BGE

COURSE BOOK

Level 3 GEOGRAPHY

BrightRED PUBLISHING

BGE LEVEL 3

GEOGRAPHY

COURSE BOOK

PERFECT FOR S1, S2, AND S3

INTRODUCING BRIGHTRED BGE GEOGRAPHY

INTRODUCTION

Welcome to the BrightRed BGE Geography textbook. This book should guide you through all the Outcomes and Benchmarks for Geography for the Scottish Curriculum in a fun-filled, colourful way.

Teachers should never have to worry about covering or assessing Benchmarks ever again, and students should be able to glide effortlessly from Level 3 and progress to some areas of Level 4 while learning about topics that are not only enjoyable, but also should concern all of us about the modern world we live in. The selected topics target learning pathways that build on prior knowledge and help progression into National and Higher Geography. In addition, the activities offered will ensure challenge and rigour for all students, from accessing and understanding key words to evaluating digital data.

Topics covered build on information acquired as students work through the book. Unit 6, 'Mapping Skills', covers the basics to assist any students who may never have experienced working with latitude, longitude or OS grid references, as well as some basic activities included in the BGE Benchmarks.

Skills for life and work

This has been included to highlight the large variety of skills Geography introduces to us. Students can review these, identify their key strengths and match them to the examples of careers and further study to which each Geographical unit in the book can lead in the Homework Helpers.

Command words

Three command words are focused on throughout the activities in this book. The understanding and use of these command words should ensure better progress for students into assessment at National 4, 5 and Higher levels.

Classroom challenges

These are all formulated to cover the BGE Level 3 and some Level 4 Benchmarks and Outcomes. They have been designed to ensure pace, challenge and enjoyment for all abilities.

Homework Helpers

Activities that are suitable for extending learning beyond the classroom have been highlighted. We also have a wonderful bundle of links to videos and extension work available online at www.brightredpublishing.co.uk

Teaching Notes

Printable templates and useful teaching resources have been collated in our Teaching Notes bundle and are available to download for free from the Bright Red website.

EARTH FORCES

Having investigated processes which form and shape landscapes. I can explain their impact on selected landscapes in Scotland, Europe and beyond. SOC 3-07a

Benchmarks

- Identifies the processes which form landscapes across the world.
- Provides a simple explanation of at least three processes involved in the development of any chosen landscape, for example, coasts, volcanic, rivers or glaciated.
- Reviews at least two simple graphical sources to interpret information and form a conclusion, for example, a map and a graph.

What's coming up?

- What are the zones of the Earth?
- Finding out about the Earth's crust.
- What is Pangea and what are the causes of continental drift?
- What causes plates to move and cause continental drift?
- Getting to know all things volcanic.
- Why do we have earth-shattering earthquakes?
- What causes terrifying tsunamis?

WHAT ARE THE ZONES OF THE EARTH?

We tend to think of our planet as being a lump of solid rock. However, if we were to take a bite out of the Earth and have a look inside, we would see that it is made up of different parts.

If we were to imagine that we were going on a journey to the centre of the Earth, we would actually pass through four separate zones. The outer zone is the thinnest and is known as the **crust**. It is made of solid material. Below the crust is the thickest zone, known as the **mantle**, which is molten (liquid rock called **magma**). In the centre of the Earth is the core, which has two parts. The **outer core** is also believed to be molten, and the **inner core** is thought to be solid and probably made of dense, heavy iron.

DON'T FORGET

The distance from the surface to the centre of the Earth is 6378 kilometres!

