

HOMESCHOOL COURSE PROPOSAL

COURSE NAME: Natural Disasters

AGE GROUP: 11-14

COURSE DESCRIPTION:

NATURAL DISASTERS

Thursdays, January 26-April 27 (no class Feb 23, April 6; 12 weeks)

9:30am-11:00am

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.

Instructor: Q Collins, BSc

Location: STEM Lab (suite 21)

CLASS NAMES AND ACTIVITIES/DESCRIPTIONS:

WEEK 1: Earthquakes - Thursday, January 26

Students learn about plate tectonics, fault lines, and seismographs, and engineer a structure that can withstand a simulated earthquake.

WEEK 2: Volcanic Eruptions - Thursday, February 2

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.

WEEK 3: Land and Mudslides - Thursday, February 9

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

WEEK 4: Tsunami - Thursday, February 16

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

WEEK 5: **Tornadoes** - Thursday, March 2

We study the weather patterns that cause tornadoes as we consider the factors of how they are formed and the destruction they leave in their wake.

WEEK 6: **Hurricanes** - Thursday, March 9

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

WEEK 7: **Blizzards** - Thursday, March 16

Students learn about the differences between frozen weather types like sleet, freezing rain, and thundersnow, and discuss where blizzards and nor'easters are most likely to occur.

WEEK 8: **Wildfires** - Thursday, March 23

We discover the causes and effects of wildfires, where they happen, how environmental conditions contribute to their spread, and the techniques firefighters use to control the fires.

WEEK 9: **Sinkholes** - Thursday, March 30

Students learn the science behind sinkholes and the geological processes involved in creating them as we make a model of our own.

WEEK 10: **Avalanches** - Thursday, April 13

Today, we explore the conditions that result in an avalanche, including different types of snow and weather patterns. We conduct our own avalanche experiment to document the effects of slope.

WEEK 11: **Lightning** - Thursday, April 20

Students learn about the formation of lightning and the science of electricity while we try to create electrical sparks.

WEEK 12: **Floods** - Thursday, April 27

Students discover how floods affect local communities and the ways people help each other in the wake of a disaster.

BEFORE SUBMITTING YOUR PROPSAL:

- Read it over to see if what you wrote makes sense and sounds right.
- Spell check. Spell check. Spell check.

- Check your dates and number of weeks again.
- Make sure if it is 12-week course you have 12 weeks of classes listed.
- Make sure everything is in the correct format (commas, bold, upper/lower case, no abbreviations).