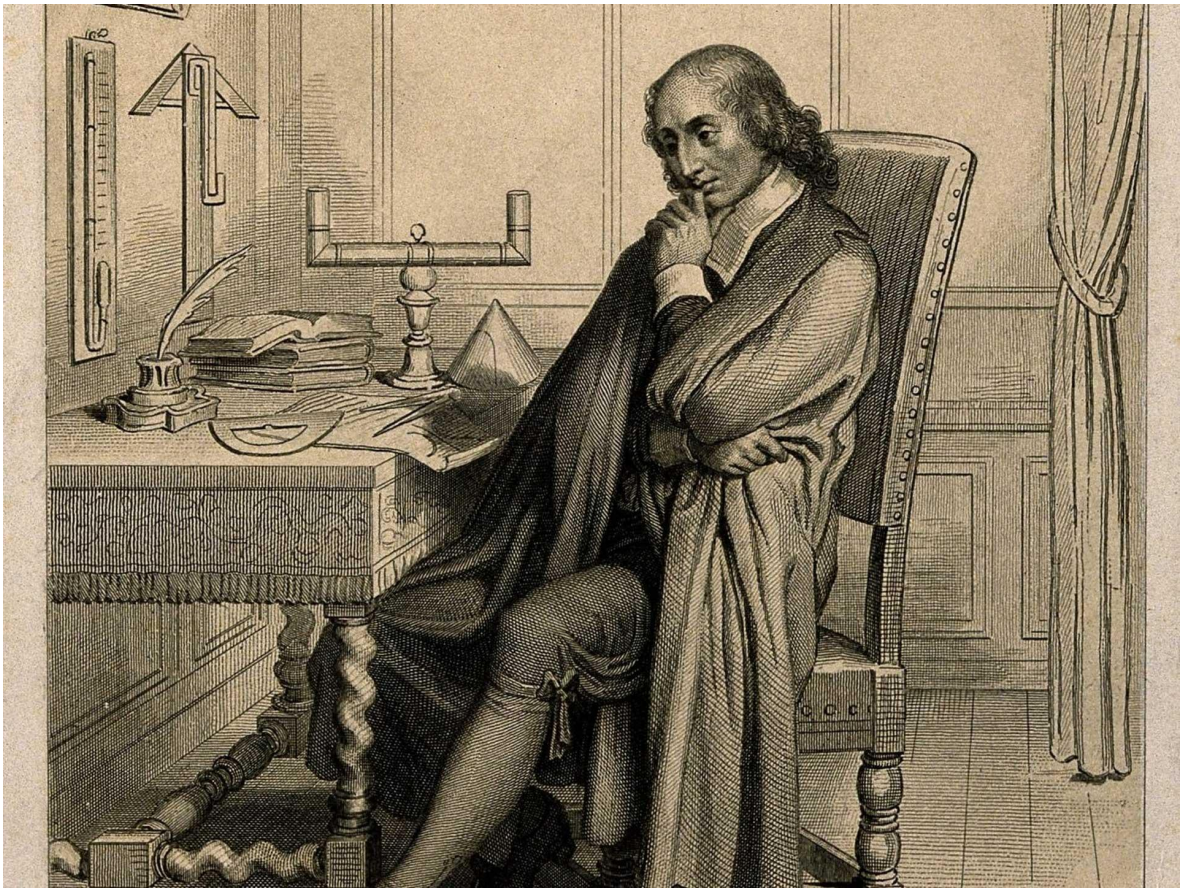
Image Analysis: Notice & Wonder

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.

Blaise Pascal was a brilliant French mathematician, physicist, inventor, philosopher, and writer who lived in the 17th century. He was born in Clermont-Ferrand, France, on June 19, 1623, and died in Paris on August 19, 1662, at the young age of 39. Pascal's father, Étienne Pascal, was a tax collector and a talented mathematician who educated his son at home. Pascal's mother passed away when he was just three years old, leaving his father to raise him and his two sisters, Gilberte and Jacqueline.

