Key Question: Why don't penguins need to fly?

Learning objectives

During the enquiry pupils will have opportunities through the application and analysis of a wide range of geographical skills and resources to:

- **Identify**, **recognise** and **describe** the key geographical features of the Antarctic environment;
- **Identify** ways in which penguins are adapted to the Antarctic environment;
- **Identify** countries in Africa which lie within the Sahara Desert;
- **Identify**, **recognise** and **describe** the key geographical features of the Sahara Desert;
- **Explain** why Antarctica is a desert despite being the coldest place on Earth;
- **Describe** ways that the Arctic region and North Pole is similar to and different from (**compare and contrast**) Antarctica and the South Pole and offer **reasons** for such differences;
- **Describe** and **explain** the components of the food chain of an Emperor Penguin;
- **Identify** and **describe** 3 geographical features of a South American country that Peter the Polar Bear visits on his journey to Antarctica;
- **Compare and contrast** the weather and climate of Antarctica (the home of Polo) and Zambia (the home of Marco);

Purpose of the enquiry

This enquiry introduces young geographers to the concept of biomes and natural regions which they will study in greater depth at a later stage. It enables them to understand the importance of location in relation to the Equator and poles in determining weather and climate, which in turn have such an influence on shaping the natural geographical features of environments. Pupils will come to understand the distribution of hot and cold places in the world and how living things have to adapt to survive in such places – the more extreme the environment, the more specialised the adaptation. By comparing a number of environments, pupils are able to identify and describe similarities and differences between places in the world and offer reasons for why such differences exist. The fundamental geographical concepts of place, space, location, distribution, scale and environmental interaction underpin the enquiry.

Context

This enquiry focuses very much on the natural environment and places where there is little or no human presence. Through a number of engaging stories, pupils are first introduced to the continent of Antarctica and are able to locate it in relation to all the continents and oceans of the world. Antarctica is the coldest, windiest and driest place on Earth and as such provides a real comparison to the environment of the pupils' local area. Through the study of hot and cold areas of the world (and the reasons why these places are located where they are) pupils are able to understand why Antarctica is so cold and dry. The concept of a desert is developed through a comparative study of the Sahara Desert and pupils are able to consolidate their understanding of adaptation by comparing the life of Emperor Penguins with that of Camels. Further progression occurs through looking at the country of Zambia (the home of Marco the Monkey) and the physical features of rivers including waterfalls such as Victoria Falls.

National Curriculum coverage Geography

Locational knowledge

- Name and locate the world's seven continents and five oceans.

Human and physical geography

- Identify daily and seasonal weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the north and south poles.
- Use basic geographical vocabulary to refer to key physical and human features.

Geographical skills and fieldwork

- Use world maps, atlases and globes to identify the United Kingdom and its countries as well as the countries, continents and oceans studied at this key stage.
- Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features.
- Use simple observational skills to study key human and physical features of environments.

Connections to the subject content of other curriculum areas

English

Teachers should develop pupils' spoken language, reading, writing and vocabulary as integral aspects of the teaching of every subject. English is both a subject in its own right and the medium for teaching; for pupils, understanding the language provides access to the whole curriculum. Fluency in the English language is an essential foundation for success in all subjects.

Spoken language

Pupils should be taught to speak clearly and convey ideas confidently using Standard English. They should learn to justify ideas with reasons; ask questions to check understanding; develop vocabulary and build knowledge; negotiate; evaluate and build on the ideas of others; and select the appropriate register for effective communication. They should be taught to give well-structured descriptions and explanations and develop their understanding through speculating, hypothesising and exploring ideas. This will enable them to clarify their thinking as well as organise their ideas for writing.

Key Question: Why don't penguins need to fly?

- **Explain** the geographic reasons why Polo finds it difficult to live in Zambia and Marco finds it a problem to live in Antarctica;
- Design and construct a simple model of a waterfall and use it to **identify** and **describe** some of its geographical features;
- **Describe** and offer **reasons** why an ostrich doesn't need to fly and **explain** how this is very similar to a penguin.

