



ROCK KIT GUIDE

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Overview

This kit contains rocks and minerals found in Santa Cruz County or within the state of California. Please handle them with care and return them to the kit after use. Supplemental information about general geology and specific Californian geologic processes is also provided for further study.

Kit Activities & NGSS Standards

While these activities can be adapted for many ages, they are specifically designed to meet the following NGSS Standards for grades 2-4.

NGSS Standards

2-ESS1-1: Use information from several sources to provide evidence that Earth events can occur quickly or slowly.

- *ESS1.C: The History of Planet Earth*- Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe
- *ESS2.A: Earth Materials and Systems*- Wind and water can change the shape of the land
- *ESS2.B: Plate Tectonics and Large Scale System Interactions*- Maps show where things are located. One can map the shapes and kinds of land and water in any area

4-ESS1-1: Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.

4-ESS1-2: Analyze and interpret data from maps to describe patterns of Earth's features.

- *ESS1.C: The History of Planet Earth*- Local, regional, and global patterns of rock formations reveal changes over time due to earth forces, such as earthquakes. The presence and location of certain fossil types indicate the order in which rock layers were formed
- *ESS2.A: Earth Materials and Systems*- Rainfall helps to shape the land and affects the types of living things found in a region. Water, ice, wind, living organisms, and gravity break rocks, soils, and sediments into smaller particles and move them around
- *ESS2.B: Plate Tectonics and Large Scale System Interactions*- The locations of mountain ranges, deep ocean trenches, ocean floor structures, earthquakes, and volcanoes occur in patterns. Most earthquakes and volcanoes occur in bands that are often along the boundaries between continents and oceans. Major mountain chains form inside continents or near their edges.

Kit Contents

Specimens & Materials:

- Rock specimens (15)
- Specimen ID cards (15)
- Rock Cycle Game (5 Dice, 5 Labels)

Supplemental Visual Resources:

- Geologic Time Scale (2)
- Geologic Map of Santa Cruz
- Rock Development Chart (2)
- Subduction Zone Infographic
- Tectonic Plate Movement Infographic
- Rock Cycle Chart (2)
- Geologic History of California Zine (template and instructions)
- Rock Word Search
- Rock Keying Guide

Books:

- *Magic School Bus: Inside the Earth* by Joanna Cole