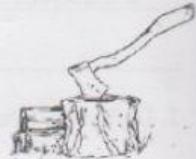


## Lesson 19

### Simple Machines

Machines that have few or no moving parts are called simple machines. The six simple machines are the lever, pulley, screw, wheel and axle, wedge and inclined plane.

**1. Wedge** – A wedge is an object with at least one slanting side ending in a sharp edge, which cuts materials apart. An axe is used to chop wood. The metal part chops through the wood, pushing it apart into two smaller sections.



**2. Lever** – A lever is a stiff bar that rests on a support called a **fulcrum** which lifts or moves loads. The center of this seesaw is used to balance the board with the seats. The children can easily move up and down without much force.



**3. Screw** – A screw is an inclined plane wrapped around a pole which holds things together or lifts materials. The cap on this water bottle has a spiral shape. When you place it on the bottle and twist, the cap pulls itself toward the bottle.



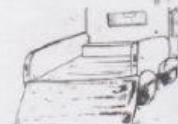
**4. Wheel and Axle** – A wheel with a rod, called an axle, through its center lifts or moves loads. When you turn the large knob on a door, a rod on the inside releases the latch that holds the door closed. It would be difficult to turn the rod if the knob wasn't attached to it.



**5. Pulley** – A pulley is a simple machine that uses grooves wheels and a rope to raise, lower or move a load. A wheel with a rope is used to hoist the flag up to the top of a tall flagpole. This simple machine can also be used to help lift heavy objects with less force.



**6. Incline Plane** – An inclined plane is a slanting surface connecting a lower level to a higher level. A ramp is used for loading this truck. A mover can pull a cart with a heavy object up the ramp. This is much easier than lifting heavy objects into the truck.



Date: \_\_\_\_\_

1. The seesaw is an example of which simple machine? [1]

\_\_\_\_\_

2. The door knob and rod make up which simple machine? [1]

\_\_\_\_\_

3. The wheel and rope makeup which simple machine? [1]

\_\_\_\_\_

4. Which simple machine is on the back of the truck in the picture? [1]

\_\_\_\_\_

5. Which simple machine is found on the head of the ax? [1]

\_\_\_\_\_

6. What types of simple machines do you see in the picture below? [4]

a. The slide is \_\_\_\_\_.

b. The shovel is \_\_\_\_\_.

c. The broom is \_\_\_\_\_.

d. The screwdriver is \_\_\_\_\_.

