**What are waves?**

Waves are produced when a medium is disturbed. For example, we can produce a wave by flicking a string or a **slinky spring**.

* Waves transmit energy without transferring matter

**Terminology of waves**

Crest

Trough

Direction of oscillation

wavelength

Amplitude

Equilibrium position

Direction of travel of the wave

* **Crest** – The point on a wave with the maximum upward displacement, i.e. the highest point in a cycle.
* **Trough** – The point on a wave with the maximum downward displacement, i.e. the lowest point in a cycle.
* **Equilibrium position** – The original position of the particles when no wave is passing through the medium.
* **Amplitude *A* –** maximum magnitude of displacement of an oscillating particle from its equilibrium position.
* **Wavelength λ–** minimum distance a wave repeats itself.
* **Frequency *f* –** number of waves produced in 1 s ; unit : Hz
* **Period *T*** – time required to produce one complete wave.
* **Wave speed** ***v* –** distance travelled by a wave per unit time.