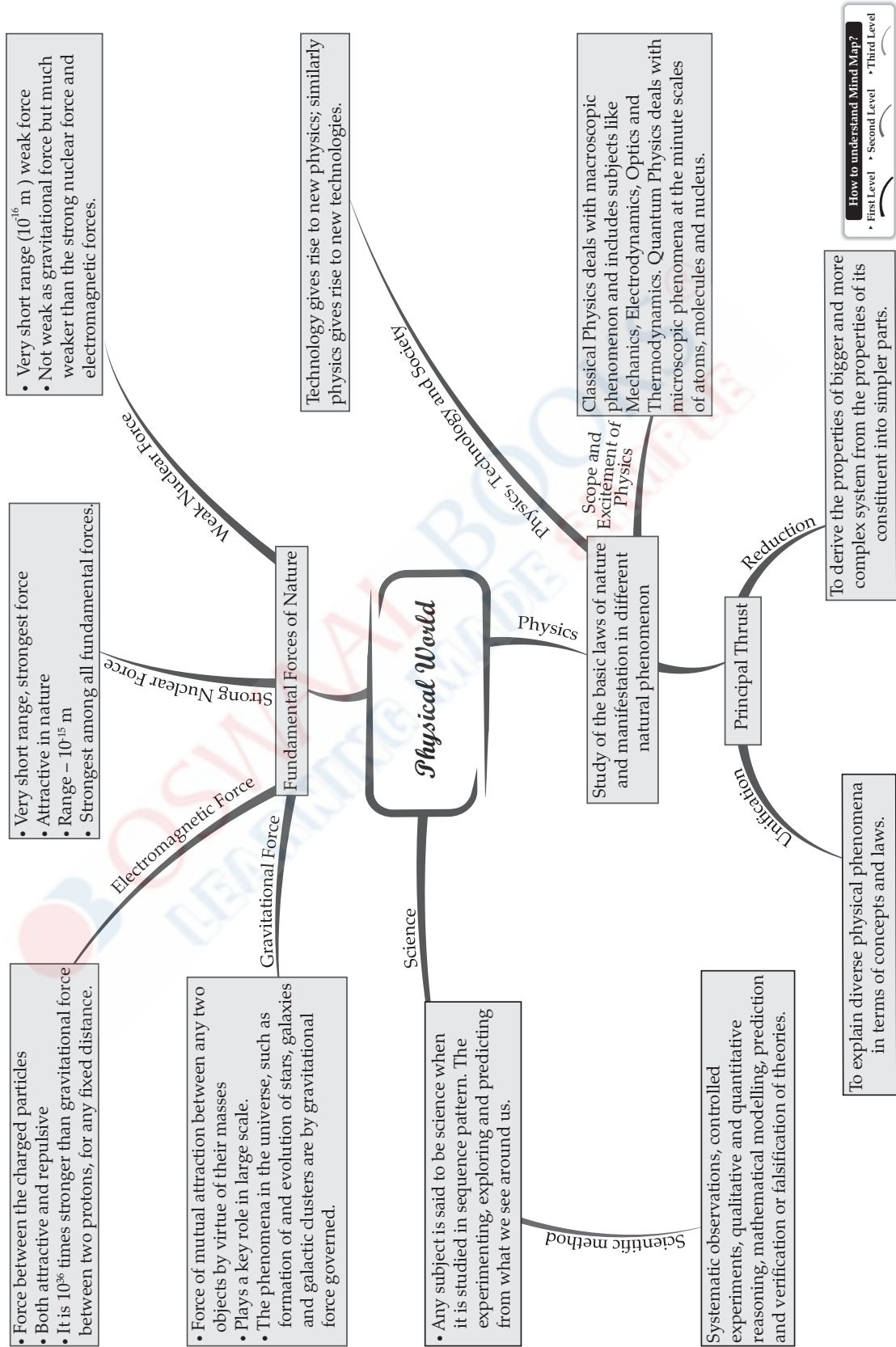
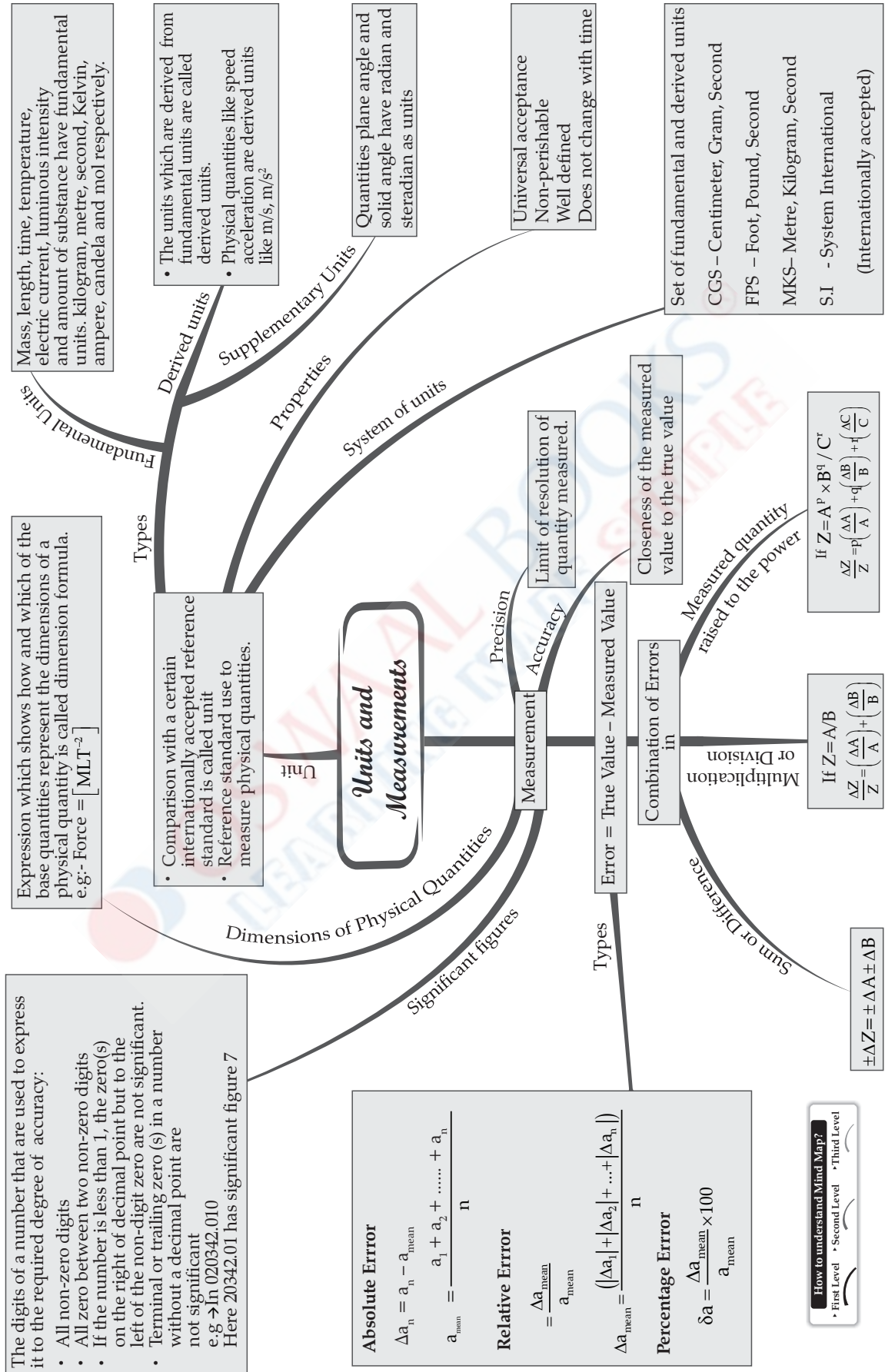


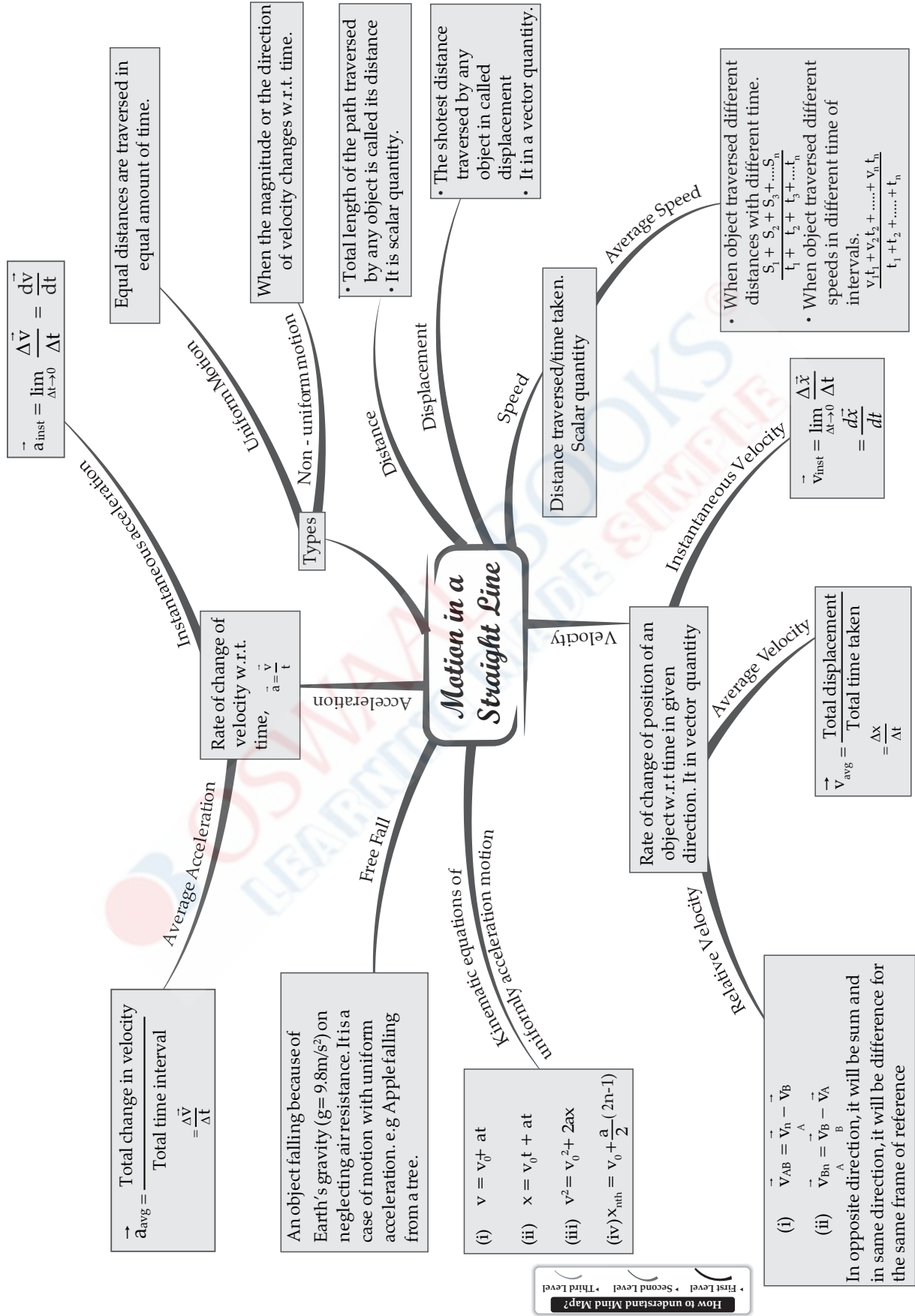
What are Associations?
 It's a technique connecting the core concept at the Centre to related concepts or ideas. Associations spreading out straight from the core concept are the First Level of Association. Then we have a Second Level of Association emitting from the first level and the chronology continues. The thickest line is the First Level of Association and the lines keep getting thinner as we move to the subsequent levels of association. This is exactly how the brain functions, therefore these Mind Maps. Associations are one powerful memory aid connecting seemingly unrelated concepts, hence strengthening memory.

