

## Introduction to Newton's Laws – Vocabulary:

1. Force- A push or a pull on an object.
  2. Free Body Diagram- Rough outline of object with arrows to show all forces acting on object.
  3. Net force- Sum of all forces acting on an object.
  4. Inertia- An object's tendency to keep doing what it's doing.  
More inertia = more mass
  5. Equilibrium- forces are equal  $\rightarrow$  balanced.
  6. Weight- Force of gravity on an object  $F_w = mg$
  7. Normal Force- perpendicular force to the surface.  
changes its magnitude.
  8. Friction- force working against  
Kinetic  $\rightarrow$  moving      Static  $\rightarrow$  stationary.
  9. Coefficient of Friction-  $\mu$  ( $\mu_0$ )  
tells how rough or smooth a surface is.
  10. Newton's 1<sup>st</sup> law- an object at rest stays at rest; an object in motion stays in motion unless a net force acts on it.
  11. Newton's 2<sup>nd</sup> law-  $F_{net} = ma$
  12. Newton's 3<sup>rd</sup> law- For every action, there's an equal & opposite reaction  
when normal force can't match - things move.
- MASS - measured in Kg.  
What an object is composed of.