

Name \_\_\_\_\_

## Historical Breakthroughs with the Scientific Method

### Open-Ended Questions

1. Consider the scientific method used by one of the scientists mentioned (Galileo Galilei, Isaac Newton, Charles Darwin, Marie Curie, or Albert Einstein). Describe the steps of the scientific method they followed in their groundbreaking work, highlighting key observations and experiments.
2. Discuss the impact of one of the scientific breakthroughs mentioned (Galileo's observations, Newton's laws, Darwin's theory, Curie's discoveries, or Einstein's theories) on modern science and society. How has this breakthrough influenced our understanding of the natural world or led to practical applications?
3. Imagine you are a scientist using the scientific method to investigate a new phenomenon. Describe the steps you would take, from identifying a research question to drawing conclusions based on your findings. How would you apply the scientific method to make discoveries in your chosen field of study?
4. Reflect on the role of the scientific method in driving progress in science and our understanding of the world. Why is it essential for scientists to adhere to this systematic approach, and how has it contributed to the advancement of knowledge throughout history?