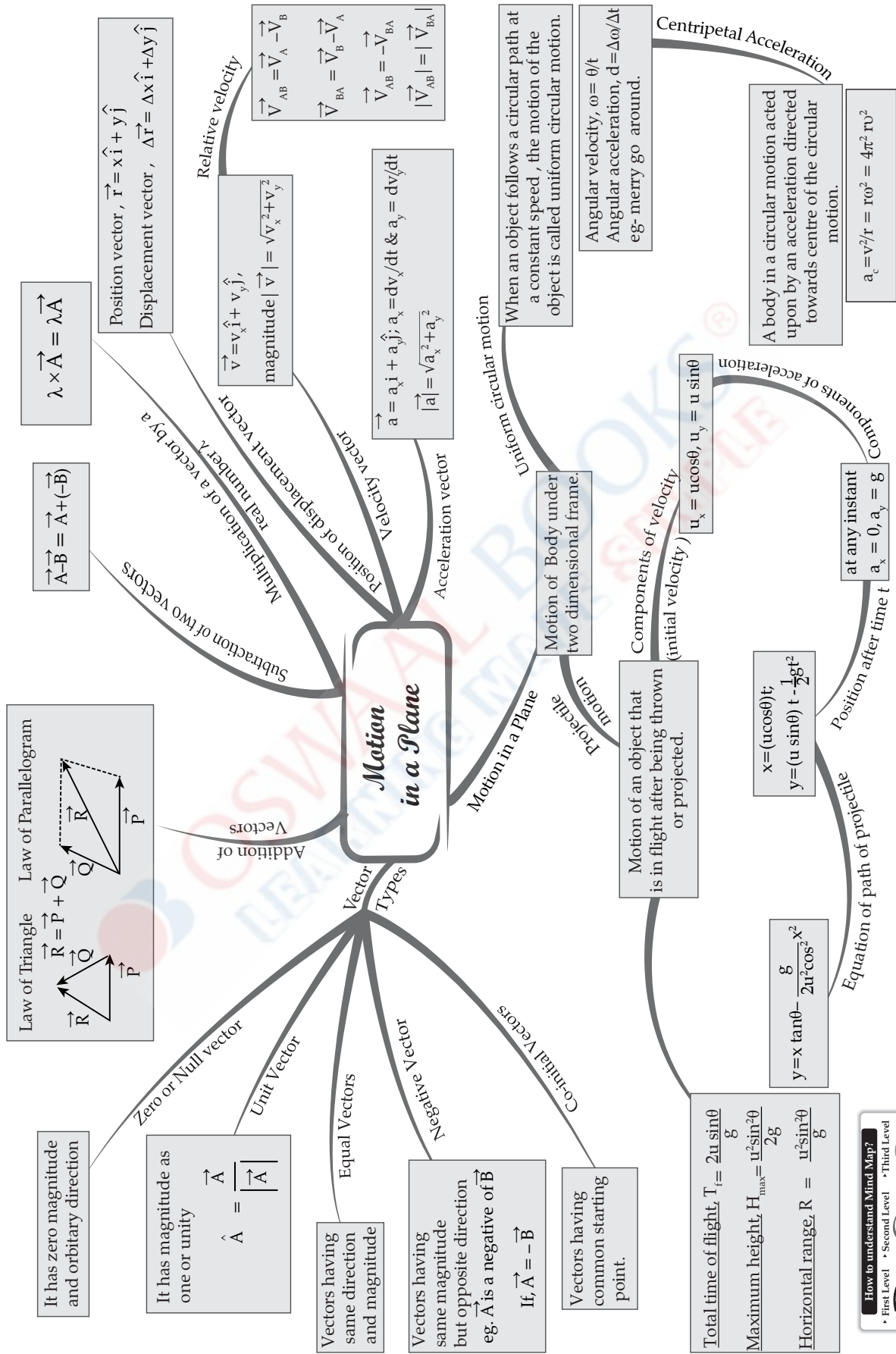
PHYSICS

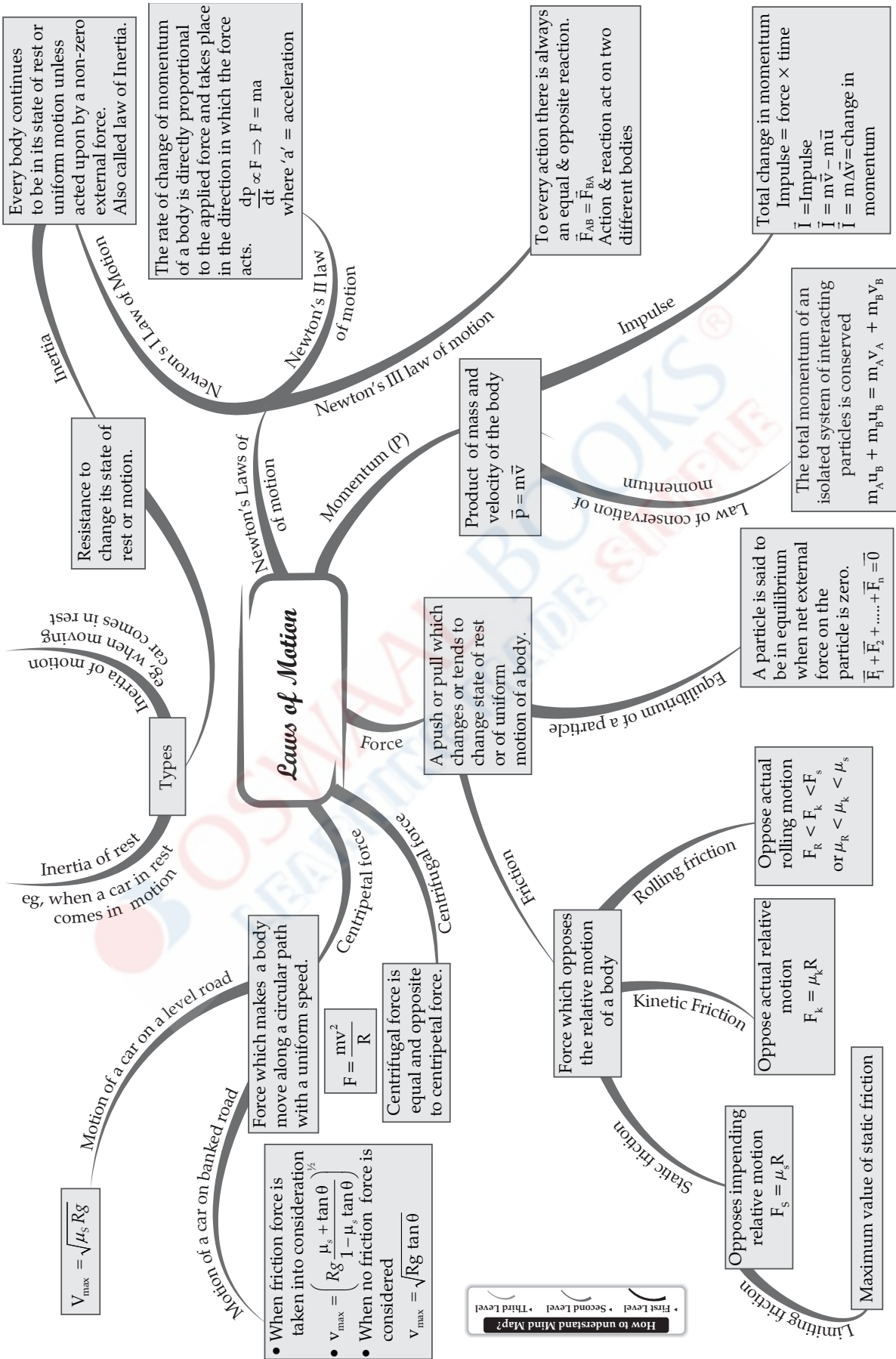




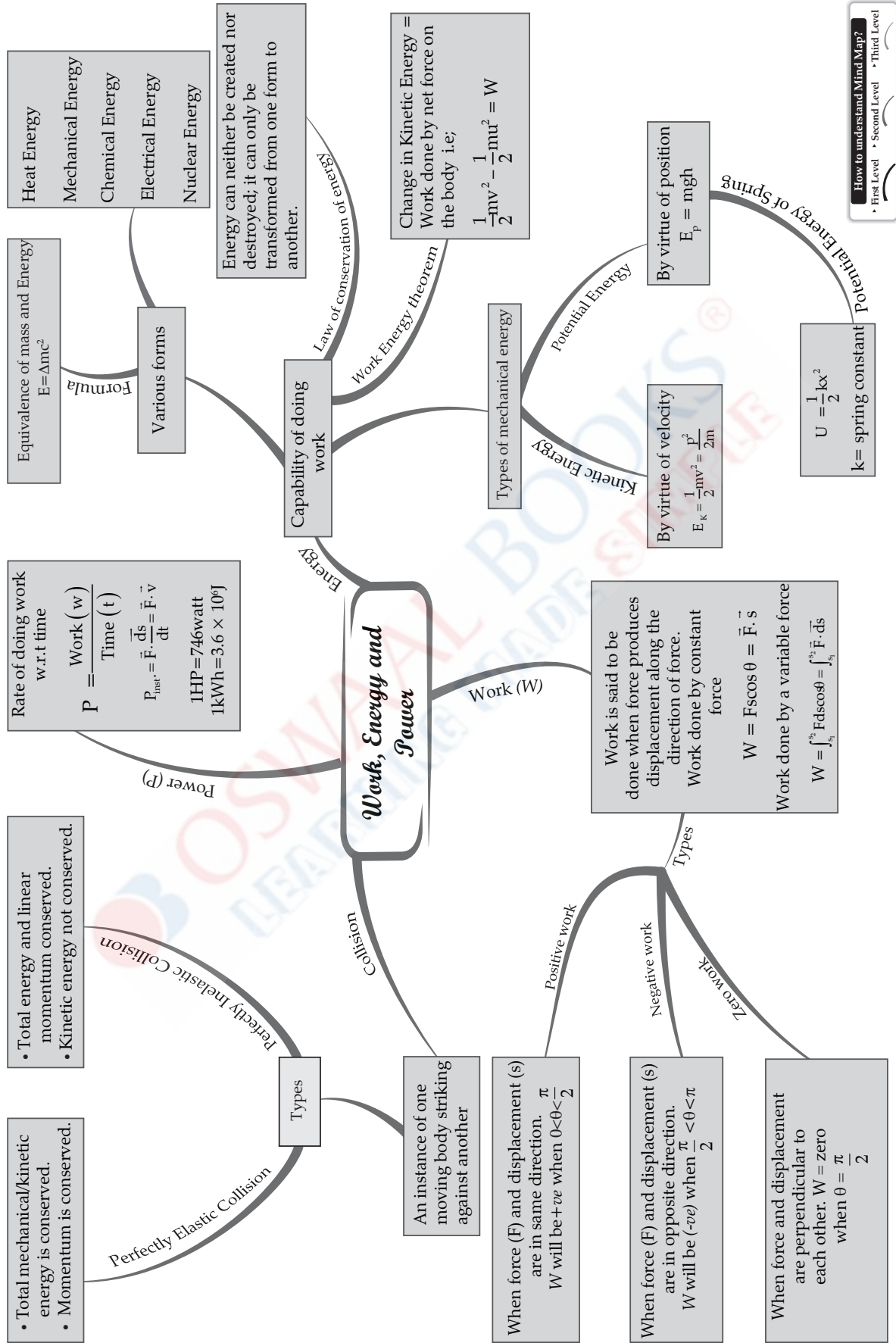
How to understand Mind Map?
 • First Level • Second Level • Third Level



