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.

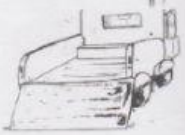
2. Lever – A lever is a stiff bar that rests on a support called a **fulcrum** which lifts or moves loads. The center of this seesaw is used to balance the board with the seats. The children can easily move up and down without much force.

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.



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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]

_____

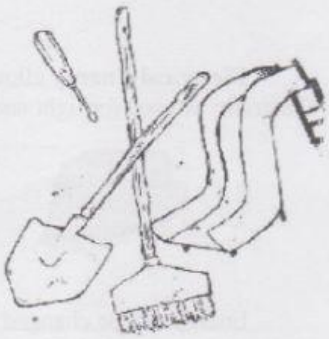
6. What types of simple machines do you see in the picture below? [4]

a. The slide is _____.

b. The shovel is _____.

c. The broom is _____.

d. The screwdriver is _____



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