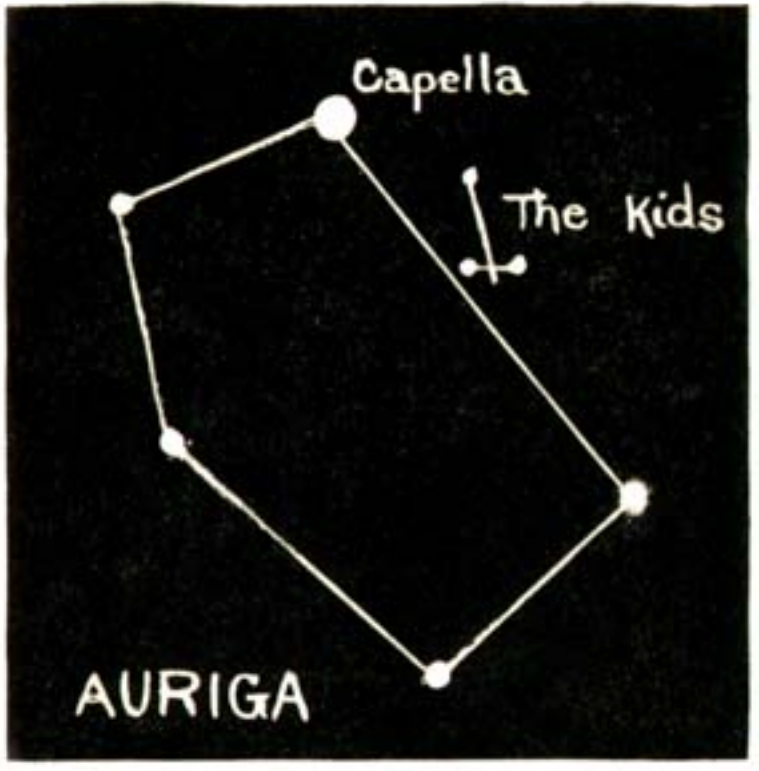
Look for Auriga during the middle of November

"Do come in just a minute, Dr. Lorry, and see what I've made," begged Helen, the second night the doctor came to tell her about the stars.

Dr. Lorry put on his eye-glasses and sat down near the library lamp, to look at the small blue book Helen handed to him. It was made of six squares of black paper pasted on larger white cards.

On the first square Helen had drawn the Dippers in white ink, and underneath on the card she had written all she had learned about them. On the blue cover in large white letters was printed MY STAR BOOK.

"That's a fine idea!" exclaimed the doctor.



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"I wish every little girl in the United States had one. Tonight we'll learn a group of stars that will be harder to draw. It is called Au-rĭ'-ga, or the Wagoner. We'll go to the same place to see it, and face north."

When they had found the Big Dipper, Dr. Lorry said, "Now, instead of using the two real Pointers to find Auriga, just imagine that the two top stars of the bowl are pointing east, or to the right. You see they point out a very, very bright star, the only bright one anywhere near?"

"Yes," answered Helen, "brighter than even the Dipper?"

"Yes, a star of the first magnitude, we say, meaning brightness. Now, see what we are to look for."

This time the flash-light showed a large figure made of five stars, one of which was the bright star. When the light was turned away,

Helen looked up into the darkness and saw the exact copy of the little drawing smiling down upon her—only so very large and grand.

"The bright star is named Ca-pel'-la, the Goat. Playing near her are the three little Kids."

Helen skipped with pleasure when she found them. "This is a prettier group than the Dipper."

"A prettier constellation, we say," said the doctor, smiling and leading the way back to the house.

III. TAURUS, THE BULL

You can see this during December

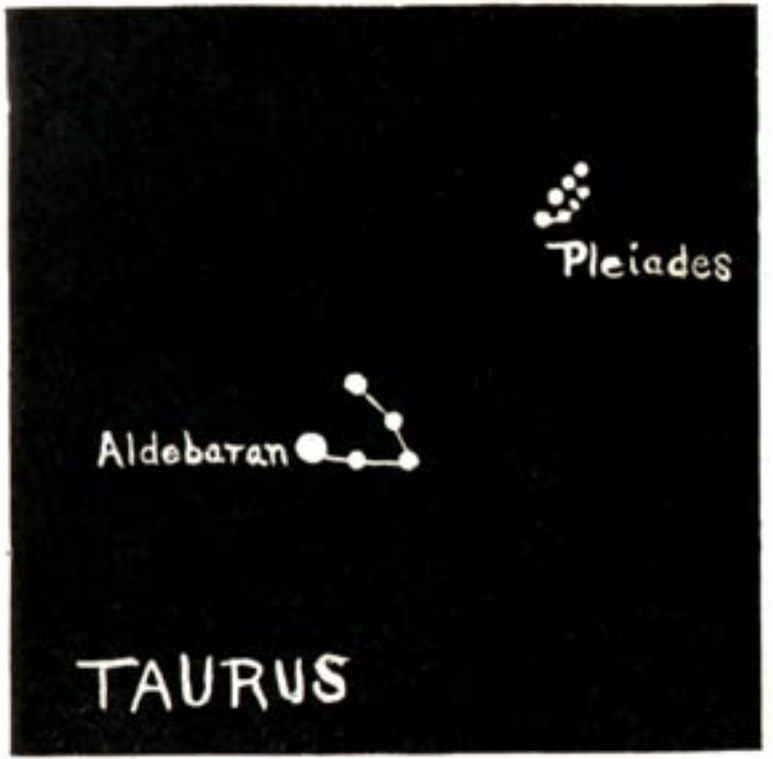
"The moon is so bright we can't see the stars well, now," Dr. Lorry had telephoned, and it seemed a long time to Helen before they stood once more, looking up at the bright Capella, now much higher up in the sky.

