

Gravity

Gravity is the force of attraction between two objects. Gravity depends on two factors: the mass of the objects and the distance between them. The Earth is the most massive object near you so you are pulled towards the Earth. The sun is much more massive than the Earth but you don't fly off into space towards it because its distance is so great. Match each gravity related term in the word box to its description.

Newton
gravity

acceleration
inertia

Einstein
weight

tides
friction

altitude
mass

- 1 _____ The amount of matter in an object, this characteristic of an object stays the same.
- 2 _____ This measure describes the amount of gravitational force of an object.
- 3 _____ This is the force of attraction between objects.
- 4 _____ The moon is kept in orbit by two forces. Earth's gravity pulls it toward the planet and this force pulls the Moon in a straight line.
- 5 _____ The force of gravity was first described mathematically by this English scientist.
- 6 _____ A dropped object will increase its speed as it falls toward Earth. If an object held near the surface of Earth is released, it will fall and pick up speed, also known as this.
- 7 _____ These phenomenon is caused by the gravitational attraction of the moon and sun on the Earths oceans.
- 8 _____ A more accurate theory involving the force of gravity was later formulated by this German-born scientist.
- 9 _____ All objects accelerate at the same speed toward Earth. However, this force is the reason that a flat sheet of paper and a crumpled piece of paper do not reach the ground at the same time.
- 10 _____ As this increases on Earth, gravitational pull decreases slightly because an object moves farther away from the center of the planet.