

**FOSS Levers and Pulleys Module
Glossary
2005 Edition**

Advantage: A gain in effort or distance or a change of direction resulting from the use of a simple machine. (SS, TG)

Axis: An imaginary line that passes through an object or system, around which the object or system rotates. (SS)

Bellows: A device that takes in air when the sides are spread apart and expels it through a tube when the sides are brought together. (SS)

Block and tackle: Another name for a pulley system. (SS)

Catapult: A large class-3 lever system used in ancient times to launch heavy objects. (SS)

Chain hoist: A compound pulley system using chain instead of rope. (SS)

Class-1 lever: A lever in which the fulcrum is between the load and the effort. (SS, TG)

Class-2 lever: A lever in which the load is between the fulcrum and the effort. (SS, TG)

Class-3 lever: A lever in which the effort is between the fulcrum and the load. (SS, TG)

Complex machine: A machine that is designed using a number of simple machines, often run by a motor. (SS)

Compound pulley: Two or more pulleys working together. (SS)

Counterweight: A weight or influence that balances another weight or influence. (SS)

Diagram: A drawing that describes the relationship of all the parts of a system. (TG)

Directional advantage: A change in direction that results from passing a rope through a pulley. (TG)

Double lever: A machine that uses two levers working together. (SS)

Effort: The force applied to move a load using a simple machine. (SS, TG)

Equal-arm balance: A scale used to compare masses placed at equal distances from the fulcrum. (SS)

Fixed pulley: A pulley attached in position above a load to be lifted. (TG, SS)

Force: A push or a pull. (SS)

Fulcrum: The point at which a lever arm pivots. (TG, SS)

Hydraulic: Operated by means of fluid pressure. (SS)

Inclined plane: A flat surface set at an angle, used to change the direction of a force. (SS)

Jackscrew: A device used to raise extremely heavy loads, consisting of a platform sitting on top of a screw. (SS)

Lever: A beam, free to pivot around a point, used to move a load. (SS, TG)

Lever arm: A beam, free to pivot around a point. (TG, SS)

Load: The weight or resistance that is moved using a simple machine. (SS, TG)

Mechanical advantage: A ratio of the load or resistance to the effort or force. (SS, TG)

Movable pulley: A pulley attached to a load that is being lifted. (TG, SS)

Newton: The metric unit used to measure force. (SS, TG)

Piston: A solid cylinder inside a cylindrical chamber, used to receive or transmit motion. (SS)

Pulley: A wheel with a grooved rim in which a rope can run to change the direction of the pull and so lift a load. (TG, SS)

Resistance: An opposing force tending to prevent motion. (SS)

Screw: An inclined plane spiraled around an axis. (SS)

Sheave: A grooved wheel used in a pulley. (SS)

Simple machine: Any of the six elementary devices (including levers and pulleys) that provide mechanical or other advantage. (TG, SS)

Slope: The slant of an inclined plane. (SS)

Thread: A ridge or groove that spirals around a screw. (SS)

Two-coordinate graph: A graph that shows relationships between two variables. (TG)

Wedge: A double inclined plane that tapers to a point or sharp edge, used to change the direction of force. (SS)

Wheel and axle: Two wheels of different diameters attached and rotating on the same axis. (SS)

Winch: A wheel-and-axle system that has a cylinder on which a rope is wound. (SS)

Windlass: A wheel-and-axle system used to apply force to a rope while winding it around the axle. A windlass can also be called a winch. (SS)