



MUSEUM OF  
NATURAL HISTORY  
AND PLANETARIUM  
Roger Williams Park

# Rhode Island Rocks

## A Pre-Visit Information Guide for Teachers

NGSS: MS LS4-1,2; MS ESS1-4; MS ESS2-3

The smallest state has a big past! Students will discover the rocks and fossils that give clues about Rhode Island's geologic history. They will learn to think like paleontologists as they recreate our tectonic past through fossil evidence.

### OBJECTIVES

- **The Formation of Rhode Island**

Discover the patchwork quilt that is Rhode Island geological history, from its beginnings as an ancient chain of volcanoes to swamps at the base of a mountain range. Students will learn how fossils on both sides of the Atlantic show our state's ancient African connection and how the theory of plate tectonics originated.

- **Rhode Island Through the Ages**

Handle the fossils that reveal that Rhode Island teemed with tropical life, where horsetail rushes grew to over 100 feet, fish were armor-plated, and amphibians ruled the land. Students will see the rocks that show the violent tectonic forces that broke Pangaea asunder and set North America on its separate course.

- **Fossil Evidence for Plate Tectonics**

Students will perform a simulated 'fossil dig' to reveal what ancient organisms inhabited the landmass that they are exploring. They will compare their fossil finds to draw conclusions about plate tectonics and the past environment, discovering firsthand how fossil evidence supports the theory of plate tectonics.

### ACTIVITIES

Teachers are encouraged to conduct pre-visit and post-visit classroom discussions and activities with their classes to make the most of their experience. A fun lesson plan that illustrates the concepts of plate tectonics and the different types of plate movements and boundaries can be found at:

<https://www.nps.gov/teachers/classrooms/plate-tectonics.htm>

### HELPFUL VOCABULARY

**Fault** – A fracture in a rock in which adjacent surfaces have moved relative to one another

**Rift** – A place where the Earth's crust is being pulled apart

**Glacier** – A mass of ice that moves or flows over land under its own weight

**Till** – Poorly sorted debris deposited by melting glacial ice

**Moraine** – A landform made of till

**Drumlin** – Elongated hill form by glacial action