

Name \_\_\_\_\_

## Cosmic Beginning: How Did the Universe Begin and How Do We Know?

### Open-Ended Response Answer Key

1. Answers will vary, but students might mention excitement, curiosity, and the desire to investigate the implications of an expanding universe. Questions may include inquiries about the universe's ultimate fate or the nature of the early universe.
2. Answers will vary, but students might mention that understanding our cosmic origins satisfies our curiosity about the universe and helps us appreciate our place in it. Additionally, scientific knowledge often leads to unexpected technological advancements.
3. Answers will vary, with some students choosing to witness the Big Bang to understand the universe's birth, while others might prefer to witness other key moments in history for different reasons, such as the formation of the first stars or the evolution of life on Earth.
4. Students may speculate about future discoveries in cosmology, such as understanding the nature of dark matter and dark energy or uncovering evidence of other universes. Predictions may also include insights into the universe's long-term fate, such as the possibility of a "Big Freeze" or a "Big Crunch."