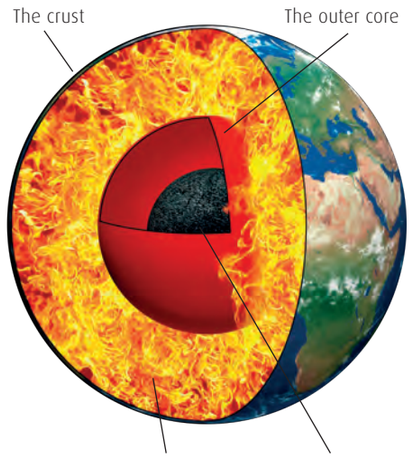
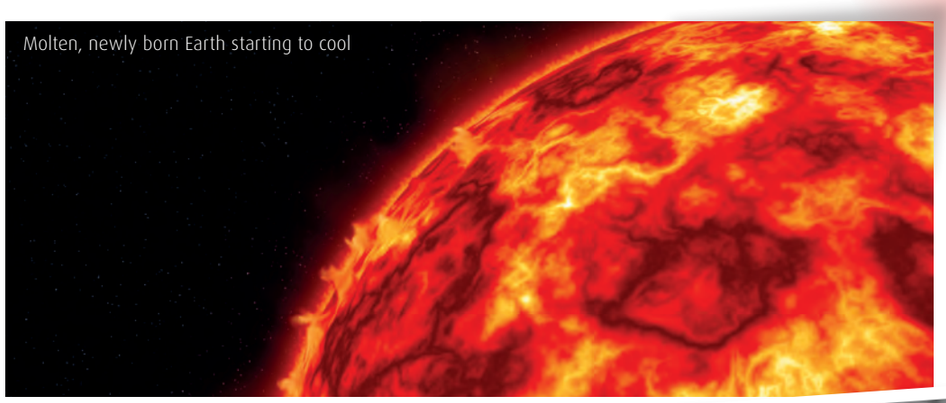


Diagram 1 – The zones of the Earth


Molten, newly born Earth starting to cool

How the crust formed

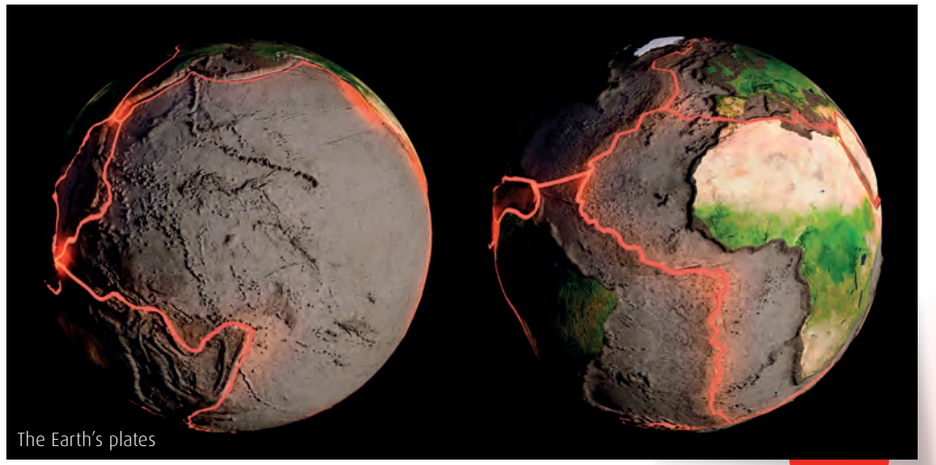
The Earth was created under so much heat and pressure that it formed as a molten (liquid) planet. As it orbited (moved in a curved path) around the sun, it gradually began to cool and settle. It was during this time that the outer zone of the Earth – the crust – formed around the planet, rather like skin forming on a bowl of custard or porridge as it starts to cool. Although the crust may feel thick and solid under our feet, when compared to the overall size of the Earth it is as thin as the skin on an apple and as fragile as the shell on an egg.


Notice how thin the shell on this egg is!

The Earth's plates

What makes things difficult for humans is the fact that the crust is also broken up into large pieces known as **plates**. The boundaries of these are the Earth's danger lines where **volcanoes**, **earthquakes** and **tsunamis** regularly occur. In addition, these plates are constantly on the move, jostling and bashing into each other, or ripping apart to open up chasms leading to the mantle below. It is this movement that has ultimately caused great loss of human life on our planet over the centuries.

There are some great film clips on our Homework Helpers to help you imagine what planet Earth was like when it first formed.

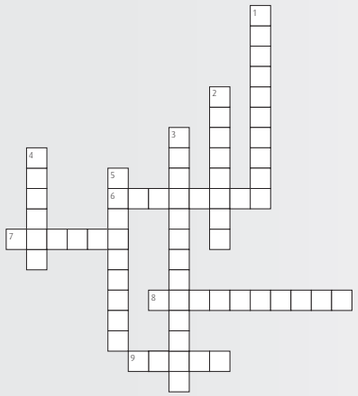

The Earth's plates

Classroom challenge

1. You should now know how to identify features of glacial erosion on a map. Test this knowledge by trying to identify a CORRIE, ARÊTE, U-SHAPED VALLEY, HANGING VALLEY and RIBBON LAKE from the map below. Copy and complete this table in your workbook.

