## Gravitational Force- Enriched notes

Def : $\qquad$

- The gravitational force on earth is $9.8 \mathrm{~N} / \mathrm{kg}$. This means that bodies accelerate $9.8 \mathrm{~m} / \mathrm{s}^{2}$ regardless of mass.
- The force becomes weaker as you move away from the center of the earth.

Mass vs Weight

| Mass | Weight |
| :--- | :--- |
|  |  |
| Does not vary wherever you are and <br> measured in kg | Varies depending on the planet or area you <br> are on and measured in N (Neutons) |

- Moon's GF =1.67 N/kg ( $6 x$ less than earth)
- Sun's GF = 273.65 N/kg (28x more than earth)


## Formula to calculate weight in $\mathbf{N}$

$\mathrm{W}=\mathrm{Fg} \times \mathrm{mg}$
$W=$
$\mathrm{Fg}=$
$\mathrm{mg}=$
ex: 90 kg to N

