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## Gravity and Motion Notes

### Key Concepts

- What determines the strength of the force of gravity between two objects?
- What two factors combine to keep the moon and Earth in orbit?

### Key Terms

- Force
- Gravity
- Law of universal gravitation
- Mass
- Weight
- Inertia
- Newton's first law of motion

1. What is gravity?

2. What does Newton's Law of Universal Gravitation state?

3. What is the unit for gravity?

4. The strength of the force of gravity depends on what 2 factors?

5. Why don't you notice the force of attraction between you and a book in your hand?

6. What is weight?

7. Why would you weigh less on the moon than on the Earth?

8. Strength of gravity is affected by the distance between the two objects.

What happens to the force of gravity as the distance between 2 objects increases?

9. If the Earth and the sun are constantly pulling on each other because of gravity, why doesn't the Earth fall into the sun, or the Moon fall into Earth?

10. What is inertia?

11. Give an everyday example of inertia.

12. What is Newton's First Law of Motion?

13. Why do Earth and the Moon remain in their orbits?

14. What would happen to the moon without Earth's gravity?

15. What would happen to the moon if it were not moving in orbit?