



Simple Machines



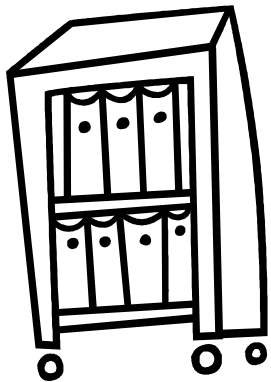
Machine – a tool that helps us do work

Machines help us by:

- 1. Changing the amount of force on an object.**
- 2. Changing the direction of the force.**

Force is a push or pull that changes the motion or shape of an object.

Example: I push a bookshelf to move it.



Energy is the ability to do
work.

Example: I must have energy to
run the mile.



Work is the result of force moving an object.

Example – Picking up something heavy is hard work!



Gravity



Gravity is the force that constantly pulls objects toward Earth.

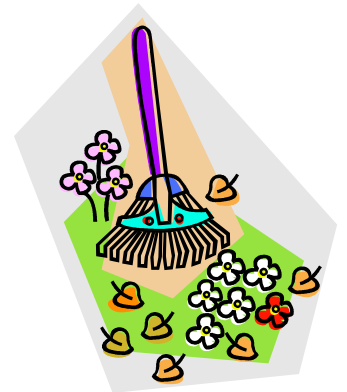
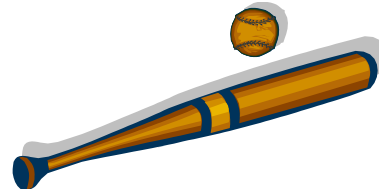
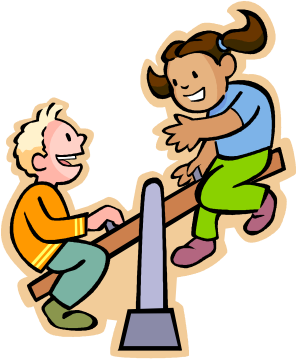


Simple machines – have few or no moving parts

- Lever
- Inclined Plane
- Wedge
- Screw
- Wheel and Axel
- Pulley

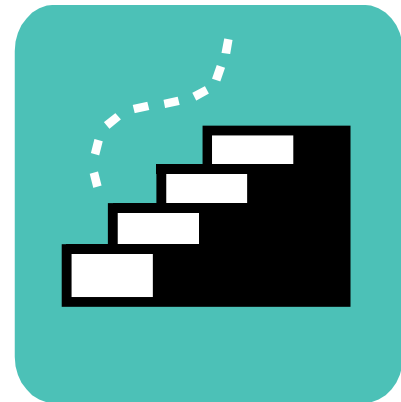
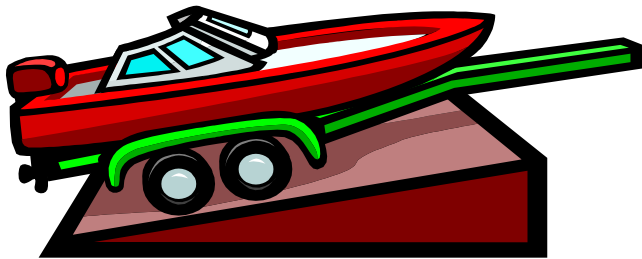
Lever –made of a board or bar set on top of a fulcrum. It is used to lift weight

Example: seesaw, crowbar, baseball bat, rake



Inclined Plane – a slanted surface to make lifting easier

Example: ramp, stairs



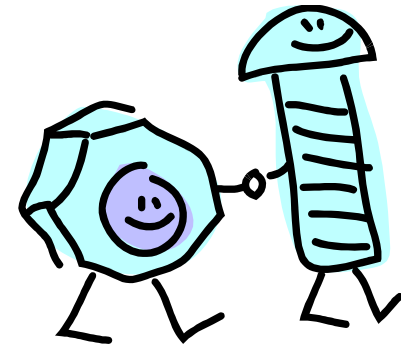
Wedge – two inclined planes together used to raise an object or split an object.

Example: knife, door wedge, axe



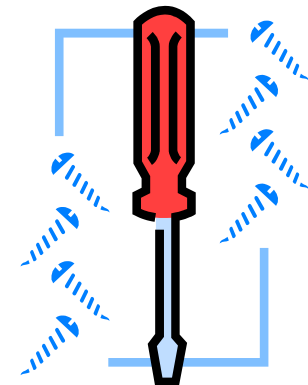
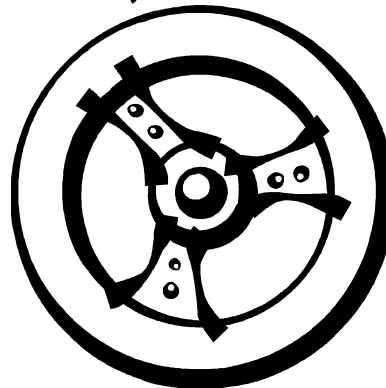
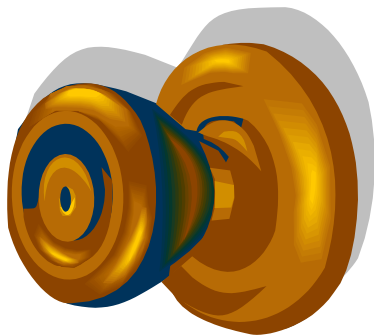
Screw – an inclined plane wrapped around a pole or shaft that is used to hold materials together or drill holes.

Example: drill bit, screws



Wheel and Axle – a wheel that turns on a post to help move things quickly and easily

Example: steering wheel, doorknob, screwdriver



Pulley – made of rope and string wound around a reel to change the direction of a force.

Example : flagpole, clothesline, cranes, fishing reel

