VOLCANOS

NAME:

DEPARTMENT:

VOLCANOS

TASK:WHAT ARE VOLCANOS

Volcanoes are geological formations formed by the eruption of lava, gas and other substances on the earth's surface. Most are near the boundaries of tectonic plates, where the Earth's crust meets heat and pressure.

Volcanoes are usually conical or mountain-

like structures with vents or openings at the top, called calderas. The crater is connected to th e magma chamber below, which stores lava called magma. When the pressure in the magma c hamber becomes too high, magma can rise to the surface, causing a volcanic eruption.

On the other hand, volcanic eruptions can be dangerous, causing property damage, loss of life and damage to the environment. Ash, lava flows, pyroclastic flows, mud, and volcanic gases are all problems with volcanic activity.

Studying volcanoes is important for understanding the earth's geology,monitoring volcanic ac tivity, and predicting volcanic eruptions. Volcanologists monitor volcanoes using a variety of tools and techniques, such as seismographs, gas analyzers, thermal imaging cameras, and sate llite imagery, to collect data and assess volcanic issues.

FORMATION OF VOLCANOS

The molten rock that rises below the surface in a volcanic vent is called magma, and after the volcano erupts it is called lava. Magma is made up of molten rock, crystals, and dissolved gas es—

think of an unopened soda bottle with grains of sand in it. Molten rock consists of oxygen, sil icon, lead, iron, magnesium, calcium, sodium, potassium, titanium, and manganese. When co oled, liquid magma can form rocks of various minerals until it is complete, forming opaque o r invisible rocks.

Magma originates ten miles underground and is lighter than the surrounding rocks.

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This object, which is pushed to the earth by the buoyant force, is lighter than the rocks around it and is under the pressure of the gases inside. Magma is pushed forward and can erupt from weak areas of earth rock. If so, the explosion has begun.

It can also shoot violently into the air, condensing the atmosphere with broken rocks (tephra) and gas. Larger particles swirl around the vent, and the ash can move across the surface of the volcano under the force of gravity. Volcanic ash is a small amount of volcanic ash the size of a hair that can fall to the ground miles from the wind. The smallest particles of ash can be thr own into the sky for miles and be carried around the world many times by strong winds in the atmosphere before falling to the ground.

TYPES OF VOLCANOS

1.Shield Volcanoes: These volcanoes have broad, gently sloping sides and a flat, shield-like shape. They consist of low-

viscosity basaltic lava flows that spread in all directions from the central vent. Shield volcano es are usually caused by nonexplosive eruptions and can grow. The Hawaiian Islands are the best.

2.Fissure Volcano: A Fissure volcano is a long, thin fissure in the Earth's surface from which lava erupts.

Instead of a single central orifice, fissure eruptions occur as a series of linear orifices. Lava fl ows from eruptions can cover large areas and form large volcanic plains. Volcanic activity in t he Icelandic region of the Mid-Atlantic Ridge is often associated with fissure volcanoes.

3.Cinder cones, cider cones are small volcanoes with left sides.

They consist of explosive eruptions that spew pieces of lava, called ash or slag, into the air. T

he slags fell around the vent, forming a cup-

like structure. Cinder cones are usually short and may appear as stand-

alone volcanoes or as parasitic cones surrounding large volcanoes.

4.Stratovolcano (Composite Volcano): A stratovolcano is a tall, steep volcano containing alt ernating layers of solidified lava flows, volcanic ash, and pyroclastic debris. They are formed by a combination of volcanic eruptions and lava flows.

Eruptions from stratovolcanoes can be very explosive and produce pyroclastic flows and ash clouds. Mount Fuji in Japan and Mount Vesuvius in Italy are examples of stratovolcanoes.

5.Caldera: A caldera is a large lakelike depression that forms when a volcanic rock erupts aft er a large eruption or void in the magma chamber. Calderas can be several kilometers in diam eter and are often associated with highly explosive eruptions. The Yellowstone crater in the U nited States and the Santorini crater in Greece are prime examples.

These are just a few examples of the types of volcanoes found in the world. Each species has its own characteristics, offensive behavior and associated dangers. It is worth noting that volc anic activity is very variable and some volcanoes may show different types or type changes o ver time.

REFERENCES

www.britannica.com

www.nationalgeographic.com