


to push or pull and object.

force

Described in strength and direction




A black and white image of Darth Vader's helmet, representing a force.

exert a force on an object

holding is NOT work.

work

Work = force x distance



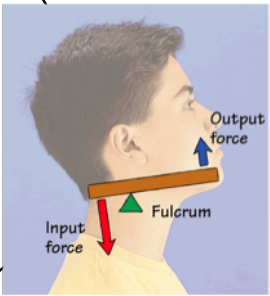
A black and white photograph of a person climbing a steep, rocky hill, illustrating the concept of work.

something that lets you do work.

machine

makes work easier

makes work more efficient



Input force

Fulcrum

Output force

First-Class Lever

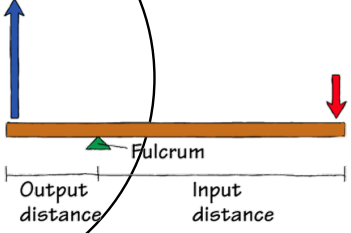
A diagram of a first-class lever using a person's head and neck as an example. The fulcrum is at the base of the skull, the input force is the weight of the head acting downwards, and the output force is the neck muscles acting upwards.

has a rigid pole

it is free to rotate

lever

rotates on a fixed point



Output distance

Fulcrum

Input distance

A schematic diagram of a lever. It shows a horizontal rigid pole with a fulcrum in the middle. An input force (red arrow) is applied at a distance from the fulcrum, and an output force (blue arrow) is applied at a distance from the fulcrum.