"Helen, what color is Capella?" asked Dr. Lorry.

"White," answered Helen. "All the stars are white."

"Ahem!" said the doctor, "are they, though? Suppose you draw a line through Capella and the three Kids until it comes to that very bright star in the east. What color's that?"

"Why, *red!*" said Helen, in astonishment.



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"Red is correct," said the doctor. "We have yellow ones, green ones, blue ones—"

"Blue ones!"

"Bluish, we say," smiled her companion. "That red star is called Al-deb-a-ran, or the Bull's Eye, because it forms the eye in the constellation of Tau-rus, the Bull. You see it is in that V-shaped figure? That is the Bull's face."

"I don't think it looks much like a bull's face," said Helen, after a moment.

"Neither do I," agreed the doctor. "All these names were made up about three thousand years ago, you see. Perhaps if we were naming the constellations, we might do it differently. Now, just a little higher up, do you see a tiny bunch of stars?"

"Yes, three, four, five tiny ones."

Dr. Lorry was silent.

"Six—seven!" cried Helen, after a moment.

"Bright eyes!" said the doctor. "I see seven, too. They are called the Ple'-ia-des, or sometimes the Seven Sisters. You'll find the Pleiades mentioned in the Bible. Now, see if you can find where before I come again."

IV. ORION

Orion can best be seen early in January

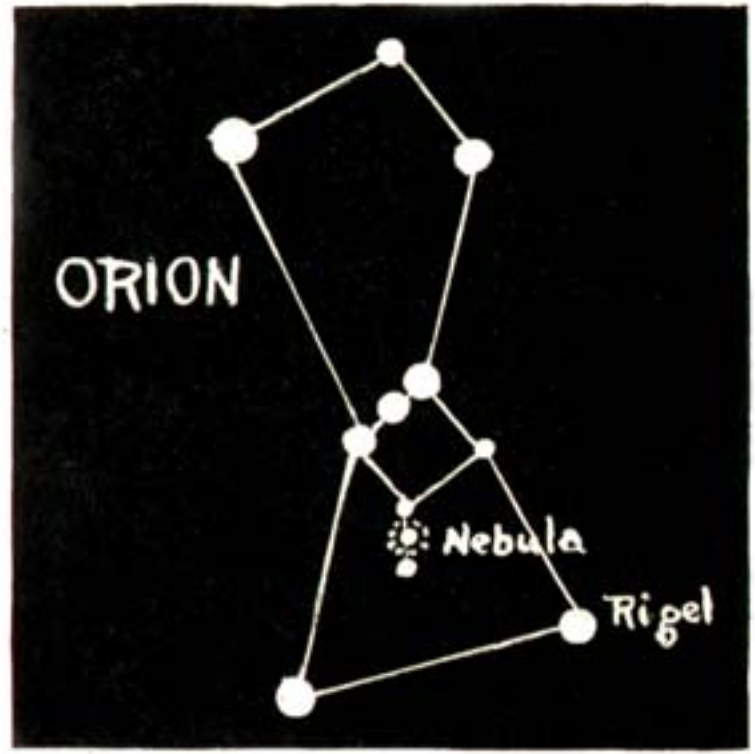
Helen had her book all ready in the hall to show the doctor, the Bull carefully drawn, Aldebaran tinted a rosy red, and the Pleiades shining in their places like tiny jewels. Underneath she had written:

That maketh the Bear, Orion, and Pleiades,
And the chambers of the south.
Job 9: 9.

Canst thou bind the cluster of the Pleiades,
Or loose the bands of Orion?
Job 38: 31.

"Mother helped me find the verses," explained Helen, "but I really don't understand them."

"Orion is the constellation we have to-



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night," said Dr. Lorry, opening the front door. "This time we will face east. See our old friends, Auriga, Taurus, and the Pleiades? Now we will add to them O-ri-on, the Giant Hunter. Here is his picture."

The black card showed a figure somewhat the shape of Auriga, only a belt of three large stars went across the middle. Then Helen gazed upwards.

"I see a square of bright stars that I always used to call the Little Dipper," said Helen.

"O-ho!" said the doctor, "you're looking for something too small. Orion himself is much, much larger. That is only his belt and sword. His shoulders and head are above, and his feet—"

"Oh, so large!" interrupted Helen. "And he is bright, isn't he?"

"I guess you see him," said the doctor. "He is the most beautiful constellation we

have. The three bright stars make his belt, and his sword is stuck through his belt. In the handle of his sword is a hazy cloud called the Great Nebula.

"Now, just throw back your head and look at all these stars at once, and see if you can imagine any one great enough to make Orion and the Pleiades and those great, open spaces over in the southern sky? We couldn't string those seven stars of the Pleiades on a chain of fire. Could you break up Orion and let those wonderful stars wander around through the sky?"

"Why, those are my verses," said Helen, in surprise. "How easy!"

"Just a minute," said the doctor, suddenly, turning around once more before they went in. "What color would you call Rigel (Rī'-jel), Orion's left foot?"

"Blue!" said Helen.

