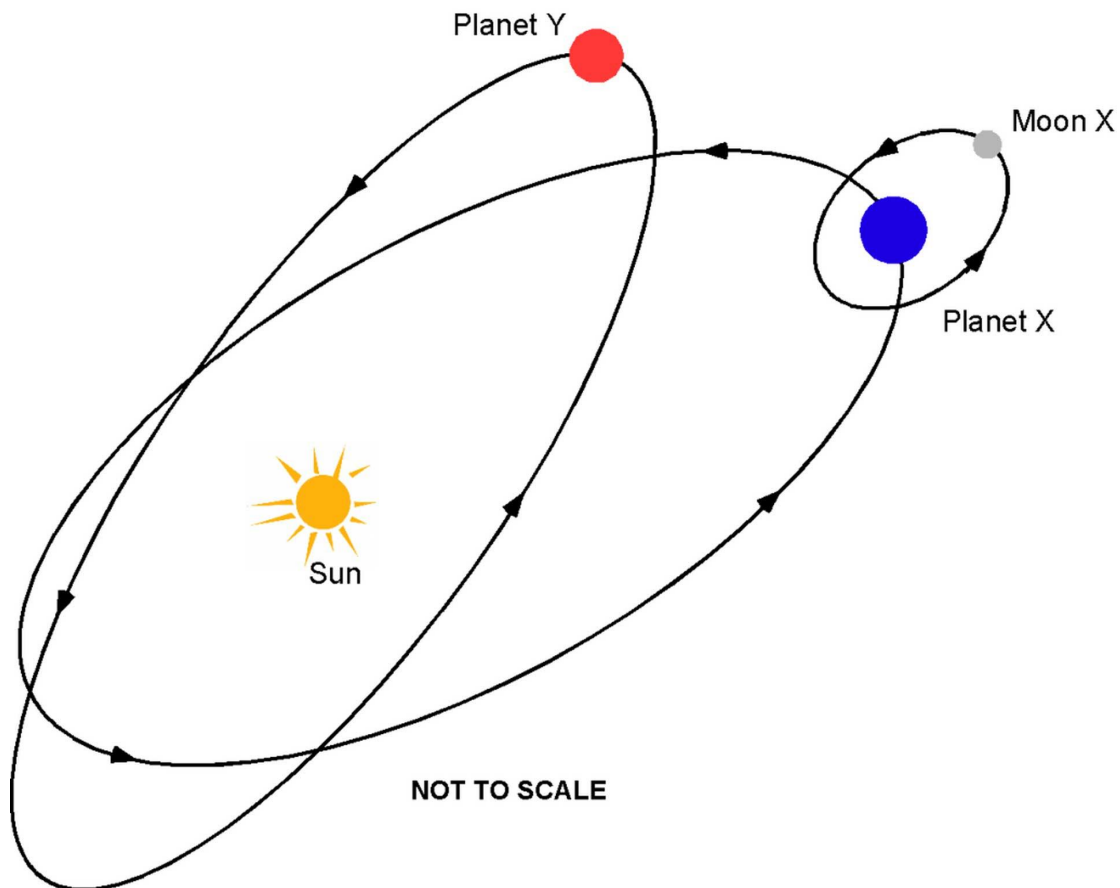


Image Analysis: Notice & Wonder

Directions: Look at the image and write down 3 things you **notice** (key details, main ideas, or themes) and then write down 3 things you **wonder** (questions you have because of the image or things you are curious about when you look at the image).

What
do you
notice?



What
do you
notice?

Read & Take Notes



Directions: Read the passage below. Take notes in the space provided.

Johannes Kepler was a very important scientist who lived a long time ago. He was born in Germany in 1571 and died in 1630. Kepler was known for his work in astronomy, which is the study of stars and planets. He was also a mathematician and a philosopher.

Kepler was interested in how the planets moved. He studied the work of other scientists, like Nicolaus Copernicus, who believed that the Earth went around the Sun. Kepler wanted to understand how the planets moved and why. He studied the work of Tycho Brahe, another famous astronomer. Kepler used Brahe's observations to figure out how the planets moved.

Kepler discovered three laws of planetary motion. These laws explained how the planets moved around the Sun. He found that the planets moved in an oval shape, not a circle. He also found that the planets moved faster when they were closer to the Sun. Kepler's discoveries were very important because they helped scientists understand the universe better.

Kepler also worked on optics, which is the study of light. He invented a new type of telescope called the Keplerian telescope. This telescope was better than the telescopes that were used before. Kepler's work on optics helped scientists understand how light works.

