Name _____

Gravity's Mysteries: Theoretical Challenges in Understanding the Force of Attraction

Multiple Choice Questions

1. What did Isaac Newton's Law of Universal Gravitation propose?

a) Gravity is caused by the curvature of spacetime.

b) Every mass attracts every other mass with a force.

c) Gravity is a mysterious force called dark energy.

d) Gravity is caused by the bending of light.

2. According to Albert Einstein's theory of general relativity, how is gravity described?

a) As a force acting at a distance between masses

b) As a consequence of the curvature of spacetime

c) As a push-pull interaction between objects

d) As the result of magnetic fields

3. What is one of the major theoretical challenges in understanding gravity?

a) Combining general relativity with quantum mechanics

b) Explaining the behavior of dark matter

c) Proving the existence of dark energy

d) Understanding the nature of black holes

4. Which mysterious form of matter makes up a significant portion of the universe's mass and remains invisible to our telescopes?

a) Black holes

b) Dark energy

c) Dark matter

d) Neutrinos

5. What is one theoretical concept related to gravity waves that scientists are still working to understand?

a) How to generate gravity waves artificially

b) How to use gravity waves for communication

c) The nature of gravity waves and their interactions with other forces

d) How to travel faster than the speed of light using gravity waves