



Earth and Life

Volcanoes: How eruptions affect climate

Voice Over

We're all used to seeing diagrams illustrating the Earth's system which include an active volcano. In many ways what comes out of volcanoes is obvious, but their overall affect on the Earth's system are complex. In this programme we focus on just one aspect – their impact on climate.

Caption: Volcanoes and the atmosphere

John Kutzbach

Actually what you see coming out of the vent of a volcano is primarily condensed water and mineral ash particles. These fall out of the answer fairly quickly. The smoke that we see that spreads over the entire planet is actually composed of sulphuric acid droplets, extremely small droplets, too small to see with the naked eye, but that are formed in the upper atmosphere when the sulphurous gases emitted by the volcano are converted by chemical processes in the upper atmosphere into sulphuric acid, which then condenses into this fine mist.