

# 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.

Isaac Newton was born on Christmas Day in 1642 in Woolsthorpe, England. He was a very small baby and people didn't think he would live. Newton's father died before he was born, and his mother remarried when he was three years old. Newton was left with his grandmother and didn't like his stepfather. He was a smart boy who loved to learn. He went to school in Grantham and then to Trinity College in Cambridge.

At Cambridge, Newton studied mathematics and physics. He was a good student and became a professor of mathematics. In 1665, the plague spread to Cambridge and the university closed. Newton went home and spent two years thinking about math and science. He came up with ideas about gravity, light, and calculus.

Newton's most famous work was called *\*Principia Mathematica\**. This book explained the laws of motion and gravity. Newton also wrote about light and color. He invented the reflecting telescope. Newton was a very smart man who made many important discoveries.

Newton was a member of the Royal Society, a group of scientists. He was also the Master of the Royal Mint, which made coins. Newton was a very important person in England. He was knighted by Queen Anne in 1705.

Newton was a genius, but he could also be very difficult. He was jealous of other scientists and didn't like to share his ideas. He was a complex person, but his work changed the way we understand the universe.

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.

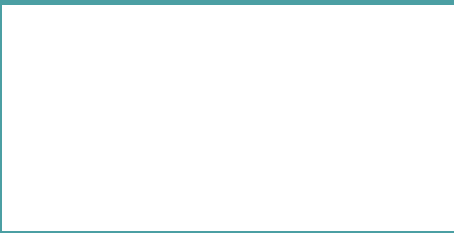
## Vocabulary Term

**calculus**

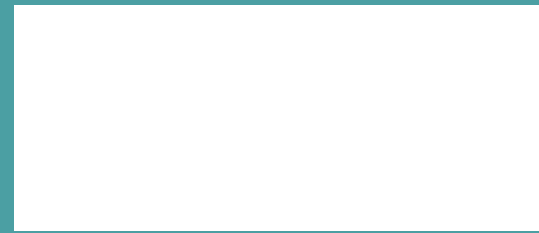
*noun*

A branch of mathematics that deals with rates of change and accumulation. It is used to solve problems involving motion, growth, and other continuous processes.

## Use It In A Sentence:



## An Image to Represent It:



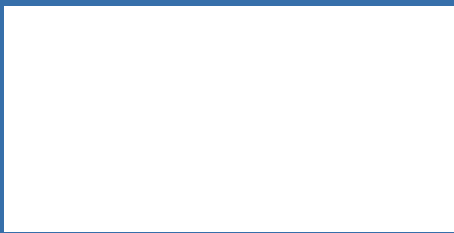
## Vocabulary Term

**gravity**

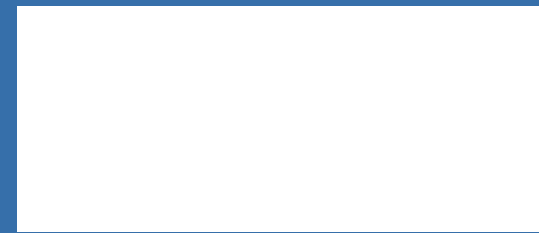
*noun*

The force that attracts objects towards each other, especially the force that attracts objects towards the center of the Earth.

## Use It In A Sentence:



## An Image to Represent It:



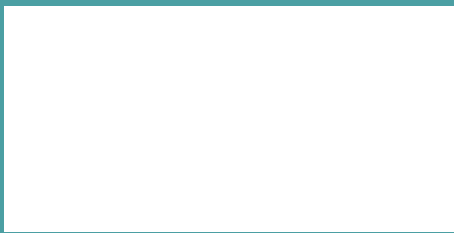
## Vocabulary Term

**genius**

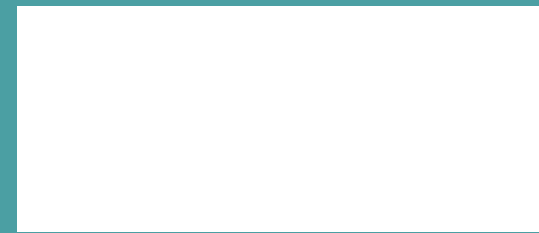
*noun*

A person with exceptional intellectual ability or creative power.

## Use It In A Sentence:



## An Image to Represent It:



## Vocabulary Term

**jealous**

*adjective*

Feeling or showing envy of someone or their achievements or possessions.

## Use It In A Sentence:



## An Image to Represent It:



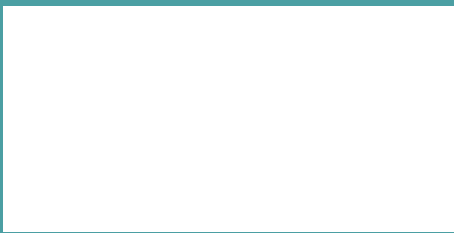
## Vocabulary Term

**complex**

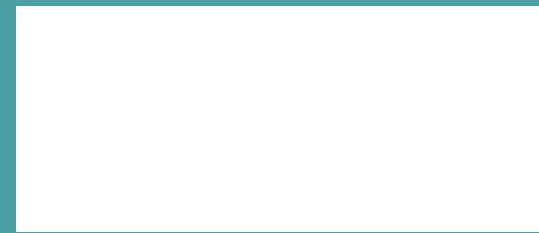
*adjective*

Consisting of many different and connected parts.

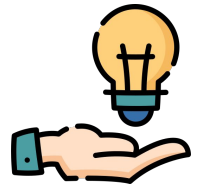
## Use It In A Sentence:



## 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 Newton study at Cambridge?

**Pick the Answer**

- A) He studied history and literature.
- B) He studied math and physics.
- C) He studied art and music.
- D) He studied language and writing.

**Explain: Why did you pick that answer?**

**Question:**

2. What did Newton invent?

**Pick the Answer**

- A) He invented the telescope.
- B) He invented the microscope.
- C) He invented the computer.
- D) He invented the printing press.

**Explain: Why did you pick that answer?**

**Question:**

3. What was Newton's most famous work called?

**Pick the Answer**

- A) \*The Laws of Motion\*
- B) \*The Universe\*
- C) \*Principia Mathematica\*
- D) \*The Laws of Gravity\*

**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. Where was Isaac Newton born?

**Question**

2. What did Newton do during the two years he spent at home after the plague?

**Question**

3. What was Newton's role at the Royal Mint?

# Reflect and Discuss

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

1. Think about a time when you had to overcome a challenge, like Newton did when he had to deal with his stepfather. How did you overcome that challenge? What did you learn from the experience?

**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. Newton was a genius, but he could also be difficult. Have you ever felt like you were both smart and difficult? How do you think these two sides of your personality can work together?

**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. Newton was a member of the Royal Society, a group of scientists. What are some groups or communities that you are a part of? How do these groups help you learn and grow?

**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.

**calculus**

*A branch of mathematics that deals with rates of change and accumulation. It is used to solve problems involving motion, growth, and other continuous processes.*

**gravity**

*The force that attracts objects towards each other, especially the force that attracts objects towards the center of the Earth.*

**genius**

*A person with exceptional intellectual ability or creative power.*

**jealous**

*Feeling or showing envy of someone or their achievements or possessions.*

**complex**

*Consisting of many different and connected parts.*