SEISMIC WAVES

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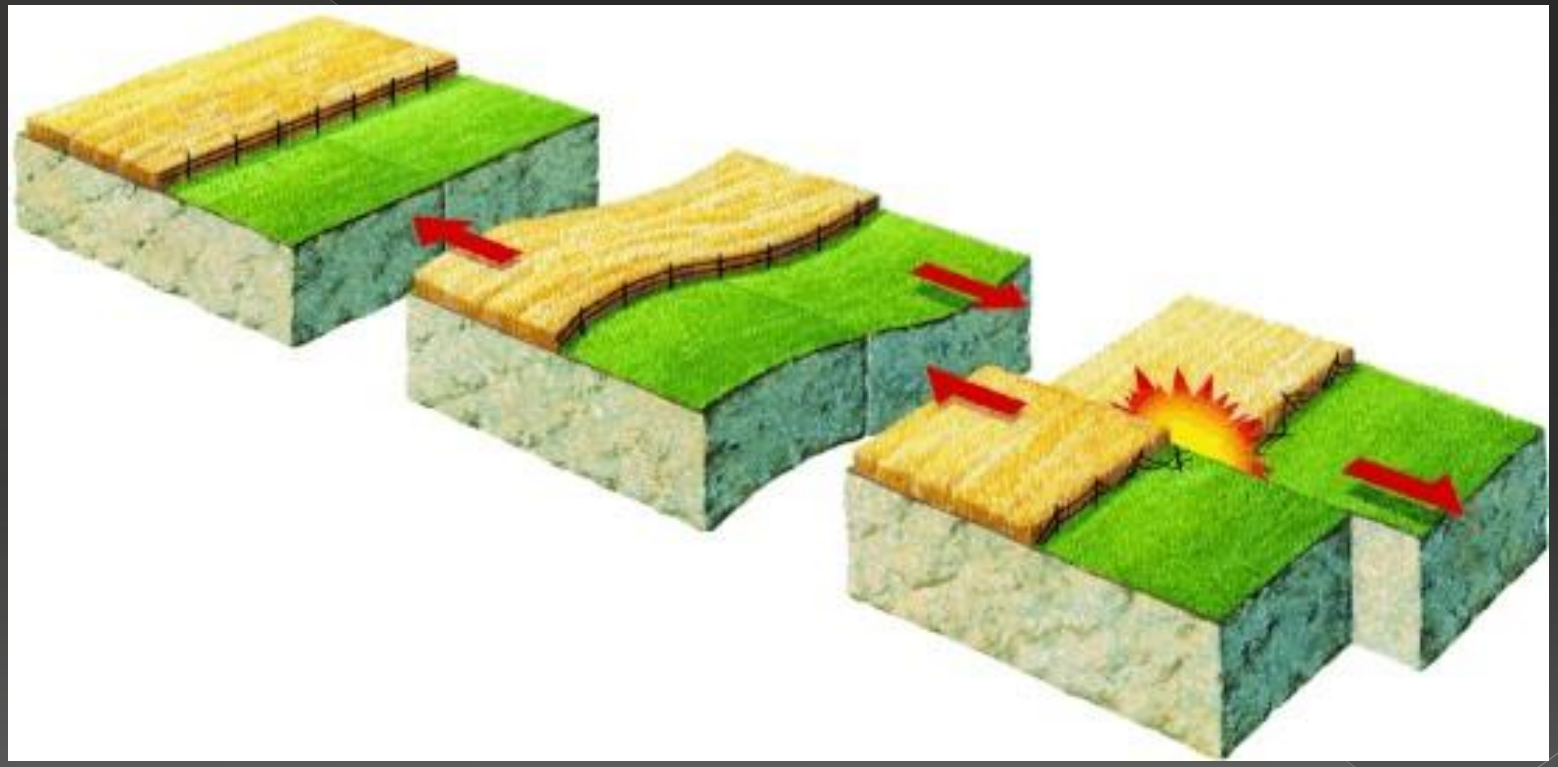
What is an earthquake

- An earthquake is a shaking of the ground which occurs when the tectonic plates slide past each other or collide against each other.