Feature	Name from map	Four-figure grid reference
Corrie		
Arête		
U-shaped valley		
Hanging valley		
Ribbon lake		

2. Read through all the pages on glaciation. Use the clues to complete this crossword.



Across
6. When rocks in a glacier scrape and scour the land.
7. An armchair-shaped feature.
8. The name of the world's fastest-moving glacier.
9. A knife-edged ridge between two corries.

Down
1. The name of the ultimate pyramidal peak.
2. When ice pulls rocks out of the landscape.
3. Used to be V-shaped.
4. A type of long, thin lake.
5. Comes out of the end of a hanging valley.

Check out the Homework Helpers for more fun-filled glaciation activities.

HOW CAN HUMANS MAKE USE OF GLACIAL FEATURES?

Like volcanic landscapes, glaciated areas can offer opportunities for humans. In fact, certain glacial features have proven to be extremely useful.

The diagram below shows some of these.

Diagram 10 – Uses of a glacial landscape

All these uses of glaciated landscapes mean that people are able to get jobs there and earn money. This means that people are happy to live and work in these places and not move away to nearby cities. When many people do leave a countryside area, we call it **rural depopulation**.

Follow the links on the Homework Helpers to find out more on how Scotland's glaciated landscapes can be used.

Some uses of glacial landscapes – rafting, hydroelectric power and skiing

WHAT CONFLICTS ARISE BETWEEN PEOPLE WHO WANT TO USE GLACIAL LANDSCAPES?

People using the countryside should respect the fact that the people living there, the wildlife and the environment all need to be protected. However, so many different people would like to use glaciated landscapes for lots of different activities that it often leads to **conflict**. This means that groups of people start to have serious disagreements with each other about how the landscape should be used. Diagram 11 on page 71 sums up some of the arguments and conflicts that arise because of **tourism** in the Cairngorms National Park near Aviemore, Scotland.

Location of Aviemore

TEACHING NOTES

Making valid conclusions about the impact of human activity on a chosen area is CfE Level 4 work.

The Cairngorms National Park

Rare and endangered species such as the Scottish wildcat live in the Cairngorms.

Farmers use the land in the Cairngorms.

The beautiful scenery is very fragile and easily damaged.

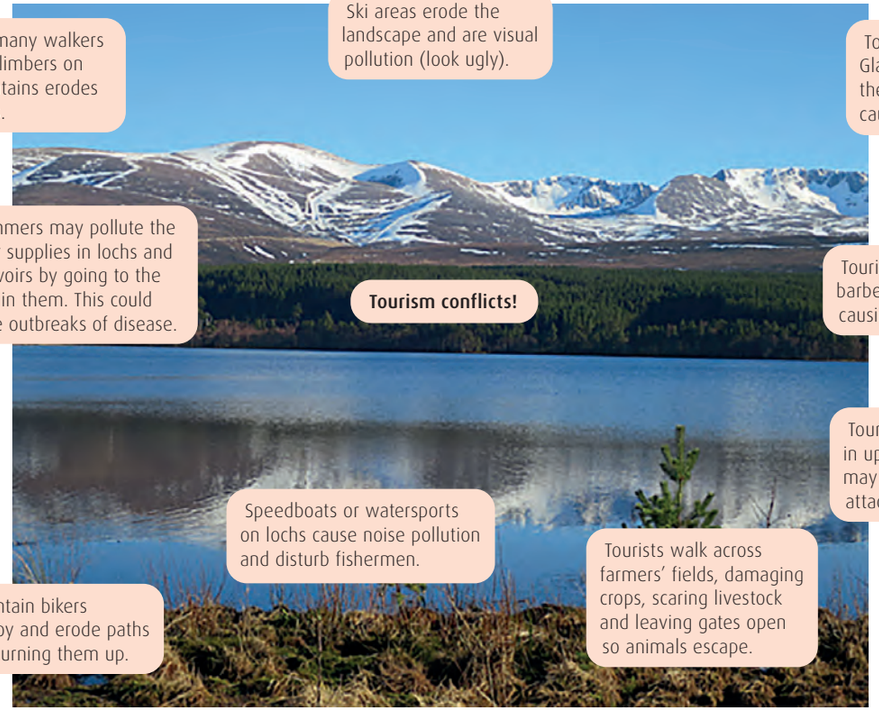


Diagram 11 – Conflict from tourism in the Cairngorms

Many think that skiing destroys the natural environment of Cairn Gorm mountain. What do you think?

