Natural Disasters by Deanna

Volcanoes

Natural disasters

Introduction
In this text you will be reading about natural disasters such as earthquakes and volcanoes.

Earthquakes

Earthquakes

Where do earthquakes happens?

Earthquakes are most common in countries that are on or close to the equator. They also occur when the countries are on the tectonic plates or fault line.Fault are cracks in the earth where sections of a plate (or two plates) are moving in different directions. Faults are caused by bumping and sliding. No part of Earth's surface is free from earthquakes, but some regions experience them more frequently. Here is some of the counties that get a lot of earthquakes... Indonesia,Tonga,Japan,Fiji.
Here are the Mercalli:

Intensity Shaking Description/Damage
I Not felt Not felt except by a very few under especially favorable conditions.
II Weak Felt only by a few persons at rest,especially on upper floors of buildings.
III Weak Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV Light Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V Moderate Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI Strong Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII Very strong Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII Severe Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX Violent Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X Extreme Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

http://www.whoi.edu/cms/images/topic_earthquake_main_193575.jpeg

Why do earthquakes happen?

An earthquake is the shaking and vibration of the Earth's crust due to movement of the Earth's plates (plate tectonics). Earthquakes can happen along any type of plate boundary. Earthquakes occur when tension is released from inside the crust. Plates do not always move

smoothly alongside each other and sometimes get stuck. When this happens pressure builds up. When this pressure is eventually released, an earthquake tends to occur.
The point inside the crust where the pressure is released is called the focus. The point on the Earth's surface above the focus is called the epicentre.
Earthquake energy is released in seismic waves. These waves spread out from the focus. The waves are felt most strongly at the epicentre, becoming less strong as they travel further away. The most severe damage caused by an earthquake will happen close to the epicentre.

How do you measure an earthquake?

The power of an earthquake is measured using a seismometer. A seismometer detects the vibrations caused by an earthquake. It plots these vibrations on a seismograph.
The strength, or magnitude, of an earthquake is measured using the Richter scale. The Richter scale is numbered 0-10.

Tsunami

What causes a tsunami?
A tsunami is a huge wave, usually caused by volcanic or earthquake activity under the ocean, which can eventually crash onto the shoreline. The effects on a community can be devastating.
When an earthquake, volcano or landslide happens on the ocean floor, water is displaced. This water forms the start of the tsunami.
When the waves reach shallower water:
their height can increase by several metres
the shallow water slows the wave
the waves get closer together
It is hard to see that a tsunami is approaching. The most obvious sign is the coastal water retreats just before the waves reach the shore. This is actually the trough of the wave following behind.

On 26 December 2004 a tsunami occurred in the Indian Ocean. It was the result of the Indio-Australian Plate subducting below the Eurasian Plate. It was caused by an earthquake measuring more than magnitude 9. The earthquake caused the seafloor to uplift, displacing the seawater above.
In open ocean the tsunami measured less than 1 metre high.
The tsunami travelled at speeds up to 800km per hour.
When the Tsunami reached the shores, the height of the wave increased to 15 metres in some areas.

A quarter of a million people died.
About Two million people were made homeless.
More than 50 People were washed away in the waters.
Thirteen countries were affected, the worst country Indonesia.
Indonesia was hit by the tsunami first. Fourty-five minutes later the tsunami reached Thailand.

The worst tsunami recorded in history?
One of the worst tsunamis in the world was in the great Indian Ocean tsunami of 2004.
Giant forces that had been building up deep in the Earth for hundreds of years were released suddenly on December 26, shaking the ground violently and unleashing a series of killer waves that sped across the Indian Ocean at the speed of a jet airliner.
By the end of the day more than 150,000 people were dead or missing and

millions more were homeless in 11 countries, making it one of the most destructive tsunami in history.

Tornado

What is a torando?

A torando is a violent rotating column of air extending from a thunderstorm to the ground. The most violent tornadoes are capable of huge destruction with wind speeds of up to 300 mph. They can destroy large buildings, uproot trees and hurl vehicles hundreds of yards. Damage paths can be in excess of one mile wide to 50 miles long. In an average year, 1000 tornadoes are reported nationwide.

How does a torando form?

Most tornadoes form from thunderstorms. You need warm, moist air from the Gulf of Mexico and cool, dry air from Canada. When these two air masses meet, they create wind in the atmosphere. A change in wind direction and an increase in wind speed with increasing height creates an invisible, horizontal spinning effect in the lower atmosphere. Rising air within the updraft tilts the rotating air from horizontal to vertical. An area of rotation, 2-6 miles wide, now extends through much of the storm. Most strong and violent tornadoes form within this area of strong rotation.