

Machines

Simple Machine: a single device that makes work easier by getting more force out than we put in, alters the size or direction of force

Input Force = work you do on a machine

Output Force = work done by the machine on the object

Compound Machine = machine made of two or more simple machines put together

Ex. Bike: wheel and Axle (wheels), Lever (brake), Pulley (chain), etc.

Mechanical Advantage = number of times a machine multiplies a force

Mechanical Efficiency = comparison of machine's work output with the work input

- output is always less than input
- work output + work done = input
- NEVER 100% because every machine has moving parts and some input is used to overcome friction
 - things like oils/lubricants can reduce friction and increase efficiency