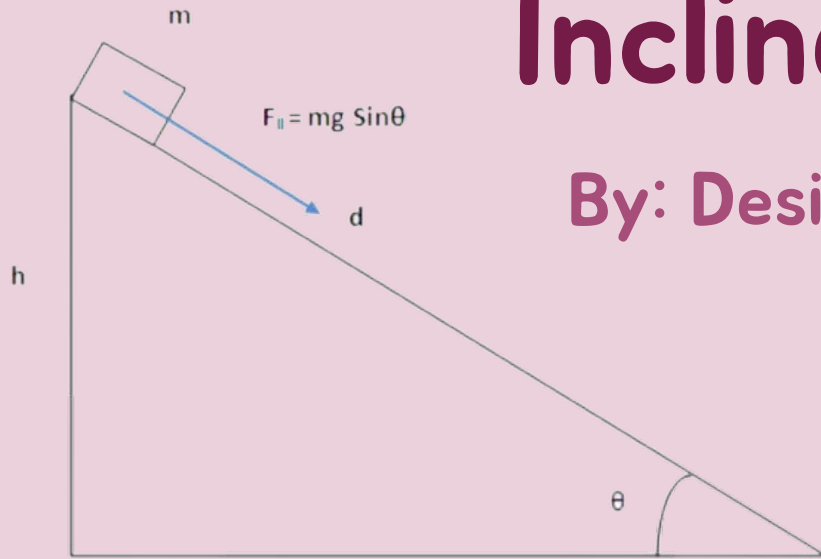


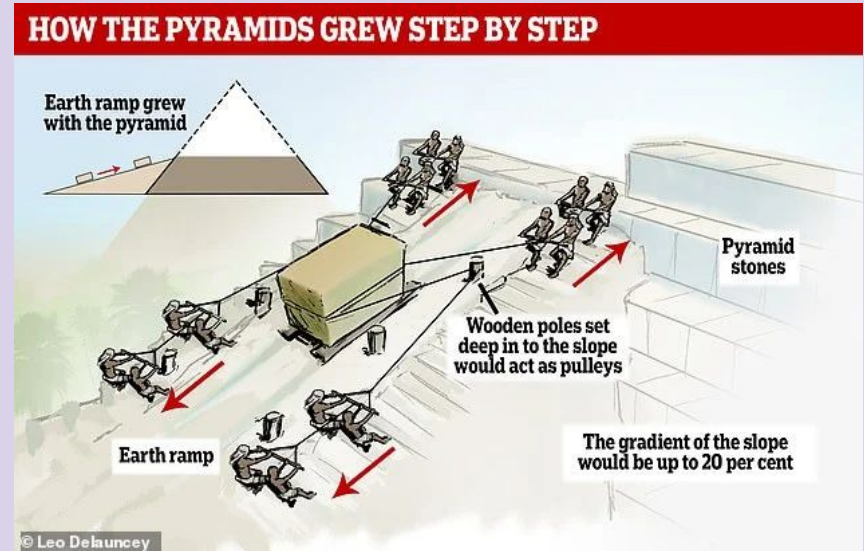
Inclined Plane

By: Desiree & Angela



1. History of the Inclined Plane

- Inclined planes were not invented by one specific civilization; they emerged in many ancient civilizations around the same time.



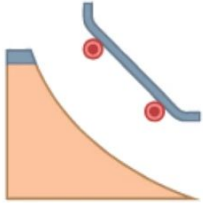
2. How Inclined Planes were used in the Past

- Inclined planes were commonly used in ancient civilizations
 - Egyptians used inclined planes to move the stone blocks for building pyramids
 - Ancient Romans and Greeks used ramps when they constructed

Many people over the years used inclined planes/ramps when building different things

