

Teacher materials

Tectonic hazards: After the earthquake

Scenario description

Players take on the role of decision-makers responding to the threat of earthquakes (and the tsunamis they may generate). They must analyse data, make decisions and allocate resources to prepare for – and respond to – these natural hazards. Players must think critically about which preparation techniques to invest in and which types of economic activity and services to prioritise for recovery.

Approximate location: Indonesia



Learning objectives

- To identify the impacts of earthquakes/tsunamis.
- To make decisions about how to recover from earthquakes/tsunamis.
- To prioritise responses to earthquakes/tsunamis, whilst balancing the needs of people, the economy and the environment.

Key geographical terminology

- **Earthquake:** The shaking and vibration of a section of the Earth's crust due to the movement of the Earth's plates (plate tectonics).
- **Natural hazard:** A naturally occurring event that causes harm to people and property.
- **Tsunami:** Large ocean waves caused by earthquakes beneath the seabed.
- **Buoy:** A floating device anchored to the sea bed.

Key decisions

- How should we prepare for tectonic hazards like earthquakes and tsunamis?
- How should we respond to an earthquake?
- How should we respond to a tsunami?
- After an earthquake/tsunami which types of economic activity should be prioritised for recovery?
- Which services should be prioritised for recovery after an earthquake/tsunami?

Think, work and apply like a geographer

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

- seismologist
- geologist
- civil engineer (disaster preparedness)
- public information officer
- healthcare worker
- emergency response worker

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Questions to explore	<ul style="list-style-type: none"> • How can we prepare for earthquakes and tsunamis? • How can we respond to earthquakes and tsunamis? • How can technology help us to prepare for and respond to natural hazards? • What are services and why are they critical to disaster recovery? • What do emergency services do immediately after an earthquake or tsunami? • Who makes decisions about how to prepare for and respond to earthquakes, tsunamis and other natural disasters? • What should be included in an emergency kit for a natural disaster?
Emotional and ethical considerations	<ul style="list-style-type: none"> • Fear and uncertainty: The threat of an earthquake or tsunami may cause anxiety. Survivors of an event may also suffer from additional stress. • Ethical decision-making: How do we ensure that decisions made during and after a disaster are fair to all members of the community? Should vulnerable populations (e.g. children, the elderly or people with disabilities) be given special consideration in planning?
Links to other BBC resources* <i>*Some video content may only be available in the UK.</i>	<ul style="list-style-type: none"> • BBC Bitesize for Teachers – Plate tectonics: Earthquakes: https://www.bbc.co.uk/teach/class-clips-video/articles/zp4mcxs • BBC Bitesize for Teachers – Plate tectonics: Tsunamis: https://www.bbc.co.uk/teach/class-clips-video/articles/z2dh8p3 • BBC Bitesize – Plate tectonics: https://www.bbc.co.uk/bitesize/topics/zcnc4xs/articles/zrcqr2p • BBC Bitesize – Tectonic hazards – Earthquakes and Tsunamis: https://www.bbc.co.uk/bitesize/articles/zc4rcmn#znppn9q • BBC Newsround – What is an earthquake?: https://www.bbc.co.uk/newsround/av/45991910 • BBC Newsround – What is a tsunami and why do they happen?: https://www.bbc.co.uk/newsround/av/45996556 • BBC Bitesize for Teachers – Explain this: Plate tectonics: https://www.bbc.co.uk/teach/class-clips-video/articles/zrc992p • BBC Bitesize – Explore earthquakes: https://www.bbc.co.uk/bitesize/articles/zj89t39 • CBBC Fierce Earth Extreme: Tsunami: https://www.bbc.co.uk/cbbc/watch/p014spgy
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.