Key Subject Vocabulary

Continent; Ocean; Antarctica; Southern Ocean; Mountain; Valley; Snow; Ice; Blizzard; Desert; Landscape; Environment; Wind; Rain; Ice Sheet; Pebbles; Shore; Hill; Cliff; Habitat; Adapted; Africa; Iceberg; Sand dune; Arctic; Carnivore; Temperature; Summer; Winter; Predator; Food chain; Krill; Animal; Phytoplankton; Plant; River; Waterfall; Gorge; Country; Jungle.

Reading and writing

Teachers should develop pupils' reading and writing in all subjects to support their acquisition of knowledge. Pupils should be taught to read fluently, understand extended prose (both fiction and non-fiction) and be encouraged to read for pleasure. Schools should do everything to promote wider reading. They should provide library facilities and set ambitious expectations for reading at home. Pupils should develop the stamina and skills to write at length, with accurate spelling and punctuation. They should be taught the correct use of grammar. They should build on what they have been taught to expand the range of their writing and the variety of the grammar they use. The writing they do should include narratives, explanations, descriptions, comparisons, summaries and evaluations: such writing supports them in rehearsing, understanding and consolidating what they have heard or read.

Numeracy and Mathematics

Teachers should use every relevant subject to develop pupils' mathematical fluency. Confidence in numeracy and other mathematical skills is a precondition of success across the national curriculum.

Teachers should develop pupils' numeracy and mathematical reasoning in all subjects so that they understand and appreciate the importance of mathematics. Pupils should be taught to apply arithmetic fluently to problems, understand and use measures, make estimates and sense check their work. Pupils should apply their geometric and algebraic understanding, and relate their understanding of probability to the notions of risk and uncertainty. They should also understand the cycle of collecting, presenting and analysing data. They should be taught to apply their mathematics to both routine and non-routine problems, including breaking down more complex problems into a series of simpler steps.

Science

Animals including humans

Pupils should be taught to:

- Identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals.
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores.

Living things and their habitats

Pupils should be taught to:

- Explore and compare the differences between things that are living, dead, and things that have never been alive.
- Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other.
- Identify and name a variety of plants and animals in their habitats.
- Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

Animals including humans

Pupils should be taught to:

- Notice that animals, including humans, have offspring which grow into adults.
- Find out about and describe the basic needs of animals, including humans, for survival (water, food and air).

Art and design

Pupils should be taught to:

- Use a range of materials creatively to design and make products.
- Use drawing, painting and sculpture to develop and share their ideas, experiences and imagination.
- Develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space.

Key Question: Why don't penguins need to fly?

Design and Technology

When designing and making, pupils should be taught to:

Design

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

Make

- Select from and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing).
- Select from and use a wide range of materials and components, including construction materials.
- Select textiles and ingredients, according to their characteristics.

Evaluate

- Explore and evaluate a range of existing products.
- Evaluate their ideas and products against design criteria.

Technical knowledge

- Build structures, exploring how they can be made stronger, stiffer and more stable.

NOTES

Ancillary Question 1: Where is Pip's home and what do we find there?

Without giving any other information tell the pupils that you are going to read them a story called: *Where Is Home, Little Pip* by Karma Wilson and Jane Chapman (Simon & Schuster ISBN 978-1847383884). Read through the story twice and then discuss the story. What kind of animal is Pip and in what sort of place does she live? Why was getting lost so dangerous for Pip? What might have happened to her given the conditions she encountered? Encourage the pupils to think about the geography of this place – particularly the landscape and associated weather conditions. What do the pupils already know about penguins? Where do they live?

Now tell the pupils that you are going to show them two short films about the continent of the world in which Pip lives – known as the 'white continent'. Using a large wall map of the world and the map in **Resource 1** remind pupils about the seven continents and five oceans of the world and ask them to consider which continent they think is known as the 'white continent' and why? Antarctica. Take time to discuss with the pupils what they already know about Antarctica and write down key points on the board. Be sure to use a globe to locate Antarctica in the far 'south' of the Earth rather than using the term 'bottom' (as the Earth is essentially a sphere there is no 'bottom' or 'top' to the world).