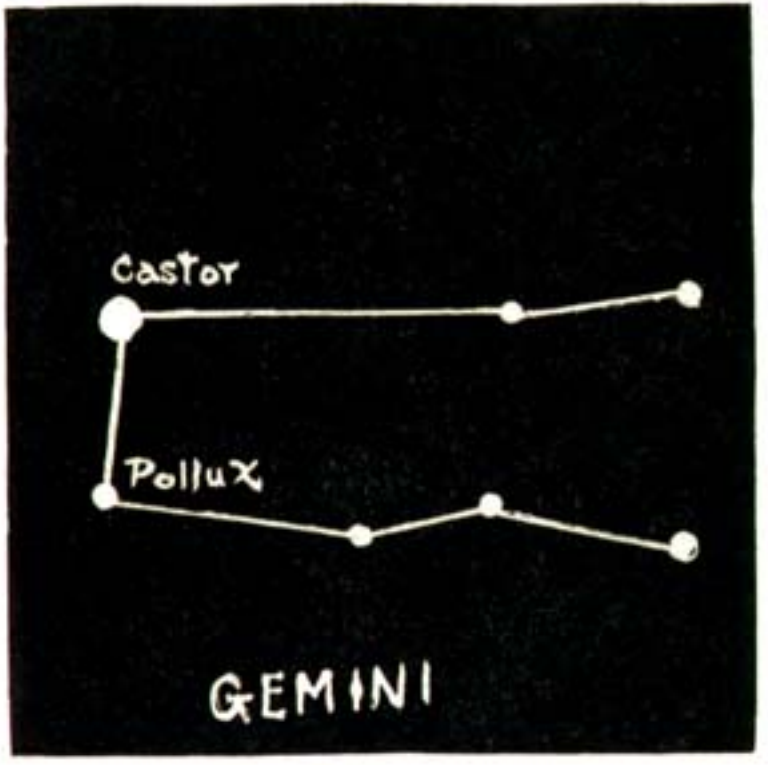
V. GEMINI, THE TWINS

Look for this during the middle of January

"We will find the Twins, Cas-tor and Pol-lux, tonight," said Dr. Lorry, guiding Helen along the dark path. "They are rather hard to point out, but once you see the picture—" he fumbled in his pocket for his little black card and light.

"Castor is a bright star, perfectly white, and Pollux is a little brighter star, as yellow as gold. To help you find them, I will say there is a spelling-match up in the sky just below Auriga, and just at the left of Orion, and Castor and Pollux are choosing sides. Castor has two stars on his side and Pollux has three."

Helen laughed, put her hand over the light,



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and looked up to hunt for the two lines of spellers. She soon found them.

"For Orion is pointing right at them," she said.

"This lesson is so short, I want to show you something else. Do you see a faint, silvery band crossing the sky, passing through Auriga, and very near Gemini? It is made of so many millions of stars, and they are so far away, that it looks milky. It is called the Milky Way. You can study it with your opera-glasses, and find many clusters and drifts of stars in it, to keep you from getting impatient for your next lesson."

VI. CANIS MAJOR, THE GREAT DOG

You will find this early in February

"Orion has a great hunting dog," said Dr. Lorry, as if he were going to tell a story, "and he is forever chasing a rabbit. He never catches it, and he is always after it. He runs so fast that he is standing on his hind legs all the time, his tail sticking out straight, and his front feet in the air. His nose is the very brightest star in the sky. Here he is!" The black card showed the picture of the Great Dog.

"Now look up behind Orion, just coming up over the hill. Si'ri-us, his nose, is called

the dog-star, and when it rises with the sun, we say dog-days have come."

"Where is the rabbit?" asked Helen.

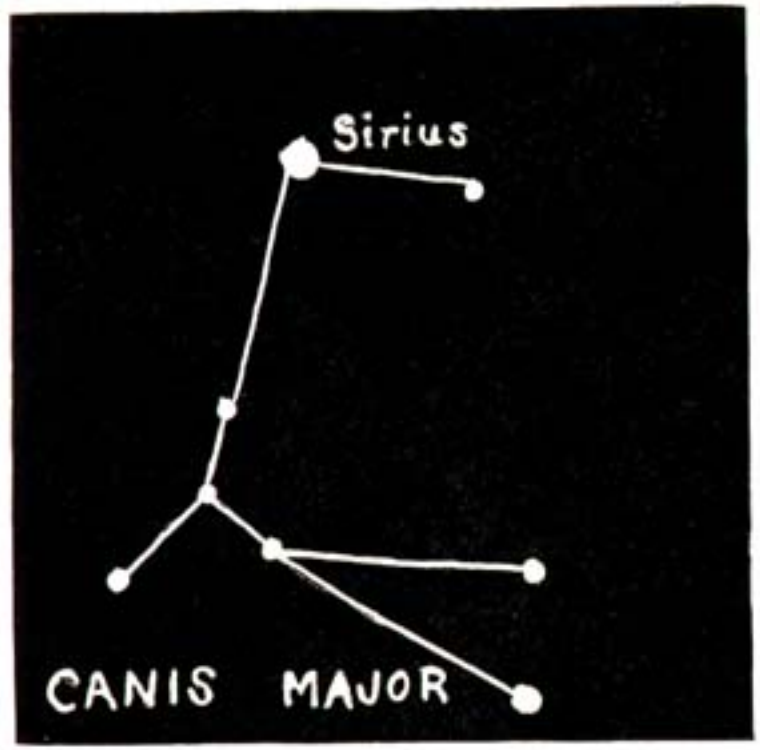
"Right under Orion's feet," answered the doctor. "Can you see a rough square with three stars curved over it, for the rabbit's back? Four very faint stars on the right are the rabbit's ears."

"I think Rigel and Sirius are the prettiest stars I know," said Helen.

"You did well to remember Rigel's name," said Dr. Lorry, looking surprised.

"Well, you see," explained Helen, timidly, "I come out nearly every night with mother and I point out all the things I learn to Edith and Donald. Of course I don't know very much about the stars, but they love to hear it."

"Good!" said the doctor. "Now, I don't know very much about the stars, but I learn



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more when I tell you, and you learn more when you tell Edith and Donald. You might even let them copy your book."

"I have," said Helen, laughing.

VII. LEO, THE LION

Look for Leo late in March

One day Dr. Lorry had a telephone call.

