



Birchfield
PRIMARY SCHOOL

Year 6 Curriculum Overview
Term 2.2

Teaching Team:

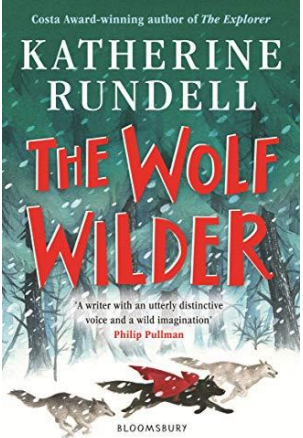
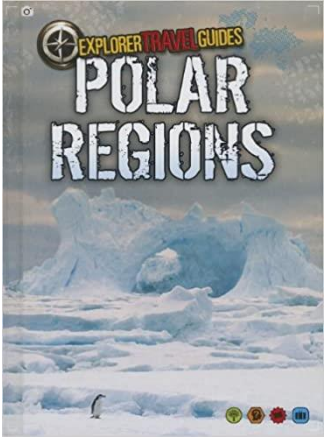
Miss Fowler, Miss Akhtar and Mrs Hickman

SLT: Mr J Aldred

PE (Physical Education) Days: Monday

Homework: Every Tuesday and Friday

Please see below an overview of the main themes, knowledge and skills we will be covering this half term.

Enquiry Question	How are the ice caps damaged by environmental change?
Significant People	Robert Falcon Scott, Ernest Shackleton, Roald Amundsen, Harpreet Chandi, Matthew Henson.
Class Texts	<p>Wolf Wilder – Katherine Rundell Themes: Family, revolution, bravery, corruption, fantasy, nature, love, freedom, difference, diversity.</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div>
Reading	<p>Reading domain: 2d make inferences from the text / explain and justify inferences with evidence from the text. 2g identify / explain how meaning is enhanced through choice of words and phrases.</p> <p>Test techniques: This half term, year 6 pupils will be developing their inferential skills and the impact of selected vocabulary upon the reader. As we progress through the term children will</p>

	<p>be exposed to a range of different texts and use the PEE method (point, evidence and explain) to structure their responses using evidence from the text to justify and support their response. Children will know how to find and copy words from various texts, using their prior knowledge as well as what they have read.</p>
Writing	<p>This half term pupils will explore character descriptions – the purpose, audience, and features. They will then use their knowledge to compose their own character descriptions, making sure to use figurative language, cohesive devices, parenthesis, and a variety of punctuation.</p>
Maths	<p>To begin this half term, pupils will consolidate their mathematical skills and knowledge from previous terms and will deepen their knowledge on fractions, decimals, and percentages – fluency, reasoning and problem solving. They will then move on to learning about ratio, the properties of shape and the position and movement of shapes in Geometry.</p>
History	<p>Pupils will continue to explore the Titanic, the causes and significance of the tragedy.</p>
Geography	<p>Pupils will begin to explain how climate change affects climate zones and biomes across the world. They will learn about natural resources in the Arctic which include oil, gas, metals, minerals, fish, wood and freshwater, combinations of these natural resources can be found in every country in the Arctic Circle and under the Arctic Ocean and the distribution of and access to natural</p>

	resources, cultural influences and economic activity are significant factors in community life in a settlement.
Science	Children will learn about the principles of classification and create their own keys to classify each other. Pupils will learn that we can group living and non-living things by their observable characteristics and create classification keys that help us with identification.
Mandarin	Children will be learning about these topics, this half term: <ul style="list-style-type: none"> • My friends • Describing people <ul style="list-style-type: none"> • Body parts • Colours
Art	This half term pupils will continue exploring Inuit art and learn that Inuits have been expert carvers for thousands of years. They carve art objects from materials such as bone, ivory, and wood. Birds, bears and other land animals are the common artistic subject matter. Children will create a 3-D form using malleable materials in the style of a significant artist, architect, or designer.
Music	This unit of work builds on the improvisation skills learnt in Classroom Jazz 1. Using two new pieces, Bacharach Anorak and Meet the Blues, the pupils will learn to play the pieces and then explore improvising with the repertoire.
PSHE	Pupils will learn about what a digital footprint is and the negative impact this can have on people. Children will also recap on how to keep safe online.