Next show the pupils the two short films at www.youtube.com/watch?v=sIujRh4g6lw and www.youtube.com/watch?v=FQbWtF9ghkg and ask them to think particularly about the natural environment (the surroundings we see) in Antarctica – building on what they learned from the story of Pip the penguin. The films allow us to see a good deal and hear something of the place but what would we be feeling or smelling if we visited? What would the weather be like? Make a list of all the adjectives that the pupils suggest on the board. Before moving on, summarise the following key points for the pupils:

- Antarctica is in fact land with mountains and valleys covered by ice up to 5 km thick in places.
- 70 per cent of the world's fresh water is stored in the ice of Antarctica.
- It is the driest place on Earth and the world's largest desert.
- It is also the coldest and windiest place on Earth.
- It is surrounded by the Southern Ocean.
- The South Pole lies at its centre.

NOTES

Ancillary Question 2: How are penguins able to survive in Antarctica?

Explain to the pupils that penguins are birds and belong to the animal kingdom. Take time here to explore with the pupils what they already know about birds – what are the characteristics of all birds? Birds have feathers, beaks, lay eggs, are warm blooded and most can fly! What birds do we most commonly see in and around the school? Penguins are one of the small numbers of birds that don't fly. They have small wings that are short and stiff but these are far too small and weak to lift a penguin into the air. They are much more important to the penguin as flippers or paddles when swimming through water (penguins spend most of their lives in water) or pushing themselves over the ice on their stomachs (called tobogganing).

Read the second book about Pip the penguin by Karma Wilson and Jane Chapman entitled *Don't Be Afraid, Little Pip* (Simon & Schuster ISBN 978-1847386182). What happened to Pip when she tried to use her wings to fly? What does Pip mean at the end of the story when she says: 'Now I can swim and now I can fly'? Before moving on spend a moment exploring the difference between animals (the kingdom of living things in which birds belong) and plants e.g. plants are rooted and do not move and don't have advanced senses such as smell, sight or hearing.

Now show the pupils the film about Emperor penguins at www.youtube.com/watch?v=RYvachfdpPI. How do the pupils think that penguins are able to survive living as they do in the coldest, driest, windiest place on Earth? Make a list of all the things that any living creature would need to be able live in the Antarctic. What clues were there in the film e.g. standing together in huge numbers to protect each other from the icy wind and keeping the egg off the frozen ground and sheltered from the extreme weather. The third book in the Pip trilogy: *What's in the Egg, Little Pip?* (ISBN: 978-1847388223) explores this further and helps the pupils understand how the penguins keep the egg warm (in a pouch underneath their thick feathers) and why this is so important.

Next write the word *adapted* on the board and explain that this word is used to describe all the ways in which a living creature, such as a penguin in Antarctica, is well suited to the *habitat* (the surroundings) in which it lives. The Antarctic habitat is very severe and so the adaptations of the penguins have to be special. Give the pupils a copy of **Resource 2** and then support them to label the following features with an arrow: *thick fat keeps out the cold*; *webbed feet helps them balance; thick oily feathers keeps water off; small flippers for swimming fast; pouch for keeping egg warm.*

NOTES

Ancillary Question 3: How does Antarctica compare with the Sahara Desert?

Give the pupils a copy of the map in **Resource 3** and the satellite image in **Resource 4** which show the location of the Sahara Desert in the continent of Africa. How can the pupils tell from the satellite image that so much of the continent of Africa is desert? Take some time here to remind pupils that a continent is just a large area of the land on the Earth's surface which is divided up into many countries. Using the map in **Resource 5** support the pupils to name as many countries as they can which contain parts of the Sahara Desert.

Now show the pupils the film at https://www.youtube.com/watch?v=RdFkC6Gtb5A. Discuss how the environment of the Sahara Desert compares with Antarctica? Encourage the pupils to see that the landscape is almost exactly the same, i.e. huge, windswept, barren, apparently lifeless, extreme and hostile etc. The only real difference being the presence of endless sand rather than endless ice and extremely hot and dry conditions rather than extremely cold and dry conditions.

Next show the pupils the photograph in **Resource 6**. Only one large animal is able to survive in the Sahara Desert. What is it? Discuss with the pupils what they know about camels? How are camels adapted to survive in such an extremely hot and dry habitat? A common response will be that camels can store water in their humps but explain that these humps store fat reserves rather than water. These fat reserves will provide the energy camels need when they have to survive for weeks and weeks without food. Do the children know of any other ways that the camel is adapted to living in the desert? Explain that they have two rows of long eyelashes to protect their eyes from blowing sand and the glare of the sun; nostrils that close for the same reason; long legs to keep their body as far away from the scorching ground as possible during the day; thick layers of fur and an undercoat of wool to keep them warm during the freezing nights; large flat leathery pads on the bottom of their hooves to make walking on sand dunes much easier; thick leathery patches on their knees so that they don't get burnt when they kneel down on the hot sand. In the same way that the pupils labelled the diagram of the Emperor penguins in **Resource 2** they could do the same for the diagram of a camel in **Resource 7**.

