Geography Now!

New Junior Cycle

Activity Book

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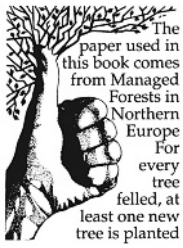

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Page 178, Rajesh Parishwad, ‘The national shame destroying a country’s scientific future’, www.chemistryworld.com

Section 1

1 Our restless Earth

Anticipation exercise

Read each statement and indicate whether you know or need to learn it in the columns on the left side of the table. When you have completed the chapter, re-read the statements and answer again, this time in the columns on the right. Did your answers change?

Before reading the chapter		Our restless Earth		After reading the chapter	
I know this	I will learn this		Statement	I know this	I need to learn this
		1	Our solar system is made up of the Sun and eight planets.		
		2	Earth is made up of three layers. The one we live on is called the crust.		
		3	Earth's crust is broken up into sections called plates.		
		4	There are three types of plate boundary, called: transform, destructive and constructive.		
		5	Plates move because of convection currents.		
		6	Movement of plate boundaries may cause mountain building, volcanic eruptions and earthquakes.		
		7	As the plates move, they carry the continents with them. This is called continental drift.		
		8	It has taken millions of years for continents to reach where they are today.		
		9	Movement is still taking place, very, very slowly.		
		10	Continents were once (200 million years ago) one landmass called Pangaea.		

Investigation sheet

Textbook learning activity 1.1.

Q1.1(a) How far is Earth from the Sun in kilometres (km)?	Q1.1(b) What is the name of the imaginary line around the widest part of Earth?
Answer	Answer
Where/how did you find this information?	Where/how did you find this information?
Q1.1(c) What is the circumference of Earth in kilometres?	**Q1.1(d) What length is the radius of Earth (the distance from the edge to the centre) in kilometres?**
Answer	Answer
Where/how did you find this information?	Where/how did you find this information?

In what way did you and your partner work together to answer these questions?

What did you do to find the information (e.g. if you used the internet, what search terms did you use; if you used a book, what did you look up)?

How did you decide where to search for the information?

How were you confident that the information you found was correct?

Matching exercise

Match the numbered descriptions with the lettered words or phrases in the table below. Write your answers in the grid provided.

1	The layer of hot, soft rock that Earth's crust floats on	**A**	destructive
2	The theory that explains the movements of plates	**B**	continental drift
3	The boundary type where plates collide	**C**	transform and destructive
4	The boundary type where crust is created	**D**	mantle
5	The boundary types that cause earthquakes	**E**	magma
6	The molten or semi-molten material that is Earth's mantle	**F**	constructive
7	The type of current that causes magma to move in a circular motion	**G**	plate tectonics
8	Sections of Pangaea move apart	**H**	convection

1	2	3	4	5	6	7	8

Key terms crossword

Across

2 (And 5 Down) Movement of the continents as they are carried along on the plates.

5 Plate boundary where plates collide and crust is destroyed.

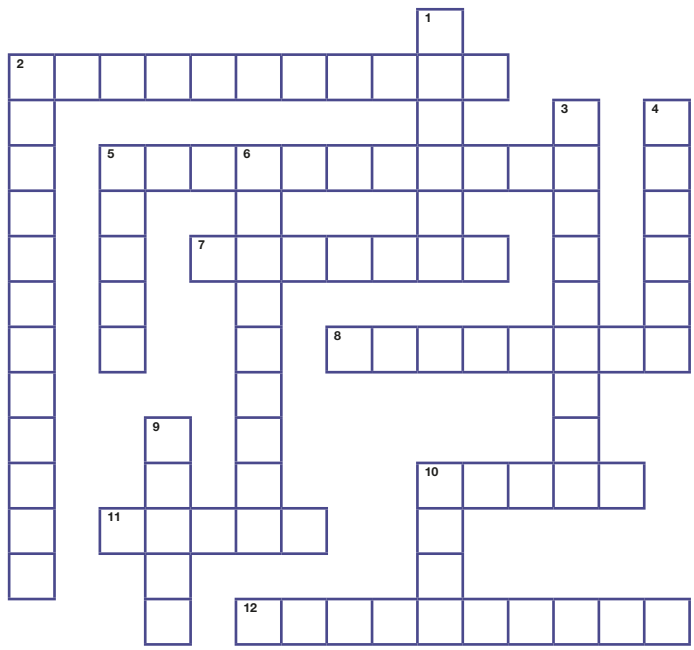
7 The single large landmass about 200 million years ago.

8 See 12 Across.

10 Outer layer of Earth made of solid rock.

11 The molten or semi-molten material in the mantle.

12 (And 8 Across) The circular movement of semi-molten magma in the mantle.



Down

1 The largest layer of Earth, made of molten and semi-molten rock.

2 The type of boundary where plates pull apart and crust is created.

3 See 9 Down.

4 Sections into which Earth's crust is broken.

5 See 2 Across.

6 The type of boundary where plates glide past one another.

9 (And 3 Down) The movement of the plates and the features that result.

