

Lesson 1 Earthquakes

p.531-540

Scan Lesson 1. In your Science Journal, write three questions that you have about earthquakes. Try to answer your questions as you read.

Main Idea

What are earthquakes?

I found this on page _____.


Where do earthquakes occur?

I found this on page _____.

I found this on page _____.

Details

 **Define** earthquakes.

 **Summarize** the distribution of earthquakes on Earth.

Categorize information about the relationship between earthquake events and plate boundaries.

Boundary Type	Depth of Earthquake	Other Details
Convergent boundaries		
Divergent boundaries		
Convergent boundaries involving two continents		

I found this on page _____.

Illustrate rock deformation, and write a short description of how this process works.

Drawing	Description

Lesson 1 | Earthquakes (continued)

Main Idea

I found this on page _____.

I found this on page _____.

Seismic Waves

I found this on page _____.

Details

Describe each type of fault.

Type of Fault	Description	Location
Strike-slip		
Normal		
Reverse		

Distinguish between an earthquake's focus and its epicenter.

Compare the 3 types of seismic waves. Provide at least three details about each type.

Type of Fault	Description
Primary waves (P-waves)	
Secondary waves (S-waves)	
Surface waves	

Main Idea

Mapping Earth's Interior

I found this on page _____.

I found this on page _____.

I found this on page _____.

Details

Identify what scientists have discovered about Earth's interior by studying seismic waves.

Inner and outer core: _____

Mantle: _____

Distinguish between a seismometer and a seismogram.

Seismometer	Seismogram

Sequence the steps followed in locating an earthquake's epicenter.

<p>Find the arrival time difference.</p> <p>Determine the _____ between the appearance of the first _____ and the first _____ on the seismogram.</p>
<p>Find the distance to the epicenter.</p> <p>Use a _____ to determine _____. Find the time difference on the _____. Read the distance from the epicenter on the _____.</p>
<p>Plot the distance on the map.</p> <p>Draw a _____ around the seismometer location so that all points are the same distance from the station determined in Step 2.</p> <p>Repeat these steps for at least _____ more seismometer locations. The epicenter is _____.</p>

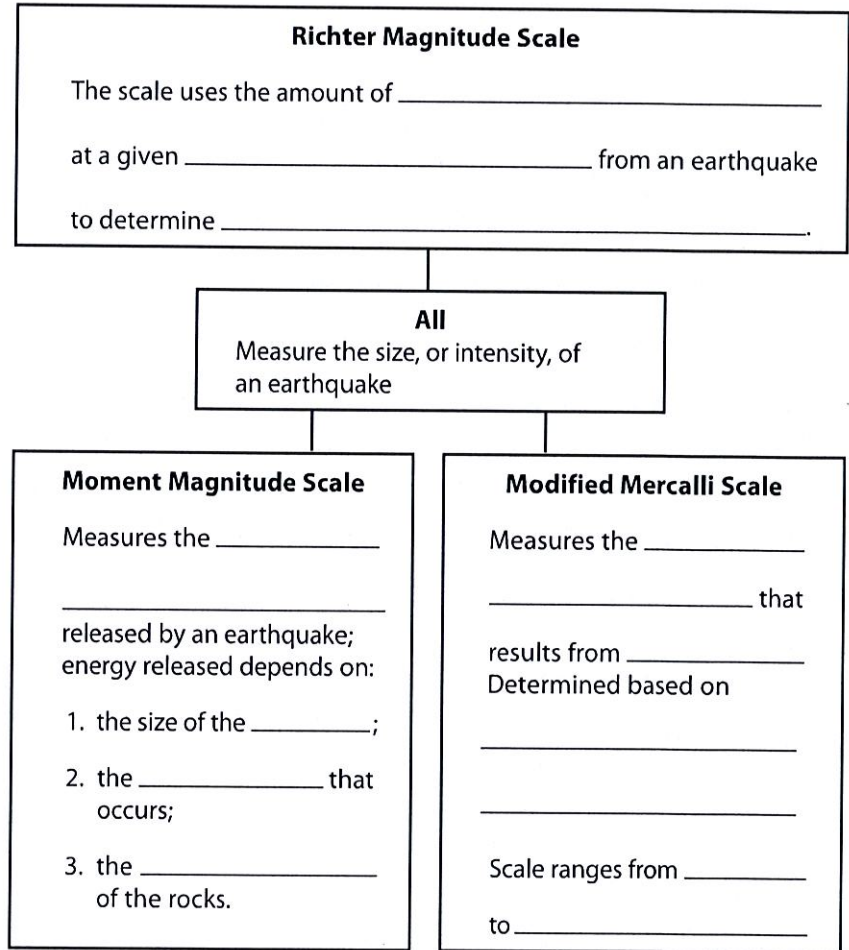
Main Idea

Determining Earthquake Magnitude

I found this on page _____.

Details

Compare and contrast the Richter magnitude scale, the moment magnitude scale, and the Modified Mercalli scale.



I found this on page _____.

Record four indicators that seismologists use to determine earthquake risk.

1. _____
2. _____
3. _____
4. _____

Analyze It Explain why two different earthquakes with the same Richter magnitude scale readings could have very different Modified Mercalli scale numbers.