

Chapter 5 Review

Forces in Earth's Crust

Stress that pushes a mass of rock in two opposite directions is called shearing.

The Earth's crust at Owens Valley in California is under tension, resulting in normal faults.

In a normal fault, the part of the fault that lies below the other part is called the footwall.

Compression stress force produces reverse faults.



In a strike-slip fault, the rocks on either side of the fault slip past each other sideways with little up-or-down motion.

A fold in rock that bends upward into an arch is called an anticline.

The squeezing together of rocks by stress is called compression.

In a strike-slip fault, the rocks on either side of the fault slip past each other sideways.

Monitoring Earthquakes

The point beneath Earth's surface where rock breaks under stress and triggers an earthquake is called the focus.

The rating system that estimates the total energy released by an earthquake is called the moment magnitude scale.

A seismograph records the ground movements caused by seismic waves.

A device that uses wire stretched across a fault to measure horizontal movement of the ground is called a creep meter.

A GPS satellite system monitors both vertical and horizontal movements along a fault.

A tiltmeter is most like a carpenter's level.

The Mercalli scale describes the effects of an earthquake on people, buildings, and land at a given location.

Earthquakes and Seismic Waves

Seismic waves carry the energy of an earthquake away from the focus.

When a fault locks, friction between the opposite sides of a fault is high, and stress builds up until an earthquake occurs.

Geologists cannot yet predict earthquakes because they can't be sure when and where stress will be released along a fault.

Geologists know that wherever plate movement stores energy in the rock along faults, earthquakes are likely.

The risk of earthquakes is high along the Pacific coast of the United States because that's where the Pacific and North American plates meet.

When an earthquake occurs, P waves are the first seismic waves to arrive at a given location, then S waves and finally surface waves.

During an earthquake, seismic waves move outward from the focus in all directions.

Earthquake Safety

If the Coast Guard warns of a giant wave of water approaching the shore as a result of a major earthquake, they are warning of a tsunami.

A building designed to reduce the amount of energy that reaches the building during an earthquake is called a base-isolated building.

The best way to protect yourself in an earthquake is to drop, cover, and hold.