

Pico and Fusion Year B The Journey Overview

SUBJECT:  Geography

THEME:  Other Countries

TERM: Autumn 1

EXPEDITION: The Journey



KEY QUESTION: What knowledge and skills would explorers need to support them on their journeys?



EXPEDITION OVERVIEW:

In this Expedition the children will study the physical geography of mountains and mountain ranges, their formation, some famous expeditions and also mountain biodiversity. Children will create a range of representations, including mountain models, a class world map

After mountains the children will move to the sea along a winding river. Children will learn about the water cycle, rivers and the effect they have on the landscape. They will look at how rain finds its way into rivers and how rivers develop from the source to entering the sea.

CULTURAL CAPITAL:

Each year Cultural Capital is acquired through a knowledge rich, concept driven *Journey*. However, we aim to go further with the use of our surroundings and the resources on our doorstep.

Knowledge of climate change.

Highest Mountain in the world – Everest was first climbed by Edmond Hillary and Tenzing Norgay

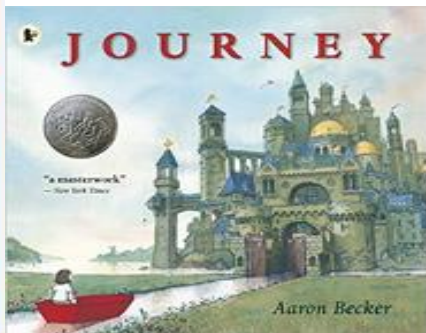
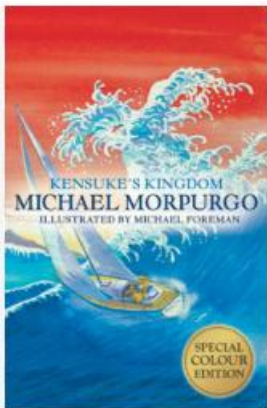
Debate changes to the Rainforest for logging/farming versus wildlife and medicines.

Recognise similarities and differences between alpine regions and Antarctica and be able to impart this knowledge around a range of issues that they share e.g. deforestation, landslides, climate change

Know the types of plants and trees in our local environment by visiting the reserve.

SUPPORTING TEXTS:

In school: *Kensuke's Kingdom* by Michael Morpurgo and *The Journey* by Aaron Becker



Other Texts Include:





Skills:



GEOGRAPHY KEY CONCEPTS: These are areas of substantive knowledge within our curriculum which are repeated during their Voyage through the school.

Key Concepts and Substantive Knowledge: (text in bold are key areas of focus in this expedition)

Locational Knowledge: Name and Locate Locations **Boundaries** (continents, localities, nations)

Place Knowledge: How interconnections have shaped a place. **Place and Space:** (biomes, bodies of water, tectonics, topography)

Human Geography **Resources** (energy, food supply, infrastructure); **Movement** (migration, navigation, transport); **Cultural Awareness ; Interdependence**

Physical Geography **Processes** (Human and Physical)

Not this term: **Settlements** (population, rural areas, urban areas); **Climate** (climate change, climate zones, pollution, weather); **Sustainability**

Skills: 

Cartography (atlases, directions, distance, Equator, latitude, longitude, North/South Pole, maps, scale, symbols)

Fieldwork - data & interpretation

Location and Direction

Scale (comparison)

Collect, Analyse, Interpret

Communicate

Knowledge:

River Journey	
Source	The start of a river is its source. It is where it begins its journey. This could be a spring on a hillside, a mountain, a lake, or a bog or marsh. A river may have more than one source.
Waterfall	A narrow where water flows over a vertical drop or a series of steep drops in the course of a river. Soft rock is eroded by water which leaves a hard rock ledge from which the water falls.
Meanders	A curve in a river which forms a snake-like pattern. The river erodes sediment on the outside of the curves and drops it on the inside of curves due to water moving fastest on the outside of a turn.
Mouth	The end of a river where it flows into the sea, another river or a lake is known as the mouth of the river. Much of the river's gravel, sand, silt and clay are deposited here.
Delta	A wide muddy or sandy area where some rivers meet the sea at a very slow speed, or when an inland river drops its load and drops all the sediment that it was carrying, creating a wide, marshy area.
River Management	
Drinking Water	Rivers, lakes or reservoirs may sometimes look clean but they are often filled with bacteria which can make you sick. It is therefore treated to make sure it meets safe drinking standards before being pumped to homes.
Sampling and Research	Water sampling is the process of taking a water for testing. It is also used to test the health of the river and to find out if pollution substances from farming, are present.
Dams	A dam is a barrier that stops or restricts the flow of water or underground streams. Reservoirs created by dams not only prevent floods but also provide water for activities such as irrigation, drinking water and industrial use.

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Rivers

A river is the path that water takes as it flows along a channel downhill with banks on both sides and a bed at the bottom. If there is lots of rain, snow or melting ice, rivers often overflow beyond the top of their banks and begin to flow onto floodplains at either side.



Key Vocabulary

channel	a path of a narrow body of water where water flows
estuary	mouth of a large river, where the tide meets the stream
gorge	narrow valley with steep, rocky walls through hills/mountains
River Severn	Longest river in the UK (354 km) through the city of Bristol
Thames	346 km long river running through the city of London
canal	man-made water channels for flow, vehicles and irrigation
basin	land drained by a river and its tributaries
floodplain	flat area around a river that often gets flooded
irrigation	supply of water to land or crops to help growth
bank	the land at the side of the river
weir	low dam built across a river to raise the level of water
bridge	structure built to allow people to cross a river
pumping station	facilities including pumps and equipment for pumping water from one place to another, supplying water to canals, removing sewage to processing sites and to drain land
tributary	smaller river which joins onto the main channel of a river

The Nile

The Nile begins as two rivers. The White Nile comes from Lake Victoria in Uganda and the Blue Nile starts in the Ethiopian Highlands. They join together in Sudan to form one river. The River Nile brings water to the Sahara Desert and for thousands of years, it has been used to water crops (irrigation). Rivers were also important trade routes. It eventually reaches the sea but due to the heat, much of it evaporates before it gets there. It also splits into many smaller rivers forming a delta.

