

## Gravity

- **GRAVITY:** Force of attraction between two bodies.

### FACTORS THAT INFLUENCE GRAVITATIONAL FORCE:

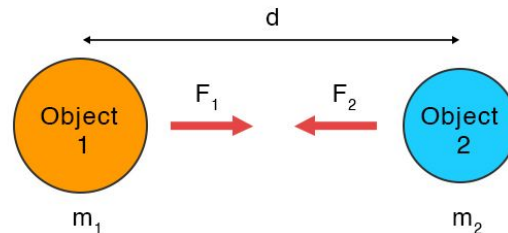
- Mass: More mass more gravity
- Distance: Gravitational force decreases with increasing distance

### GENERAL POINTS TO REMEMBER:

- Gravity always attract and does not repel
- Acceleration due to gravity on the surface of the earth is  $9.8 \text{ m/s}^2$
- The sun and moon's gravity causes tides
- Gravitational force obeys the inverse square law

## Gravitational Force Formula

### Gravitational Force



$$\text{Force (F)} = F_1 = F_2 = G \frac{m_1 \cdot m_2}{d^2}$$

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- Gravitational force: **F**
- Mass of object 1:  **$m_1$**
- Mass of object 2:  **$m_2$**
- Distance between the objects: **d**
- Universal gravitational constant **G:  $6.67 \times 10^{-11} \text{ N}\cdot\text{m}^2/\text{kg}^2$**