"Do you want your grass cut?" asked a small, eager voice.

"My grass cut! Why, it's not up yet. Grass doesn't come up until April, young lady."

"Well, anyway, I've found something in the sky that looks like a sickle," explained Helen. "You know, one of those curved knives we cut grass with."

"Have you, indeed?" cried Dr. Lorry. "I'll be over tonight, then, as soon as it's dark, and take a star lesson from you."

And actually, when Dr. Lorry ran up the front steps, the little teacher was ready for

her pupil with a black card, bearing the picture of a beautiful star sickle.

"That's fine," said the doctor, following Helen out into the garden. "And it's one of the few constellations that really looks like its name. Ah! there it is!"

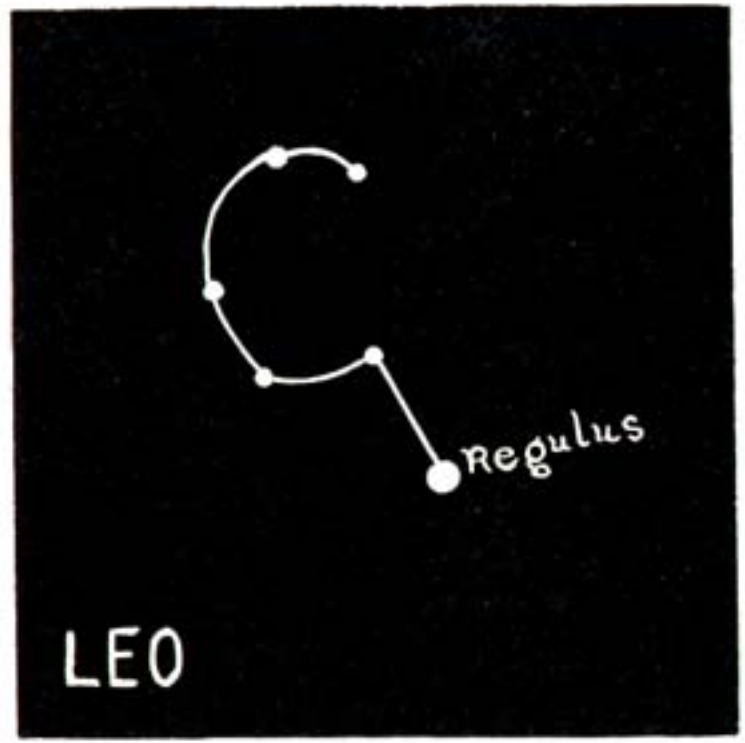
"What is the first magnitude star in the handle?" asked Helen, mischievously.

"First magnitude!" echoed Dr. Lorry. "You're a good pupil. Well, that is Regulus. This constellation is sometimes called Leo, the Lion, as well as the Sickle. And Regulus is the lion's heart."

"You couldn't possibly mistake Leo, could you?" said Helen.

"Not if you look directly east during the last of March at seven o'clock, at the constellation just coming up," laughed Dr. Lorry.

"There is one more interesting thing about Leo. There is a shower of meteors near Leo,



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called the Leonids, every November from the tenth to the fifteenth. They are bluish and very swift."

"Oh, do let's watch next November!" Helen said.

"Let's wait until 1932," suggested Dr. Lorry, "because they are magnificent every thirty-three years. And it wouldn't do to sit up until after midnight very often."

"I'll see you, then, in 1932," said Helen.

VIII. BOÖTES, THE HERDSMAN

Look for this the last part of April

"The very first thing you must learn about our new constellation," began Dr. Lorry, glancing at the sky, "is to pronounce its name correctly. Boötes is pronounced Bō-ō-tease.

"And the next thing is to see his picture," went on the doctor, bringing out his card.

"It looks like a kite," said Helen.

"Yes; and the way to find it is to look at the Big Dipper, using the two top stars as pointers, and following to the right or east, until you come to a big, big,—"

"Reddish-yellow star!" said Helen.

"Yes," said the doctor, looking up at the big star. "Do you see it? Its name is Arc-tu'-rus, and it is mentioned in the Bible, so it

is pretty old. Boötes is the Herdsman, and Arcturus is his right knee." —

"Let's call it a kite," said Helen.

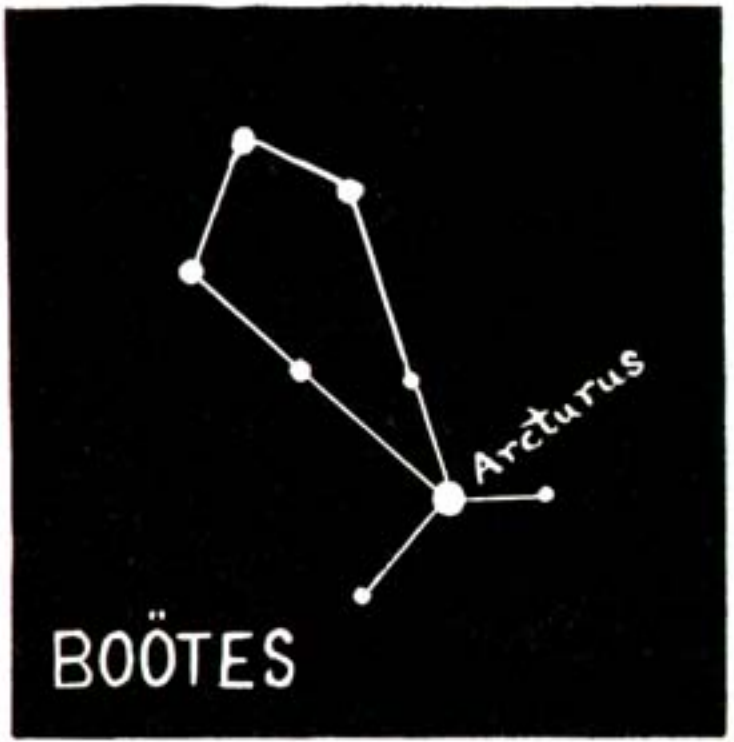
"Very well," agreed Dr. Lorry, "only don't let any one think he is anything but a Herdsman. He is very much easier to find if you look for a kite, however."

