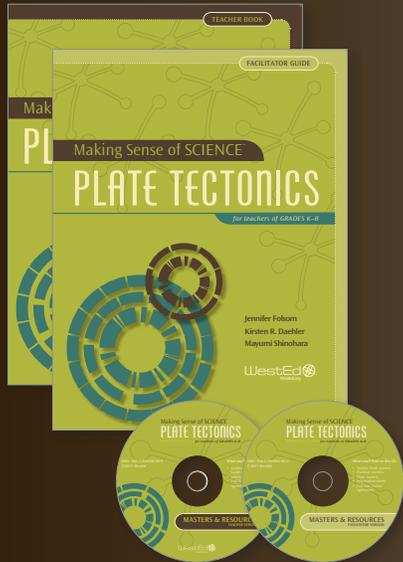


Making Sense of SCIENCE PLATE TECTONICS

for teachers of GRADES K–8

COURSE OVERVIEW



This publication is in development.

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Session 1: Plates

From space, Earth's surface looks static and uniformly flat, almost like a painting. But when we stand on the surface of Earth, it's obvious that things are far from static and flat. This session explores what we know about Earth's surface, GPS, earthquakes, and tectonic plates, and unveils common misconceptions about the movement and behavior of plates.

Session 2: Earth's Layers

While many of us are very familiar with the surface of Earth, what lies deep beneath our feet remains hidden. In this session you'll further explore tectonic plates, learn about the chemical and physical composition of its distinct layers, and consider the challenges and tradeoffs of various models that give students a cross-sectional view of Earth.

Session 3: Diverging Plates

Earth's seafloors are mysterious places, even today. So in the 1960s, when geologist Harry Hess claimed that along Earth's mid-ocean ridges the seafloor was growing due to volcanic activity, many people were surprised, shocked even. This session tackles vexing questions of plate motion and of what happens in the places where plates diverge from one another.

Session 4: Converging Plates

Some of Earth's most notable geologic features are caused by converging plates. Interestingly, the world's tallest mountains are formed by converging plates and so are the world's deepest ocean trenches! It is often surprising that the same phenomena, plate convergence, can form both the tallest and the deepest places on Earth. This session reveals why this is so, and examines how students are thinking about plates and more specifically how plates change over time.

Session 5: Moving Continents

Today, we usually think of Earth as having seven continents—Asia, Africa, North America, South America, Antarctica, Europe, and Australia. But this has not always been true, nor will it remain true in the future. In this session, you will explore the idea of Continental Drift and its relationship to the theory of Plate Tectonics.