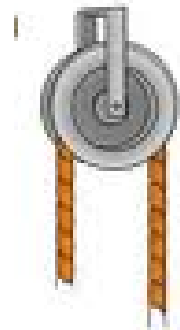
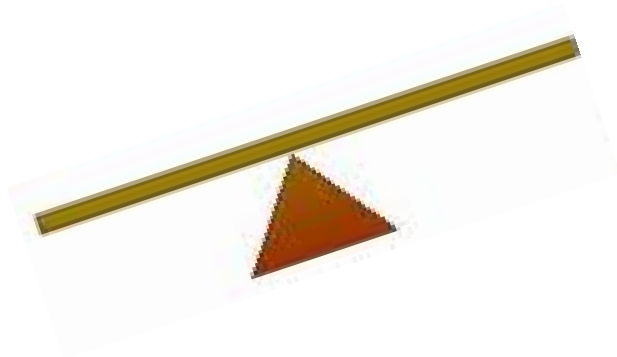
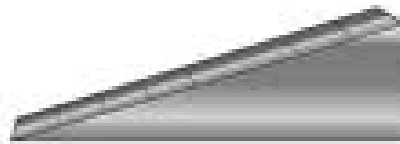
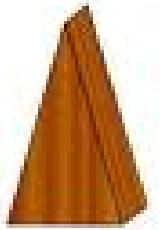


# SIMPLE MACHINES

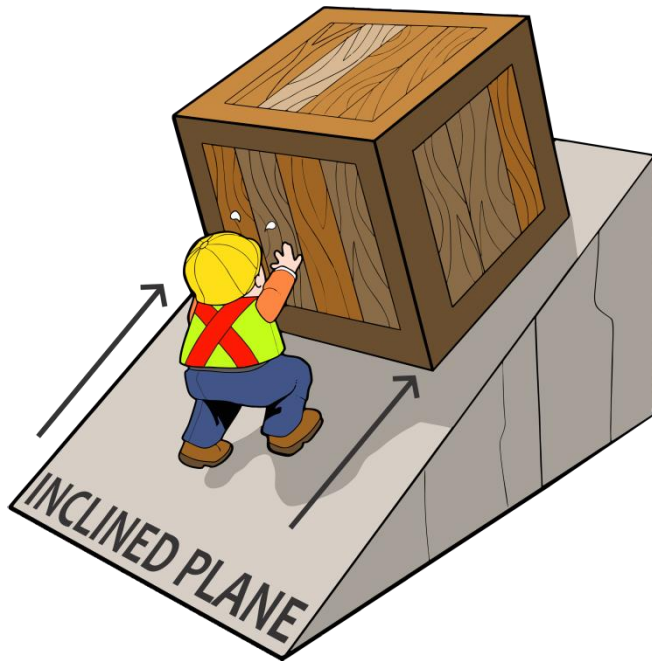


# What is a simple machine?

- A machine is any tool that makes work easier.
- A **simple machine** is an object that changes a force.
- Simple machines lets you use less force to move an object.



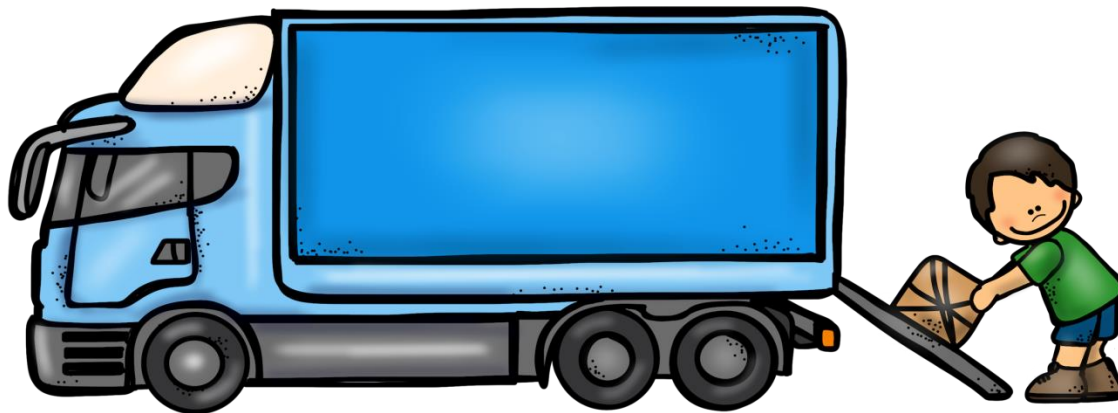
# How do simple machines work?



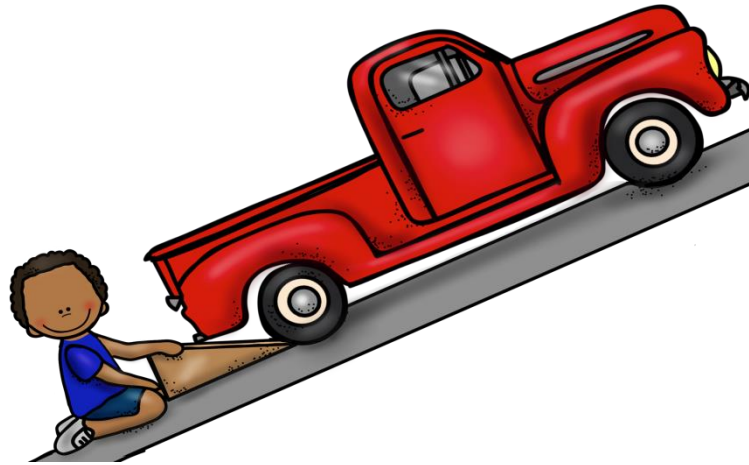
- Some simple machines change the direction of the force.
- Some simple machines increase the distance over which a force is used.

# Inclined Plane

- An **inclined plane** is made up of a slanted surface.
- Inclined planes make work easier by increasing the distance over which a force is used.
- For example, it is easier to move a heavy box up a ramp than to lift a heavy box straight up.



# Wedge



- A **wedge** is a simple machine made up of two inclined planes.
- It is shaped like a V.
- A wedge changes the direction of a force from downward to outward.
- Wedges help stop objects, cut objects or to split objects apart.

# Screw

- A **screw** is a simple machine made up of an inclined plane wrapped around a post.
- A screw changes the direction of a force by changing a turning force into a downward force.
- Turning a screw with a screwdriver pushes the screw into the wood. The force is spread out over many turns.



# Lever



- A **lever** is a simple machine made up of a stiff bar that moves freely on a fixed point.
- Levers are often used to help lift objects.
- The fixed point a lever moves on is called the **fulcrum**.
- The fulcrum can be on either end of the lever or in the middle.

# Wheel and Axle

- A **wheel and axle** is a simple machine made up of two cylinders that turn on the same axis.
- A larger wheel turns on the smaller wheel, or axle.
- A small force is used to turn the large wheel, which makes work easier.





# Pulley



- A **pulley** is a simple machine made up of a rope fitted around the rim of a fixed wheel.
- Some pulleys increase the force that is used on them.
- Some pulleys change the direction of the force.

# Reflection

- How do simple machines help people do work?
- Name the 6 simple machines.
- Think of 3 simple machines you have used today.

