# **Force and Motion**

Terms for the 4<sup>th</sup> and 5<sup>th</sup> grade

### **Force**

 Force is something that changes the movement or shape of an object—the greater the force, the greater the effect.

## **Force**

• the force of attraction between two objects with mass.

### **Force**

- amount of material in an object.
- force exerted on object's mass by gravity.

### **Force**

- is the force that slows down or stops the move-ment of one object in contact with another.
- creates heat—the greater the friction, the greater the heat.
- friction experienced by objects traveling through the air is called **air resistance**.

### **Force**

- causes an object traveling in a straight line to follow a curved path.
- usually creates circular motions that move outward toward the center of rotation.

#### **Force**

- causes an object traveling in a straight line to follow a curved path.
- usually creates circular motions that move inward toward the center of rotation.

#### Motion

#### Motion

- is directly related to the influence of forces.
- movement of objects have measurable and observable properties.

#### **Motion**

- the tendency of objects to remain at rest or keep moving in a straight line until influenced by a force—
- the greater the mass, the greater the inertia.

### Motion

- the tendency of moving objects to remain in motion until slowed or stopped by a force
- the greater the mass and velocity, the greater the momentum.

### **Motion**

- the magnitude of movement, independent of direction.
- the speed in a particular direction.

### **Motion**

- the measure of how quickly speed and/or velocity changes.
- the specific point at which an object's mass appears to be concentrated.