Nature's Fault

By Lauren & Ella

Earthquakes

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The earth is made of huge parts like jigsaw pieces which rub and collide into each other in jerky movements. These are called tectonic plates.
Earthquakes occur when the tectonic plates become locked together and there is a build of tension which builds up and eventually there is so much tension that there is a sudden shift or rupture at the boundary called a fault line where the two plates meet. This releases energy in the form of powerful vibrations called shock waves which cause earthquakes.
Earthquakes are most commen next to fault lines, many major earthquakes happen within part of a volcanic area in somewhere called the ring of fire.

There are two ways to measure an earthquakes, one method is to examine the amount of energy released underground. The other method is to look at the actual effect on people and buildings. Both of these methods are needed because an earthquake underground won't cause much damage however powerful it is where as an smaller earthquake but nearer the ground can damage a whole city!The largest recorded earthquake in the United States struck Prince William Sound, Alaska on Good Friday, March 28, 1964 UTC (Coordinated Universal Time).The largest recorded earthquake in the world was in Chile on May 22, 1960, and the earliest reported earthquake in California was felt in 1769 by the exploring expedition of Gaspar de Portola while the group was camping about 48 kilometers south-east of Los Angeles.
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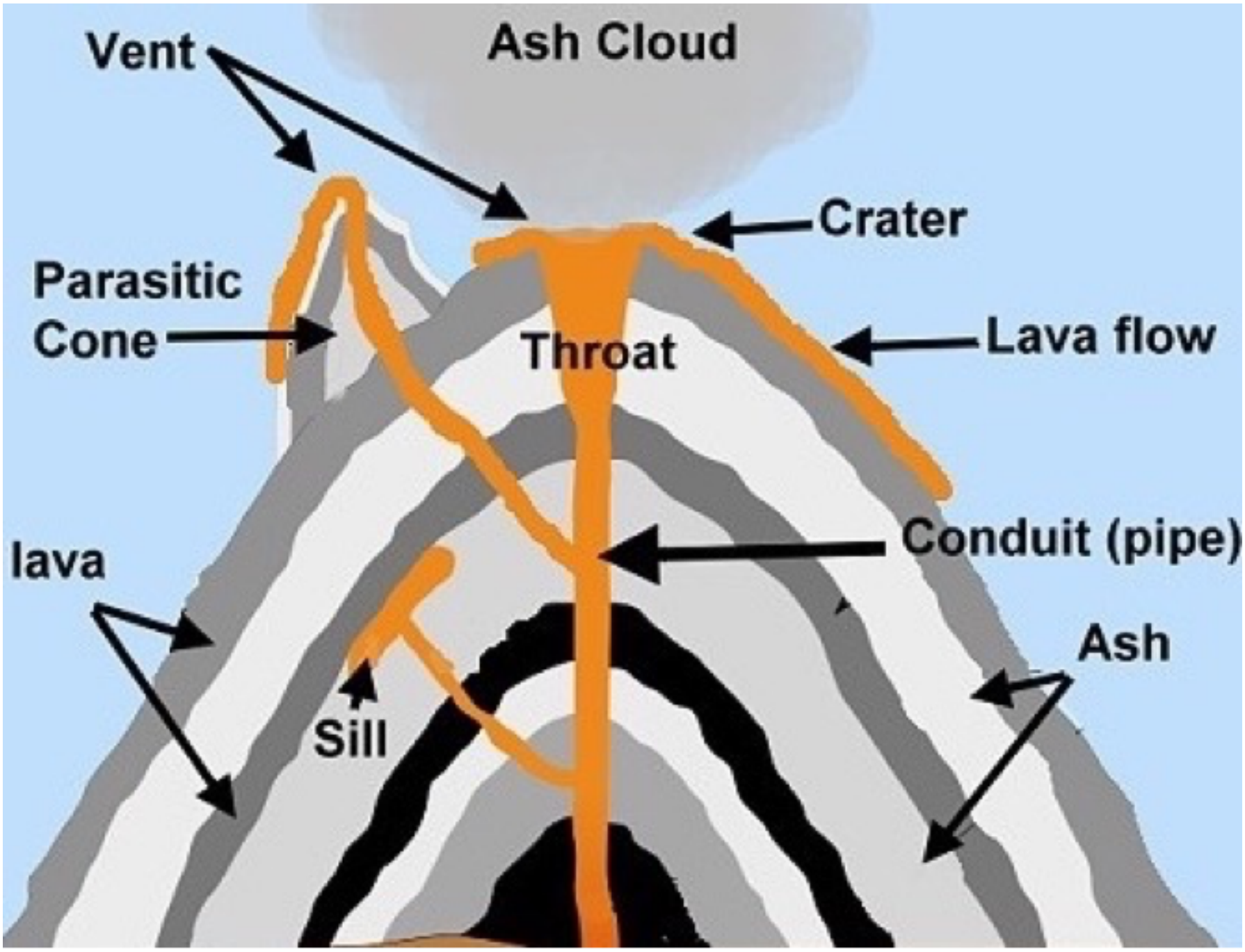
Volcanoes