Computing	Children will apply the concept of variables to enhance an existing game in Scratch. They will predict the outcome of changing the same change score block in various parts of a program, then they will test their predictions in Scratch. Pupils will also experiment with using different values in variables, and with using a variable elsewhere in a program
RE (Religious Education)	Children will be learning about the disposition of responding to suffering understanding religious traditions and non-religious world views.
PE	Fitness: Pupils will take part in a range of fitness challenges to test, monitor and record their data. They will learn different components of fitness including speed, stamina, strength, coordination, balance, and agility. Pupils will be given opportunities to work at their maximum and improve their fitness levels. They will need to persevere when they get tired or when they find a challenge hard and are encouraged to support others to do the same. Pupils are asked to recognise areas in which they make the most improvement using the data they have collected.

Knowledge Organiser:

Reading

Book Knowledge Organiser – The Wolf Wilder by Katherine Rundell

Important Information	
<p>Plot: Fear and her mother, Marina, live alone in the snowbound woods of Russia. They are wolf wilders (people who teach tamed wolves to live in the wild). When an infamous Russian general arrests Marina, Fear sets off on a quest to save her. With the help of her trusted wolves and a runaway Russian soldier, Fear travels across the frozen landscape and is swept up in the beginnings of a revolution.</p>	
<p>Themes</p> <ul style="list-style-type: none"> bravery and resilience friendship family nature vs humanity 	
<p>Setting: In the beginning, their cosy, wooden house is a sanctuary that protects them from the bitter Russian cold. Both mother and daughter lovingly built the house and made it homely. The sanctuary is disrupted by the Russian soldiers who make sure that Fear and her mother can never go back there. The woods are dense with trees and everything is covered with snow. In the woods, Fear roams free and wilds wolves. She also meets Ilya out amongst the trees. Fear's knowledge of the woods is useful when it comes to fleeing from the Russian army.</p>	
Characters	
<p>Fear: At the start of the book, Fear is a wild character who is only close to her mother and the wolves she has befriended. As the book progresses, she must work with humans to rescue her mother and use her bravery to fight for herself and others.</p> <p>Ilya: Ilya is a soldier who does not believe in the Tsar's regime. He has dreams and a talent that he would much rather pursue. He becomes a reliable friend and fierce supporter of Fear, and even learns to trust her wolves.</p> <p>Alexei: Alexei is a revolutionary agitator who wants to use Fear to inspire others. He is a strong, inspiring character who is admired by Fear and Ilya.</p> <p>Rakov: Rakov is a Russian army general who wants to crush the revolution and destroy wolves and wolf wilders alike. He is a source of much fear in the book and an intimidating adversary.</p>	
<p>Story Type: Fairy Tale A fairy tale is a traditional story for children that often involves magic, imaginary creatures, royalty and fantasy elements. Some readers have also drawn parallels with Little Red Riding Hood. In both, a red-caped girl ventures into the woods. However, in <i>The Wolf Wilder</i>, Fear sees wolves as companions, rather than creatures to be conquered or feared.</p>	
<p>Link to Enquiry: The cold climate is the focal point of this book and allows us to immerse ourselves into what it is like in these frozen climates, the types of animals that live there and how living things survive living in such a habitat.</p>	
<p>Name of Book: The Wolf Wilder Date Published: 2020 Author: Katherine Rundell Genre: Fiction</p>	
<p>Key Questions/Reflection Points The novel introduces Fear, her mother and their peaceful home. How and why is the peace disrupted? Why do you think Fear and Marina are wolf wilders? Think about the different risks they are taking by engaging in this practice. Do you think the risks are worth it? Why/why not? What impression are we given of the rich people who keep wolves as pets? Fear, Ilya and the wolves encounter Rakov and he commits a terrible act. How do Fear's skills help them to survive? Alexei wants Fear to join his cause. Do you think Fear should help him and why? The children prepare to execute their plan. What difficulties do you think they will encounter? The children trick their way into St Petersburg, rallying others to join them. What do you think about the ending of the book? What might the people of Russia do next?</p>	
Key Vocabulary	
Imprisonment	Putting someone in prison
Aristocrat	A member of a rich and powerful family
Insidious	Intended to deceive or entrap; sly, treacherous
ragged	Old and torn
merchant	a person or company involved in wholesale trade, especially one dealing with foreign countries
Decay	Rot or decompose
whimpering	Making a series of low, feeble sounds expressive of fear, pain or unhappiness
malnourished	Being supplied with less than the minimum or an unbalanced amount of the nutrients or food essential for growth and health
Injustice	Lack of fairness
Winning	Give a slight involuntary grimace or shrinking movement of the body out of pain or distress
agitator	A person who urges others to protest or rebel

