Science Vocabulary – Force and Motion
October 15th-19th, 2012

1. **Force** – a push or pull

2. **Motion** – a movement

3. **Friction** – a force that works against motion

4. **Gravity** – a force that pulls objects toward one another; the force that pulls objects toward the center of the Earth

5. **Inertia** – the tendency of an object to resist a change in motion

6. **Work** - the use of force to move an object through a distance

7. **Kinetic energy** – energy of motion

8. **Potential energy** – energy that is stored in an object

9. **Mechanical energy** – energy that puts something in motion

10. **Acceleration** – measurement of a change in speed over time

11. **Newton’s Laws of Motion:**

   • 1st Law - An object at rest will remain at rest unless acted on by an unbalanced force. An object in motion continues in motion with the same speed and in the same direction unless acted upon by an unbalanced force. This law is often called "the law of inertia".

   • 2nd Law - Acceleration is produced when a force acts on a mass. The greater the mass (of the object being accelerated) the greater the amount of force needed (to accelerate the object). \( F=MA \) Force = mass \times acceleration

   • 3rd Law - For every action there is an equal and opposite re-action.