"Do you notice how light it is now at seven?" asked Helen.

"Perhaps next time I had better wait until eight o'clock," suggested the doctor. "It is almost too bright to see the stars at all."

"I love to learn the stars," said Helen. "I can find all those I learned first, even if they are farther toward the west, because I've watched them. See! Orion is just setting, and Gemini and Auriga are just above. And Sirius will soon be out of sight at night."

"Keep it up, Helen," was all Dr. Lorry said.



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IX. CORONA, THE NORTHERN CROWN

You can find the Crown early in May

"The constellation this time is one that I like myself," said Dr. Lorry, fanning himself with his straw hat. "It is Co-ro´-na or the Northern Crown. Down in South America and Australia you can see the Southern Crown."

"Do you mean there are stars we can't *ever* see up here in New England?"

"Yes, indeed," replied Dr. Lorry. "There is another whole set of constellations to learn when we move South. Now, just see on the diagram where Corona is, just beside Boötes. The middle star of the crown is the brightest one, just as it should be."

I found this on _____

"Oh! that is so easy," said Helen, immediately finding the beautiful crown in the dark blue sky.

"That bright star's name is Gemma, the Pearl," said the doctor.

"I shouldn't say that Gemma was a first magnitude star, should you?" asked Helen.

"Just what magnitude would you say Gemma was?" inquired Dr. Lorry.

"Second," guessed Helen.

"Right, as usual," said the doctor. "Now let me see if you can find another star without a picture. It is Spica, the brightest star in Virgo. Most of the stars in Virgo are faint, but Spica is very bright. Begin with the star in the Crown nearest Boötes, and draw a line with your eye through Arcturus, and you *almost* strike that pure white star in the southern sky."

"I see it!" cried Helen.

"Spica is the ear of corn which the Virgin is holding in her left hand," explained Dr. Lorry.

"Spica and Regulus look alike," said Helen.

"So they do," said the doctor.

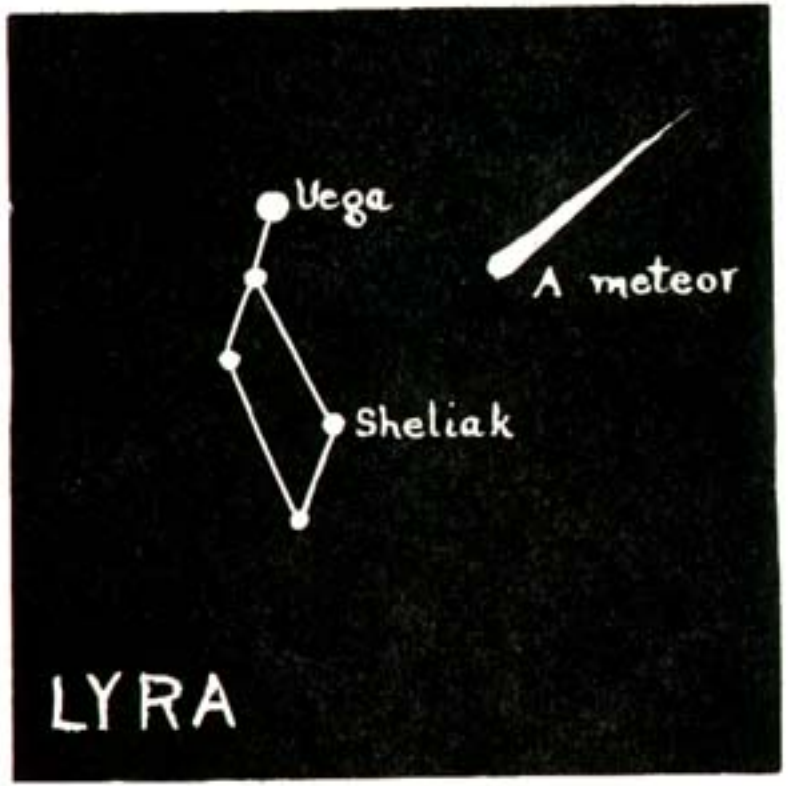
X. LYRA, THE LYRE

Look for this in early June

"I'm sorry to send this young lady to the beach," said Dr. Lorry to Helen's mother, as they stood in the garden. "I shall miss these lessons myself, but I think the seashore will do more for Helen than school."

"I shall miss my star lessons more than school," cried Helen. "I'll tell you a beautiful plan. Why can't I pick out some stars at the beach and send them to you to find out their names?"

"That will be very fine," said the doctor, heartily. "I will teach you just this one before you go. It will be Lyra, the Lyre. Look up in the north-eastern sky and see if you can



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pick out this musical instrument. That bright star at the top is Vega."

"That is easy to find, because there isn't any other bright star in this part of the sky," said Helen.

"Vega is more than ten million times as far from us as the sun is," went on the doctor. "And Sheliak, which is named on the diagram, often changes its brightness; sometimes it is fourth magnitude; sometimes as bright as third. We call such a star a variable."

"How queer!" said Helen.

"Many things are wonderful about the sky," said Dr. Lorry, flashing his pocket light on the black card. "I have drawn a meteor on this diagram. This is rather a large meteor, to show you how they look. We call them shooting stars sometimes, and I want you to notice them at the beach."

"How do you find one?" asked Helen.