Movement of tectonic plates

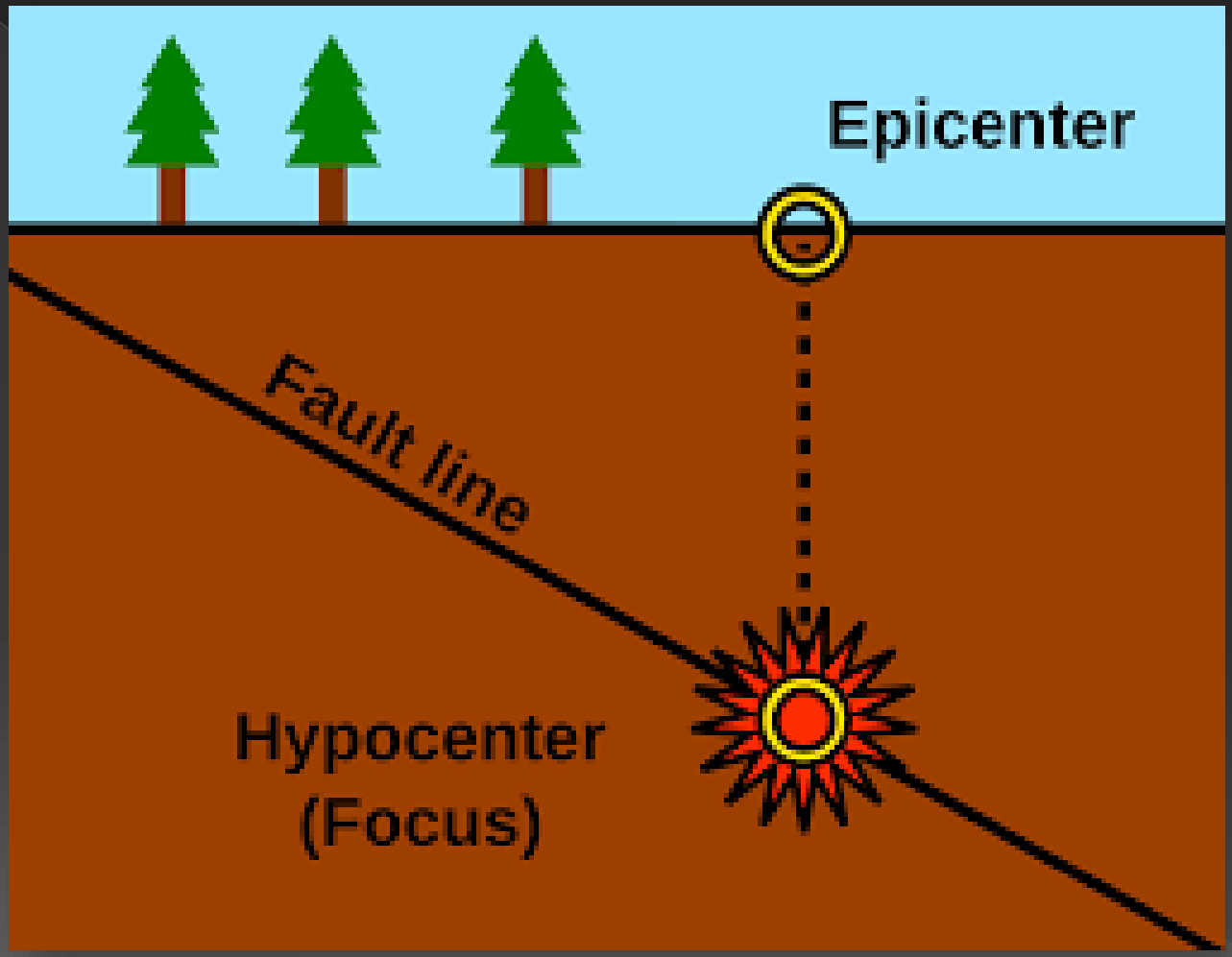


Definitions

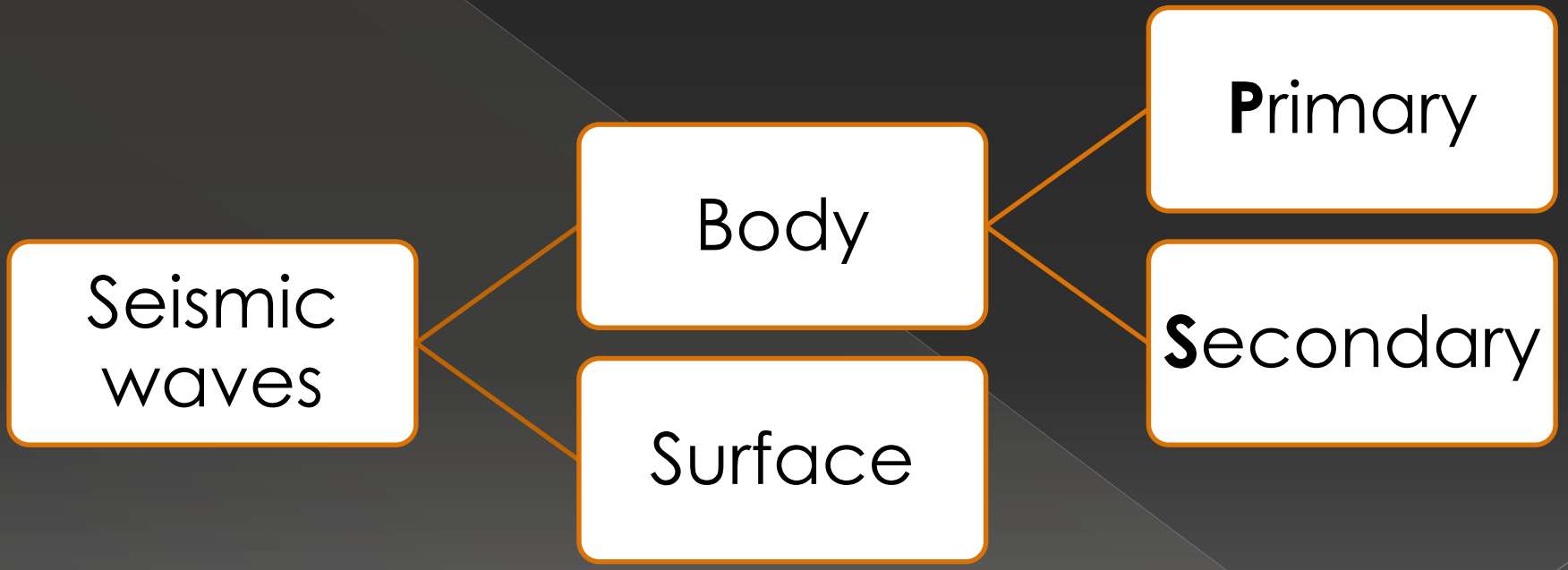
- **Fault or fault plane** = the surface where when two blocks of the earth suddenly slip past one another

  Hypocenter = the location below the earth's surface where the earthquake starts

  Epicenter = the location on the surface of the earth directly above the hypocenter


Epicenter
Fault line
Hypocenter
(Focus)