Writing

Spellings...I need to know some of these:	Punctuation Reminders:	Writing Mat Working towards Year 6																																																																																																
<table border="1"> <tr><td>accommodate</td><td>correspond</td><td>hindrance</td><td>recognise</td></tr> <tr><td>accompany</td><td>criticise</td><td>individual</td><td>recommend</td></tr> <tr><td>according</td><td>curiosity</td><td>interfere</td><td>relevant</td></tr> <tr><td>achieve</td><td>definite</td><td>interrupt</td><td>restaurant</td></tr> <tr><td>aggressive</td><td>desperate</td><td>language</td><td>rhyme</td></tr> <tr><td>amateur</td><td>determined</td><td>leisure</td><td>rhythm</td></tr> <tr><td>ancient</td><td>develop</td><td>lightning</td><td>sacrifice</td></tr> <tr><td>apparent</td><td>dictionary</td><td>marvellous</td><td>secretary</td></tr> <tr><td>appreciate</td><td>embarrass</td><td>mischievous</td><td>shoulder</td></tr> <tr><td>attached</td><td>environment</td><td>muscle</td><td>sincere</td></tr> <tr><td>available</td><td>equip(-ped)</td><td>necessary</td><td>sincerely</td></tr> <tr><td>average</td><td>equipment</td><td>neighbour</td><td>soldier</td></tr> <tr><td>awkward</td><td>especially</td><td>nuisance</td><td>stomach</td></tr> <tr><td>bargain</td><td>exaggerate</td><td>occupy</td><td>sufficient</td></tr> <tr><td>bruise</td><td>excellent</td><td>occur</td><td>suggest</td></tr> <tr><td>category</td><td>existence</td><td>opportunity</td><td>symbol</td></tr> <tr><td>committee</td><td>explanation</td><td>parliament</td><td>system</td></tr> <tr><td>communicate</td><td>familiar</td><td>physical</td><td>temperature</td></tr> <tr><td>community</td><td>foreign</td><td>prejudice</td><td>thorough</td></tr> <tr><td>competition</td><td>forty</td><td>privilege</td><td>twelfth</td></tr> <tr><td>conscience</td><td>frequently</td><td>profession</td><td>variety</td></tr> <tr><td>conscious</td><td>government</td><td>programme</td><td>vegetable</td></tr> <tr><td>controversy</td><td>guarantee</td><td>pronunciation</td><td>vehicle</td></tr> <tr><td>convenience</td><td>harass</td><td>queue</td><td>yacht</td></tr> </table>	accommodate	correspond	hindrance	recognise	accompany	criticise	individual	recommend	according	curiosity	interfere	relevant	achieve	definite	interrupt	restaurant	aggressive	desperate	language	rhyme	amateur	determined	leisure	rhythm	ancient	develop	lightning	sacrifice	apparent	dictionary	marvellous	secretary	appreciate	embarrass	mischievous	shoulder	attached	environment	muscle	sincere	available	equip(-ped)	necessary	sincerely	average	equipment	neighbour	soldier	awkward	especially	nuisance	stomach	bargain	exaggerate	occupy	sufficient	bruise	excellent	occur	suggest	category	existence	opportunity	symbol	committee	explanation	parliament	system	communicate	familiar	physical	temperature	community	foreign	prejudice	thorough	competition	forty	privilege	twelfth	conscience	frequently	profession	variety	conscious	government	programme	vegetable	controversy	guarantee	pronunciation	vehicle	convenience	harass	queue	yacht	<p>A Capital letters for sentences, initials and proper nouns.</p> <p>.</p> Full stops	<p>Active and Passive Use active and passive sentences appropriately: Active: In front of millions of screaming fans, the star striker missed a vital penalty. Passive: In front of millions of screaming fans, a vital penalty was missed by the star striker.</p>
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<p>! Exclamation marks for exclamations or surprise.</p> <p>? Question marks</p> <p>,</p> Apostrophes for possession and missing letters. <p>,</p> Commas in lists, and to mark parenthesis, fronted adverbials and clauses. <p>...</p> Ellipsis to show a long pause for tension. <p>" "</p> Inverted commas for speech (Don't forget the commas too!). <p>-</p> Hyphen to connect words together. <p>-</p> Dashes to show longer pauses or parenthesis. <p>()</p> Brackets for parenthesis.	<p>Use a mixture of simple, compound and multi-clause sentences. Use a thesaurus to up-level your vocabulary choices.</p>																																																																																																	
<p>Splendid Subordination! Use these conjunctions in varied places in your multi-clause sentences: if because as before after until unless since when Can you use a subordinate clause in different places in your sentences?</p>	<p>Important Links! Link your sentences and paragraphs using adverbials: Time Subsequently, Later that day, Finally, Place Deep inside the forest, Below the sea, Frequency Occasionally, Often, Contrast/ Cause On the other hand, In contrast, As a result, Consequently, Manner/ Behaviour Breathing heavily, Waiting anxiously, Without warning, Suspecting the worst,</p>	<p>It's All Relative! Use a relative pronoun to add a relative clause. who, which, where, when, whose, that The Queen, who has reigned for 60 years, has four children. go is the you chain. The stench was so putrid that it made her eyes water. They had ventured deep into the forest where they began to feel uneasy.</p> <p>twinkl visit twinkl.com</p>																																																																																																