3. How are Inclined Planes Used Today?

Examples Of Inclined Plane



Skateboard ramp



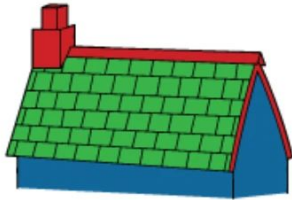
Slide



Water slide



Funnel



Roof



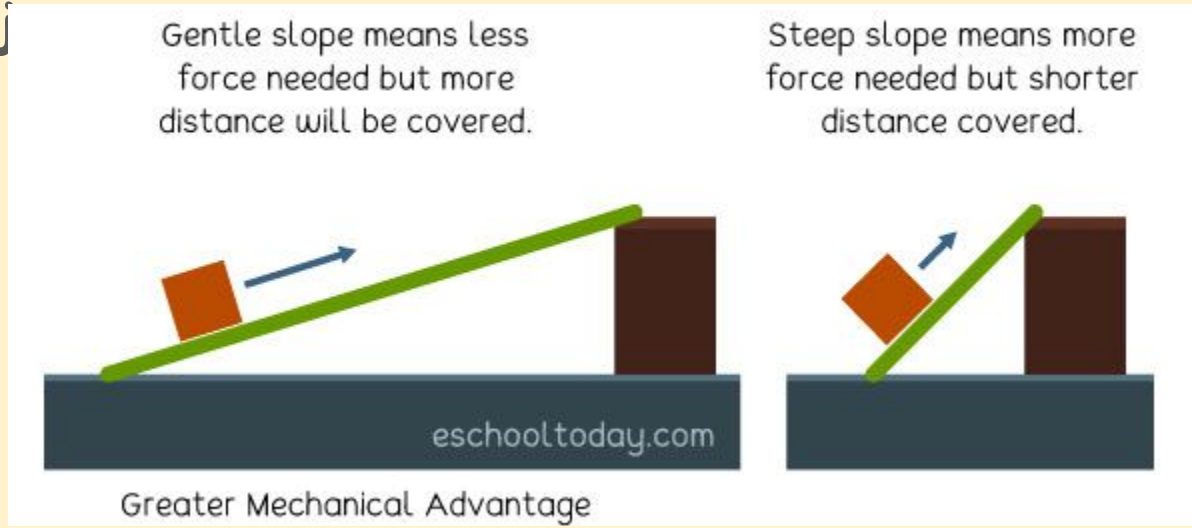
Road ramp

- Used to move heavier objects using less force and more distance.
 - Some examples are ramps, slides, escalators, etc..

4. How Do Inclined Planes Work?

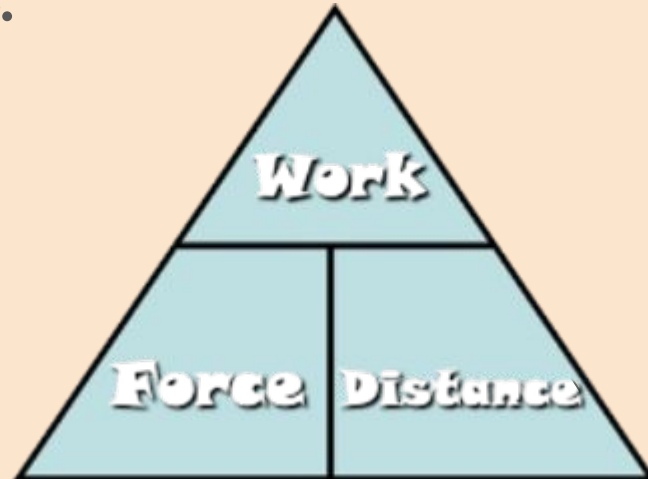
- Inclined planes work by trading force for distance
 - The force is distributed over a greater distance, letting you use less force when moving heavy

