Your notes

KS3 Geography: revision notes

Earthquakes and volcanoes

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Plates and boundaries

- The Earth's crust is broken into **tectonic plates**, which float on the mantle and are moved by **convection currents** and the pull of sinking plates.
- Destructive boundaries: an oceanic plate sinks (subducts) under a continental plate, causing explosive volcanoes and earthquakes, as in the Andes.
- Constructive boundaries: plates move apart and magma rises to form new crust, with gentler volcanoes, as in Iceland on the Mid-Atlantic Ridge.
- Conservative boundaries: plates slide past each other, causing earthquakes but no volcanoes, as on the San Andreas Fault. Where continental plates collide, fold mountains form, such as the Himalayas.
- The Ring of Fire is a ring of volcanoes and earthquakes around the Pacific Ocean.

Earthquakes and volcanoes

- Earthquakes happen when pressure builds up where plates are stuck and is suddenly released. The **focus** is where the earthquake starts underground; the **epicentre** is the point on the surface above it. **Seismometers** measure the shaking.
- **Composite volcanoes** are steep, with layers of ash and lava and violent eruptions. **Shield volcanoes** have gentle slopes and runny lava.
- Volcanoes can be active, dormant (not erupted for a long time, but could erupt again) or extinct.

Effects and responses

- Primary effects happen straight away: buildings collapse and people are killed or injured. Secondary effects come later: fires, tsunamis, landslides, disease and homelessness.
- People live near volcanoes for fertile soil, geothermal energy, tourism and minerals.

- Reducing the risk: monitoring volcanoes, earthquake-proof buildings (cross-bracing and shock-absorbing foundations), hazard maps, drills and emergency kits.

Key terms

Tectonic plate	A large section of the Earth's crust.
Convection current	The circular movement of heat in the mantle that moves plates.
Destructive boundary	Where an oceanic plate sinks under a continental plate.
Constructive boundary	Where plates move apart and new crust forms.
Conservative boundary	Where plates slide past each other.
Subduction	One plate sinking beneath another.
Focus	The point underground where an earthquake starts.
Epicentre	The point on the surface directly above the focus.
Seismometer	An instrument that measures earthquakes.
Composite volcano	A steep volcano with explosive eruptions.
Shield volcano	A gently sloping volcano with runny lava.
Dormant volcano	A volcano that hasn't erupted for a long time but could erupt again.

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What moves tectonic plates?
2. What happens at a constructive plate boundary?
3. What happens at a destructive plate boundary?
4. At which type of boundary are there earthquakes but no volcanoes?
5. What is the epicentre of an earthquake?
6. Which instrument measures earthquakes?
7. Which type of volcano has gentle slopes and runny lava?
8. What is a dormant volcano?

Answers

1. Convection currents in the mantle, and sinking plates pulling them
2. Plates move apart and magma rises to form new crust
3. An oceanic plate sinks under a continental plate
4. Conservative
5. The point on the surface directly above the focus
6. A seismometer
7. A shield volcano
8. One that hasn't erupted for a long time but could erupt again

Your notes

What to do next

Practise 13 questions on this topic

Try 4 exam questions, with mark schemes

Read the lesson, one step at a time

Free revision for GCSE and KS3 at lycolearn.co.uk. Some notes are for one exam board only, and say so in brackets.

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