Important Links!
Link your sentences and paragraphs using adverbials:

Time
Subsequently, Later that day,
Place
Deep inside the forest, Below the sea,
Frequency
Occasionally, Often,
Contrast/ Cause
On the other hand, In contrast,
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Breathing heavily, Waiting anxiously, Without warning,

Creating Cohesion Top Tip: Not only can you use pronouns like he, she, it or they instead of repeating a name or names but how about other names or titles too? Here's some examples: the teacher, she, Mrs Smith, the lovely woman or the lady with the long hair.

Be a Punctuation Professional:

A	Capital letters for sentences, initials and proper nouns.
.	Full stops
!	Exclamation marks for exclamations or surprise.
?	Question marks
'	Apostrophes for possession and missing letters.
,	Commas in lists, and sentences.
...	Ellipsis to show a long pause for tension.
" "	Inverted commas for speech (Don't forget the commas too!).
-	Hyphen to connect words together.
-	Dashes to show longer pauses or parenthesis.
()	Brackets for extra information or asides.
:	Colon to separate clauses.
;	Semi colons to separate clauses.

Writing Mat

Expected Year 6

Perfect Parenthesis!
Use brackets, commas or dashes to punctuate extra information and asides:
The tomb of Tutankhamen (the Ancient Egyptian pharaoh) was discovered by Howard Carter.
The advancing alien, who was speaking a Martian language, looked dangerous.
The daffodils – my favourite sign of spring – swayed gently in the woodland breeze.

Use a thesaurus to look for more ambitious synonyms. Why use 'frightened' when you could use...
startled alarmed apprehensive
Or 'show' a character's feelings:
his breathing quickened her heart raced
sweat trickled gasping for air

Spellings... I need to know all of these:			
accommodate	correspond	hindrance	recognise
accompany	criticise	individual	recommend
according	curiosity	interfere	relevant
achieve	definite	interrupt	restaurant
aggressive	desperate	language	rhyme
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Active and Passive
Use active and passive sentences appropriately:
Active: In front of millions of screaming fans, the star striker missed a vital penalty.
Passive: In front of millions of screaming fans, a vital penalty was missed by the star striker.

