

Descriptions: The Six Types of Simple Machines

Wheel & Axle - Makes work easier by moving objects across distances. The wheel (or round end) turns with the axle (or cylindrical post) causing movement. On a wagon, for example, a container rests on top of the axle.

Inclined Plane - A flat surface (or plane) that is slanted, or inclined, so it can help move objects across distances. A common inclined plane is a ramp.

Wedge - Instead of using the smooth side of the inclined plane to make work easier, you can also use the pointed edges to do other kinds of work. When you use the edge to push things apart, this movable inclined plane is called a wedge. An ax blade is one example of a wedge.

Lever - Any tool that pries something loose is a lever. Levers can also lift objects. A lever is an arm that “pivots” (or turns) against a fulcrum (the point or support on which a lever pivots). Think of the claw end of a hammer that you use to pry nails loose; it’s a lever. A see-saw is also a lever.

Pulley - Instead of an axle, a wheel could also rotate a rope, cord, or belt. This variation of the wheel and axle is the pulley. In a pulley, a cord wraps around a wheel. As the wheel rotates, the cord moves in either direction. Attach a hook to the cord, and now you can use the wheel’s rotation to raise and lower objects, making work easier. On a flagpole, for example, a rope is attached to a pulley to raise and lower the flag more easily.

Screw - When you wrap an inclined plane around a cylinder, its sharp edge becomes another simple tool: a screw. If you put a metal screw beside a ramp, it may be hard to see similarities, but a screw is actually just another kind of inclined plane. One example of how a screw helps you do work is that it can be easily turned to move itself through a solid space like a block of wood.

Images: The Six Types of Simple Machines



Wheel and Axle



Inclined Plane



Wedge



Lever



Pulley



Screw