

## Balanced and Unbalanced Forces

- **balanced forces**  
if object is not moving it will remain **stationary**  
if object **already moving** it will move at a **steady speed**
- **unbalanced forces**  
object will **accelerate** if larger force is in direction object is moving  
object will **decelerate** if larger force is in the opposite direction it is moving

## Newton's Second Law

- **Force( N )=mass(kg) x acceleration(  $m/s^2$  )**
- **Mass** - how much matter there is, measured in kg
- **Weight** - the force when gravity acts on a mass, measured in N
- **On Earth there is 10N of weight acting on every 1kg of mass so 12kg of mass will have a weight of 120N**