

Name \_\_\_\_\_

## The Sun's Gravitational Dance: How it Shapes the Planets

### Short Answer

1. How does Kepler's Second Law of Planetary Motion explain the varying speeds of planets in their orbits?
2. Why is Earth's distance from the Sun considered ideal for the existence of life?
3. How does the Sun's gravity assist in space exploration, particularly during interplanetary journeys?
4. Explain how the Sun's gravity creates tides on Earth and the influence of the Moon in this phenomenon.
5. What is the significance of gravitational interactions among celestial bodies in our solar system, such as the influence of Jupiter on asteroids and comets?