Litter left by tourists

Mountain bikes erode the land

Wildfires like this can result from careless use of fires, barbecues and glass bottles

5. Look at Diagram 3 on page 82 and 'My Rainforest Weather Diary'. Copy and complete the paragraph below by selecting the correct words from the word box.

HUMID VAPOUR CONDENSE HEAVY LIGHTNING CONVECTION EVAPORATE MONOTONOUS COLDER CUMULONIMBUS

The weather in the tropical rainforest is very _____. This is because the hot sun makes moisture e_____ from the forest, making the atmosphere very sweaty. This water v_____ rises upwards above the trees. As it rises, it gets into _____ temperatures, which makes the moisture c_____ to form clouds. By afternoon, these clouds have grown into large, tall, _____ thunderstorm clouds. There will, therefore, often be h_____ rain, thunder and _____ before the sun sets in the rainforest. Another name for these thunderstorms is _____ rainfall. This happens almost every day, and so we can say that the weather in the rainforest is m_____.

6. Make your own labelled diagram in your workbook to show what convection rainfall is.

TEACHING NOTES

You could make use of the template from the Teaching Notes for this.

ADAPTING TO THE RAINFOREST CLIMATE

How are plants adapted to this climate?

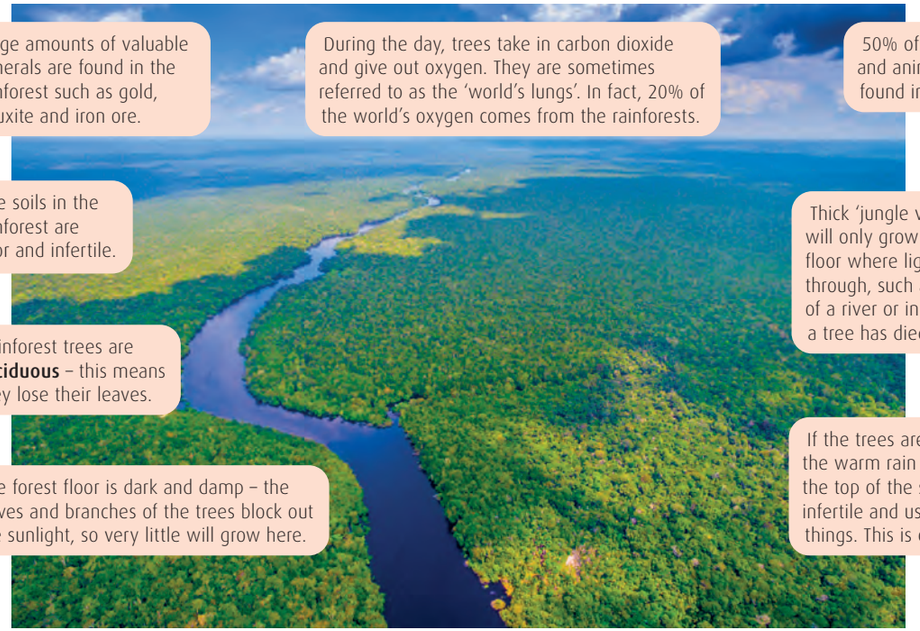


Diagram 4 – Important facts about the rainforest

Lack of light on the forest floor means no undergrowth. Thick jungle plants grow where there is light

Despite their poor infertile soils, rainforests are full of the most luxuriant vegetation found on our planet. This leads us to ask: how can this thick vegetation grow? Where are the **nutrients** (food from the soil for plants) coming from? The answer is that they are feeding on their own dead leaves, which are rotting on the forest floor!

The forest itself is made up of distinct layers.

BrightRED Course Books

BGE LEVEL 3

GEOGRAPHY

Rhona Maclean

This BrightRED Course Book for Broad General Education is the perfect resource for students in **S1, S2** and **S3**. It covers the **Level 3 experiences and outcomes** and has been written to meet the **Curriculum for Excellence benchmarks**.

Whether you are looking for support in the classroom or help at home, this BGE Course Book is the one for you! The core content is supported with many great teaching and learning features:

- ***What's coming up?*** spells out the ground you are set to cover.
- ***Classroom challenge* questions and tasks** test your knowledge and keep you on track.
- ***Homework helpers*** offer you extra support to try yourself at home.
- ***Don't forget* pointers** remind you of the most important bits just in case!
- ***Teaching Notes*** provide supporting content every step of the way.
- **A full glossary** lists key terms and concepts for handy reference.

Twice winner of the IPG Education Publisher of the Year award.

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Be Bright, Be Ready for Level 3 and beyond!

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