Volcanoes

A volcano is a rise in the land (usually a mountain) where molten rock erupts through the surface of the planet. These are the definitions of the names.
Magma - Molten rock beneath Earth's surface.
Parasitic Cone - A small cone-shaped volcano formed by an accumulation of volcanic debris.
Sill - A flat piece of rock formed when magma hardens in a crack in a volcano.
Vent - An opening in Earth's surface through which volcanic materials escape.
Flank - The side of a volcano.
Lava - Molten rock that erupts from a volcano that solidifies as it cools.
Crater - Mouth of a volcano - surrounds a volcanic vent.
Conduit - An underground passage magma travels through.
Summit - Highest point; apex
Throat - Entrance of a volcano. The part of the conduit that ejects lava and volcanic ash.
Ash - Fragments of lava or rock smaller than 2 mm in size that are blasted into the air by volcanic explosions.
Ash Cloud - A cloud of ash formed by volcanic explosions.



Did you know?

The largest volcano in our Solar System is on Mars! It is called Olympus Mons, the active volcano is 17 miles tall and over 320 miles across.
The largest active volcano on Earth is Mauna Loa it is one of the five volcanoes that form the island ofHawaii in the U.S.A, it is estimated to be 4,170 miles above sea level. From its base below sea level to its summit, Mauna Loa is taller than Mount Everest, it also has the greatest volume of any volcano, estimated to be 10,200 cubic miles. At 60 miles long and 30 miles wide, it makes up half of the entire island. It is the world's largest shield volcano, a gently sloping mountain produced from a large number of generally very fluid lava flows.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VOLCANOES

Tsunamis

A tsunami is a series of ocean waves caused by an underwater earthquake, landslide, or volcanic eruption. More rarely, a tsunami can be generated by a giant meteor impact with the ocean. These waves can reach heights of over 100 ft, and about 80% of tsunamis happen within the Pacific Ocean's "Ring of Fire". The first wave of a tsunami is usually not the strongest, successive waves get bigger and stronger. Tsunamis can travel at speeds of about 500 miles or 805 kilometers an hour that's almost as fast as a jet plane.The states in the U.S. at greatest risk for tsunamis are Hawaii, Alaska, Washington, Oregon, and California.

If caught by a tsunami wave, it is better not to swim, but rather to grab a floating object and allow the current to carry you.Tsunamis retain their energy, meaning they can travel across entire oceans with limited energy loss.Tsunami means “harbor wave” in Japanese (tsu = harbor + nami = wave), reflecting Japan’s tsunami-prone history.Scientists can accurately estimate the time when a tsunami will arrive almost anywhere around the world based on calculations using the depth of the water, distances from one place to another, and the time that the earthquake or other event occurred.Hawaii is always at great risk for a tsunami – they get about 1 per year and a severe one every 7 years. The biggest tsunami that occurred Hawaii happened in 1946, the coast of Hilo Island was hit with 30 ft waves at 500 mph.In 2004, the

Indian Ocean tsunami was caused by an earthquake with the energy of 23,000 atomic bombs. After the earthquake, killer waves radiating from the epicenter slammed into the coastline of 11 countries. The final death toll was 283,000.