Newton's First Laws	Every object in a state of uniform motion tends to remain in that state of motion unless an external force is applied to it.

Forces that resist to motion	Inertia
Friction -	The resistance encountered when one body is moved in contact with another.
The 4 Types of Friction	Static Rolling Sliding Fluid
Designed or arranged to offer the least resistant to fluid flow.	Aerodynamic

For every action there is an equal and opposite reaction.	Newtons 3rd Law of Motion
Newton's 2nd Law	The relationship between an object's mass *m*, its acceleration a, and the applied force *F* is *F = ma*.
Potential Energy: (PE)	The energy stored by an object as a result of its position
• The energy that matter has because of its motion and mass. • where m = mass of object • v = speed of object • KE = Energy in Joules	Kinetic Energy $KE = \frac{1}{2} * m * v^2$
• Energy due to position and motion; sum of potential and kinetic energies. Includes heat and friction. • Just add Potential Energy + Kinetic Energy.	Mechanical Energy

Distance over time 80 km / 2 hrs = 40 km / hr 80 miles / 2 hrs = 40 mph	Speed
Acceleration	The final velocity – the starting velocity, divided by time.
Momentum	A measure of the motion of a body equal to the product of its mass and velocity. ■ Mass times velocity
Amount of Work (w) done depends on two things: The amount of [ ] (F) exerted. W= F X D	● Amount of [ ] (w) done depends on two things: The amount of Force (F) exerted. W= F X D
Trajectory	The path of flying object: the path that a projectile makes through space under the action of given forces such as thrust, wind, and gravity.
One Newton is the amount of force required to give a 1-kg mass an acceleration of 1 m/s/s.	One Newton is the amount of force required to give a 1-kg mass an acceleration of 1 m/s/s.

Machine that uses grooved wheels and a rope to raise, lower or move a load.	Pulley
LEVER	A stiff bar that rests on a support called a fulcrum which lifts or moves loads
An object with at least one slanting side ending in a sharp edge, which cuts material apart.	WEDGE
Inclined Plane	A slanting surface connecting a lower level to a higher level
An inclined plane wrapped around a pole which holds things together or lifts materials.	Screw
Two or more simple machines working together.	Compound Machines