NOTES

Ancillary Question 4: How is the Arctic different from the Antarctic?

With the pupils, return to the map of the world in **Resource 3** and view the satellite image in **Resource 4.** Remind them that the frozen area around the South Pole is called the Antarctic region and the frozen area around the North Pole is called the Arctic region – Arctic to the north and Antarctic to the south. Now encourage the pupils to align the satellite images in **Resource 8** with the two maps of Antarctica and the Arctic region in **Resource 9**. These are both areas covered in ice and if you were standing at the North Pole or South Pole the environment would look very similar.

There are webcams used by geographers to monitor the environment during the course of a year at both the north and south poles. The South Pole webcam is at www.youtube.com/watch?v=cfChwrrEV20 and the North Pole webcam is at www.youtube.com/watch?v=8ul6LqZJl-E. Play both of these to the pupils. During the year something very important happens to the ice around the North Pole which doesn't happen to the ice around the South Pole. Can the pupils identify what this is? The map of the Arctic region in **Resource 9** also provides a clue. Support the pupils to compare the two keys on the maps of Antarctica and the Arctic region. Where is most ice found in Antarctica compared with the Arctic region? Under the snow and ice in Antarctica and the South Pole is land, not ocean (which is why Antarctica is a continent) whereas under the ice at the Arctic region and North Pole is an ocean of water – the Arctic Ocean. This is a very important distinction between the two locations which, on the surface, look very much the same.

NOTES

Ancillary Question 5: Why are there no Polar Bears in Antarctica?

In the frozen Arctic regions of the north the Polar Bear is the top predator and a carnivore. It dominates its habitat (the surroundings in which it lives). It sits at the top of its food chain. However, surviving on the sea ice (remember there is no land beneath most of the Arctic) is not easy, even for the polar bear. Show the following film clips to the pupils in this order: www.youtube.com/watch?v=OwZH_aT0FGI

www.youtube.com/watch?v=eQ4Ak2w1ZDU

www.youtube.com/watch?v=bA-jDk3-Mgs

Ask the pupils to identify any things they see or hear which shows how well the polar bear is suited (adapted) to living in such surroundings (habitat). For example, the polar bear spends winter in a den beneath the ice during which time it lives off fat reserves and the females give birth to young (they don't hibernate in the strict sense of the word). Also encourage the pupils to describe any day-to-day problems which polar bears have to face e.g. melting ice! They only emerge from their dens with the arrival of spring as it becomes warmer. Having watched the sequence of films, support the pupils to create a polar bear food chain from the images in **Resource 10.** Mix the images up and then divide pupils into pairs. Can they order the living things into the correct sequence of the food chain? This will be a challenge because two of the images show organisms millions of times larger than they actually are, through an electron microscope. The order is Polar Bear – Ringed Seal – Cod – Krill (small animals which can grow up to a size of 2 cm) – Phytoplankton (microscopically small plants). The pupils can now complete the simple flow diagram of the food chain in **Resource 11**.

Why there are no polar bears in Antarctica is a question that is often asked by children and adults alike. The truth is that the climatic and environmental conditions of most of central Antarctica would be far too extreme for polar bears to survive – far too cold with far too little food. Average winter temperatures in central Antarctica are –60 °C compared with –40 °C in the Arctic but most crucially, average Antarctic summer temperatures are –28 °C compared with 0 °C in the Arctic. The coastline of Antarctica and the surrounding islands of the Southern Ocean would provide a suitable polar bear habitat with plenty of easily caught prey in terms of seals and penguins (these would be decimated in huge numbers and their survival threatened very quickly). If there are places in Antarctica that would be ideal for polar bears, then why don't we find them there? This is a good question for the children to consider. Tell the pupils that the answer is that they can't get to Antarctica!