obj



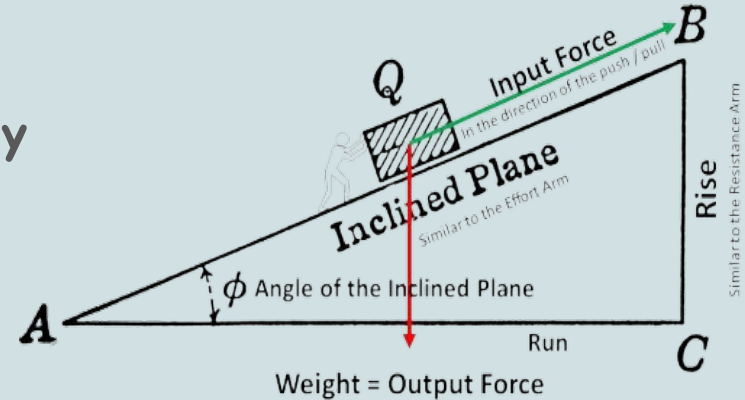
5. What is Work? How is it Calculated?

- Work is the transfer of energy when force is applied to an object.
- Work is calculated by **multiplying force and distance.**
 - The unit for work is **joules.**



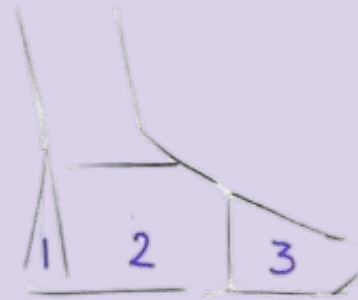
6. How Does an Inclined Plane Work?

- An inclined plane works by mechanical advantage, meaning that you can exchange force with distance or vice versa.
 - In the inclined plane this is represented by the ramp (apply smaller force over a greater distance, making it easier to lift the object by distributing the force over the slope/ ramp).
 - Mechanical advantage is a measure of how much a machine multiplies the force applied to it.



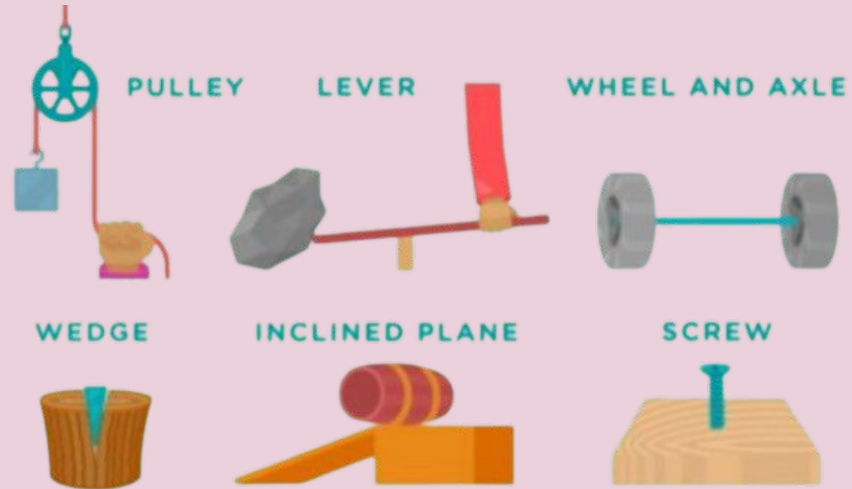
7. Examples of the Inclined Plane in the human body:

- Some examples of the inclined plane in the human body are feet and joints.
 - The flat surface of the foot with the slanted angle allows you to push yourself upwards using less force than you would need vertically.
 - When you walk, your foot makes contact with the ground at an angle acting as a ramp surface for you to push off and move forward.



8. Other examples of simple machines we use everyday

- Some examples of other simple machines we use everyday are:
 - Lever
 - Screw
 - Wheel and Axle
 - Pulley
 - Wedge



9. What is Mechanical Advantage? How is it used in a mousetrap car?

- Mechanical advantage is the ratio of the force produced by the machine to the force applied to it, used in assessing the performance of a machine.
- Mechanical advantage is used in a mousetrap car by the lever system, where a long lever arm applies force over a longer distance than with a short lever arm. This results in a fewer amount of force but a longer distance traveled.

