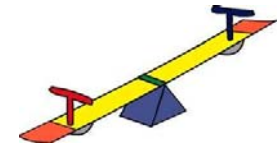




★ Understanding Structures and Mechanisms ★



Simple Machines



- ✓ We are learning to investigate mechanisms that include simple machines and enable movement
- ✓ We are learning to demonstrate an understanding of movement and ways in which simple machines help to move objects
- ✓ We are learning to assess the impact on society and the environment of simple machines and mechanisms



Simple Machines



Lever



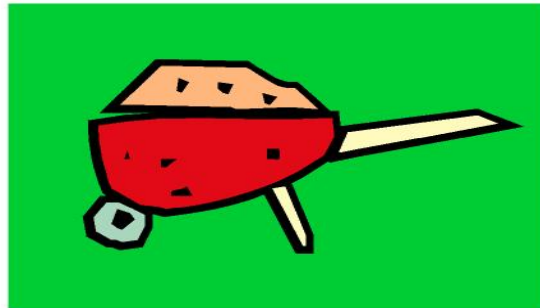
Inclined Plane



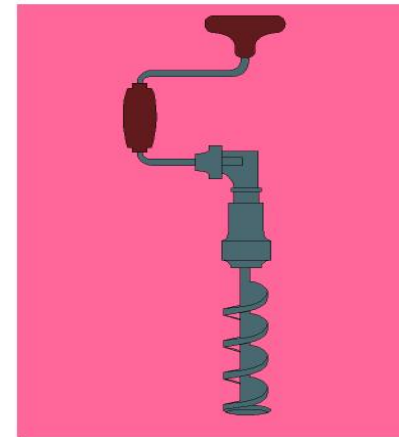
Wedge



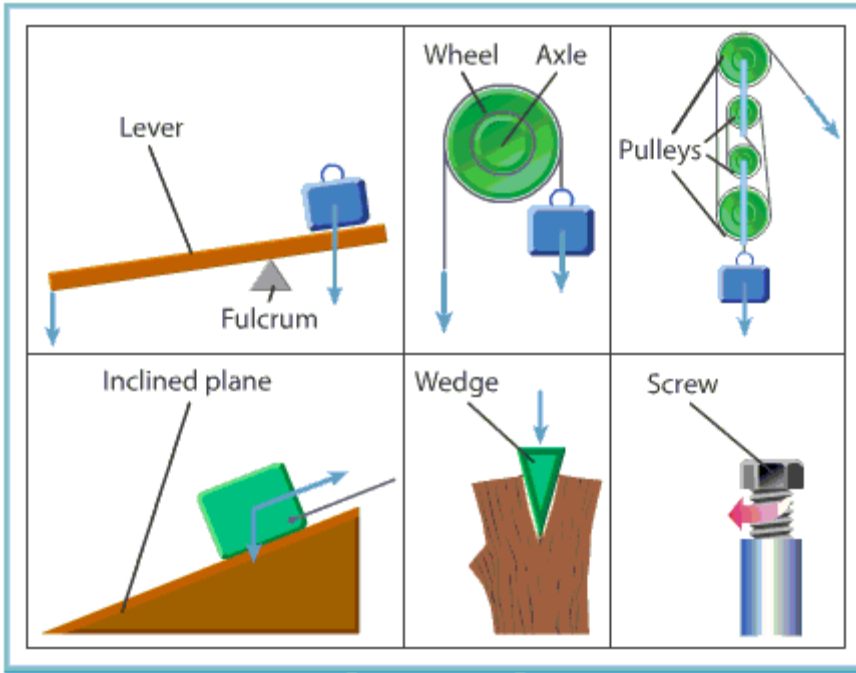
Pulley



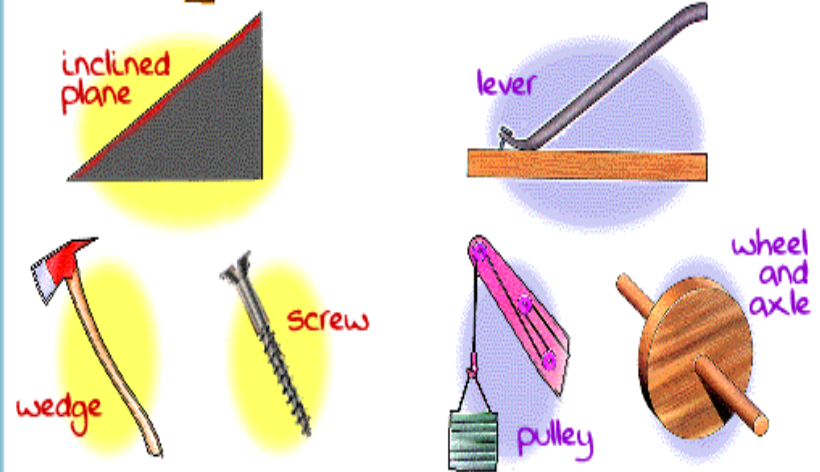
Wheel and Axle



Screw

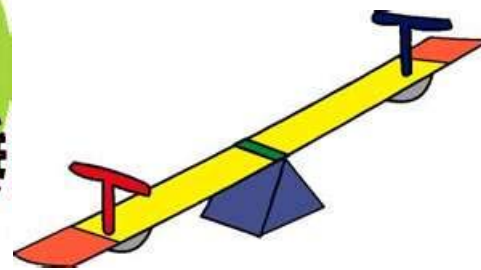
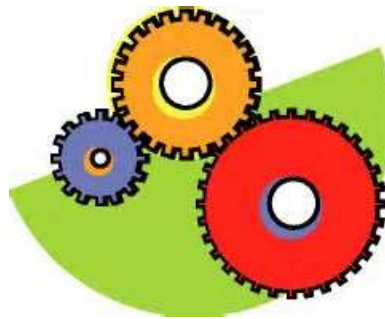


