

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.

<b>Part of a Bicycle</b>	<b>Simple Machine</b>
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