"You just watch," explained Dr. Lorry, "until you see one. You are sure to see one if you watch long enough. Sometimes a piece of one strikes the earth, and we call these pieces meteorites. They are made of metal which has been melted and cooled very rapidly."

"I wish I could find one," said Helen. "Anyway I'll write to you soon after I get to the seashore."

XI. CYGNUS, THE SWAN

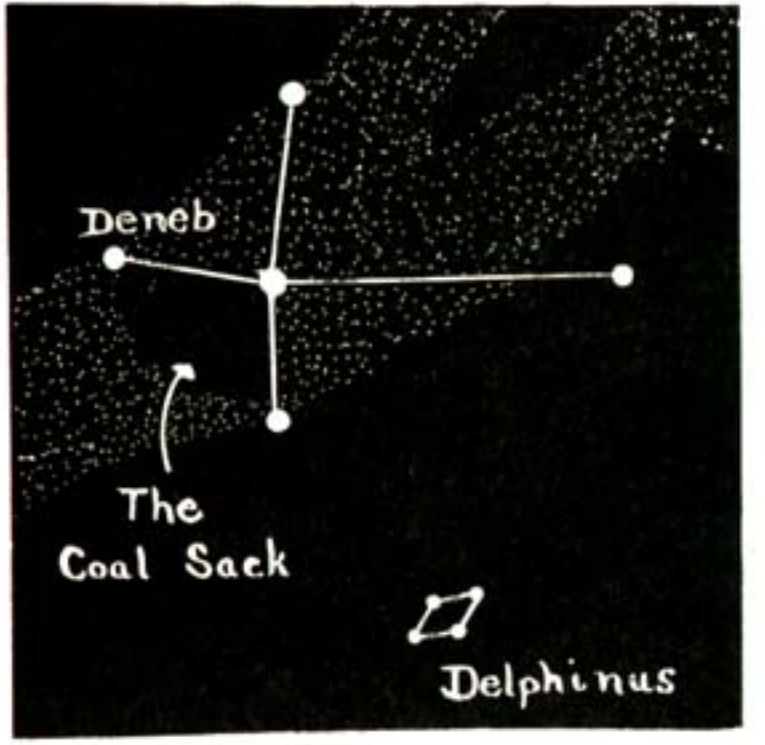
The Swan is visible early in July

To tell the truth, the hotel at the beach was rather lonesome, when Helen and her mother went down in June. But after a hot week or two, more people came. One evening, just before Helen went up-stairs to bed, she sat with her elbows on the piazza railing, looking at the sky.

"See, mother! there is Lyra 'way up high!"

"And what do *you* know about Lyra?" asked a puzzled voice beside her. She turned to see a young man, who had arrived that day, in the next chair.

"She is learning the constellations," explained Helen's mother. "And we're trying to



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pick out a new one to send home to her teacher to find out its name."

"Good!" said the young man, heartily. "Does she know Cygnus, the Swan?"

"Oh, no!" said Helen. "Wouldn't it be great fun if I could really learn one and surprise the doctor! Do you know about the stars?"

"Just a little," said the young man. "I can show you the Swan. Do you see where the Milky Way divides itself? See a large perfect cross at the left?"

"With one brighter star at the top?" said Helen.

"Yes, that is Deneb, the Swan's tail. Do you know what the Milky Way is?"

"It is thousands of faint stars," said Helen, timidly.

"Yes, and there is a place in the Swan where these faint stars stop. See, just left of the

middle star? That is the Coal Sack. Then just below Cygnus is a tiny diamond of four stars. That is Delphinus, the Dolphin."

"Isn't that cunning?" said Helen. "Won't the doctor be surprised? Thank you ever so much for telling me, and will you show me another sometime?"

"Surely," said the young man, smiling to himself.

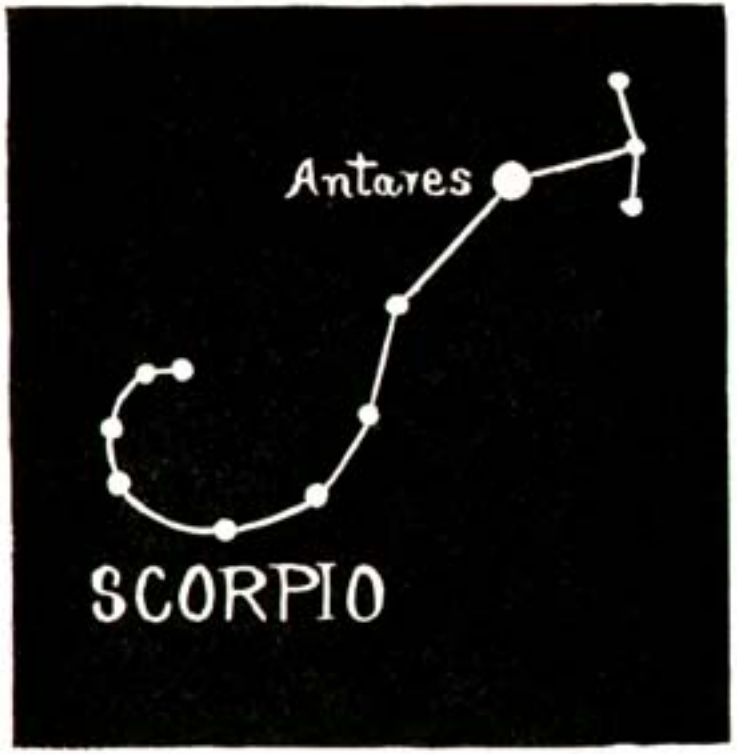
XII. SCORPIO

Look for this late in July

"Dear Dr. Lorry," wrote Helen, "I knew you'd be awfully surprised to hear that I had found out the name of the Swan. And the way we found out was this. A man here offered to teach me, and mother happened to find out that he really is a Star Professor at the big college in New York!

