

an object's change in position over time when compared with a reference point

**Motion**

the rate at which an object moves; speed depends on the distance traveled and the time taken to travel that distance.

**Speed**

**the speed of an object in a particular direction.**

**Velocity**

**the rate at which velocity changes, an object accelerates if its speed changes, if its direction changes, or if both its speed and its direction changes.**

**Acceleration**

a push or a pull, all forces have both size and direction

the SI unit of force.

**Force**

**Newton**

the force that results from combining all the forces exerted on an object.

**Net force**

a force that opposes motion between two surfaces that are touching.

**Friction**

a force of attraction between objects that is due to their masses.

*Gravity*

a measure of the gravitational force exerted on an object, usually by the Earth.

*Weight*

the amount of  
matter that  
something is made  
of, its value does  
not change when the  
object's location.

**Mass**