

Earth's Dynamic Geosphere: Plate Tectonics Activity 4 - Effects of Plate Tectonics

This investigation will help you to:

- Oceanic Trenches
- Volcanoes at Plate Boundaries
- Hot Spots
- Mountains at Plate Boundaries
- Earthquakes and Plate Tectonics

Oceanic Trenches

- "Basic Geology of the Mariana Islands" - Volcano World

The subduction of the Philippine plate below the Pacific plate has formed the deepest oceanic trench in the world, the Mariana trench. Read about the geology of this area at this web site. Also has links to the volcanoes which form at this subduction zone.

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Volcanoes at Plate Boundaries

- Volcanoes formed at subduction zones (convergent plate boundaries) are called composite cone volcanoes. To learn about two very famous composite cones, click on the links below:
 - Mount St. Helen's
 - Mount Pinatubo
- "Cascade Range Volcanoes and Volcanics" - USGS Cascades Volcano Observatory
The Cascade Range in the Western United States represents an example of active subduction volcanism. This site provides an in-depth review of the geologic history of the Cascade volcanoes.

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Hot Spots

- USGS - "Hot spots:" Mantle Thermal Plumes
Learn more about the geology of the Hawaiian islands as well as other other hotshots around the world.
- USGS Hawaii Volcano Observatory
Read about the Hawaiian Volcanoes and how they formed. It also includes links to other pages about specific volcanoes on the islands of Hawaii and Maui.

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Mountains at Plate Boundaries

- Mount Kilimanjaro

Learn more about Africa's tallest mountain in the East African rift valley, formed when two plates move apart.

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Earthquakes and Plate Tectonics

- "Earthquakes and Plate Tectonics" - USGS National Earthquake Information Center
Explains the distribution of earthquakes around the globe. Includes a review of plate tectonic theory and the four types of seismic zones. Also includes examples of each type of seismic zone.
- "Plate Tectonics, the Cause of Earthquakes" - University of Nevada Seismology Lab
This site contains many excellent images, including technical illustrations, satellite images, and maps, that illustrate the link between plate tectonics and earthquakes.

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