

Using Maps to Search for Tectonic Plate Boundaries

To help your child learn more about tectonic plate boundaries, try examining a world map together. Tectonic plate boundaries are classified as convergent, divergent, or transform. Your child does not need to know the types of boundaries at this level, but it is an interesting topic to study! Each type of boundary is defined by the motion of tectonic plates. Often, there are clues from landforms and geologic events that scientists use to figure out what type of plate boundaries exist. You can use these clues, too!

Convergent plate boundaries are boundaries where tectonic plates come together. When two continental plates meet, mountain chains, such as the Himalayan Mountains, will often form on the land along these boundaries. Where continental plates and oceanic plates come together, there will often be volcanos caused by the melting of subducting plates, such as the Andes Mountains.

Divergent plate boundaries are boundaries where tectonic plates move away from each other. At divergent boundaries, new oceanic crust is made on the seafloor, creating mid-ocean ridges. Mid-ocean ridges are made of underwater mountain chains that are separated by a valley along the seafloor. The most famous of these is the Mid-Atlantic Ridge.

Transform plate boundaries are boundaries where tectonic plates slide horizontally past each other in opposite directions. Pressure builds along these boundaries from the friction between the plates. When this pressure is released, it can cause major earthquakes. The San Andreas Fault in California is a transform boundary.

Examine a world map with your child. Take a close look at any landforms your child notices. Discuss any observations your child makes about the landforms, paying particular attention to mountain chains. Although it may not be possible to locate actual plate boundaries on a typical map, have your child explain where they think some boundaries are likely located and why.

Here are some questions to discuss with your child:

1. What geologic features do you see on this map (e.g., mountain chains, volcanos, ocean trenches, etc.)?
2. Where do you think there may be a plate boundary? How do geologic features support this?
3. What kind of plate boundary do you think it is?

