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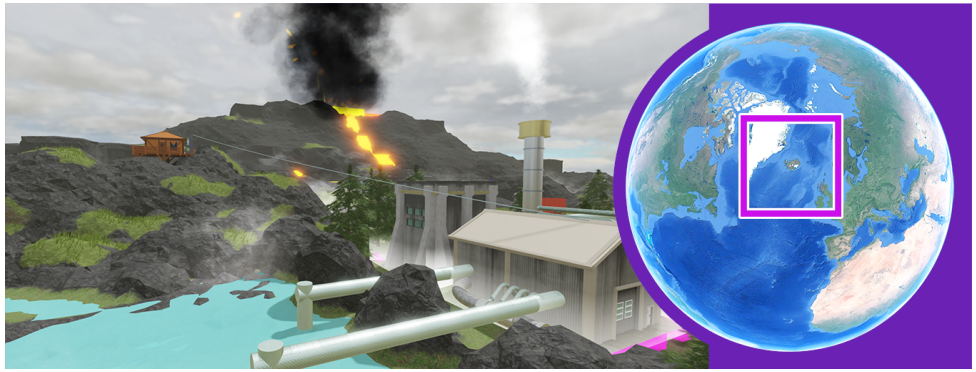
Teacher materials

Tectonic hazards: Volcano preparation

Scenario description

Players take on the role of decision-makers responding to the opportunities and challenges of living close to an active volcano. They must analyse data, make decisions and allocate resources to balance economic benefits with disaster preparedness. Players must decide whether to take advantage of the resources available around the volcano, while ensuring the community is prepared for the impacts of potential eruptions.

Approximate location: Iceland



Learning objectives

- To identify the impacts of volcanic eruptions.
- To make decisions about how to monitor, prepare for and respond to volcanic eruptions.
- To examine the social, economic and environmental consequences of living close to volcanoes, including the potential benefits.

Key geographical terminology

- **Geothermal power:** The generation of electricity using heat from within the Earth.
- **Natural hazard**: A naturally occurring event that causes harm to people.
- **Tourism**: Where people visit an area for a holiday and spend time away from home. Tourists travel for lots of reasons including recreation, relaxation, and sight-seeing.

Key decisions

- Should we monitor the volcano to predict potential eruptions?
- Should we focus on generating geothermal energy or developing tourism facilities?
- Should we mine or farm the land around the volcano?
- What are the best ways to prepare for a potential eruption?

Think, work and apply like a geographer

Encourage students to explore the links between gameplay and real-world job roles, such as:

- volcanologist
- seismologist
- geologist
- geothermal engineer
- tourism planner

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Questions to explore	• Why do people live close to active volcanoes? • How can we monitor volcanoes to predict potential eruptions? • What are the benefits of geothermal energy? • What attracts people to visit areas near to active volcanoes? • What role do emergency services play during a volcanic eruption? • Who makes decisions about how to respond to volcanic eruptions and other natural disasters?
Emotional and ethical considerations	• **Fear and uncertainty:** The threat of a volcanic eruption may cause anxiety. • **Ethical decision-making:** Should we prioritise economic benefits or the safety of the population? Should we consult local people when decisions are made that affect them?
Links to other BBC resources* **Some video content may only be available in the UK.*	• BBC Bitesize for Teachers – Plate tectonics: Volcanoes: https://www.bbc.co.uk/teach/class-clips-video/articles/zj9x46f • BBC Bitesize for Teachers – Explain This: Plate Tectonics: https://www.bbc.co.uk/teach/class-clips-video/articles/zrc992p • BBC Bitesize – Plate tectonics: https://www.bbc.co.uk/bitesize/topics/zcnc4xs/articles/zrcgr2p • BBC Bitesize – Tectonic hazards: Volcanoes: https://www.bbc.co.uk/bitesize/articles/z9k496f#zyffydm • BBC Bitesize – Volcanic mountains: https://www.bbc.co.uk/bitesize/articles/zskwdp3#zmmkmbk • BBC Bitesize – Geothermal energy: https://www.bbc.co.uk/bitesize/articles/z4dhxbk • BBC Bitesize – What happens when a volcano erupts?: https://www.bbc.co.uk/bitesize/articles/zrj6gwx • BBC Newsround – Iceland volcano eruption article: https://www.bbc.co.uk/newsround/articles/ceqxdxpl7x4o
Play *Planet Planners on Roblox*	The URL for the game is: https://www.roblox.com/games/80099528313812. This link will take you to the Roblox platform.