Take the pupils to the map of countries of the world in **Resource 13**. There are plenty of polar bears in Greenland and northern Canada. To get to Antarctica a polar bear would need to travel south through all of the countries of North America and all of the countries of South America to the very southern tip of Argentina and Chile (the island of Tierra del Fuego) – see map **Resource 12**. This would leave just 800 km of water of the Southern Ocean to cross to reach the Antarctic Peninsula. Could it be done?

This provides a great opportunity to work with the pupils on creative story telling. Encourage them to speculate on how *Peter the Polar Bear* might travel from northern Canada to Antarctica and work in small groups to tell his story. What would he need to pack to take with him? Will he find food along the way? If he is to get to Antarctica then he is going to have to travel through some very warm places on the way as he crosses the Equator. How will he cope? Tell the children that he is going to have to travel by bus all the way passing through 12 countries as he does so: Canada – United States of America – Mexico – Guatemala – Honduras – Nicaragua – Costa Rica – Panama – Colombia – Brazil – Bolivia – Argentina. The pupils could be divided up into groups of three and given the task of finding out something really important about one country – not just anything but something important for a polar bear e.g. what food might be available. Another idea is for the children to create a postcard from Peter to his family back home. Choose one of the capital cities of the countries he passes through with an appropriate geographical image on the front and a brief description of something he saw when he passed through the city.

NOTES

Ancillary Question 6: Why do Marco and Polo find visiting each other so difficult?

Read the story *The Adventures of Marco and Polo* by Dieter Wiesmüller ISBN 978-0439259705 to the pupils and show them the pictures which accompany each page. This story provides an excellent context for introducing hot and cold areas of the world and developing the pupils understanding of the concept of adaptation. Discuss with the pupils what the problem was for Marco visiting Antarctica and for Polo when he made the return journey to stay with his new friend? They just couldn't cope with the weather conditions they found at each other's homes.

Show the pupils the map in **Resource 13** and explain that Marco lives in the country of Zambia. In which continent is this country – use the map in **Resource 3** to assist. Use the map of Africa in **Resource 14** to confirm the location of Zambia and to emphasise the difference between a continent (one of the large continuous areas of land on Earth) and a country (there are 54 in Africa). How many neighbouring countries does Zambia have? Can we name them?

Return to the story and revisit the part where Marco takes Polo to see the Victoria Falls. What are the Victoria Falls – a huge waterfall. Discuss with the pupils what they think a waterfall is and then show them the short film at www.youtube.com/watch?v=FSdrX2wCGfY to consolidate their understanding. A waterfall forms when a river (in this case the Zambezi) flows over a steep drop along its course. This line of enquiry can be developed by supporting the pupils to make their own model of a waterfall from a range of simple available materials – see www.ehow.co.uk/how_7149877_do-make-model-waterfall-kids_.html

They could also write a simple acrostic poem about the Victoria Falls. In an acrostic poem, the first letter of each line spells out the key word or phrase and the following scaffold could be given to the pupils to set them going:

W *Wet and wild the water drops*

A *Angry and frothing it disappears*

T

E

R

F

A

L

L

NOTES

Ancillary Question 7: So why don't penguins need to fly?

Show the pupils the two short films at www.youtube.com/watch?v=RZAiuOBT1C8 and www.youtube.com/watch?v=XZm6y0ALDCc Ask the pupils to consider what they think it is most useful for a penguin to be able to do – fly up and around in the sky where there is no food to eat or swim skilfully underwater to catch the fish which makes up most of its diet? The penguin has wings but they are short and stubby and more like flippers. These work absolutely fine because they are perfect for helping them to swim so agilely underwater. Penguins don't need to fly in the air anyway because there are no land predators such as polar bears for them to escape from. Wings that would be good for flying would not function underwater and similarly flippers used for swimming would not get penguins airborne. So penguins don't need to fly in the air like a traditional bird, but do 'fly' with their wing flippers underwater where it is much more advantageous. As good swimmers, penguins are able to catch fish to eat and have a better chance of escaping from their underwater predators, such as leopard seals and killer whales.

This line of enquiry could culminate in the pupils creating a large whole-class collage using mixed media entitled 'A Colony of Emperor Penguins in Antarctica' (showing a colony of penguins on land sheltering together and protecting each other from a freezing blizzard). An alternative collage title could be 'Swimming with Emperor Penguins in Antarctica' (showing a colony fishing beneath the ice with shoals of fish) – see www.lovetosew.com/penguin-collage-art.htm for ideas.