Categories of seismic waves



Differences between the waves

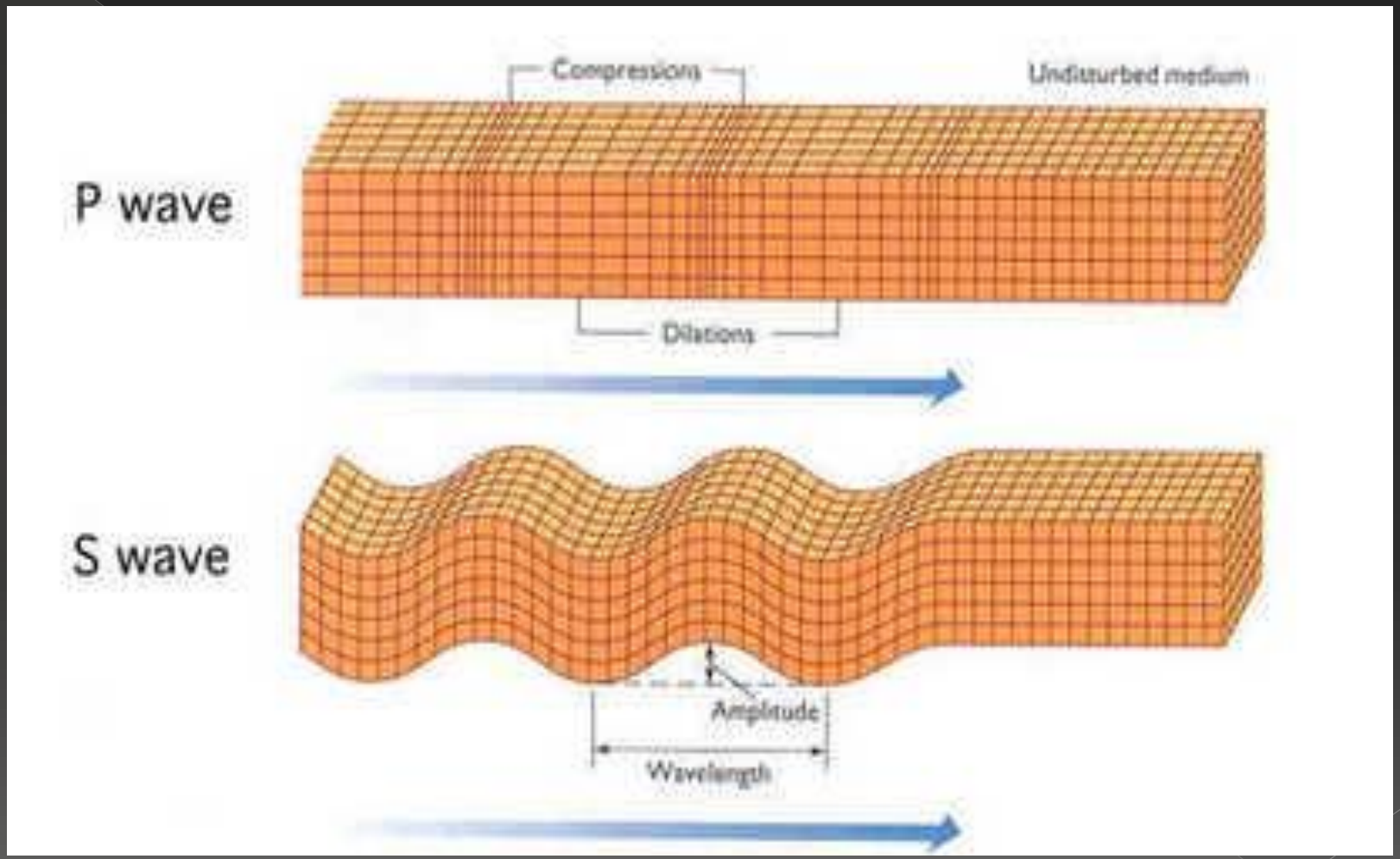
- Body waves travel through the interior of the Earth. On the other hand, surface waves propagate only at the interface between two different media, like the interface between Earth and atmosphere (i.e. the surface of the Earth).

P-waves

- Travel back and forth (compressional)
- Travel through solids, liquids and gases
- Fastest

S-waves

- Travel side to side (transverse)
- Travel only trough solids
- Slower


P wave
Compressions
Undisturbed medium
Dilations
S wave
Amplitude
Wavelength

Sources

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