

# Chapter 7 Science Study Guide: Energy in Motion

Be familiar with these terms and their definitions:

- Force - a push or a pull; objects cannot move unless a force causes them to move
- Invisible forces: friction, gravity, magnetism
- Motion - a change of position
- Friction - a force that slows or stops motion
- Gravity - a force that pulls objects toward the center of the earth
- Weight - the measure of the force of gravity on an object
- Magnetism - the pushing or pulling force caused by a magnet
- Work - when a force moves something, work takes place
- Energy - what is needed to cause change and to do work; energy can change from one form to another

Be familiar with the five things that can do work:

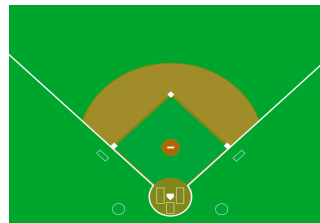
1. People
2. Animals
3. Wind
4. Water
5. Machines
  - a. Simple Machines make work easier.

Be familiar with the 6 kinds of energy:

1. Light Energy: energy from the sun
  - a. Photosynthesis
2. Electrical Energy: energy that is generated from electricity
  - a. Light bulbs, plugged-in computers, appliances
3. Mechanical Energy: energy caused by an object's motion or position
  - a. Riding a bicycle, using a lever
4. Stored Energy: energy that can be used at a later time to do work
  - a. Devices with batteries use stored energy (cameras, phones, toys)
5. Sound Energy: energy that involves sound
  - a. Ringing a bell, singing
6. Chemical Energy: comes from burning fuels
  - a. Gasoline in a car, our bodies burn energy

Ways to Describe Motion in an Object

1. The direction the object travels
2. The distance the object travels
3. The speed at which the object travels



## **Write About It**

**Have you ever worked in the yard using a wheelbarrow or a wagon? Pushing a wheelbarrow across the grass lawn is harder than pushing it on a driveway.**

**Write a paragraph describing the forces that affect how you move the wheelbarrow (friction & gravity). Explain how you can use what you know about these forces to help you work better.**

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