Pascal's exceptional intellect was evident from a young age. He was fascinated by geometry and taught himself the subject at the age of 12. His father, initially hesitant to allow him to study mathematics before the age of 15, eventually recognized his son's extraordinary abilities and gave him a copy of Euclid's Elements. By the age of 14, Pascal was already attending meetings with prominent French mathematicians, which would later form the foundation for the French Academy. At 16, he began developing his own theories, starting with his essay on conic sections, which was published in 1640.

Pascal's contributions to mathematics and science were significant. He is credited with inventing the first mechanical calculator, known as the Pascaline, in the early 1640s. This invention was inspired by his desire to help his father with tax collection. Pascal's calculator was a remarkable feat of engineering, considering the technology available at the time. It could perform addition and subtraction, and later versions were even capable of multiplication and division.

Pascal's scientific interests extended beyond mathematics. He was a pioneer in the study of fluids and made important contributions to the understanding of pressure and vacuum. He challenged the prevailing scientific theories of his time, including those of Aristotle and Descartes, who believed that nature abhors a vacuum. Pascal's experiments and observations provided evidence to support the work of Evangelista Torricelli and Galileo Galilei, who had already made significant contributions to the study of fluids and vacuum.

In addition to his scientific achievements, Pascal was also a deeply religious man. He was influenced by the Jansenist movement within Catholicism, which emphasized the importance of grace and the human condition's fallen nature. After a profound religious experience in 1654, Pascal devoted

Take Notes Here

Read & Take Notes

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

himself to writing about philosophy and theology. His most famous works from this period include the Lettres provinciales and the Pensées. The Lettres provinciales were written during the conflict between Jansenists and Jesuits, while the Pensées contain Pascal's reflections on faith, reason, and human existence.

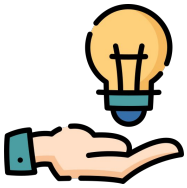
Take Notes Here

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	Use It In A Sentence:	An Image to Represent It:
exceptional *adjective* Unusually good or great; outstanding.		
prominent *adjective* Important, famous, or well-known.		
mechanical *adjective* Relating to or operated by machinery.		
prevailing *adjective* Existing or most common at a particular time.		
profound *adjective* Very great or intense; deeply felt.		

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 inspired Pascal to invent the first mechanical calculator, the Pascaline?**

Pick the Answer

A) He wanted to help his father with tax collection.

B) He was fascinated by the complexity of gears and levers.

C) He wanted to prove his mathematical abilities to his peers.

D) He was trying to solve a complex mathematical problem.

Explain: Why did you pick that answer?

Question: **2. What was Pascal's main contribution to the understanding of fluids and vacuum?**

Pick the Answer

A) He invented the first barometer.

B) He proved that air has weight.

C) He challenged the prevailing scientific theories of his time, including those of Aristotle and Descartes, who believed that nature abhors a vacuum.

D) He developed a new theory of gravity.

Explain: Why did you pick that answer?

Question: **3. What is the name of the religious movement that influenced Pascal's later writings?**

Pick the Answer

A) Protestantism

B) Jansenism

C) Catholicism

D) Lutheranism

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 did Blaise Pascal study at the age of 12?

Question

2. What were the names of Pascal's two sisters?

Question

3. What two famous works did Pascal write after his religious experience in 1654?

Reflect and Discuss

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

1. Pascal's life was marked by both intellectual brilliance and deep religious faith. How do you see these two aspects of his life interacting with each other? Can you think of any examples from your own life where your intellectual interests and your personal beliefs have intersected?

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. Pascal's early education was largely self-directed, and he was encouraged to pursue his passions by his father. How has your own education been shaped by your interests and the support of others? What role do you think self-directed learning plays in a person's development?

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. Pascal's life was cut short at the age of 39. Despite his limited lifespan, he made significant contributions to multiple fields. How do you think Pascal's early death impacted his work and legacy? What are some examples of individuals who have made significant contributions in a relatively short time?

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.

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