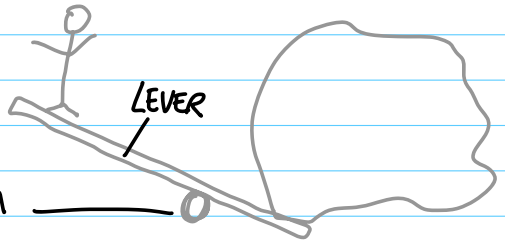
Simple Machines

Simple Machine - A tool/device made up of ONE basic machine that has little or no movement.

6 Simple Machines: Wheel/Axle, Pulley, Lever, Wedge, Inclined Plane, Screw

Lever - Rigid bar/plank that rotates around fixed point called fulcrum/pivot



→ 3 Types of Levers

1st Class 

2nd Class 

- Load between fulcrum & effort

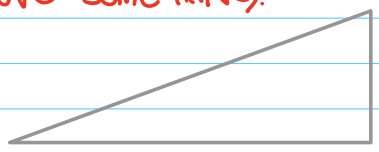
3rd Class 

- Effort between load & fulcrum

\+ Move heavier load than otherwise possible

\- You move farther than load

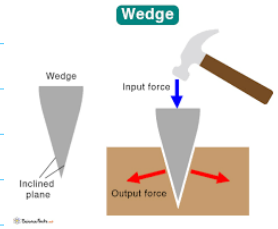
Inclined Plane - A slope or ramp that reduces amount of force needed to move something.



\+ Move LRG objects w/ less force

\- Must exert force over LRG distance

WEDGE - SAME SHAPE AS INCLINED PLANE BUT USED DIFFERENTLY. OFTEN FORCED INTO OBJECTS - CAN ONLY BE USED IN 1 DIRECTION



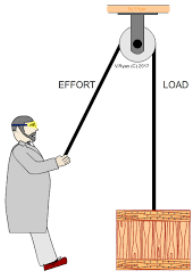


+ CAN INCREASE THE FORCE YOU APPLY TO OBJECT

- NEED TO MOVE GREATER DISTANCE INTO OBJECT THAN THE SPLIT IT CAUSES.

PULLEY - A WIRE/ROPE/CABLE MOVING ON GROOVED WHEEL. CAN BE COMBINED TO MAKE PULLEY SYSTEM.

USED TO LIFT/MOVE OBJECTS



+ CAN INCREASE THE FORCE YOU USE
- YOU MOVE VERY SLOWLY

SCREW - CYLINDER W/ A GROOVE CUT INTO A SPIRAL ON OUTSIDE - SAME SHAPE AS WEDGE W/ GROOVES

* USED TO HOLD THINGS TOGETHER OR SPLIT AN OBJECT *

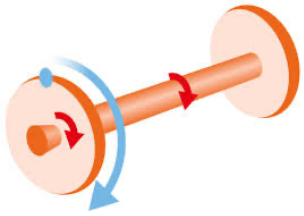


+ LIFT LARGER LOADS THAN YOU CAN HOLD
- YOU MOVE VERY SLOWLY & A GREATER DISTANCE

WHEEL & AXLE

- A COMBO of 2 turning WHEELS that ARE ATTACHED to EACH OTHER @ their CENTRES WHERE ONE CAUSES THE OTHER to turn

USED for INCREASING SPEED.



+ INCREASE force on AXLE by turning LARGER WHEEL

− MUST turn LARGER WHEEL a GREATER distance