"He takes a lot of pains with me. Last night he took our steamer chairs off the piazza down to the sand. It is so much more comfortable, and you can see so much better leaning back. It doesn't make your neck ache, either.

"He taught us the Scorpion this time. I really think it looks like a Scorpion, with its



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tail curled over its back. He says a good way to find Scorpio is to face south, and the handle of the Dipper points to it. But if you face south, you can hardly miss it, as An-ta´-res, the Scorpion's heart, is so very bright and red. When I first looked at Antares, it looked red, but after the professor called my attention to its color, I saw it was bright green, too. It is a funny color, but very pretty.

"My favorite stars so far are Regulus, Vega, Antares and Rigel. You didn't expect I'd remember Rigel, did you?

"How do you like me for a teacher?

"Your little friend,

"HELEN."

XIII. SAGITTARIUS, THE ARCHER

Wait until the last of August for this

"I think the Archer is up high enough tonight for us to study," said Helen's star friend, settling the three steamer chairs in a row on the sand.

"Just at the left of the Scorpion, you will see a figure that looks like the Big Dipper upside down."

"Oh! almost *exactly* like the Dipper?" cried Helen.

"That is it," agreed the young man. "It is called the Milk Dipper. The other must be a water dipper. Now, this is one part of Säg-it-ta´-ri-us. The other part represents a bow

and arrow. The three stars in a curved line make the bow."

"And doesn't the star at the right make the arrow?" asked Helen.

"Exactly right!" exclaimed Helen's teacher. "Perhaps you had better letter the bow, a, b, c, when you send the drawing to Dr. Lorry, and the tip of the arrow, d."

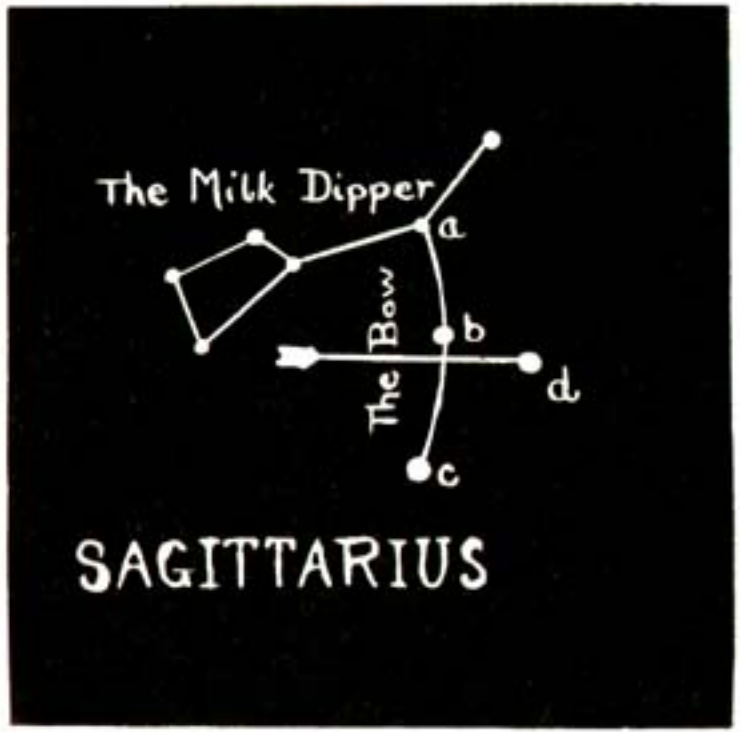
Just then a tiny star shot rapidly across the sky.

"A shooting star!" cried Helen. "Did you see it?"

"Yes," said her friend. "You see this one was so bright, it left a faint streak behind it. I'm glad we happened to see it."

"Dr. Lorry said I would see one if I watched long enough."

"That is a wonderful sight," said Helen's mother. "I have learned as much as Helen



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during these lessons, and I am sorry that we have to go home this week."

"And I shall be sorry to lose such an apt pupil," said the professor, with a low bow.

XIV. THE SQUARE OF PEGASUS, THE TRIANGLE, AND ARIES, THE RAM

These will be visible late in September

"I am glad to be back in my own garden again," said Helen, skipping down the path. "We had a beautiful time at the beach, but I feel more at home here."

"So do I," agreed Dr. Lorry, comfortably, "although Mr. Star Professor knows a lot more than I do."

"He isn't a bit more interesting, though," declared Helen.

"Well, in return for that compliment, I'll give you a very easy lesson. Face east, and look for a very large, perfect square."

"That *is* easy; they are such bright stars," said Helen, promptly.

"Now, this is called the Winged Horse," went on the doctor.

"I don't see how it can be," said Helen.

"Well, he is on his back, and his feet are up in the air—up in the sky, I should say."

"I see what might be called feet," replied Helen.

