

## Mass and Weight Notes

Mass- the amount of matter in an object

More mass= more matter

Ex: Earth- lots of matter, so large mass

peanut- little matter so small mass

\*Size has NOTHING to do with mass

Ex: beach ball has less mass than a brick!

- Mass remains constant on Earth unless the amount of matter changes

Ex: puppy, baby, plants

Gravity- the force of attraction between two objects due to their mass

-Since all objects have mass they all experience gravity

The amount of gravity between objects depends on:

1. Mass of the object- more mass= more gravitational force
2. Distance between objects-closer the objects are the greater the force, the farther away they are the less gravitational force

Ex: \*Think about magnets!

Weight- measure of gravitational force exerted on an object

Greater mass= greater weight

\*Size has NOTHING to do with weight

Ex: sponge and brick- same size but the brick has more matter so it also has more weight!

-Gravitational force is about the same all over the Earth- so is weight. As gravity changes, the weight will also change (on the moon!)

-You will weigh less on the moon because the gravitational force is less (because the moon has less mass than the Earth!)

**Mass** is measured in **grams** (unit) on a **triple beam balance** (tool)

**Weight** is measured in **newtons** (unit) on a **spring scale** (tool)

**Inertia**- tendency of objects to resist changes in motion

-More mass= more inertia (harder to stop and start moving!)

-Ex: Car (driving crazy)