

STUDY GUIDE - SIMPLE MACHINES

Six simple machines

- Be able to name the six simple machines.
 - **LEVER** - seesaw, shovel, crowbar, nutcracker
 - **INCLINED PLANE** - ramp, stairs, ladder
 - **WEDGE** - knife, ax
 - **WHEEL AND AXLE** - bicycle wheels, roller skates, doorknob, screwdriver
 - **SCREW** - jar lid, wood screw
 - **PULLEY** - flagpole rope

Simple machines are tools that **make work easier**. They make it easier to:

- Lift a heavy weight
- Move a heavy object
- Push things apart
- Hold an object together

COMPOUND MACHINES

A combination of two or more simple machines. Examples - **scissors**, **wheelbarrow**, and **bicycle**

WEDGE

Wide at one end and pointed at the other.

Helps cut or split other objects.

Examples - **knife, ax.**



LEVER

A stiff bar that moves about a fixed point (fulcrum).

Used to push, pull, or lift things.

Examples - **seesaw, crowbar, shovel**



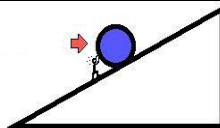
Crowbar

INCLINED PLANE

A flat surface that is raised so one end is higher than the other.

Makes it easier to move heavy objects up or down.

Example - **a ramp**



WHEEL AND AXLE

A rod attached to a wheel.

Makes it easier to move or turn things. Examples - **bicycle wheels, roller skates, doorknob.**



PULLEY

A wheel that has a rope wrapped around it.

Pulleys can be used to lift heavy objects by changing the direction or amount of the force.

Examples- **flagpole**

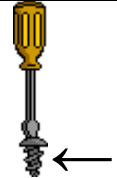


SCREW

An inclined plane wrapped around a cylinder or cone.

A common use of the screw is to hold objects together.

Examples include a **jar lid** and **wood screw**.



COMPOUND MACHINES

A compound machine is a combination of two or more simple machines.

Examples include **scissors**, **wheelbarrow**, and **bicycle**



Example: wheel and axle, screw, pulley



Example: lever, wedge, screws



Example: wheel and axle, lever, inclined plane