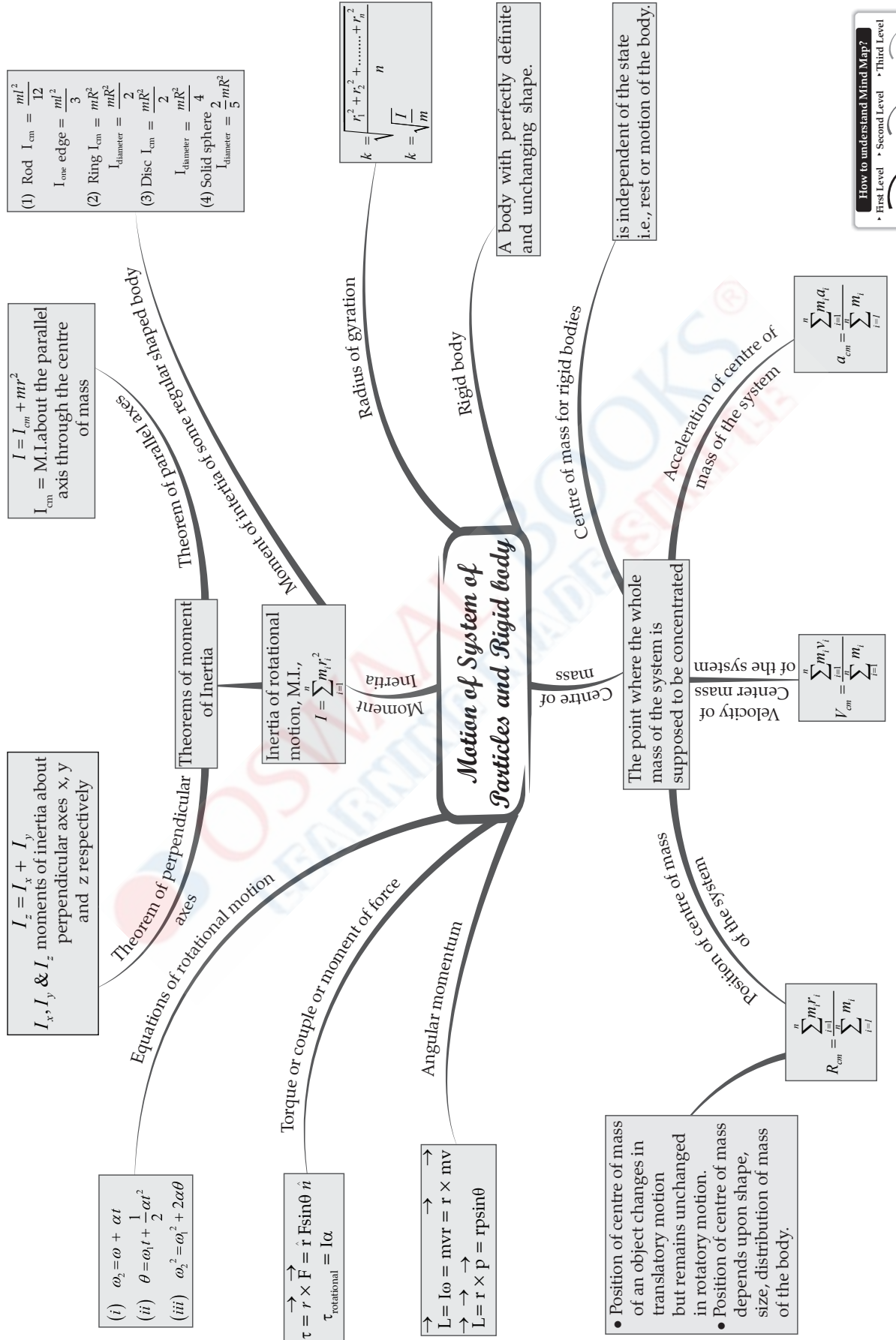




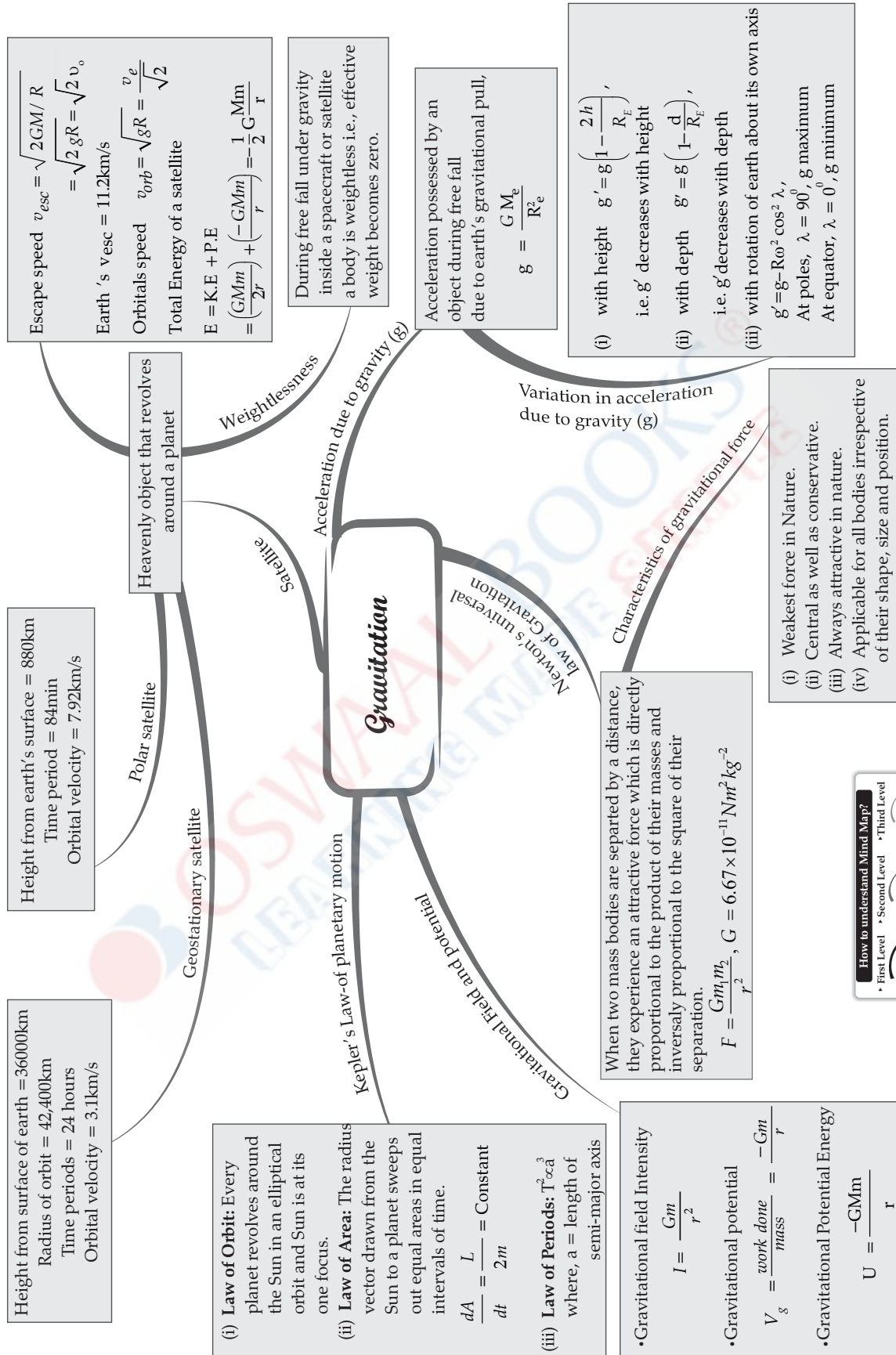
How to understand Mind Map? • First Level • Second Level • Third Level

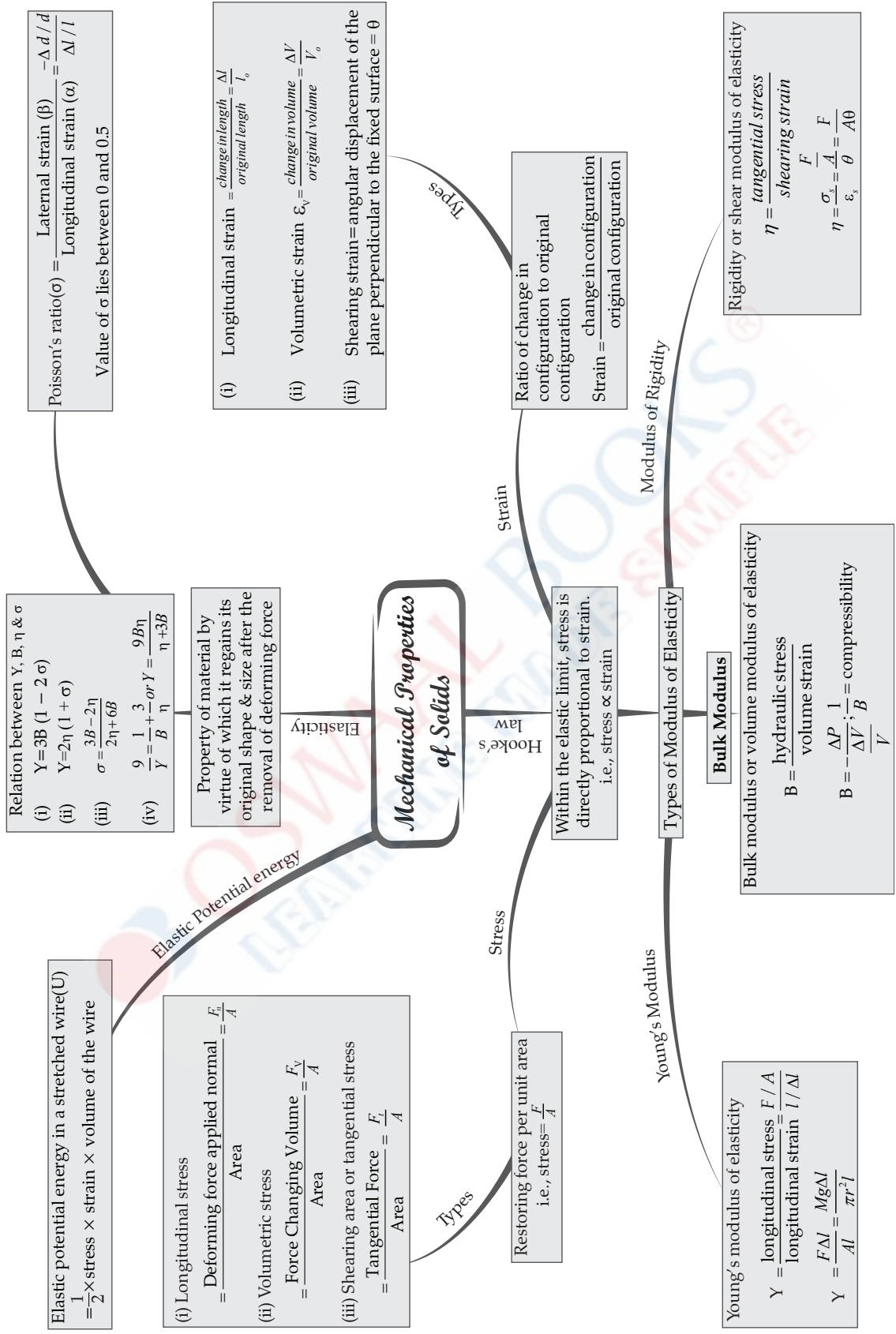


How to understand Mind Map?
 • First Level
 • Second Level
 • Third Level

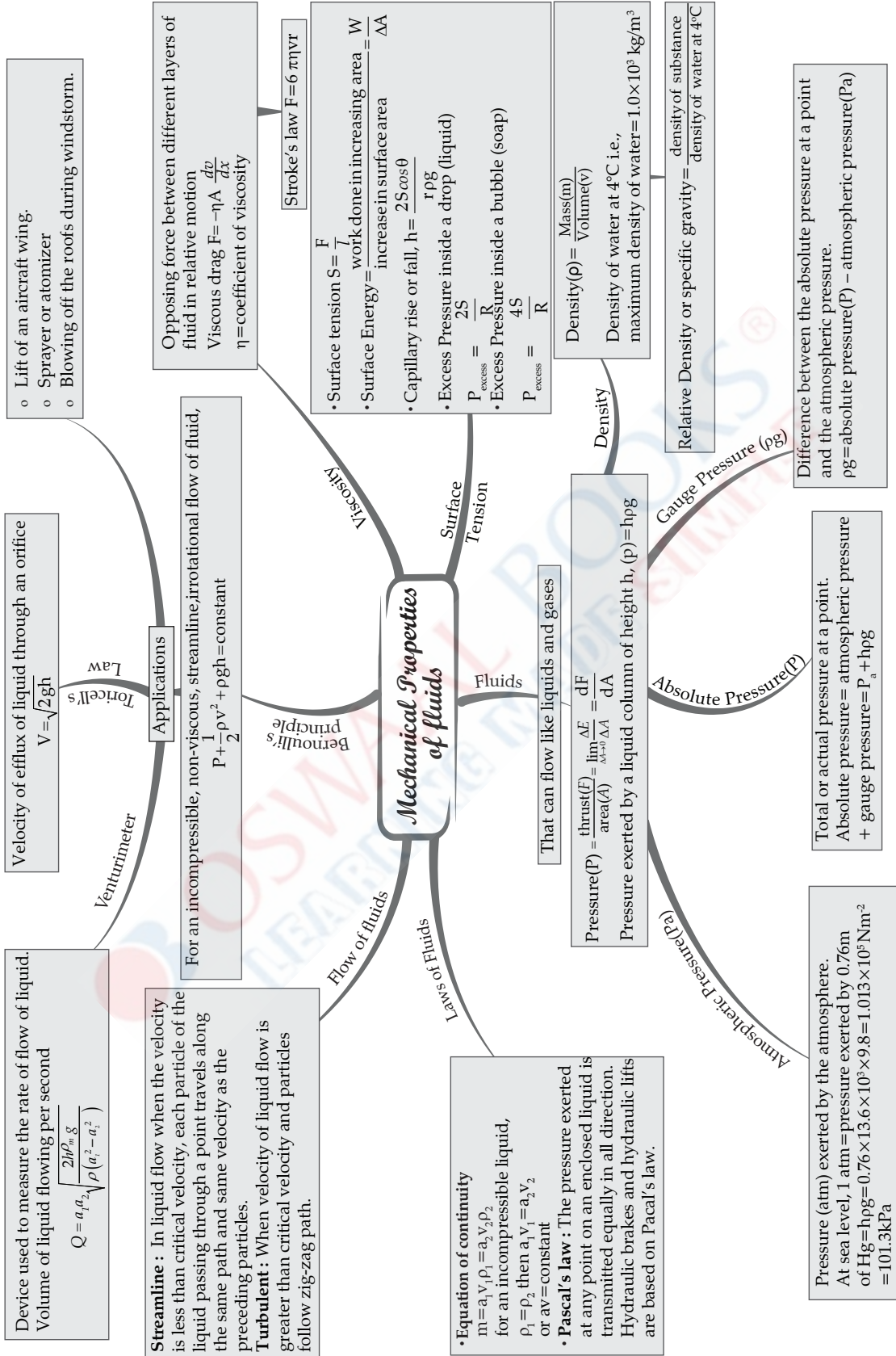


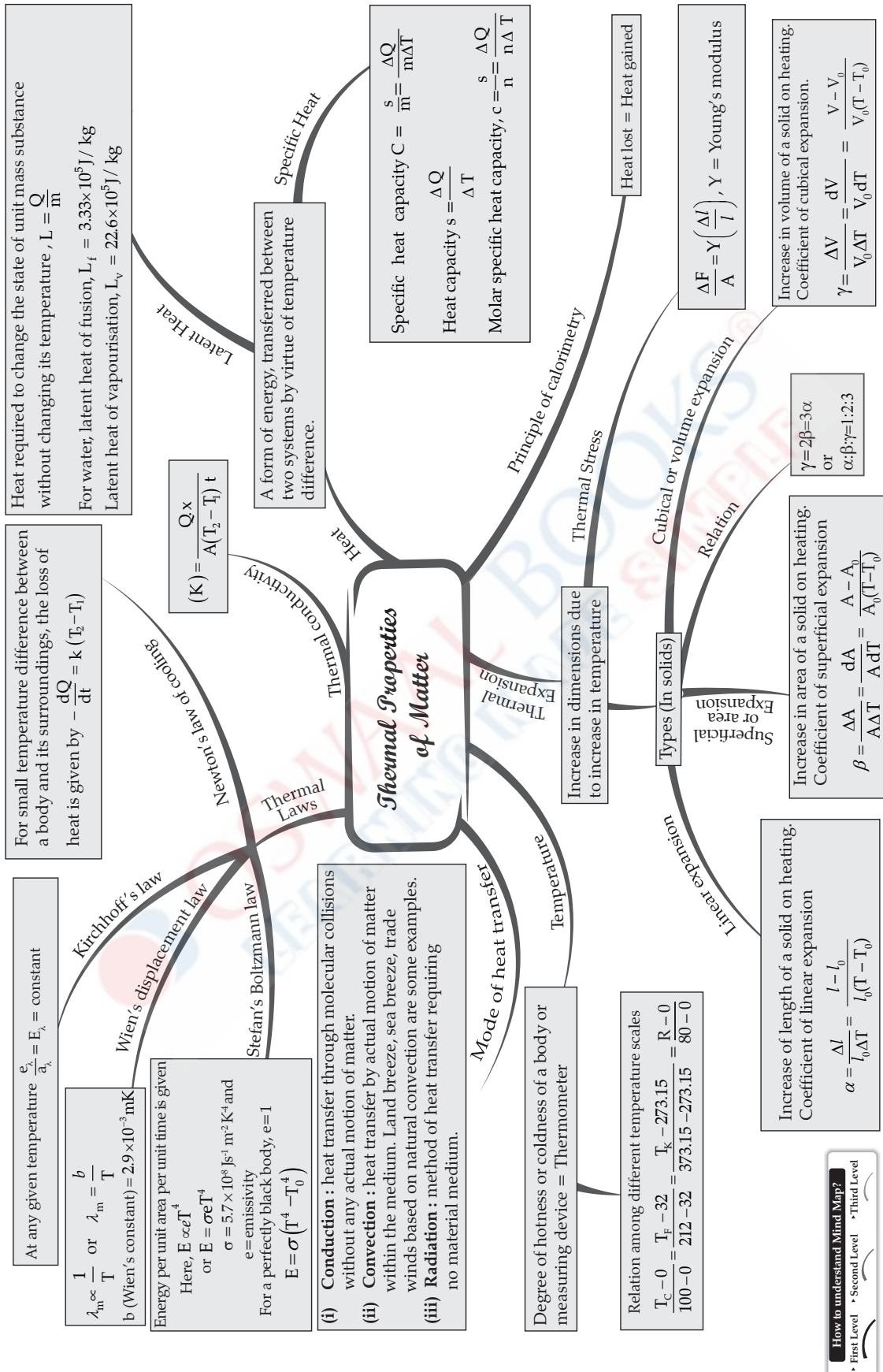
How to understand Mind Map?
 • First Level • Second Level • Third Level