10 The very hot inner layer of Earth.

Key questions

1 How long ago was Earth formed? _____

2 List the planets in order from nearest to the Sun to furthest from the Sun. _____

_____

3 What is the name of the layer at the centre of Earth? _____

4 Why is the very centre of Earth solid? _____

_____

5 What is the name of the plate that Ireland is on? _____

6 Ireland's plate shares a boundary with the North American plate. What kind of boundary is this?

_____

_____

7 At which type of boundary will you find fold mountains? _____

8 Give an example of where in the world you will find a transform plate boundary. _____

_____

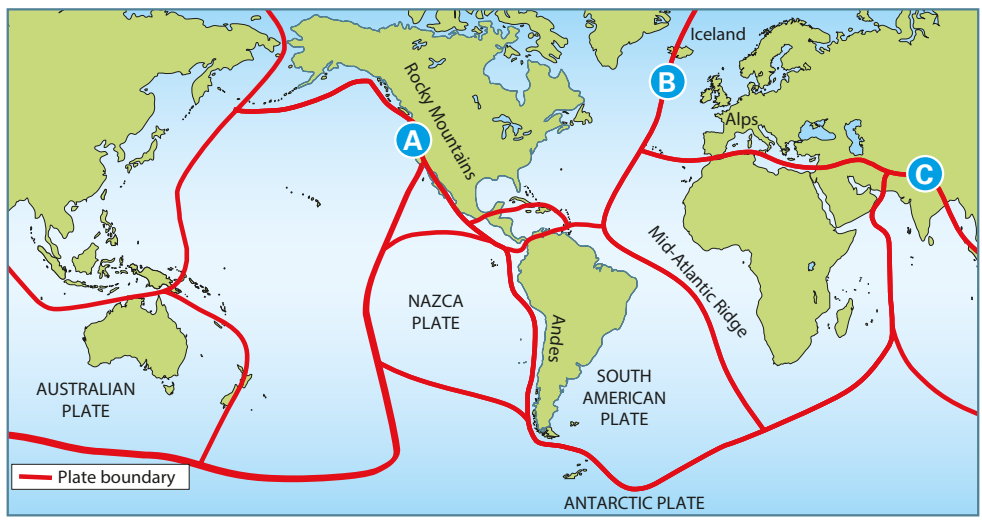
9 Plates move in different directions and at different speeds. What causes this?

_____

Key activity

Plate tectonics

Examine the map showing the major plates of Earth's crust and complete the table that follows.



Boundary label	A	B	C
Name the two plates that meet there	(i) (ii)	(i) (ii)	(i) (ii)
Identify the type of boundary there			
Describe how the plates move there			
List two features that you find at each plate boundary	(i) (ii)	(i) (ii)	(i) (ii)

Our restless Earth: self-assessment

Indicate how well you understood each of the following topics by ticking the relevant column for each statement below.

Where is your learning at?

Green: I understand this fully.

Orange: I understand most of this, but still have some questions.

Red: I am struggling with this and need help.

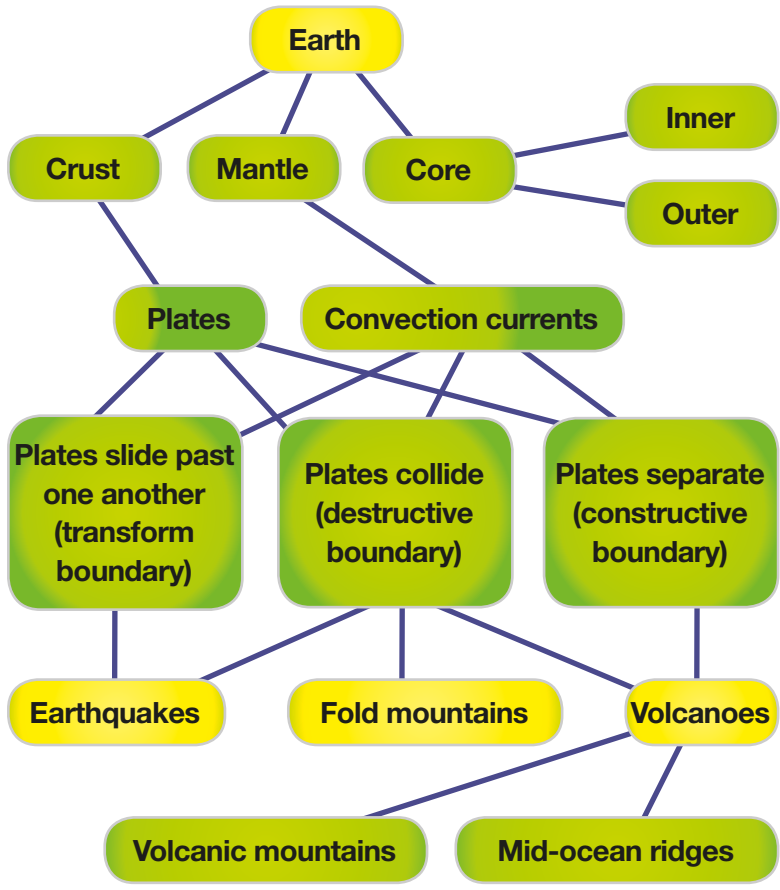
	I am able to ...	Green	Orange	Red
1	State Earth's position in the solar system			
2	Describe the structure of Earth			
3	Identify the seven main tectonic plates on a world map			
4	Classify the characteristics of types of plate boundary			
5	Describe the results of plates moving (fold mountains, volcanoes, earthquakes)			
6	Explain how convection currents work			
7	Explain the concept of continental drift			
8	Predict what will happen to the Mediterranean Sea over the next 50 million years			

Don't forget!

Go back to the anticipation guide at the start of this chapter and see if you now know or need to learn each of the statements. Did your answers change since you studied this topic?

Our restless Earth: mind map

In your copy or online, reproduce this mind map summarising the information in this chapter. This is to help you remember what you learnt in the chapter and so you may adapt it in any way you want to.



End of chapter reflection

Your teacher will give you a copy of the 'End of chapter reflection'. Complete it for this chapter.

World map