

Vocabulary: Levers



Vocabulary

- Effort – the force that is applied to a simple machine such as a lever or pulley.
- First-class lever – a lever in which the fulcrum is between the effort and the load.
 - A seesaw or teeter-totter is an example of a first-class lever.
- Fulcrum – the pivot point in a lever.
- Lever – a simple machine made of a stiff plank or bar that pivots on a fulcrum.
 - A lever can help a user to change a small force acting over a large distance into a bigger force that acts over a smaller distance.
 - A lever can also change a large force acting over a short distance to a smaller force that acts over a large distance.
- Load – the weight that will be moved, lifted, or supported by a simple machine.
- Mechanical advantage – the factor by which a simple machine reduces the effort needed to lift an object.
 - For example, if a simple machine had a mechanical advantage of 2, it would take just over 50 newtons of effort to lift a 100-newton load.
- Second-class lever – a lever in which the load is between the fulcrum and the effort.
 - A wheelbarrow is an example of a second-class lever. The fulcrum is at the tire. The load is the stuff in the wheelbarrow. The effort is the user lifting on the handles of the wheelbarrow.
- Third-class lever – a lever in which the effort is between the fulcrum and the load.
 - The human forearm is an example of a third-class lever. The fulcrum is at the elbow. The effort comes from the biceps muscle, which attaches to the bones of the forearm between the elbow and the hand. The load is whatever is being held in the hand.