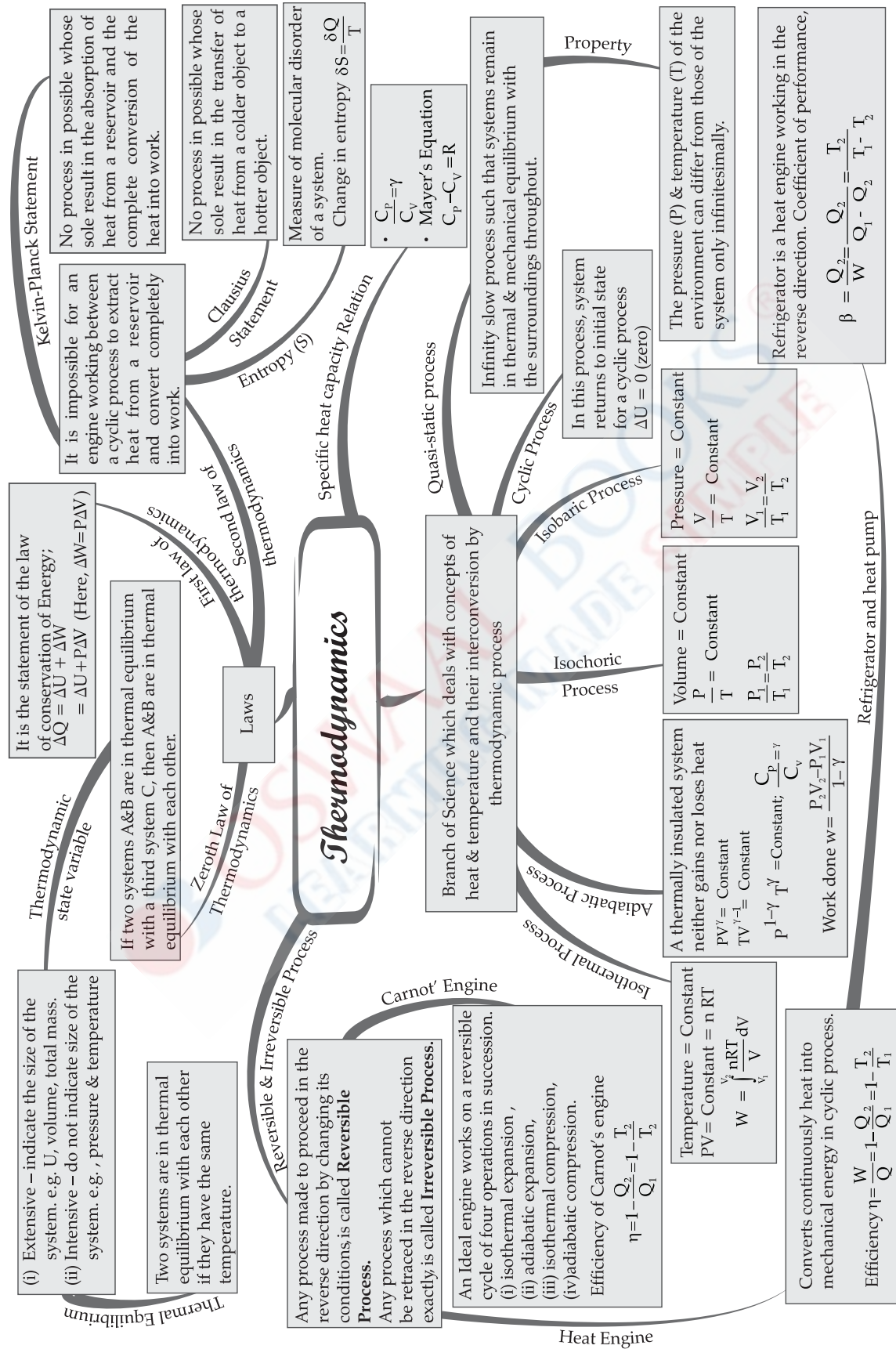


How to understand Mind Map?
 • First Level • Second Level • Third Level

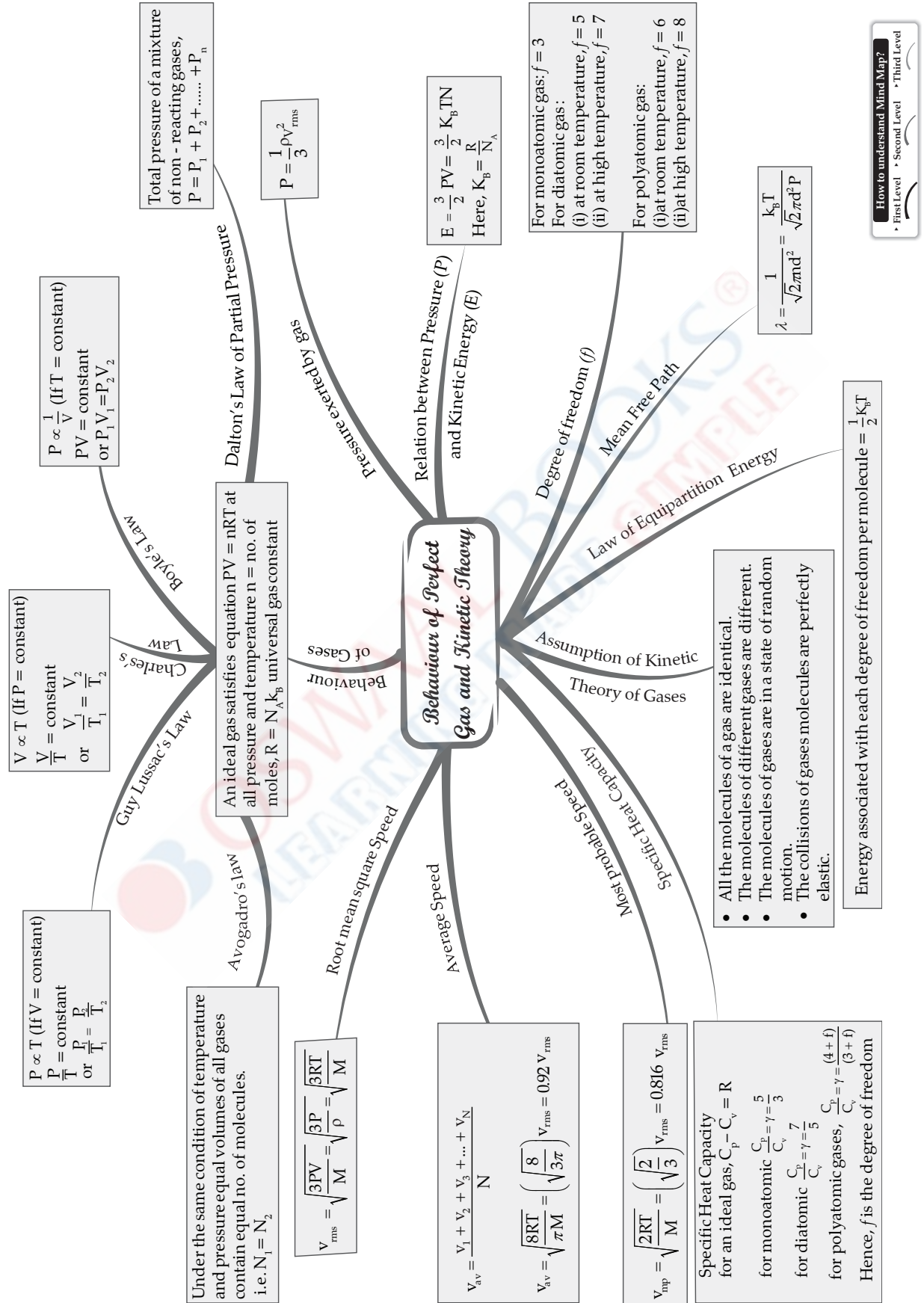


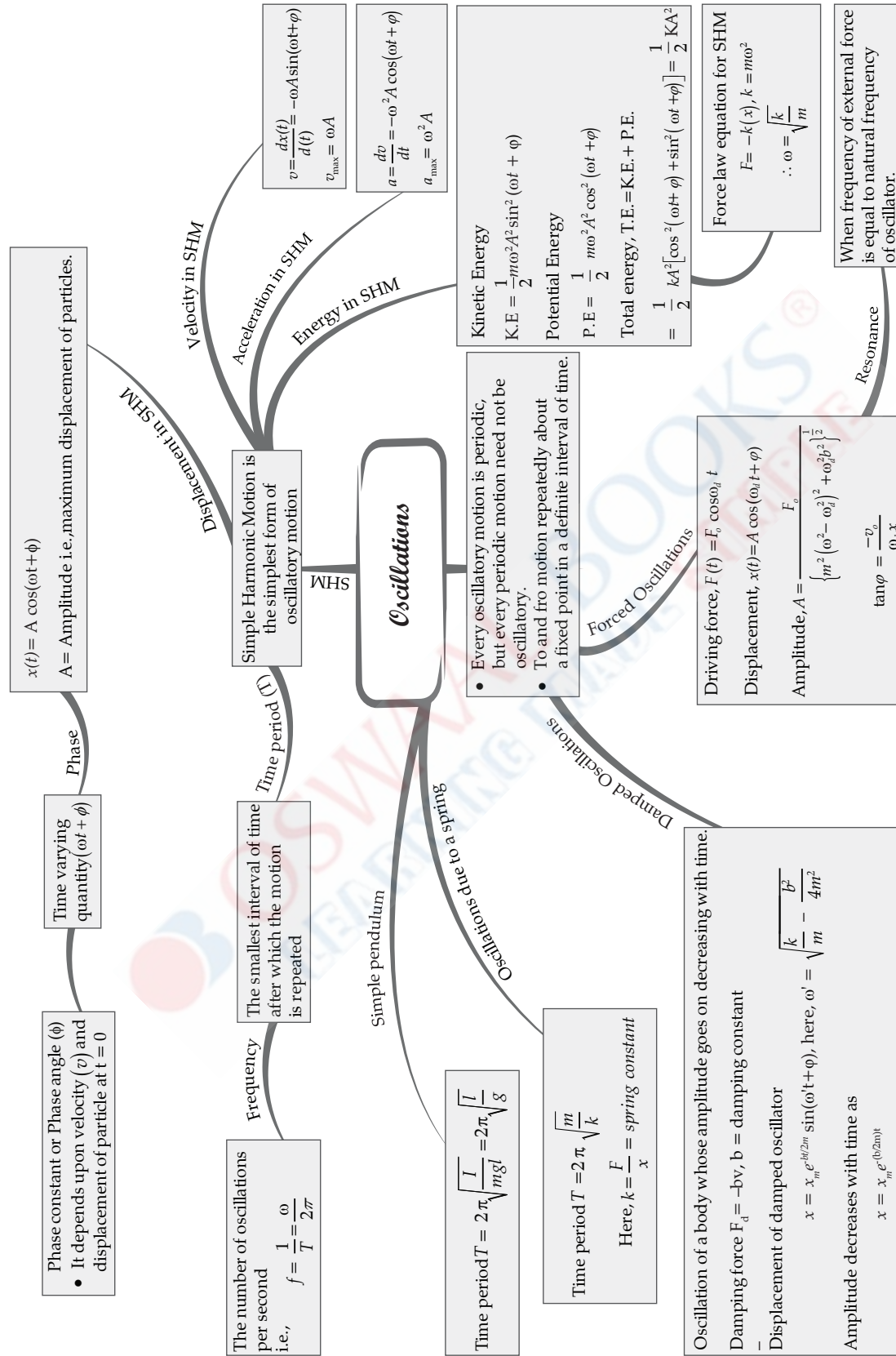


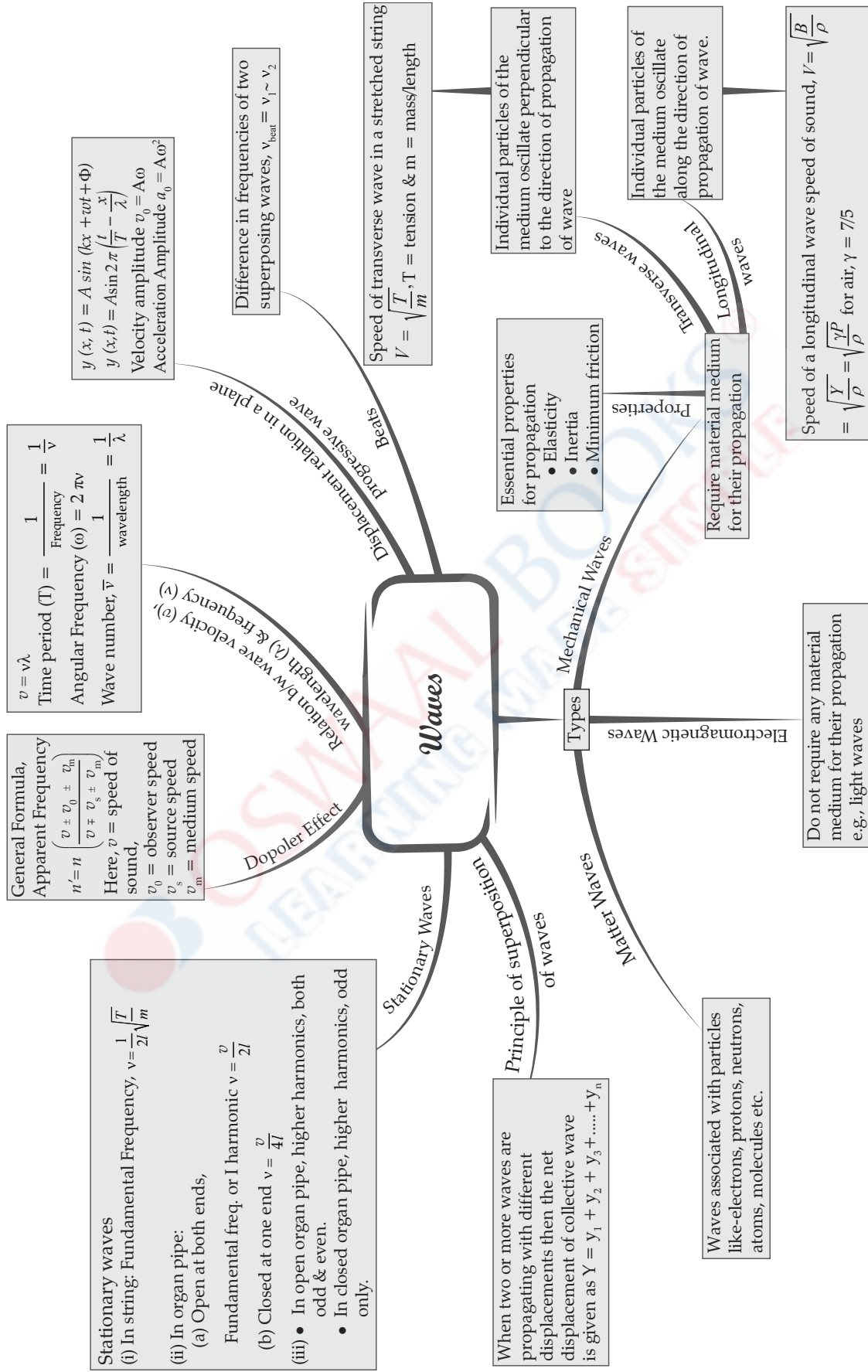
