Earthquake Characteristics

Earthquakes

- **Earthquakes** are sudden ground movements caused by the release of energy by rocks. This energy is transmitted by seismic waves.
- The size of earthquakes and the damage they cause can vary greatly.

The Elastic Rebound Theory

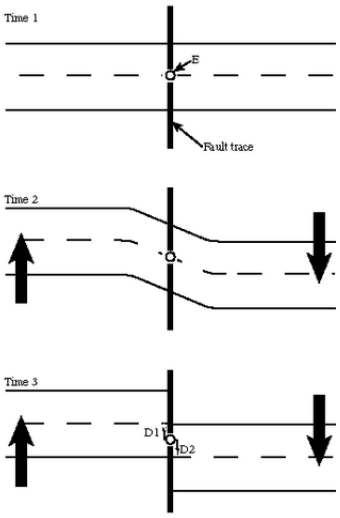
- The **elastic rebound theory** describes how earthquakes are generated.
- Stresses on both sides of a fault cause strain to build up in rocks, until they can no longer bend elastically.
- Once the stress is too great, the rocks break, releasing the built up energy and creating an earthquake.

Focus and Epicenter

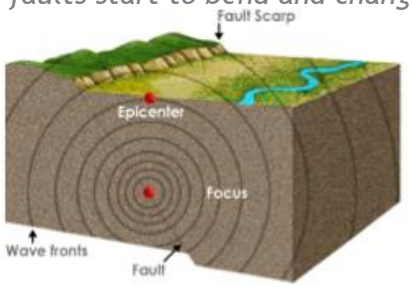
- The initial point where the rocks rupture in the crust is called the **focus.**
- The point on the land surface that is directly above the focus is called the **epicenter.**
- Shallow earthquakes can cause the most damage because the focus is nearer to the surface.

Study Tip

The focus is farther underground than the epicenter.



The elastic rebound theory tells us how the faults start to bend and change.



The energy from earthquakes moves outwards from the focus.

Concept Check

- How are earthquakes formed? How is the energy transferred?
- What is the difference between the focus and the epicenter?