

# Volcanic Landscapes & Volcanic Features

**1** Define 'volcanic landscape' and name an example.

**2** Identify what a vent is.

**3** State one type of volcanic feature.

**4** Explain how divergent plate movement creates a volcano.

**5** Suggest one reason why people live near volcanoes.

**14** Describe what fumaroles are.

**13** True or False most volcanoes on Earth are submarine?

**12** Suggest why shield volcanoes are so large.

**11** Explain why magma/lava type influences the shape of volcanoes.

**10** Outline one way that volcanic landscapes provide economic opportunities.

**9** State one form of lava.

**8** Describe how a lahar changes volcanic landscapes.



**6** Identify two challenges of living in volcanic landscapes.

**7** Name one category of volcano.



**Would you like to 'speak volcano'?**

Try our matching exercise here to boost your knowledge of volcanic keywords.



# Volcanic Landscapes & Volcanic Features: Suggested Answers

**1 Define 'volcanic landscape' and name an example.**

A volcanic landscape is an area which is dominated by volcanoes, created by volcanic activity, and shaped by volcanic activity over time. For example, in Iceland.

**2 Identify what a vent is.**

A vent is an opening in Earth's crust that allows magma, gas, and pyroclastic flows to escape to the surface. A vent may be a central cone vent or a side fissure vent opening. They may be on land or under the sea.

**3 State one type of volcanic feature.**

For example: fumarole, vent, fissure, caldera, cone, crater, lava plug, lava dome, cinder cone, magma chamber, lava tube, etc.

**4 Explain how divergent plate movement creates a volcano.**

Divergent plate movement is when two plates move away from each other. This allows magma from the mantle to reach Earth's surface and create volcanoes.

**5 Suggest one reason why people live near volcanoes.**

e.g. Volcanic activity may be infrequent and so people feel less afraid; volcanic soils are fertile and suitable for agriculture; the landscape is distinctive & attractive, etc.

**14 Describe what fumaroles are.**

Fumaroles are vents that give out volcanic gases (mostly sulphur dioxide, carbon dioxide, hydrogen chloride). They lead to brightly coloured landscapes where the gases react with water and rock.

**13 True or False most volcanoes on Earth are submarine?**

True. There are an estimated 1 million volcanoes under the oceans on the sea bed. These produce 75% of all lava on Earth.

**12 Suggest why shield volcanoes are so large.**

Shield volcanoes are formed of layers of cooled solid lava and ash flows, which form with each successive eruption to build up wide, shallow-angle slopes that become very large over time.

**11 Explain why magma/lava type influences the shape of volcanoes.**

e.g. Magma that is more viscous (thick and sticky) and gassy leads to more explosive eruptions, which can create pyroclastic flows and lead to volcanic cone collapse.

**10 Outline one way that volcanic landscapes provide economic opportunities.**

e.g. Volcanic ash once eroded creates fertile soil which is beneficial for agriculture, and leads to better productivity / crop yields and an income for farmers.

**9 State one form of lava.**

Pahoehoe or a'ā or block.

**8 Describe how a lahar changes volcanic landscapes.**

A lahar is a volcanic flow, a mix of water, soil, rock and pyroclastic material. It can flow very fast (up to 50mph), and changes landscapes by eroding slopes, destroying trees, knocking down buildings, etc.



Volcanic eruption of Bárðarbunga in Iceland

**6 Identify two challenges of living in volcanic landscapes.**

e.g. If the area is active there may be relatively frequent earthquakes or gas emissions; there may be difficulties for infrastructure & transport; if an eruption does occur, there is potential devastation, etc.

**7 Name one category of volcano.**

e.g. Shield volcano, cone volcano, calderas, cinder cone volcano, fissure volcano, stratovolcano (also called composite).



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