How to understand Mind Map?
 • First Level • Second Level • Third Level

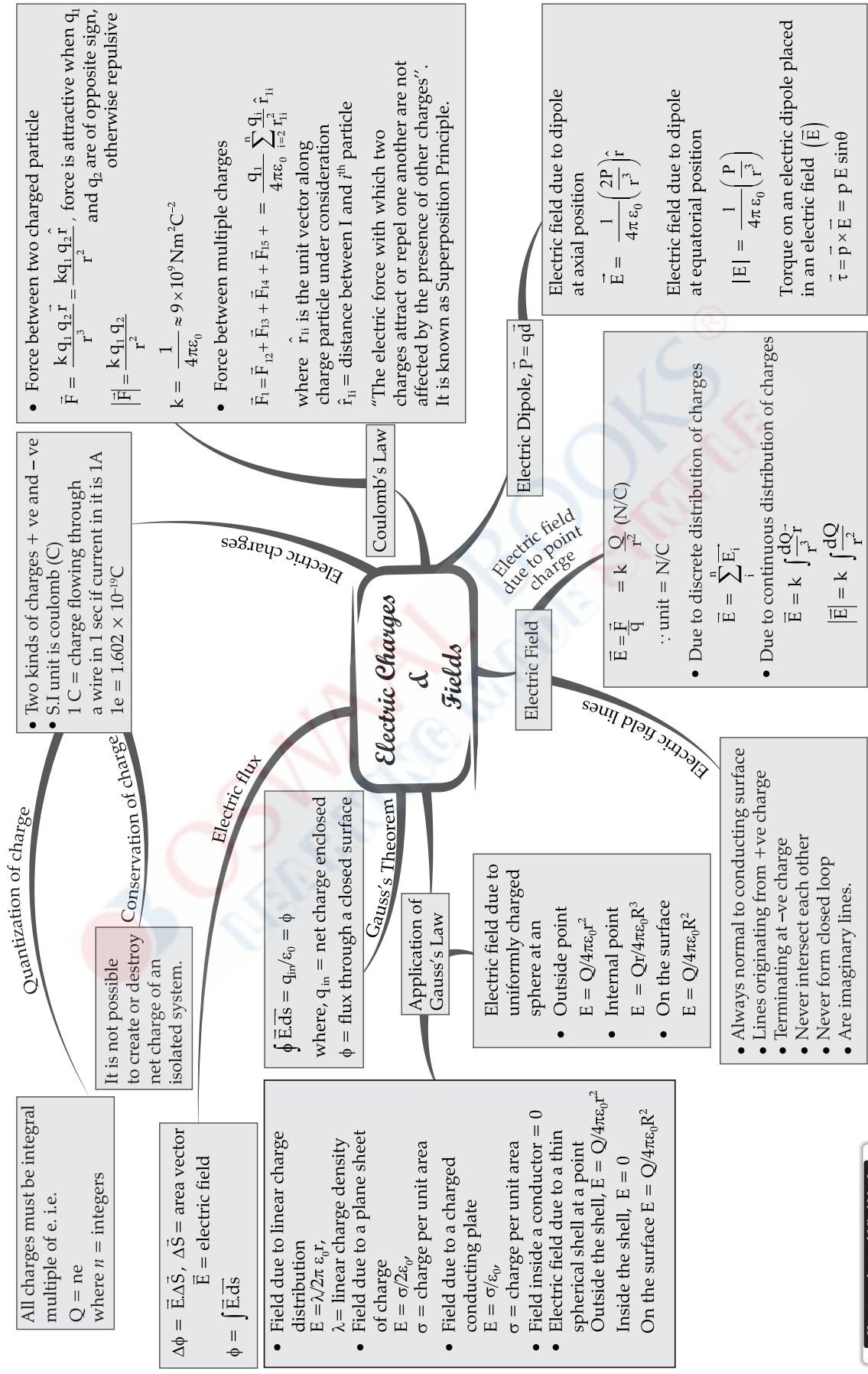


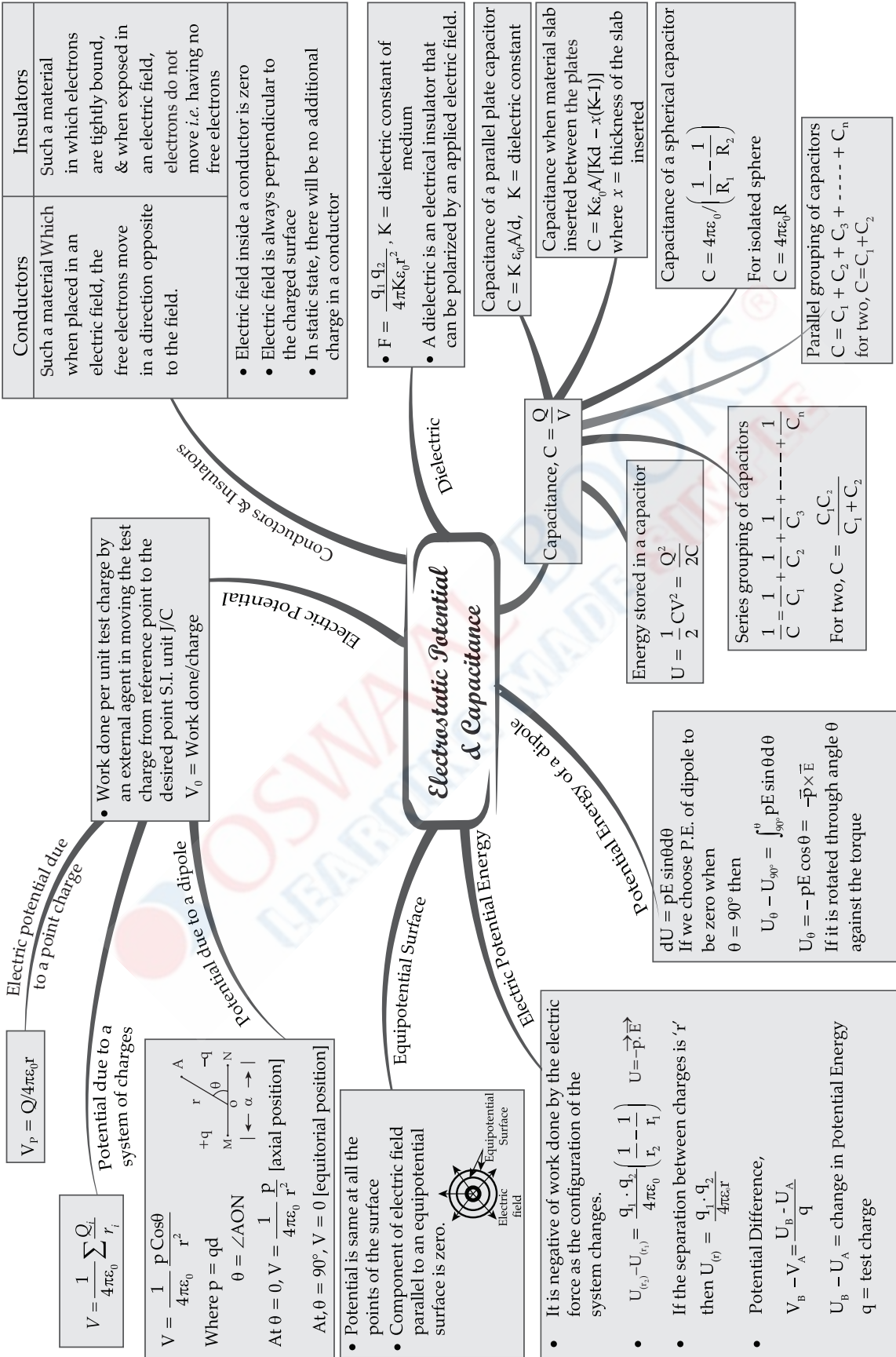
How to understand Mind Map?
 • First Level • Second Level • Third Level

