

## Environmental Science AMI 3

### Volcanoes

Sometimes, when plates move, openings form in the crust. Melted rock, called magma, squeezes up from the Earth's mantle. An opening in the Earth's surface that releases magma from the mantle is called a volcano. The word volcano is also used to describe the mountain that builds up around the opening.

Volcanoes can form on dry land or on the ocean floor. The magma comes up through openings called vents. Magma that has reached the Earth's surface is called lava. As the lava cools, it hardens into rock. Over time, the lava builds up and creates a mountain.

When volcanoes occur on the ocean floor, they can create islands. The Hawaiian Islands were formed this way. There are many earthquakes and volcanoes around the edge of the Pacific plate. In fact, there are so many volcanoes in this area that it is called the "Ring of Fire."

Some volcanoes erupt violently. Lava, ash, and hot gas explode high into the air. Other volcanoes erupt more gently. The lava flows quietly onto the surface.

In 79 A.D., Pompeii was a lively seaside town in what is today called Italy. A volcano named Mount Vesuvius towered over the city. But the people did not fear it. No one had ever seen Vesuvius erupt. It had sat quietly for 800 years.

That August, however, Vesuvius erupted suddenly and with great violence. A cloud of hot ash and gas rolled down the slopes of the volcano. Thousands of people were killed as they tried to escape. Tons of hot ash and cinders fell on the city for three days. The ash hardened almost instantly around the dead bodies.

1. What is magma?

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2. What is a volcano?

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3. What happens when volcanoes occur on the ocean floor?

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4. What happens when volcanoes erupt violently?

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5. What occurred in August of 79 A.D.? (describe in full detail)

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