



# Explosive Earth: Earthquakes & Volcanoes AUDITORIUM PROGRAMS SUMMARY

**Level: Grades 5-9**

**Minimum: 25 students**

**Program Length: 40-50 minutes**

**Maximum: 150 students**

## Description

Witness the awesome power of planet Earth and learn what goes on miles beneath the surface to create these awe-inspiring events. Using demonstrations, discussion and actual video, students will explore what drives these geologic events and learn more about the role of plate tectonics. Discover what makes mammoth slabs of rock move, often with explosive force, and find out how these sometimes destructive events have helped shape the planet we know today.

## Curriculum Correlations

Students will:

1. Discover what causes earthquakes, volcanoes and tsunamis.  
**Science: S6E5de; SES2a, b, c, d**
2. Explore the inner workings of the earth as well as these events.  
**Science: S6E5a; S8P2c, d; S8P4d, f; SES1a, b; SP4; SPS9a**
3. Learn how these forces shape our planet.  
**Science: S5E1a, b, c; S6E5a, c, d, e; SES2a, b**
4. Recognize where on earth these events happen.  
**Social Studies: SS5G1a; SS6G1a; SS7G1a; SS8G1a; SSWG1a, c**

## Main Themes

1. The Earth is always in motion.
2. Geologic events have occurred since the formation of Earth.
3. There are many different components to earthquakes and volcanoes.
4. Earthquakes and volcanoes are not only destructive forces, but also constructive forces.

## Vocabulary

Convection	Focus	P and S Waves*	Subduction
Epicenter	Hot Spot	Plate Tectonics	Tsunami
Fault	Lahars	Pyroclast	

\*6-9th Grades

## Pre-Visit

1. Review vocabulary.
2. Have students research and find different events (volcanoes, earthquakes, tsunamis) that have happened throughout history.
3. Instruct students to plot these events on a map along with their date.

## At the Museum

Visit the Plate Tectonic Theater, found within the *A Walk Through Time in Georgia* exhibition (Entry Level). On the world map, find the Ring of Fire and other plate tectonic features. Then, see the video "Continents in Collision."

## Post-Visit

1. As a class, construct a volcano (use clay or paper Mache). Include features such as a forest, lakes and snow around the edges. Use vinegar and baking soda to make an eruption. Then have students write instructions on how to perform this experiment. Also have students relate what happened in the experiment to what they know about eruptions.
2. Have students look into the history of seismology to discover what advances have been made and some of the earliest explanations of earthquakes.