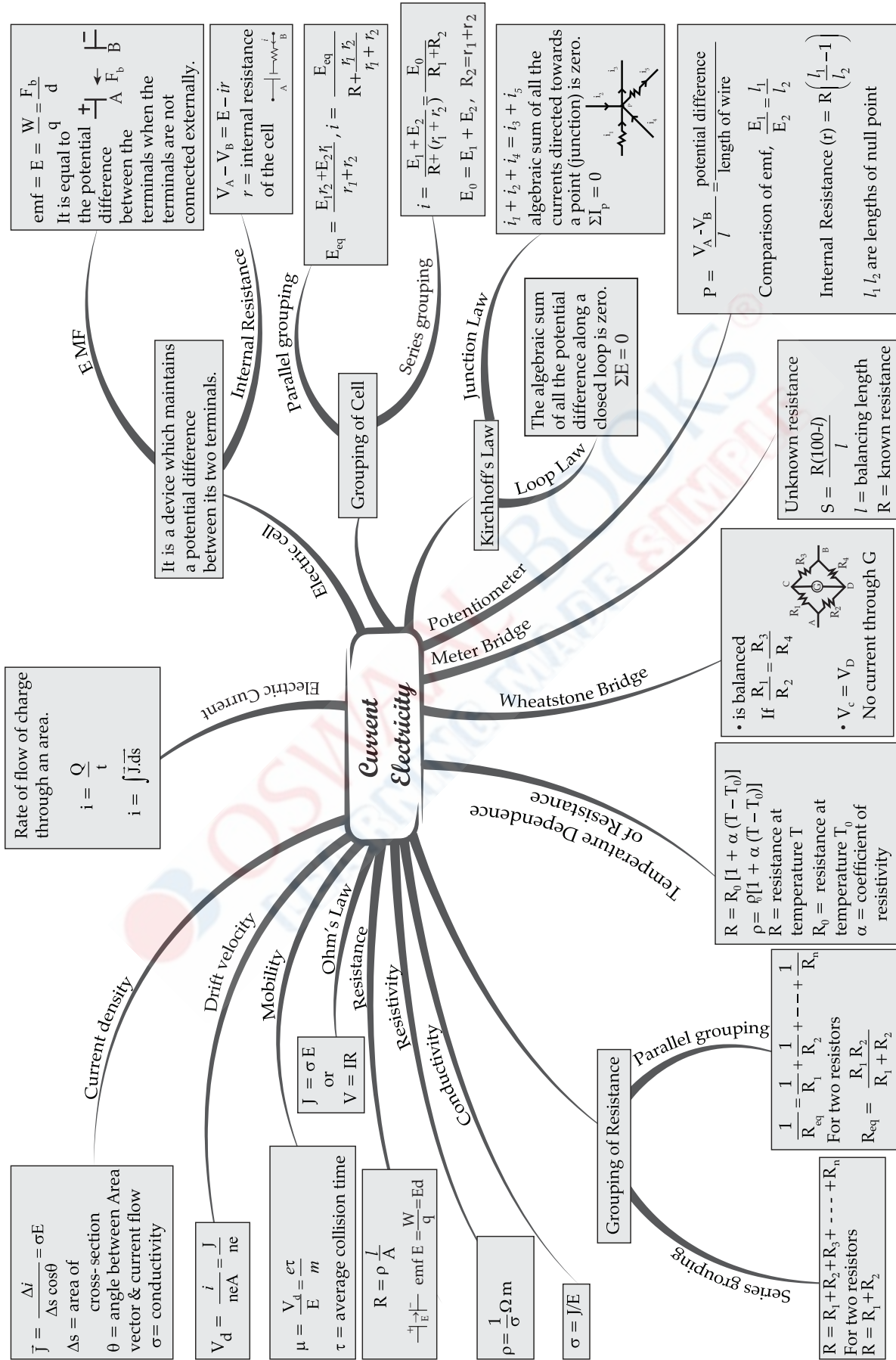




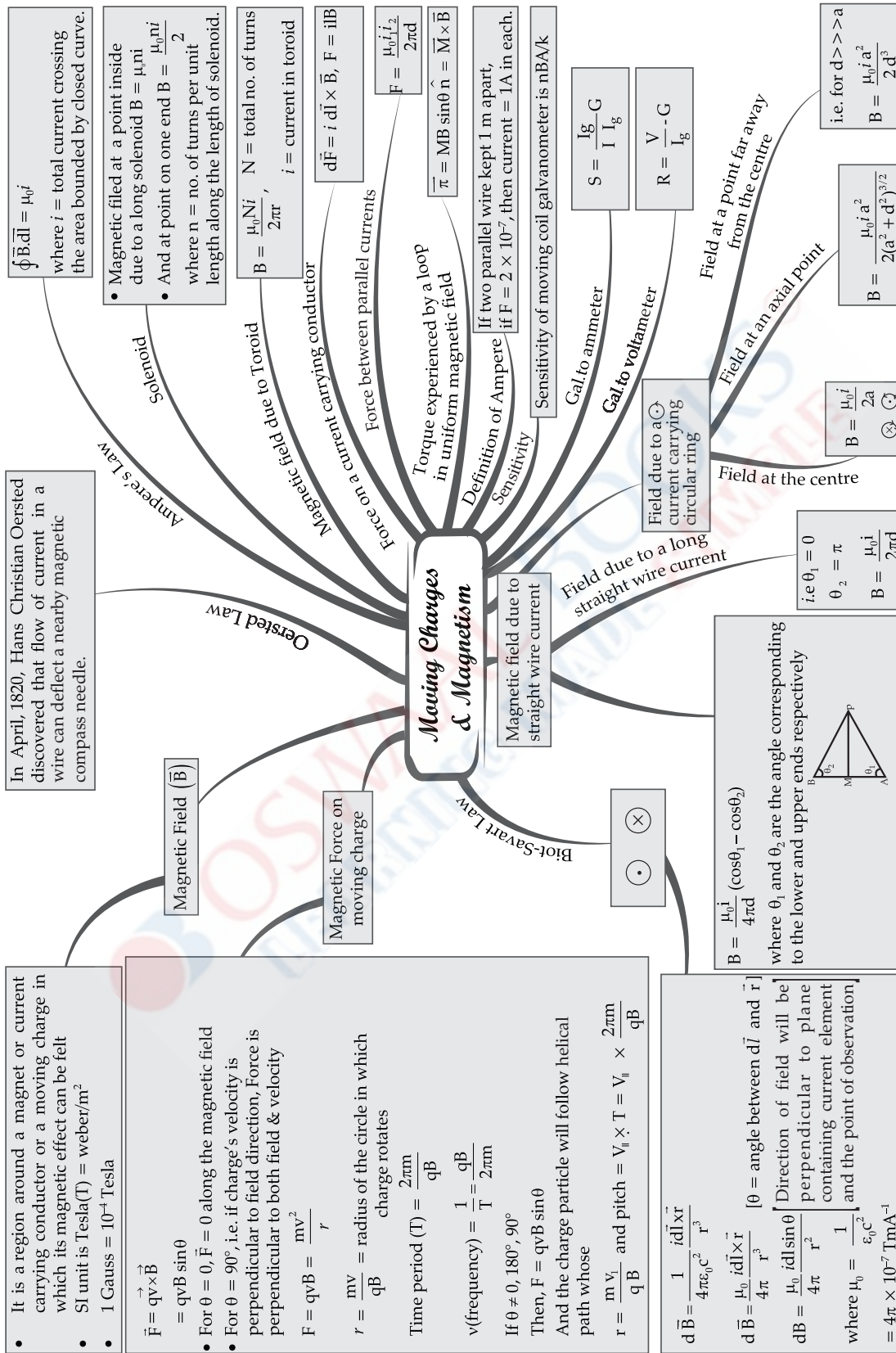








How to understand Mind Map?
 • First Level → Second Level → Third Level



- It is a region around a magnet or current carrying conductor or a moving charge in which its magnetic effect can be felt
- SI unit is Tesla (T) = weber/m²
- 1 Gauss = 10⁻⁴ Tesla

$\vec{F} = q\vec{v} \times \vec{B}$
 $= qvB \sin\theta$

- For $\theta = 0$, $\vec{F} = 0$ along the magnetic field
- For $\theta = 90^\circ$, i.e. if charge's velocity is perpendicular to field direction, Force is perpendicular to both field & velocity
- $F = qvB = \frac{mv^2}{r}$
- $r = \frac{mv}{qB}$ = radius of the circle in which charge rotates
- Time period (T) = $\frac{2\pi m}{qB}$
- $v(\text{frequency}) = \frac{1}{T} = \frac{qB}{2\pi m}$
- If $\theta \neq 0, 180^\circ, 90^\circ$
- Then, $F = qvB \sin\theta$
- And the charge particle will follow helical path whose
- $r = \frac{m v_{\perp}}{qB}$ and pitch = $V_{\parallel} \times T = V_{\parallel} \times \frac{2\pi m}{qB}$

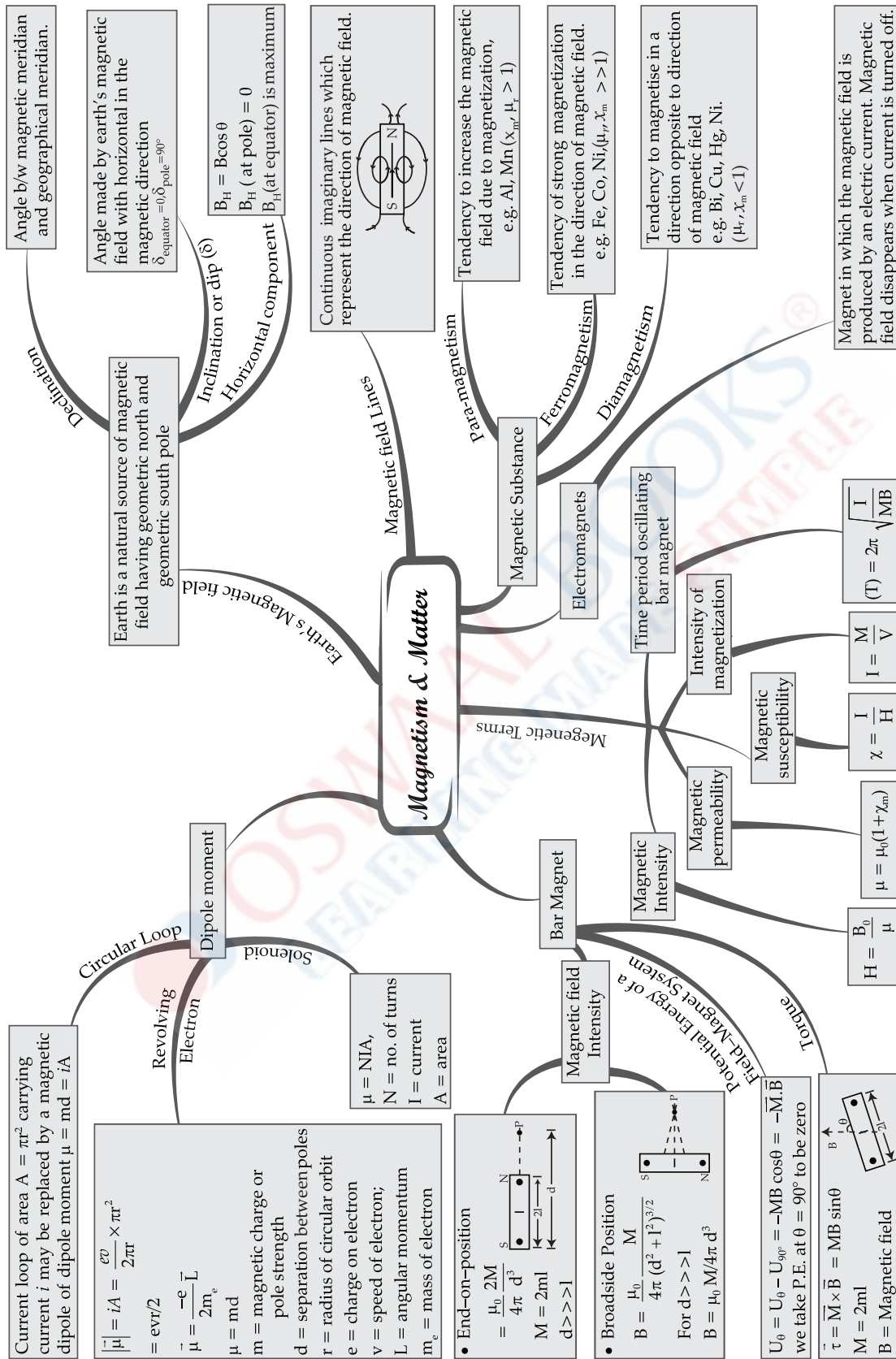
$d\vec{B} = \frac{1}{4\pi\epsilon_0 c^2} \frac{i d\vec{l} \times \vec{r}}{r^3}$

$d\vec{B} = \frac{\mu_0}{4\pi} \frac{i d\vec{l} \times \vec{r}}{r^3}$ [θ = angle between $d\vec{l}$ and \vec{r}]

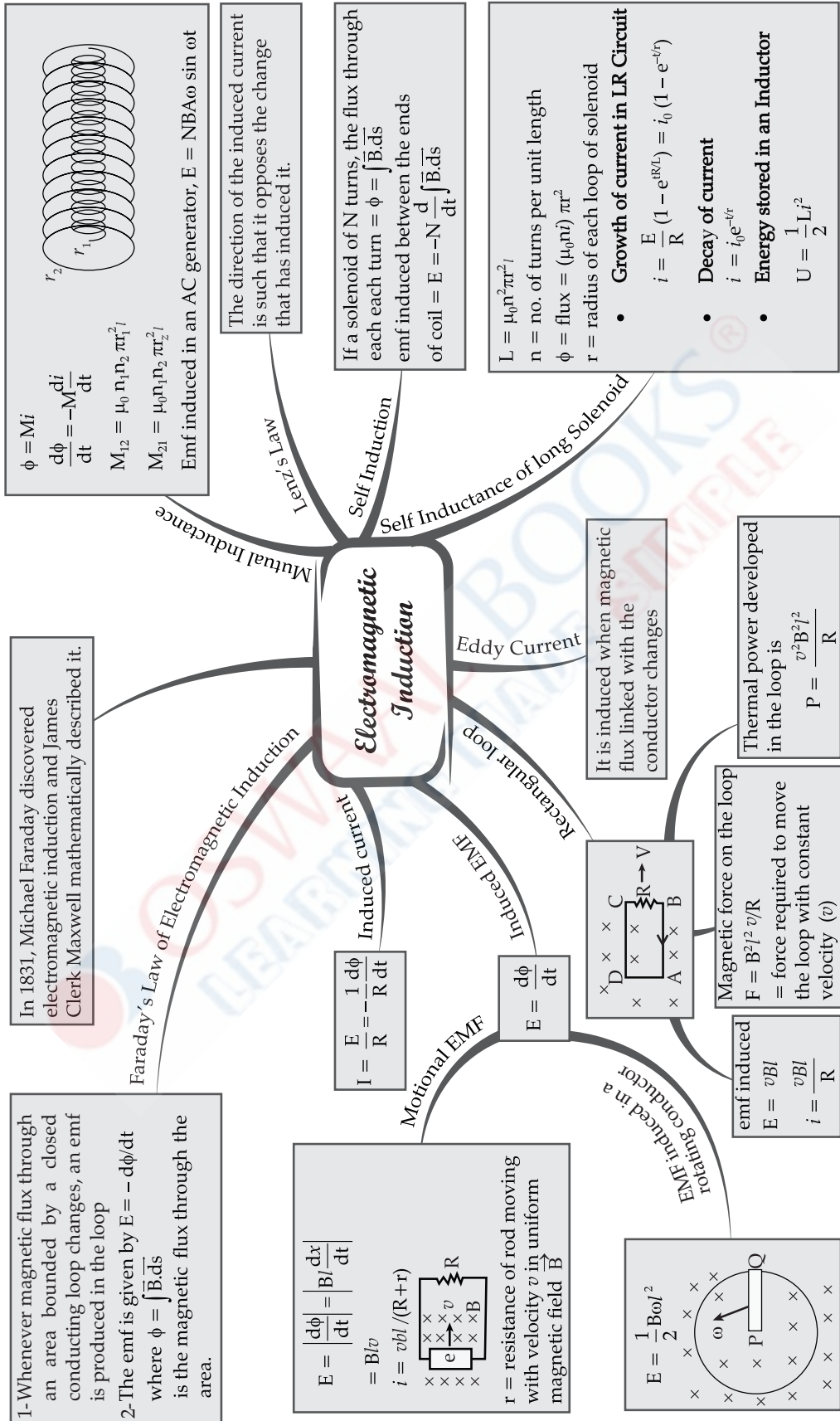
$dB = \frac{\mu_0 i dl \sin\theta}{4\pi r^2}$ [Direction of field will be perpendicular to plane containing current element and the point of observation]

