GRADE 6 EARTH SCIENCE

Earth's Dynamic Interior

Revision Worksheet — Interactive

Type your answers directly into the blue fields below. Save the file when finished.

Name:

Class:

Date:

MYP Key Concept: Change

Global Context: Orientation in Space and Time

How to use this worksheet

Type your answers in the blue fields. Use the key terms below to help you. Write in full sentences where asked.

KEY TERMS REFERENCE

Key Term	Definition
Crust	Thin, solid outer layer (5-70 km)
Mantle	Thickest layer (~2,900 km). Solid rock that flows slowly.
Outer Core	Liquid layer of iron and nickel (~2,200 km)
Inner Core	Solid iron and nickel. Hottest layer, solid due to pressure.
Convection	Circular flow: hot rises, cools, sinks, repeats
Tectonic plates	Large pieces of crust that move on the mantle
Divergent	Plates move apart. New crust forms.
Convergent	Plates push together. Subduction may occur.
Transform	Plates slide past each other. Earthquakes.
Pangaea	Supercontinent ~300 million years ago
Wegener	Proposed continental drift in 1912

SECTION A: EARTH'S LAYERS

1. Name the four layers of the Earth from outside to centre.

(a)

(b)

(c)

(d)

2. Complete the table below.

Layer	State	Thickness	One key fact

3. Write TRUE or FALSE next to each statement.

(a) The mantle is the thickest layer of the Earth.

(b) The inner core is liquid.

(c) Oceanic crust is thinner and denser than continental crust.

(d) The outer core creates Earth's magnetic field.

4. Explain why the inner core is solid even though it is the hottest layer.

SECTION B: CONVECTION CURRENTS

5. Put these steps in the correct order (1-5).

- [ ] Cooler, denser rock sinks back down
- [ ] Rock reaches the top and moves sideways
- [ ] Hot rock near the core rises slowly
- [ ] The cycle repeats continuously
- [ ] Rock cools down near the crust

6. What is the main energy source that drives convection currents in the mantle?

7. Explain why hot rock in the mantle rises upward. Use the word DENSITY in your answer.

8. Draw and label a diagram showing convection currents in the mantle.

Include: heat source, rising hot rock, sideways movement, sinking cool rock, plates on top.

Draw your diagram here (print this page if needed)

SECTION C: PLATE BOUNDARIES

9. Complete the table below.

Boundary	Plate movement	What happens	Example

10. At a convergent boundary with oceanic and continental plates, which plate subducts? Explain why.

11. Name the boundary type that causes:

(a) The Mid-Atlantic Ridge:

(b) The Himalayas:

(c) The San Andreas Fault:

12. Explain what happens at a divergent boundary. Use: magma, new crust, sea-floor spreading.

SECTION D: CONTINENTAL DRIFT

13. What was the name of the supercontinent proposed by Alfred Wegener?

14. Describe TWO pieces of evidence Wegener used to support continental drift.
Evidence 1:

Evidence 2:

15. Why was Wegener's theory rejected by most scientists during his lifetime?

16. What discovery in the 1960s finally provided the mechanism for continental drift?

SECTION E: PUTTING IT ALL TOGETHER

17. Complete the cause-effect chain by filling in the gaps.
Radioactive decay heats Earth's _____

↓

This causes _____ currents in the _____

The sideways movement drags _____ plates

At plate _____, we get earthquakes, volcanoes, and mountains

18. Explain why Earth's surface would look very different if convection currents stopped. Write at least three sentences.

19. A student says: 'The mantle is liquid because lava comes from volcanoes.' Explain why this is incorrect.

BONUS: EXTENDED RESPONSE

20. Explain the complete chain of events from Earth's core to a volcanic eruption at a convergent boundary. Mention: convection currents, plate movement, subduction, magma.

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