

## Getting Started

### Uncovering students' conceptions about plate tectonics and the Earth system

The goal of **Getting Started** is not to seek closure (the “right answer”) but to find out what your students know and think about Earth systems. By the end of the module, if not by the end of the chapter, students will have developed more detailed and accurate understandings about plate tectonics and the Earth system.

Three brief questions are provided as a pre-assessment of student understanding about the plate tectonic theory. Encourage students to write and draw as much as they know about these three questions. Avoid any attempts to confirm the correctness of ideas, but require that students justify their beliefs as much as possible. Emphasize the sharing of ideas and beliefs without seeking closure on the “right answer.”

After having completed the previous chapter about volcanoes, students may have a good idea about how the Earth’s lithosphere is formed.

In time, *EarthComm* students will understand that because the movement of the lithospheric plates is part of the Earth system, this process contributes matter and energy to the atmosphere, hydrosphere, and geosphere. These changes cause other interactions, which connect changes in the position of the continental plates to climate change, glaciation, evolution (and extinction) of species, sea-level change, and coastal erosion.

The most likely response to the question about how the Earth’s lithosphere formed will be “cooling and/or hardening of the Earth.”

Students will have a variety of ideas about how they know that the Earth’s lithosphere moves. Examples include that earthquakes are produced when the lithosphere moves, or that the continents used to be connected as one landmass a long time ago.

Students will cite various ways that the lithosphere changes. They might note that volcanoes add new material to the lithosphere, that the lithosphere gets eroded and weathered in different ways, and that mountains and valleys form over time.