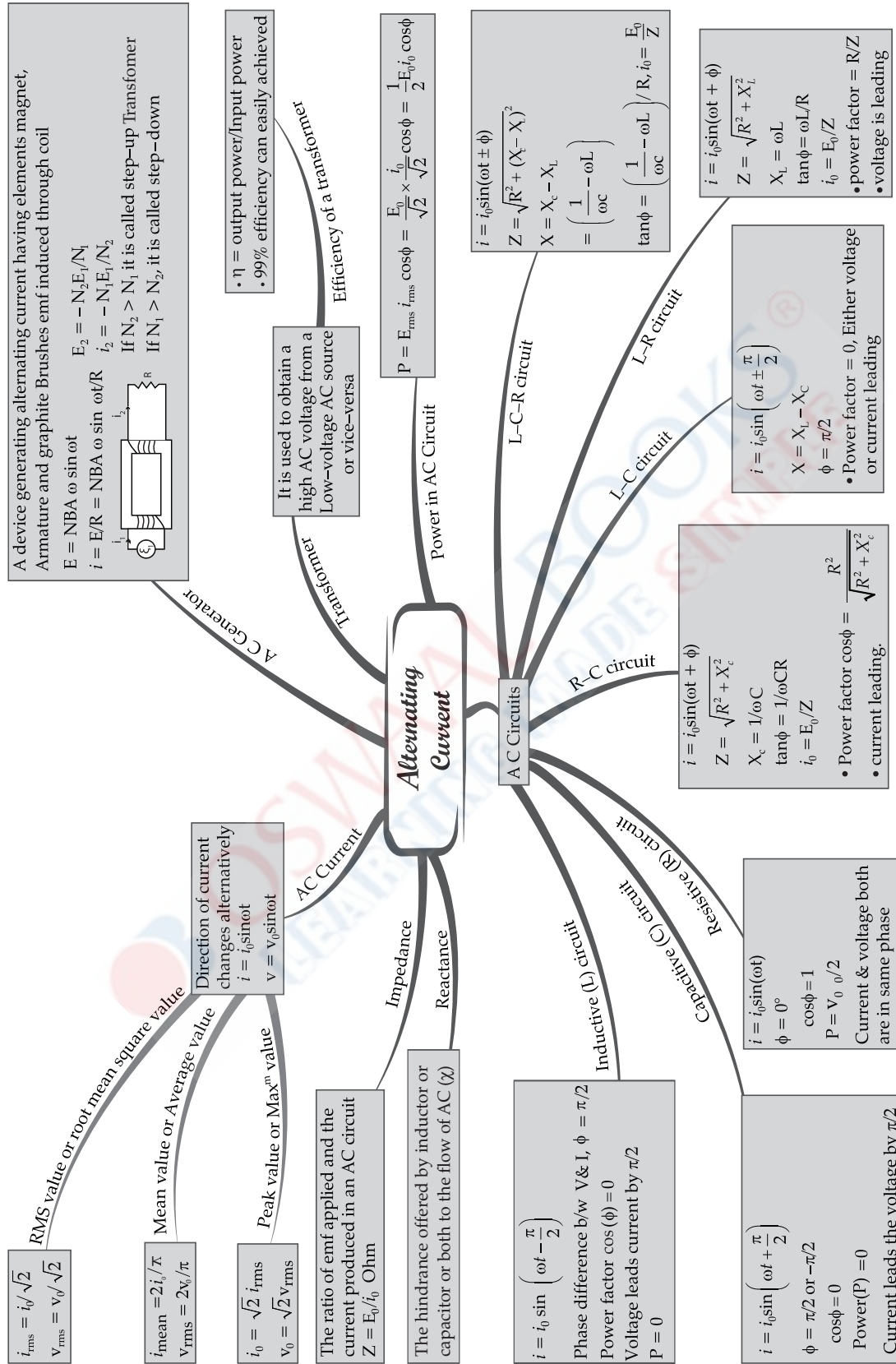
where $\mu_0 = \frac{1}{\epsilon_0 c^2}$
 $= 4\pi \times 10^{-7} \text{ TmA}^{-1}$

How to understand Mind Map?
 • First Level • Second Level • Third Level

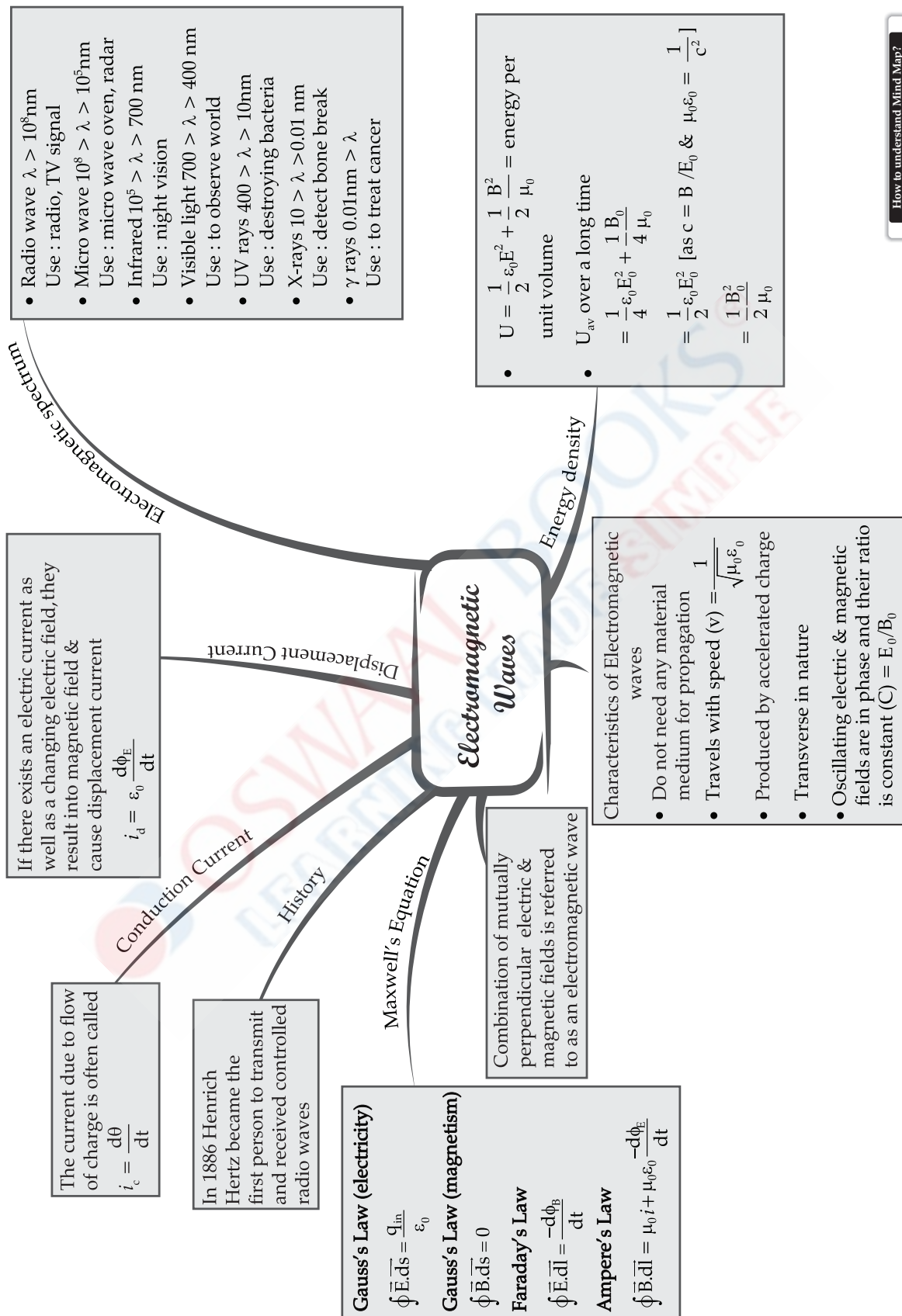


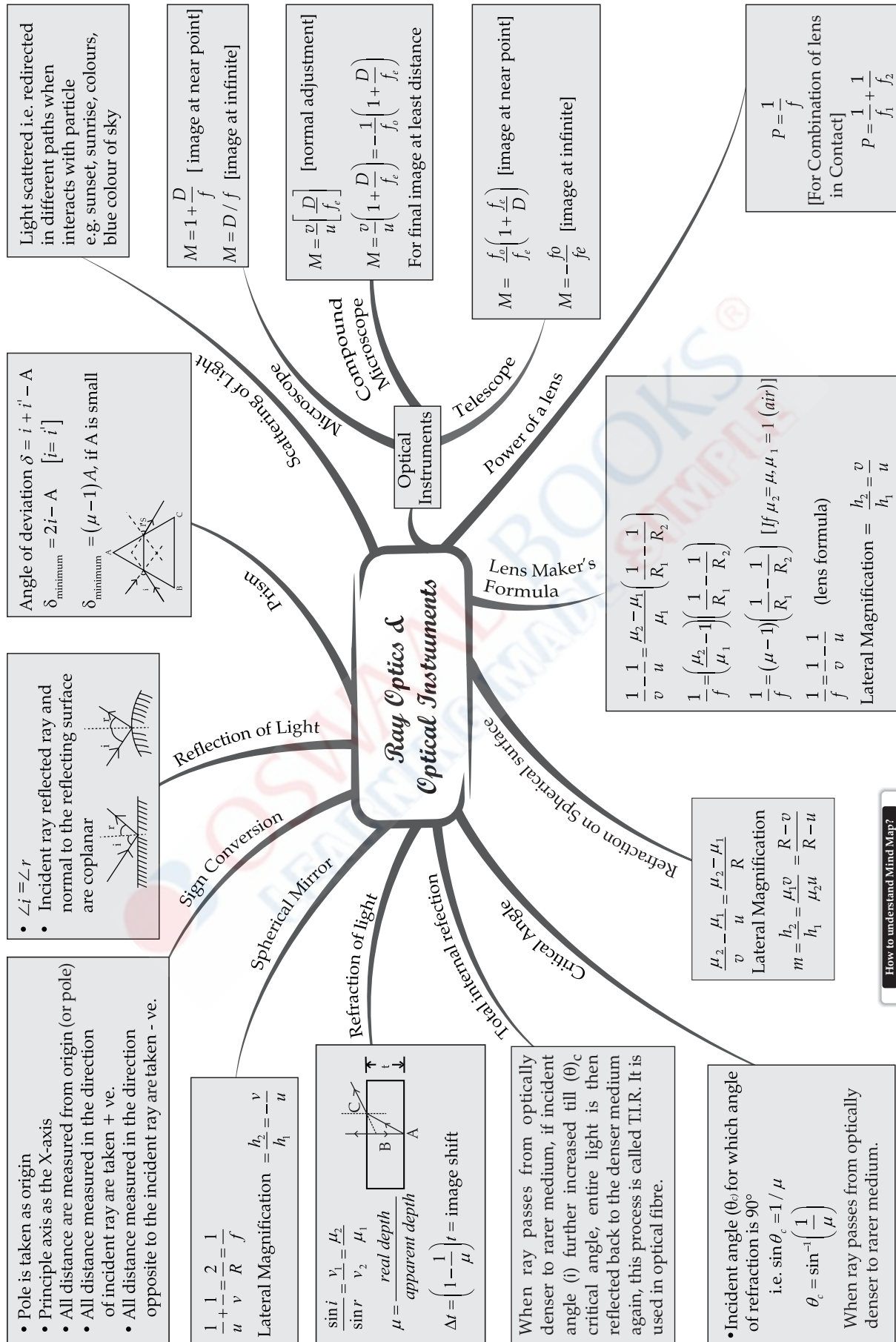
How to understand Mind Map?
 • First Level • Second Level • Third Level



