Guided Reading Chapter 7 Section 1

1. A _____ is a device with moving parts that works together to accomplish a task.

2. What is the difference between output force and input force?

3. A simple machine is an unpowered mechanical device that accomplishes a task in _____ movement(s).

   a) two b) three c) one

4. Name a few simple machines.

5. A _____ is a long, rigid, structure that rotates on a fixed point called the fulcrum.

   a) gear b) ramp c) lever

6. Complete the following table.

Part of a Bicycle	**Simple Machine**
Wheels	
	gears
	lever
Pedals	

7. A _____ is a rotating wheel with teeth that receives or transfers forces and motion to other gears or objects.

   a) gear b) ramp c) lever

8. What is mechanical advantage (in words)?

9. Write the equation used to calculate the mechanical advantage of a simple machine.

10. What is the difference between the input arm and the output arm on a lever?

11. Sketch the three classes of levers (as best you can), including labels. Label each as to its mechanical advantage (>, <, or =).

12. In science, _____ is the transfer of energy received when a force acts over a distance.

13. Write the equation used to calculate work.

14. Doing work always means _____ energy.

15. Describe the three forces (in terms of work) in Figure 7. 7.

16. Work is done when force causes _____.

    a) motion b) time c) inactivity