Kepler was a very smart and creative scientist. He made many important discoveries that helped people understand the world around them. He is remembered as one of the most important scientists of all time.

Take Notes Here

Key Vocabulary

Directions: For each term, use the word in a sentence that shows you understand its definition. Then create an image to represent the term. Be ready to explain the image.

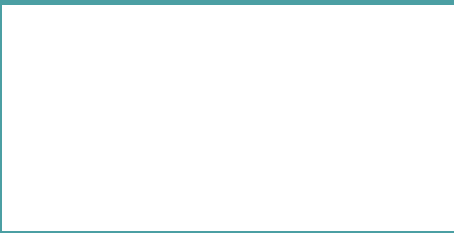
Vocabulary Term

astronomy

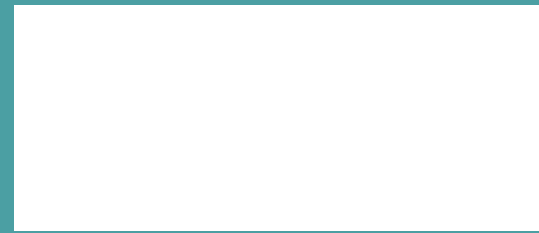
noun

The study of stars, planets, and other objects in space.

Use It In A Sentence:



An Image to Represent It:



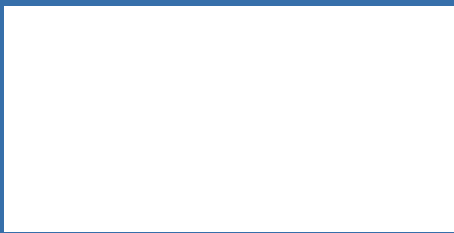
Vocabulary Term

observations

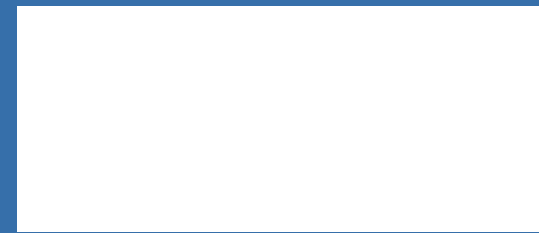
noun

The act of watching and noticing something carefully.

Use It In A Sentence:



An Image to Represent It:



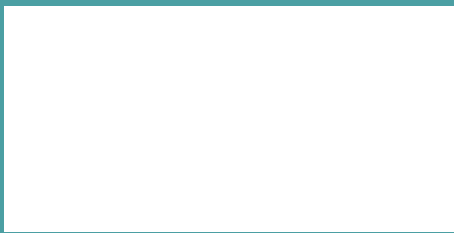
Vocabulary Term

discoveries

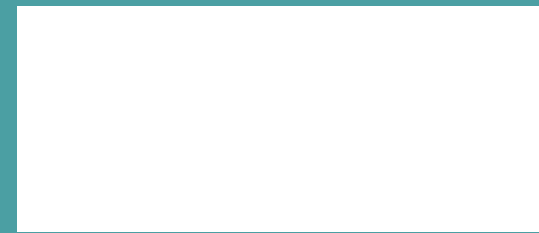
noun

The act of finding something new or something that was not known before.

Use It In A Sentence:



An Image to Represent It:



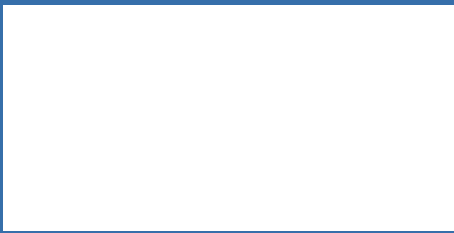
Vocabulary Term

optics

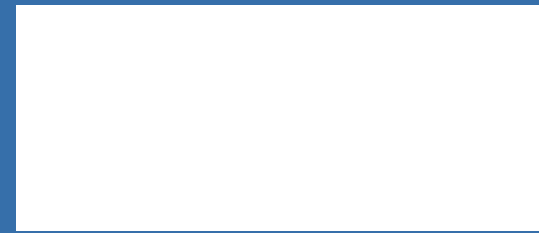
noun

The study of how light works.