World's longest rivers	
Nile	- 6695 km (Africa)
Amazon	- 6516 km (South America)
Yangtze	- 6390 km (Asia)
Mississippi/Missouri	- 5969 km (North America)
Murray/Darling	- 3673 km (Australia)

ATLAS SKILLS

There are generally three main types of maps shown in an atlas.



PHYSICAL MAPS these show topography/relief (the shape of the land) and other physical features such as rivers and lakes.

POLITICAL MAPS these show country borders, cities, transport links etc.

THEMATIC MAPS these show information such as climate data, agriculture types etc.

6 FIGURE GRID REFERENCES

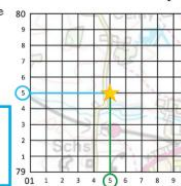
We can use six-figure grid references to find an exact location within a grid square, so they are much more accurate. The grid square is divided into tenths.

Example:

015 795

The first three numbers give the easting which includes the number of tenths.

The last three numbers give the northing which includes the number of tenths.



SPACE

PLACE
SCALE

KEYWORDS

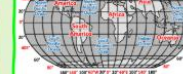
EAST
DISTANCE
SCALE

NORTH

RELIEF
WEST
TOPOGRAPHY

LONGITUDE AND LATITUDE

Unlike grid lines where we go along the corridor and the stairs, here we go **UP** and **ACROSS**.

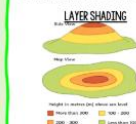


LATITUDE
Flat lines - Flat-tudel

LONGITUDE
Long lines - up and down

HEIGHT AND RELIEF

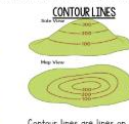
RELIEF the difference between the highest and lowest heights of an area
TOPOGRAPHY the surface features of the earth like hills, mountains, valleys etc.



Areas of different heights are shown using different colours. A key is used to show how high the land is.



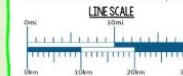
The exact height of a place above the ground is measured and written onto a map.



Contour lines are lines on a map which join up places of the same height. Everywhere along a contour line is the same height.

SCALE AND DISTANCE

OS maps have a scale. On some smaller maps, 1cm on the map equals 250m in real life. On some larger maps, 1cm on the map equals 500m. Different maps might have different scales, so check on your map to find its scale.



Using a line scale on a map is as easy as using a ruler. The important thing to remember is that a line scale shows measurements in km and the measurements on a ruler are in cm.

WORD SCALE

One centimeter on the map represents 3 kilometers on the ground. (1cm = 3 km)

Using the scale above, if we measure the distance on a map between two places with our ruler. The measurement is 4cm. We then have to multiply that measurement by 3 to calculate that the real distance between the two places is 12km.

What knowledge and skills would explorers need to support them on their journeys?

Continued Vocab: RIVERS: **estuary** - mouth of a large river, where the tide meets the stream; **channel** - a path of a narrow body of water where water flows; **gorge** narrow valley with steep, rocky walls through hills/mountains; **canal** man-made water channels for flow, vehicles and irrigation; **floodplain** flat area around a river that often gets flooded

Retrieval Vocab: Biome, climate, climate zone, Continents, Countries, Equator, Antarctic

New Vocab: MOUNTAINS: crust, mantle, core, plates, lithosphere, converge, diverge, magnitude, solidified, magma, lava, seismograph, igneous, sedimentary, metamorphic

ANTARCTIC: Antarctic Circle - one of earth's five circles of latitude; Antarctic Ocean - another name for the Southern Ocean; blizzard - a severe snowstorm with high winds; conservation - protection of natural environment and wildlife; frostbite - injury caused by exposure to extreme cold; glacier - a slow-moving mass of ice, Ice Age - when thick ice sheets called glaciers cover huge areas of land, which can last for millions of years and cause big changes to Earth's surface - have happened a number of times throughout Earth's history; iceberg - a large floating mass of ice broken from a glacier or ice sheet and carried out to sea; ice floe - a sheet of floating ice; pack ice - a mass of ice floating in the sea, South Pole - South Magnetic Pole shifting within Antarctica; territory - area of land under someone's control; treaty - an Antarctic Treaty, signed in 1959, was to ensure that Antarctica continues to be used for peaceful purposes only

Humanities Knowledge

History:

Know about Ernest Shackleton's Journey to the Antarctic

Geography:

Antarctica:

What are the key features of the polar regions and how do they compare to the UK?

How can you find the North and South Poles on a globe or map?

How can you identify the Arctic Circle on a globe or map?

How can you identify the Antarctic Circle on a globe or map?

How do daylight hours in the UK and polar regions compare?

Mountains:

What is a mountain and how are mountains formed?

Where in the world are mountains and mountain ranges?

Why do people climb mountains?

What are the impacts of Climate change and human activity on the mountain environment?

What endangered animal and plant species live in the mountain environment?

In what ways are plants and animals adapted to the mountain environment and how they can be protected?

Rivers:

Learn about the formation and features of a river. Follow its journey to the sea and discover the role of the water cycle.

What is The Water Cycle?

How do Rivers Get Their Water?

How does water travel from Source to Sea?

What is a Floodplain?