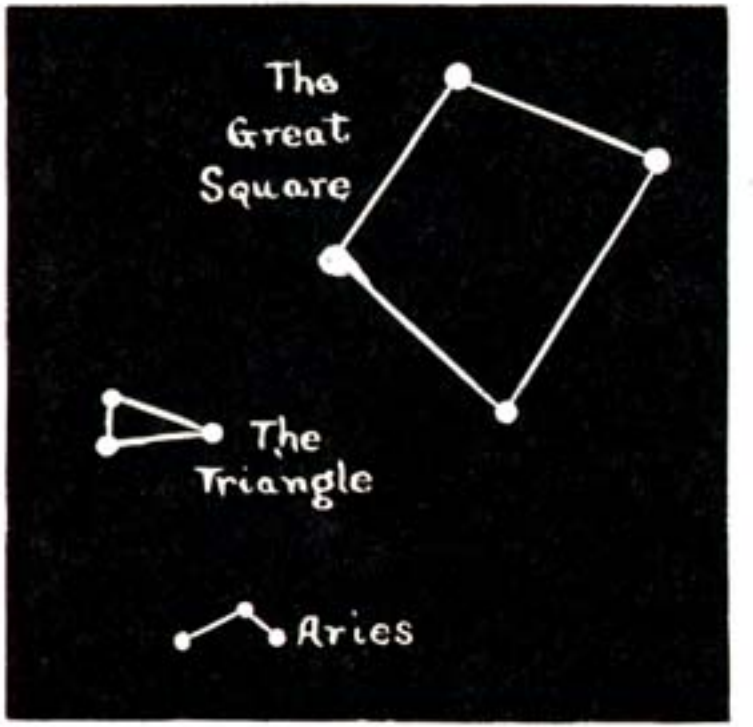
"It isn't necessary to pick them out," said Dr. Lorry. "Just look inside the square before I come again, and count every star you can see within the square."

"Oh, that will be fun!" agreed Helen.

"Now, just below the Great Square is a perfect triangle, called the Triangle."

"I see that, and it looks like its name," said Helen.

"Just below that is A-ri-es, the Ram, made up of three stars. Although Aries is quite small, it is very important. You must be sure to remember it. The right-hand star is the



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first double star ever seen. Through a telescope it looks like two stars close together. Now, do you think you can remember three constellations in one night?"

"Of course," laughed Helen.

XV. CASSIOPEIA'S CHAIR

Look for the Chair late in October

"For this constellation we would like those steamer chairs you had at the beach," said Dr. Lorry. "Come, we'll sit in the front seat of my car and lean back."

"How pretty the Milky Way is tonight!" said Helen.

"Yes, and Cass-i-o-pe'-ia's Chair lies almost wholly in the Milky Way. We are facing north. The chair is half-way between the Great Square and the Big Dipper, and looks like a W upside down. See its picture first. You see I have lettered the stars a, b, c, d, and e. The back is formed by a, b and c, the seat by c and d, and the front leg by d and e. Cassiopeia herself is nowhere to be seen."

"I see the chair beautifully," said Helen.

"You can see it at some hour of every pleasant night," said Dr. Lorry. "Hello! what do I see coming up in the east?"

"Oh, oh!" cried Helen, "it's Auriga! And I see Capella, the Goat, and the three little Kids."

"What a good memory you have!" said Dr. Lorry, greatly pleased. "You see we've made the rounds of the sky. We haven't learned every constellation, but we know fifteen of the brightest ones."

"I see the Pleiades and Taurus!" cried Helen.

"Good!" shouted Dr. Lorry, who had been hoping Helen would discover them.

"This week I counted twenty-five stars inside the Square of Pegasus," added Helen.

"That is good, too, because it is possible to see only thirty. Now we must go in. When

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you think you are forgetting these constellations just try to teach them to somebody else. I *think,*" ended the doctor, with a twinkle, "that during these lessons I have learned as much as any one."

XVI. THE PLANETS

One January night Helen stood in her window before going to bed, looking out at the stars. As she gazed at Castor and Pollux, she saw a bright star between the two lines of spellers in the spelling-match, which she could not remember seeing before. To make sure, she found her little book, and looked at the picture of Gemini. There was no star like it on the chart.

"I will call up Dr. Lorry and tell him," decided Helen.

"Aha!" said Dr. Lorry over the telephone, greatly pleased that Helen had noticed the extra star. "If you haven't gone to bed, I will come over and give you a new lesson. For that is a Planet which you have found, and not a star at all."

Helen was delighted, and soon the two astronomers were out in the garden.

"Now, the fifteen constellations we have learned," began the doctor, "are made up of FIXED STARS. That is, the stars don't go wandering about without regard for each other. This is why the Dipper always looks like a Dipper to us. But the Planets follow the pathway of the sun, which leads right through the middle of some of the constellations that you know."

"How can you tell a planet from a star?" asked Helen.

"The stars twinkle," replied Dr. Lorry. "The planets glow with a steady light. There are only four planets that you are likely to see, which I will give you in order of their brilliancy. They are VENUS, JUPITER, MARS, and SATURN. The first two are white, Mars is red, and Saturn is that green-

ish-yellow which you see up there in Gemini. If you will get me your book, I will write out the things you need to know about the planets."

The two star-gazers went in to the library, and this is what Dr. Lorry wrote in Helen's book.

1. Sometimes you will see a bright star in a constellation which is not on the chart.
2. If it does not twinkle, this will be a Planet.
3. If it is red, it is MARS.
4. If it is *very* bright, in the west, just after sunset, it is VENUS.
5. If it is in the east, or overhead, or in the west more than three hours after sunset, it is JUPITER.
6. If it is not very bright, and is greenish-yellow, it is SATURN.
7. There are only six constellations in this

book in which a planet can appear. They are Taurus, Gemini, Leo, Scorpio, Sagittarius and Aries.

As the doctor finished the list, he drew from his pocket a roll tied with bright blue ribbons. "Seeing you have so nearly finished your lecture-course, I brought along your diploma," he said. "When you have found the four planets, you can write your name on the dotted line, in your best style."

"Oh, with fancy scrolls and flourishes!" cried Helen, unrolling the heavy paper.

This was the

DIPLOMA

This is to certify that.....

has learned fifteen constellations and four planets, and is fully qualified to enjoy the oldest and least known of all Nature-Studies.

And before the year was out, Helen's name stood on the dotted line, scrolls, flourishes, and all. So when the time comes, you, little reader, may put your name there, too.

The End.