NOTES

Assessment

This enquiry presents several opportunities, at different stages, to evaluate how the pupils are progressing in geography through the mastery of key geographical skills and outcomes. It is not necessarily intended that all of the following learning activities should be assessed. Rather that the list is used as a guide for selecting one or two assessment opportunities relevant to individual pupils, rather than on a whole group basis.

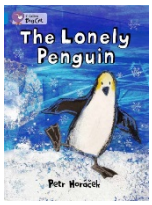
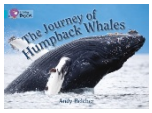
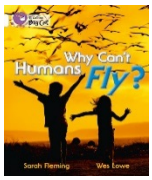
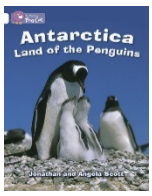
Ancillary Question	Learning Activity	Possible source of evidence of achievement
1	**Identify**, **recognise** and **describe** the key geographical features of the Antarctic environment	Oral Simple sketch with labels Labelled photograph
2	**Identify** ways in which penguins are adapted to the Antarctic environment	Annotated outline diagram
3	**Identify** countries in Africa which lie within the Sahara Desert	Labelled outline map of Africa Oral
3	**Identify**, **recognise** and **describe** the key geographical features of the Sahara Desert	Oral Simple sketch with labels Labelled photograph
3	**Explain** why Antarctica is a desert despite being the coldest place on Earth	Oral
4	**Describe** ways that the Arctic region and North Pole is similar to and different from (**compare and contrast**) Antarctica and the South Pole and offer **reasons** for such differences	Oral
5	**Describe** and **explain** the components of the food chain of an Emperor Penguin	Food chain diagram
5	**Identify** and **describe** 3 geographical features of a South American country that Peter the Polar Bear visits on his journey to Antarctica	Postcard
6	**Compare and contrast** the weather and climate of Antarctica (the home of Polo) and Zambia (the home of Marco)	Oral Poster
6	**Explain** the geographic reasons why Polo finds it difficult to live in Zambia and Marco finds it a problem to live in Antarctica	Oral
6	Design and construct a simple model of a waterfall and use it to **identify** and **describe** some of its geographical features	Model with labelled parts e.g. *river, cliff, rapids, boulders* etc.
Homework	**Describe** and offer **reasons** why an Ostrich doesn't need to fly and **explain** how this is very similar to a penguin	Simple PowerPoint presentation

Homework possibilities

Pupils could follow an enquiry investigating *Why don't Ostriches need to fly?* This would run alongside their work on penguins and involve finding out about how ostriches live (their food, their nests and how their chicks hatch out of eggs) and most crucially answering the question of why they don't fly. Just like the wings of penguins, the wings of ostriches are now far too small to lift its weight into the air. It is more important to the survival of ostriches to be able to run quickly rather than fly.

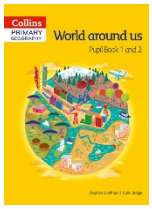
Further reading

Collins *Big Cat* has books for every child in the classroom with a wide variety of genres, top authors, relevant topics and a range of engaging formats and illustrative styles. Listed below is a selection of from the Big Cat list to support the enquiry topics in Connected Geography for KS1. Find out more at Collins *Big Cat* – www.collins.co.uk

ISBN: 978-0-00-741296-9	*The Lonely Penguin*	Petr Horacek	
ISBN: 978-0-00-746182-0	*The Journey of Humpback Whales*	Andy Belcher	
ISBN: 978-0-00-746199-8	*Captain Scott: Journey to the South Pole*	Adrian Bradbury	
ISBN: 978-0-00-746207-0	*Why Can't Humans Fly?*	Sarah Fleming	
ISBN: 978-0-00-718640-2	*Antarctica: Land of the Penguins*	Jonathan Scott and Angela Scott	

GEOGRAPHY PRIMARY

Collins *Primary Geography* provides a progressive, skills based scheme for primary school pupils.

ISBN: 978-0-00-756358-6	*Primary Geography Pupil Book 1/2 World around us*	Stephen Scoffham and Colin Bridge	
ISBN: 978-0-00-756368-5	*Primary Geography Interactive Resources*