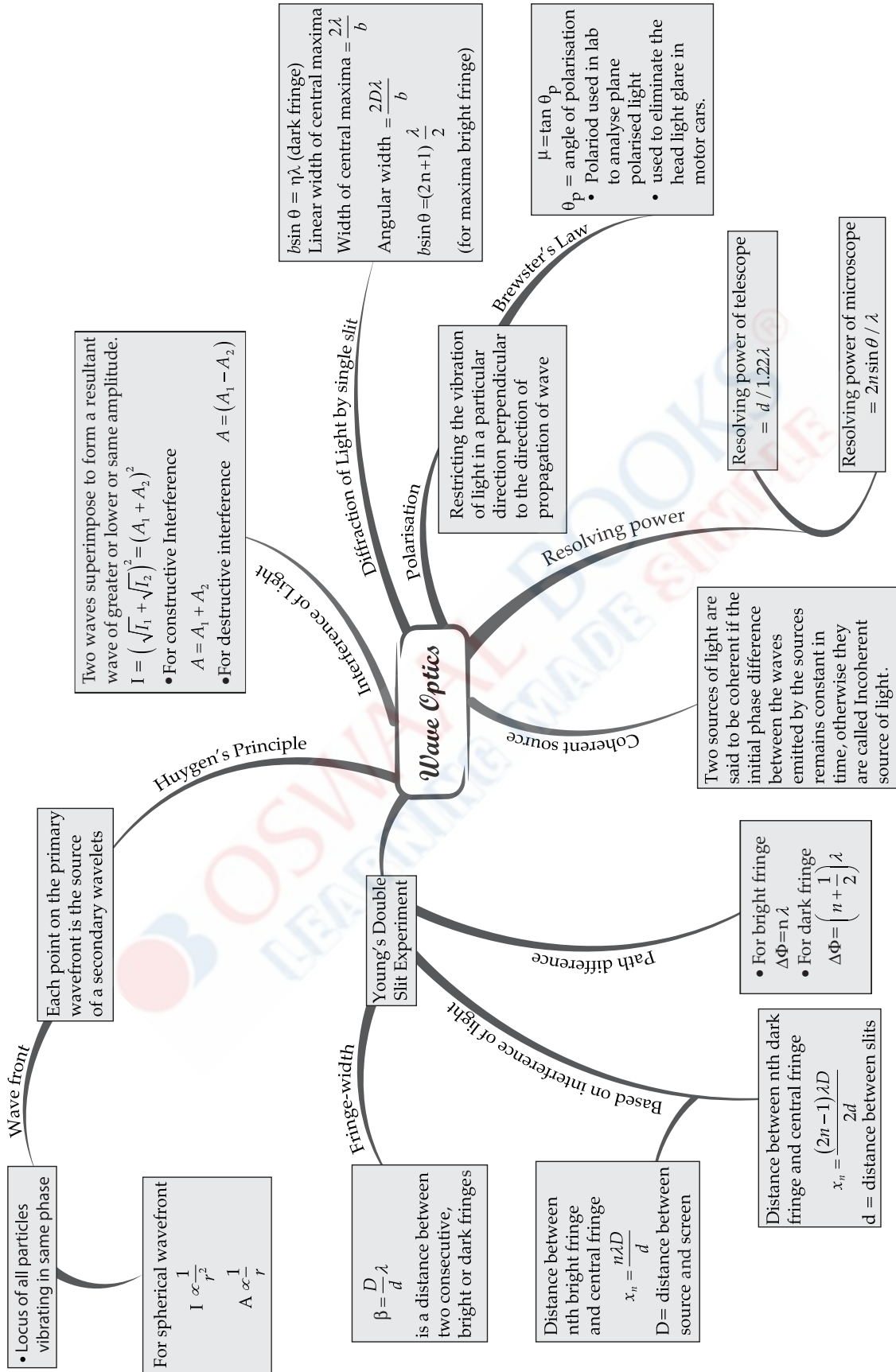


How to understand Mind Map?
 • First Level • Second Level • Third Level

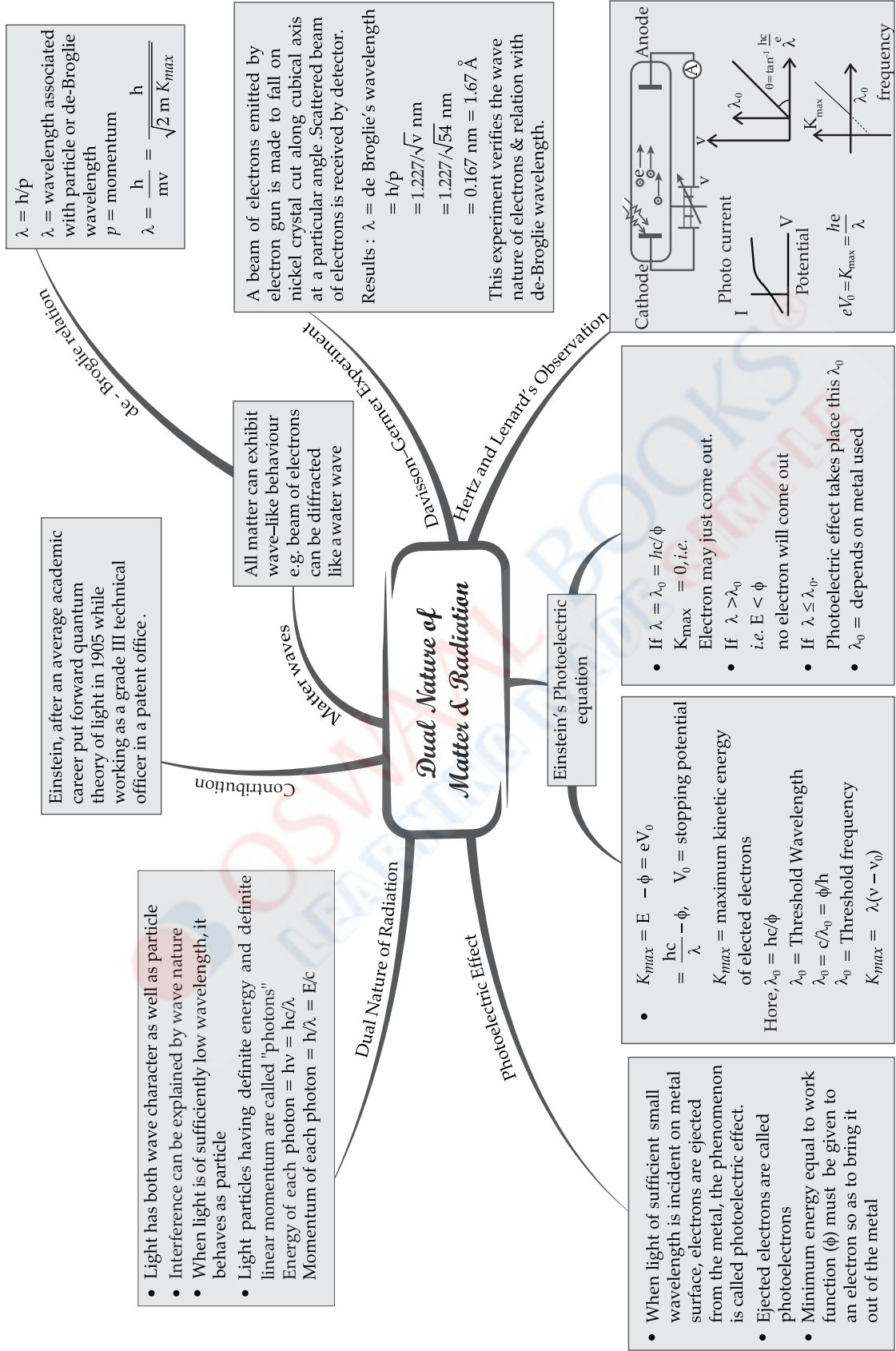




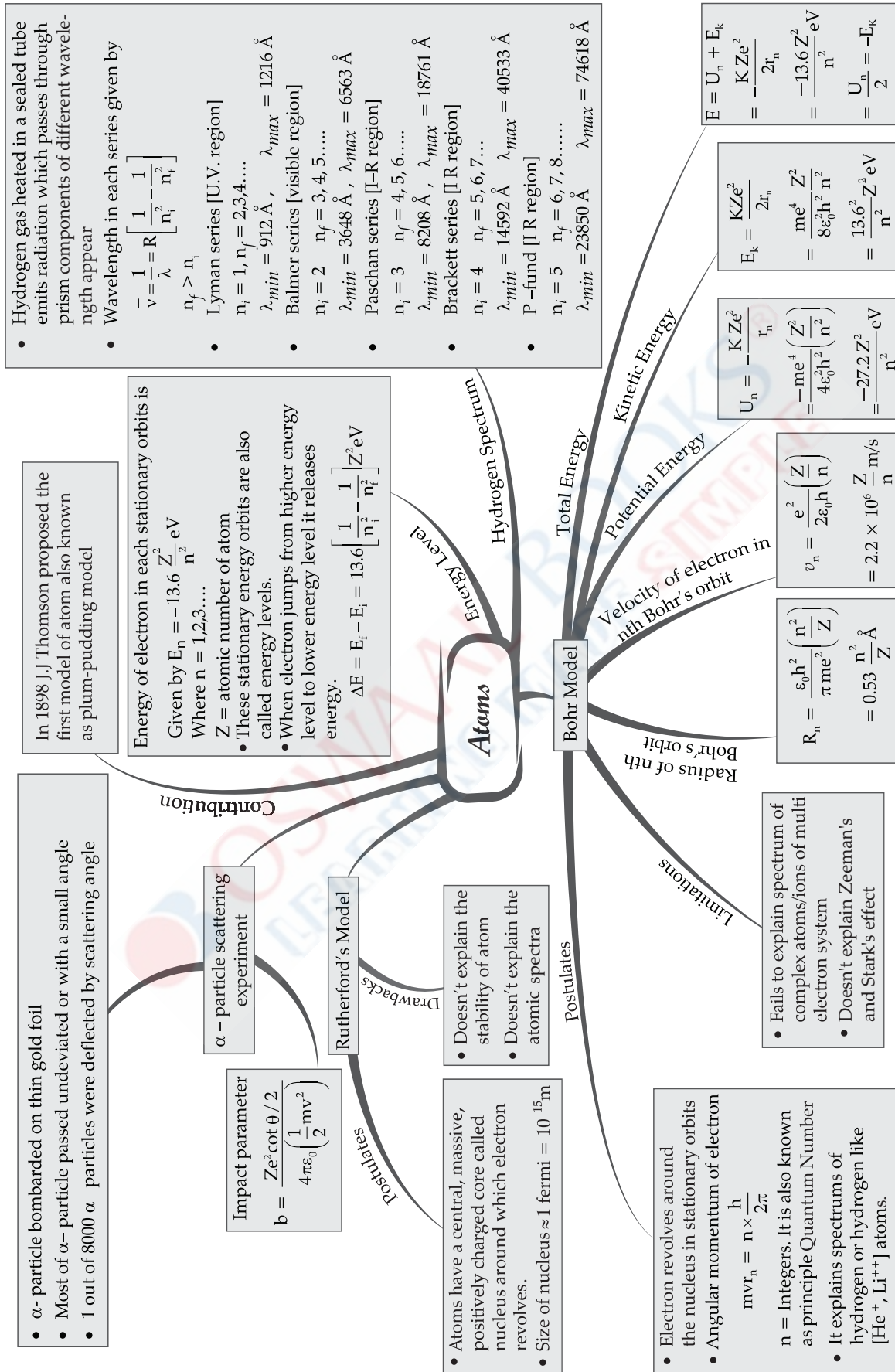
How to understand Mind Map?
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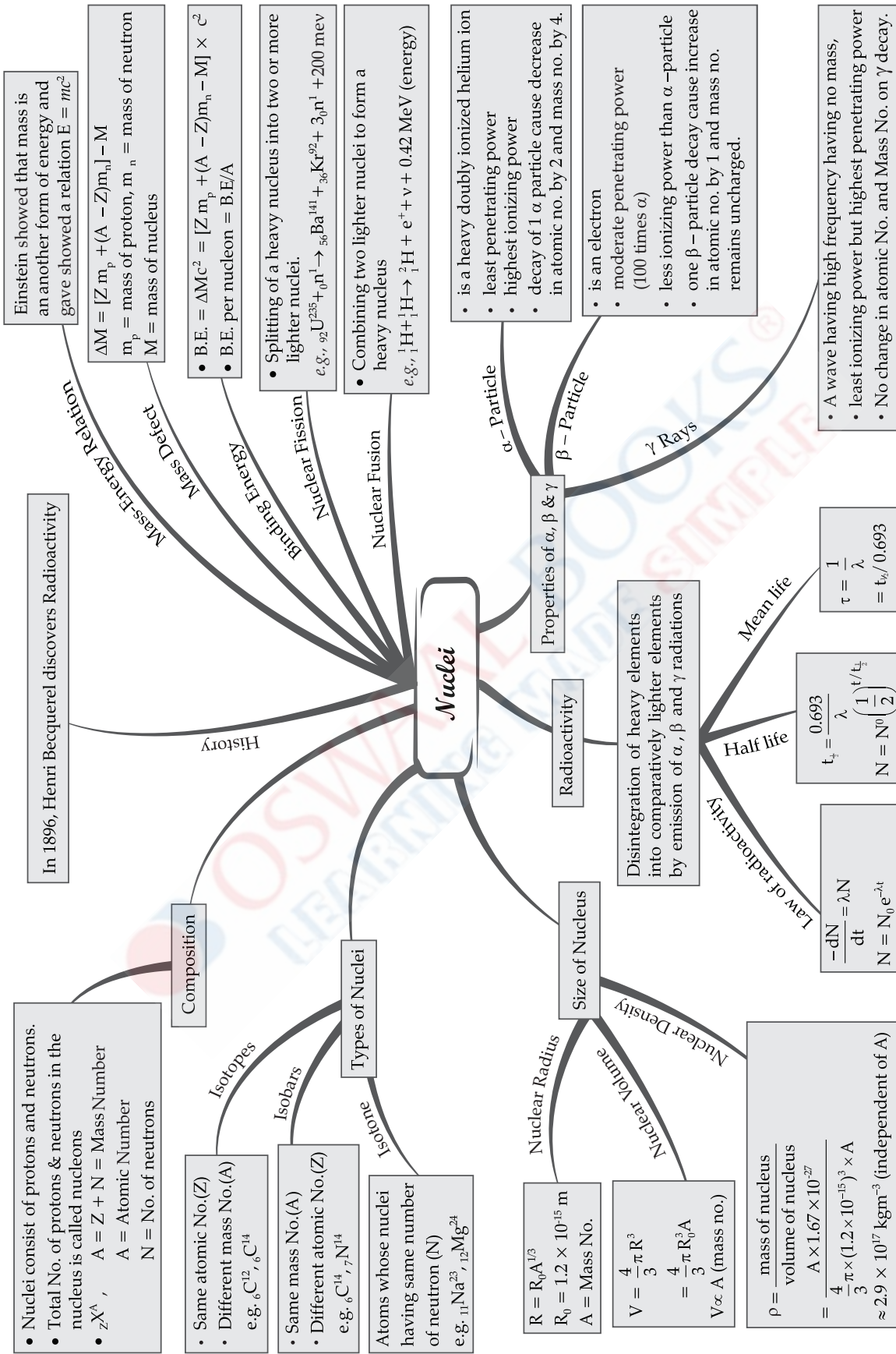
How to understand Mind Map?
 • First Level • Second Level • Third Level



How to understand Mind Map?
 • First Level • Second Level • Third Level



How to understand Mind Map?
 • First Level • Second Level • Third Level



How to understand Mind Map?
 • First Level • Second Level • Third Level

