

# **FORCES VOCABULARY**



1. Force: A push or a pull that acts on an object.
2. Newton: The SI Unit for force, equal to the force that causes a 1 kg mass to accelerate at a rate of  $1 \text{ m/s}^2$ .  
( $1 \text{ N} = 1 \text{ kg} \cdot \text{m/s}^2$ )
3. Net Force: The overall force acting on an object after all the forces are combined.
4. Friction: A force that opposes the motion of objects that touch as they move past each other. Friction acts at the surface where objects are in contact.
5. Gravity: The attraction between any two objects because of their masses. An attractive force that pulls objects together.
6. Terminal Velocity: The constant velocity of a falling object when the force of air resistance equals the force of gravity.
7. Projectile motion: The curved path of an object in free fall after it is given an initial forward velocity.
8. Inertia: The tendency of an object to resist a change in its motion.
9. Mass: The amount of matter in an object. A measure of the inertia of an object, which depends on the amount of matter the object contains.
10. Weight: The force of gravity acting on an object.
11. Free fall: The movement of an object toward Earth because of gravity.
12. Sliding friction: A friction force that opposes the motion of an objects as it slides over a surface.
13. Rolling friction: A friction force that acts on rolling objects, caused by the change in shape at the point of rolling contact.
14. Static friction: A friction force that acts on objects that are not moving.
15. Fluid friction: A friction force that opposes the motion of an object through a fluid.
16. Air resistance: Acts in the direction opposite to the motion and reduces acceleration. The opposition of the atmosphere to forward movement.
17. Drag: The aerodynamic force that tends to reduce forward motion.
18. Momentum: The product of an object's mass and its velocity.
19. Law of Conservation of Momentum: If no net force acts on a system, then the total momentum of the system does not change.
20. Acceleration due to gravity: The acceleration for any object moving under the sole influence of gravity. The numerical value for the acceleration of gravity is most accurately known as  $9.8 \text{ m/s}^2$ .

21. Centripetal Force: center-directed force that continuously changes the direction of an object to make it move in a circle.