

Earth Science Study Guide

Describe the three main layers of the Earth.	Crust: The thin, outer layer of the earth. Less than 1% of the Earth's mass. Made of solid rock, broken into plates Mantle: Molten rock on which plates float. Contains 67% of the earth's mass. Core: Inner layer of the Earth. Made of both solid and liquid metals. Contains 33% of the earth's mass.
How is the inner core different from the outer core?	The inner core is made of solid metals, and the outer core is made of liquid metals.
What does "plate tectonics" refer to?	The theory that the earth's lithosphere is broken into plates which float on top of the mantle. These plates shift, causing earthquakes.
Where do most earthquakes and volcanoes occur?	Most occur along plate boundaries.
What is magma? What is lava?	Magma is molten rock that is below the Earth's surface. Lava is molten rock once it erupts onto the surface of the Earth.
Why do earthquakes occur?	When plates move towards or grind past each other, pressure builds up. When the pressure is released, an earthquake occurs.
What is a tsunami? How do tsunamis differ from normal surface waves on the ocean?	Tsunamis are large, fast moving waves that are formed when an underwater earthquake occurs. They move much faster than normal surface waves.

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What landforms can occur at convergent boundaries? At divergent boundaries?	<p>Convergent: Fold or Fault Block mountains can form at convergent boundaries. Volcanoes can form where plates come together and one subducts under the other. Deep ocean trenches will also occur at these locations.</p> <p>Divergent: Mid ocean ridges can occur when plates pull apart. Also, on land, rift valleys can form.</p>
What type of landform is made when a glacier melts and retreats?	U-Shaped Valleys
What is the Ring of Fire?	The area around the Pacific Ocean where the Pacific plates meets other plates. Around 90% of all earthquakes and volcanoes occur in this area.
Is a deep sea trench formed by a destructive or a constructive force?	It is formed by a destructive force.
What is mechanical weathering? Give some examples.	<p>Form of the rock changes, but the composition stays the same.</p> <p>Rocks breaking down into smaller and smaller pieces as a river flows over a cliff. Wind blowing against mountains and scraping off bits of rock.</p>
Explain how these cause mechanical weathering:	<p>Ice: water settles into cracks, freezes and expands, making cracks get larger. Glaciers can cause rock to be scraped away as it moves downhill.</p> <p>Water: Rivers flowing over rocks can wear them down.</p>

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	<p>Wind: Sand can be blown against rock, wearing down the rock.</p> <p>Living organisms: Roots can grow into cracks in rock, breaking them apart.</p>
<p>What is chemical weathering?</p> <p>Give an example.</p>	<p>Form of the rock changes AND the composition changes. A new material has formed.</p> <p>Water dissolving limestone to form caves.</p>
<p>What is a fault?</p>	<p>A crack in the Earth's surface where plates meet.</p>
<p>What is a plateau?</p>	<p>A flat landform at a high elevation.</p>
<p>Explain what contour plowing is and how it helps to prevent soil erosion.</p>	<p>Plowing in curved rows that follow the shape of the land. It prevents soil from washing downhill and eroding the soil.</p>
<p>What is the purpose of a levee?</p>	<p>It raises the sides of the river to keep the water behind it.</p>
<p>What does a dam do to prevent flooding?</p>	<p>It keeps the water behind it-then the water can be released in a controlled manner, preventing flooding.</p>

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What is a reservoir?	An artificial lake made to control flooding and provide drinking water for people.
Explain how beach reclamation is used to fight erosion by waves.	When the sand is eroded away by waves, humans dredge sand from the ocean and then redeposit it onto the beach, building it back up.
Why do people often plant sea grass on sand dunes by the beach?	It prevents wind from eroding the sand dunes.
What is deposition? Give examples of landforms that are created by deposition.	A constructive force in which sediments that have been moved from one place are dropped or released in another place. Deltas, alluvial fans and barrier islands.

While preparing for your summative, remember to:

Review ALL your notes!

Go back through Ms. Robinson's flipcharts (located on her website) and resources.

Complete all your study guide questions and quiz yourself!

Re-read chapters 1, 2, and 3 in your textbook.

Review the answers to the questions in your Interactive Text