

## **NATURAL DISASTERS**

Mondays, January 25 - April 26 (no class Feb 15, Mar 15, Apr 5; 11 weeks)

11:15am-12:45pm

Ages 11-14

Students learn about unpredictable acts of nature, where they are likely to occur and how natural meteorological and geological processes can lead to potential disasters as they conduct hands-on activities and experiments to simulate these forces. All lab costs are included in registration fee. Course enrollment is limited to 12 students.

Instructor: Suzanne Law, BA, RN

Location: STEM Lab (suite 21)

Course fee: \$250 OR \$25/lab

10% sibling discount

### **LAB SCHEDULE:**

**Earthquakes** - Monday, January 25

Students learn about plate tectonics, fault lines and seismographs, and engineer a structure that can withstand a simulated earthquake as we explore the mechanics of an earthquake.

**Volcanic Eruptions** - Monday, February 1

We explore the geological process of volcanoes, examine how and where they are formed, and investigate how the Earth's core and composition contribute to the eruption.

**Land and Mudslides** - Monday, February 8

This week, we investigate the causes landslides and where they are most likely to occur as we simulate a landslide to determine which materials cause the most damage and use our engineering skills to try to minimize the destruction.

**Tsunamis** - Monday, February 22

Students explore the mechanics of a tsunami, how they are formed, how often they occur and the geological contributors that help produce these large and dangerous ocean waves.

**Tornadoes** - Monday, March 1

We study the differences between funnel clouds and a tornadoes, as we consider the factors of how they are formed and how tornadoes form seismic waves when they travel along the ground.

#### **Hurricanes** - Monday, March 8

Today, kids investigate how and where hurricanes form, why they have an eye, how they create storm surge, and their geological effect on our landscapes.

#### **Blizzards** - Monday, March 22

Students explore the differences between sleet, thundersnow, freezing rain, and frost quakes, learn about nor'easters and discuss where blizzards are most likely to occur.

#### **Wildfires** - Monday, March 29

We discover the causes of wildfires, where they happen, how environmental conditions contribute to their spread, and the different ways firefighters try to put out the fires.

#### **Sinkholes** - Monday, April 12

Students learn the science behind sinkholes and the geological processes involved in creating some of the worlds most infamous sinkholes as they create a model of their own.

#### **Avalanches** - Monday, April 19

Today, we explore the conditions that result in an avalanche, including different types of snow and weather patterns. While conducting our own avalanche experiment, we hypothesize, make observations, and document the effects of slope.

#### **Lightning** - Monday, April 26

Students learn about the different types lightning, why they are formed and the science of electricity as we try to create our own electrical sparks.