Simple Machines

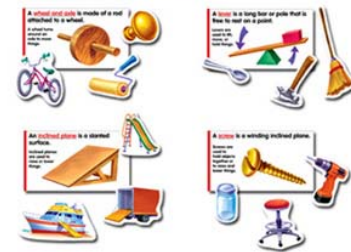


SIMPLE MACHINES

- Inclined Plane (Ramp)**
 - A flat surface with one end higher than the other.
 - Makes it easier to push or pull heavy objects up.
 - Example: Ramp, staircase, wheelchair ramp.
- Wheel and Axle**
 - A wheel is attached to a central axle.
 - The wheel and axle rotate together.
 - Example: Bicycle wheel, doorknob, car wheel.
- Pulley**
 - A wheel with a rope or cable passing over it.
 - Changes the direction of force.
 - Example: Flagpole, crane, elevator.
- Lever**
 - A rigid bar that pivots on a point called a fulcrum.
 - Can multiply or reduce force.
 - Example: Seesaw, crowbar, nutcracker.
- Wedge**
 - A triangular object that tapers to a point.
 - Used to split, lift, or hold things together.
 - Example: Knife, axe, doorstop.
- Screw**
 - A long, thin object with a spiral thread.
 - Used to join things together.
 - Example: Screw, bolt, drill bit.



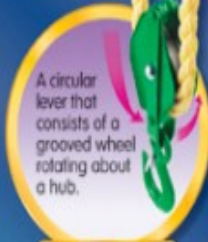
SIMPLE MACHINES



Simple Machines



Wedge



Pulley



Inclined Plane



Screw



Wheel & Axle



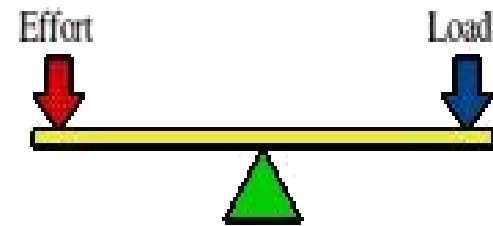
First Class Lever
The fulcrum is in the middle.

Third Class Lever
The effort is in the middle.

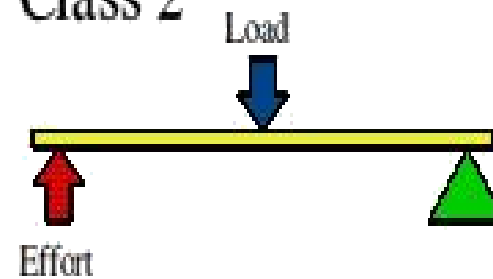
Second Class Lever
The load is in the middle.

Three Classes of Levers
A rigid bar that rotates on a pivot called a fulcrum.

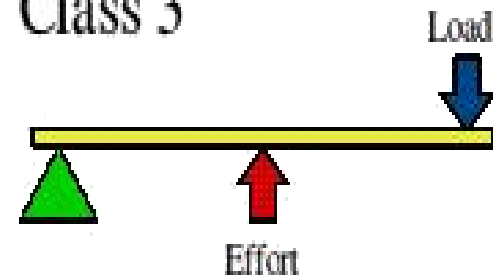
Class 1

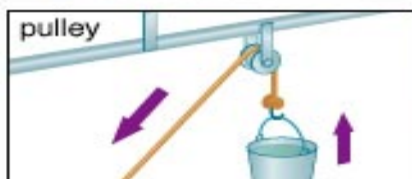
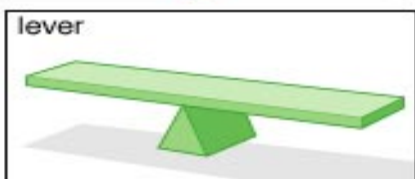
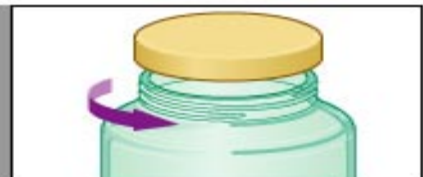
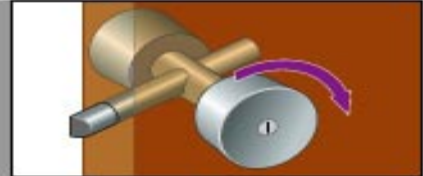
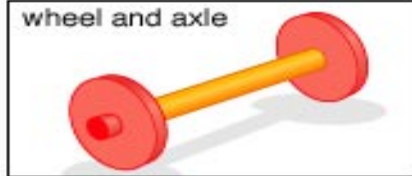
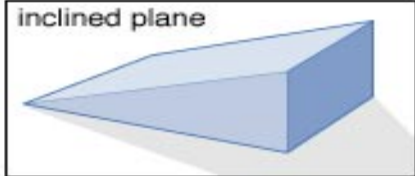


Class 2



Class 3





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