

## SIMPLE MACHINE NOTES

**Work:** A transfer of energy as the result of the motion of objects

Formula:  $Work = Force \times Distance$

**Machine:** A device that makes work easier

**Simple Machine:** A machine consisting of only one part

**Mechanical Advantage:** A number of times a machine multiplies an effort force

**Resistance Force:** Force exerted by a machine (output)

**Effort Force:** Force applied to the machine (input)

### **6 Types of Simple Machines:**

**Lever:** a bar that pivots on a fixed point

a. fulcrum b. effort force c. resistance force

**Pulley:** wheel that changes the direction of the effort force

**Wheel and Axle:** large wheel fixed to a smaller wheel or fixed to a bar called an axle

**Inclined Plane:** slanted surface used to raise objects

**Wedge:** an inclined plane with one or two sloping sides

**Screw:** an inclined plane wound around a cylinder, usually with a sharp ridge along the edge

