

## PHYSICS VOCABULARY # 2 DEFINED

1. **FORCE**: anything that acts to **change the movement** or shape of an object (a **Push or Pull**).
2. **BALANCED FORCE**: when the net forces are **equal** or cancel which results in **no** movement of the object.
3. **UNBALANCED FORCE**: when the involved forces are **not equal** which results in **movement** of an object.
4. **VECTOR**: something that can be used that has both a **magnitude** (amount) and **direction**.
5. **NEWTON**: a **measurement** of **force** or magnitude (1 lbs~4.4N)
6. **FRICTION**: force that **opposes** motion.
7. **NEWTON'S FIRST LAW OF MOTION**: objects in **motion** tend to **stay in motion**. Objects at **rest** tend to **stay at rest unless acted upon by an outside force**.
8. **NEWTON'S SECOND LAW OF MOTION**:

$$\text{FORCE} = \text{MASS} \times \text{ACCELERATION}$$



$$F = MA$$

9. **NEWTON'S THIRD LAW OF MOTION**: for **every action** there is an **equal and opposite reaction**
10. **INERTIA**: **resistance** to **change** in **motion**
11. **GRAVITY**: ( $9.8 \text{ m/s}^2$  or  $32 \text{ ft/s}^2$ ) the **force of attraction** between any two bodies of matter. (*Mater attracts Matter*)
12. **WEIGHT**:  $w = (m)(g)$  or **weight = mass x gravity**. It is a measure of how "heavy" matter is in the presence of gravity.