

Name \_\_\_\_\_

## What is the Speed of Light, and Why is it Important?

### Multiple Choice Questions

1. What is the speed of light?

- a) 100,000 miles per hour
- b) 186,282 miles per second
- c) 1,000,000 meters per second
- d) 299,792,458 miles per second

2. Why is the speed of light important in astronomy?

- a) It allows us to travel to other galaxies.
- b) It helps us discover the age of stars.
- c) It lets us see objects in space as they were in the past.
- d) It controls the movement of planets.

3. How does the speed of light impact communication using fiber optics?

- a) It slows down data transmission.
- b) It allows data to be transmitted almost instantaneously.
- c) It only works for voice calls.
- d) It doesn't affect communication.

4. Which scientific theory uses the speed of light as a fundamental constant?

- a) Theory of Evolution
- b) Theory of Gravity
- c) Theory of Relativity
- d) Theory of Electromagnetism

5. What happens to time according to Einstein's theory of relativity as an object approaches the speed of light?

- a) Time speeds up for the object.
- b) Time remains the same for the object.
- c) Time slows down for the object.
- d) Time stops completely for the object.