Use It In A Sentence:



An Image to Represent It:



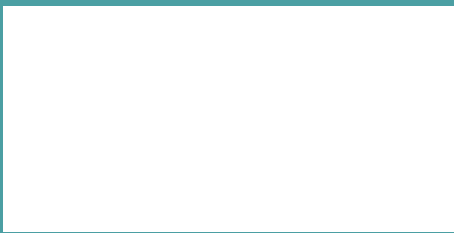
Vocabulary Term

telescope

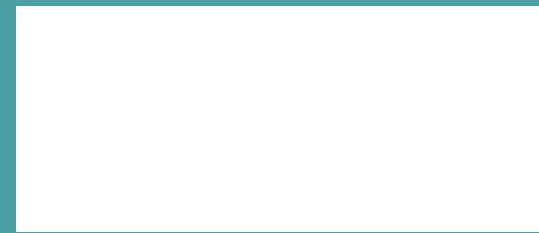
noun

A tool that uses lenses to make distant objects look closer.

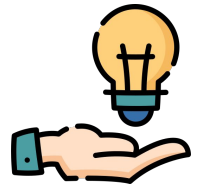
Use It In A Sentence:



An Image to Represent It:



3-2-1 Learning Reflection



Directions: Fill in the boxes below to reflect on your learning. Write down **three** new things you learned, **two** connections you made to what you already know, and **one** thing you want to learn more about.

3 THINGS I LEARNED

2 CONNECTIONS I MADE

1 THING I WANT TO LEARN MORE ABOUT

Answer and Explain

Directions: For each question, answer the question and then explain why you picked the answer you did using specific evidence from the text.

Question:

1. What did Kepler study to understand how the planets moved?

Pick the Answer

- A) The work of other scientists like Nicolaus Copernicus and Tycho Brahe.
- B) The movements of the stars in the night sky.
- C) The different types of telescopes used by astronomers.
- D) The history of astronomy from ancient times.

Explain: Why did you pick that answer?

Question:

2. What did Kepler discover about the shape of the planets' orbits?

Pick the Answer

- A) The planets moved in a perfect circle around the Sun.
- B) The planets moved in a spiral shape around the Sun.
- C) The planets moved in an oval shape around the Sun.
- D) The planets moved in a straight line across the sky.

Explain: Why did you pick that answer?

Question:

3. What did Kepler invent that helped scientists understand light?

Pick the Answer

- A) A new type of telescope called the Keplerian telescope.
- B) A new type of microscope to study tiny objects.
- C) A new type of compass to navigate.
- D) A new type of clock to measure time accurately.

Explain: Why did you pick that answer?

Short Answer Questions

Directions: Answer each question in complete sentences. Use specific evidence from the text in each response.

Question

1. What was Johannes Kepler's profession?

Question

2. What did Kepler use to figure out how the planets moved?

Question

3. Why were Kepler's discoveries about the planets important?

Reflect and Discuss

Directions: Respond to the following question using the reading and your own knowledge and experiences. Be as thorough as possible.

1. Kepler was a scientist who was curious about the world around him. What are you curious about? How do you try to learn more about the things that interest you?

Write Your Response Here. Be sure to use what you learned in the reading and your own knowledge and experiences to answer the question thoroughly.

Directions: When instructed, you will share your responses with your group. Take notes on their responses in the boxes below. Be sure to write their names at the top of each box.

Student #1: _____

Student #2: _____

Student #3: _____

Student #4: _____

Reflect and Discuss

Directions: Respond to the following question using the reading and your own knowledge and experiences. Be as thorough as possible.

2. Kepler's work was based on the work of other scientists. How do you learn from the work of others? How does their work inspire you?

Write Your Response Here. Be sure to use what you learned in the reading and your own knowledge and experiences to answer the question thoroughly.

Directions: When instructed, you will share your responses with your group. Take notes on their responses in the boxes below. Be sure to write their names at the top of each box.

Student #1: _____

Student #2: _____

Student #3: _____

Student #4: _____

Reflect and Discuss

Directions: Respond to the following question using the reading and your own knowledge and experiences. Be as thorough as possible.

3. Kepler's discoveries helped people understand the universe better. What are some things you have learned that have helped you understand the world better?

Write Your Response Here. Be sure to use what you learned in the reading and your own knowledge and experiences to answer the question thoroughly.

Directions: When instructed, you will share your responses with your group. Take notes on their responses in the boxes below. Be sure to write their names at the top of each box.

Student #1: _____

Student #2: _____

Student #3: _____

Student #4: _____

Vocabulary Flashcards

Print, cut, and fold to use as flashcards.

astronomy

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observations

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discoveries

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optics

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telescope

A tool that uses lenses to make distant objects look closer.