Name:_____

Gravity

Gravity is an invisible force that pulls objects toward each other. It's why things fall to the ground, why the Earth orbits the Sun, and why we don't float away into space. Gravity is all around us, and it's one of the most important forces in the universe. Let's learn more about what gravity is and how it works.

Gravity is a force of attraction between objects. The more mass an object has, the stronger its gravity. For example, Earth is huge, so its gravity is strong enough to pull everything toward it. That's why you stay on the ground instead of floating away.

Gravity works between any two objects that have mass. It pulls them toward each other. Here's how:

- The size of the objects matters. Bigger objects, like Earth or the Sun, have more gravity.
- The distance between the objects also matters. The closer the objects are, the stronger the pull of gravity.

For example, the Sun's gravity is so strong that it keeps all the planets in our solar system orbiting around it.

On Earth, gravity pulls everything toward the planet's center. This is why:

- When you jump, you come back down.
- Water stays in rivers and oceans.
- The Moon stays in orbit around Earth.
- Without gravity, life as we know it would not be possible!

Gravity doesn't stop working in space. It keeps planets, moons, and stars in place. Even astronauts feel gravity, though it's weaker because they're farther from Earth's center. Astronauts appear weightless because they're actually falling in orbit around Earth!

Name:_____

Fun Facts About Gravity

Sir Isaac Newton discovered the laws of gravity in the 1600s. The story goes that he got the idea after seeing an apple fall from a tree.

The Moon's gravity is only about one-sixth as strong as Earth's. That's why astronauts could bounce on the Moon!

Black holes have the strongest gravity in the universe. Their gravity is so strong that not even light can escape!

Gravity is an amazing force that holds everything together, from tiny objects to giant planets. It's a part of everyday life and the universe's biggest events. The next time you drop something, thank gravity for keeping everything in its place!

1. What two things affect the strength of gravity? _____

_____

_____

2. Why do astronauts feel weightless in space even though there is gravity? _____

_____

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3. Why is the Moon's gravity less than that of the Earth? _____

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