



## **Geology Rocks Virtual Lab Program**

Goal: Increase in knowledge of geological phenomena and history.

Objective: Examine the dynamic processes that have shaped Earth's physical structures and their effect on its history and inhabitants.

### **Rotation Timing**

Introduction – 5 minutes

Station (1,2,3, 4) – 10-20 minutes

Conclusion – 5 minutes

\*Please not all time are approximate

The program design of the **Geology Rocks Virtual Lab** will to introduce students to scientific principles, geologic history, and earth system dynamics. The students will be engaged with hands-on, inquiry-based activities that will address key concepts, such as Plate Tectonics, rock and mineral properties, and tsunamis. Our instructors will facilitate each station's content through the 5 E's framework. The stations are connected to Next Generation Science Standards for Middle School. Your students will become terrestrial and marine geologists to examine the complexities of earth science.

### **Activity Station Overview**

#### **Mineral and Rock Identification**

Students will compare and classify common mineral and rock samples. They will understand the processes that form these elements.

#### **Plate Movement**

Students will determine how long it will take for the Pacific and North American plates to slide past each other and bring the Gulf of California alongside San Francisco.

#### **Tsunami Speed**

Students will calculate the speed of the 2004 Indian Ocean tsunami. They will use this information find out how quickly it reach Band Aceh, Indonesia from the earthquake's epicenter.

#### **Epicenter Triangulation**

Students will learn how the process of triangulation can aid in a geologist's determination of an earthquake's epicenter.