



The Learning Center at WPSD

300 East Swissvale Avenue
Pittsburgh, PA 15218-1469
www.wpsd.org

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Carolyn Kirkpatrick, Librarian

FORCES OF NATURE

AS YOU ENTER THE LEARNING CENTER, BE PREPARED FOR SOME ROUGH WEATHER! “FORCES OF NATURE” IS THE 2ND THEME THIS SCHOOL YEAR. A TSUNAMI TOWERS ABOVE YOU, WHILE A TORNADO TOUCHES DOWN, AND A WILDFIRE CONSUMES PARTS OF THE LEARNING CENTER.

AS YOU CAREFULLY WANDER THROUGH, BE SURE TO READ AND LEARN ABOUT VOLCANOES, HURRICANES, EARTHQUAKES, DROUGHTS, AND FLOODS. OBSERVE HOW THESE “FORCES OF NATURE” HAVE AFFECTED AREAS AROUND THE WORLD.

WHILE THERE, YOU CAN ALSO LEARN ABOUT THE WATER CYCLE, BAROMETRIC PRESSURE, AND OTHER CAUSES FOR THE WEATHER WE HAVE.

BECOME A JUNIOR METEOROLOGIST AND SOON YOU'LL BE ABLE TO PREDICT OUR WEATHER FORECASTS (MAYBE EVEN BETTER THAN THE METEOROLOGISTS' NEWSCASTS!)

Theme-Related Websites

www.weatherwizkids.com

pbskids.org/sid/weatherwheel.html

<http://environment.nationalgeographic.com/environment/natural-disasters/forces-of-nature/>

Tornadoes

Tornadoes, also known as twisters, waterspouts, or sometimes cyclones, have been sighted in all continents except Antarctica.



In the United States tornadoes can be found anywhere at any time during the year. They are created when cool moist air meets up with dry air and are usually in the shape of a funnel. Tornado Alley, states in the plains area, is where most tornadoes occur in the United States. There are several scales that rate tornadoes. One of them is the Fujita Scale which uses 1-5 with 5 being the most destructive. Tornadoes like other forces of nature are very dangerous and everyone should know what to do when a tornado is sighted.

Avalanches

Definition: The sudden fall or slide of a large mass of material down the side of a mountain. Avalanches may contain snow, ice, rock, soil, or a mixture of these materials. Avalanches can be triggered by changes in temperature, by sound vibrations, or by vibrations in the earth itself.

Everyone thinks of an avalanche as being caused by snow but mudslides are also classified as avalanches. As winter progresses, new layers of snow fall on older layers. Avalanches can occur when one layer or a bunch of layers of snow slides, or triggered by sound vibrations or tiny vibrations in the earth. An avalanche might be wet or dry, depending upon the water in the snow or it can be loose. Whenever you have high mountains of snow, glaciers and temperature changes, then you might see an avalanche. Masses of snow, rocks, ice, mud, or a mixture of these is found in an avalanche.



People can avoid putting themselves in danger if they check the weather and know what the conditions are before going to a snow area. The following three avalanches are considered to be the worst ones in recent history. In May of 2011, there were 2 great mudslides in Malaysia that were caused by weeks of rain. Two great snowslides occurred in 2010. One in Pakistan and the other near Kabul, the capital of Afghanistan. Avalanches are always occurring in nature but if precautions are taken, no lives would be lost.

Earthquakes

Definition: The sudden movement of the Earth's lithosphere (its crust and upper mantle). Earthquakes are caused by the release of built-up stress within rocks along geologic faults or by the movement of magma in volcanic areas. They are usually followed by aftershocks.

On March 11, 2011, an 8.9 magnitude earthquake rocked Japan. The destruction caused by this earthquake was over powered by the destruction of a huge tsunami, that not only hit the eastern coast of Japan but traveled across the ocean to hit Hawaii and cause tsunami warnings for the Pacific coast of the United States.



A tsunami is a series of great sea waves, also know as a wave train, that sends large amounts of water onto land and is created when an earthquake, volcanic eruption, or other force of nature occurs. Tsunamis have been known to be 60 miles long, occur as far apart as one hour, and can travel across entire oceans at speeds greater than 500 miles per hour.

Eighty percent of tsunamis are found in the Pacific Ocean's "Ring of Fire. The Tsunami Warning Syetem consists of 26 nations watching for signs of tsunamis and is located in Hawaii. Even with this warning system, people should be alert and prepared for a tsunami when an earthquake, volcanic eruption, or even a meteroite plunges into the ocean.

Theme Books @ your library

Disaster Alert! Series

Earthquake Alert!....Shipa Mehta-Jones

Flood and Monsoon Alert!....Rachel Eagen

Ocean Storm Alert!....Carrie Gleason

Severe Storm & Blizzard Alert!....Lynn Peppas

Tornado Alert!....Wendy Scavuzzo

Tsunami Alert!....Niki Walker

Volcano Alert!....Paul Challen

Wildfire Alert!....Lynn Peppas



Earth In Action Series
Written by Mari C. Schuh



Avalanches
Earthquakes
Hurricanes
Tornadoes
Tsunamis
Volcanoes

New Books @ your library

In Touch with Basic Science - Author: Richard Spilsbury

What are Forces and Motion?

What are Solids, Liquids, and Gases?

What is Electricity and Magnetism?

What is Energy?

What is Light?

What is Sound?



Snapshots @ your library



Front Display



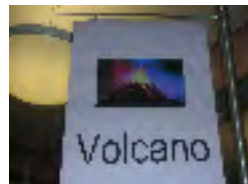
Snow



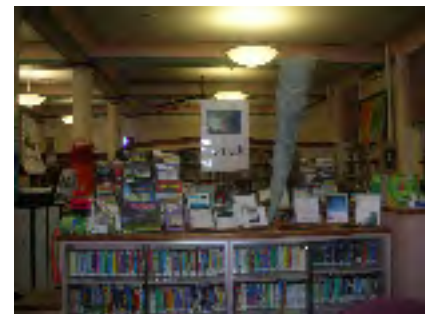
Lightning



Wildfire



Volcano



Tornado



High school students are doing an online research activity about the weather.

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First Graders are doing an online weather-related word search.

www.weatherwizkids.com