Check for:
cohesive links
• consistent tense and person
• genre features
• subject/verb agreement
• paragraphs with

Splendid Subordination!
Use these conjunctions in varied places in your multi-clause sentences:
if because as
before after until
unless since when

Writing Mat
Greater Depth Year 6

Spellings... I need to know all of these:			
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Punctuation Reminders:
A . ! ? ' , " " () ... : ; -
Use a full range of punctuation.

Check for:
• consistent tense and person
• subject/verb agreement
• paragraphs with cohesive links
• genre features
• layout devices
• pronouns/ nouns for cohesion

Active and Passive
Use active and passive sentences appropriately:
Active: In front of millions of screaming fans, the star striker missed a vital penalty.
Passive: In front of millions of screaming fans, a vital penalty was missed by the star striker.

Create a Mood!
Where appropriate, in formal writing, use the subjunctive mood:
If I were The Queen, ...
Were there to be a change in my circumstances...

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Use these conjunctions in varied places in your multi-clause sentences:
if because as
before after until
unless since when

Use a thesaurus to look for more ambitious synonyms. Why use 'frightened' when you could use...
startled alarmed apprehensive
Or 'show' a character's feelings:
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Perfect Parenthesis!
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The tomb of Tutankhamen (the Ancient Egyptian pharaoh) was discovered by Howard Carter.
The advancing alien, who was speaking a Martian language, looked dangerous.
The daffodils – my favourite sign of spring – swayed gently in the woodland breeze.

Be a Punctuation Professional!
Use semi colons, colons and dashes to mark independent clauses:
It felt like forever- the longest six weeks holiday of all time.
Jack's eyes slowly opened; there was no one to be seen.
They all knew his secret: he was a specialist secret agent.

Important Links!
Link your sentences and paragraphs using adverbials:
Time
Subsequently, Later that day,
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Occasionally, Often,
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History

History

Enquiry Question How are ice caps damaged by environmental change?

Polar discovery

Due to the harsh and inhospitable conditions, the polar regions were the last places on Earth to be explored. During the golden age of polar exploration, between 1898 and 1916, explorers searched for the Northwest Passage in the Arctic and raced to reach the South Pole in Antarctica. Three famous polar explorers were Robert Falcon Scott, Roald Amundsen and Ernest Shackleton.

Robert Falcon Scott

Robert Falcon Scott (1868–1912) was a British explorer who led two expeditions to the Antarctic. His second expedition turned into a race to the South Pole that Scott's team lost, losing their lives in the attempt.



Roald Amundsen

Roald Amundsen (1872–1928) was a Norwegian explorer. He was the first to discover the Northwest Passage in the Arctic that joined the Atlantic Ocean to the Pacific Ocean. In 1911, he led a successful expedition to be the first to reach the South Pole, beating Scott's team.



Ernest Shackleton

Ernest Shackleton (1874–1922) was a British explorer who led an expedition to attempt to walk across Antarctica. However, his ship became stuck in sea ice and sank. Shackleton and his men managed to survive for 18 months before making their way to safety.



Key Vocabulary

Inhospitable: An environment that is harsh and difficult to live in

Exploration: The action of exploring an unfamiliar area.

Northwest Passage:

The Northwest Passage (NWP) is the sea route between the Atlantic and Pacific oceans through the Arctic Ocean

Survey: A survey is a list of questions aimed for extracting specific data from a particular group of people or about a particular subject



Melting Ice Caps

Surveying the Arctic Ocean sea ice cover is one of many ways that helps experts to understand how ice cover is changing. Satellites photograph vast areas of ice, and mapping the results helps to **analyse** how the ice is changing.

Scientists measure the thickness of the ice. They drill into the ice to collect the data. Submarines also contribute to the collection of data.

In 1999 and in subsequent years, a detailed British survey has been taken to assess the level of change in sea ice over the Arctic. The results suggest that by 2040 the Arctic Ocean's sea ice cover may disappear during the late summertime.



1979



1994



1999



2011

Key

□ Changing Arctic Ocean sea ice level

Ernest Shackleton

Ernest Shackleton was an explorer who travelled to the Antarctic. In 1914 he began his third expedition, the Imperial Trans-Antarctic Expedition sailing on *Endurance*. His ship became stuck in sea ice, eventually sinking in 1915. In 1916, the team were rescued, with not a single member having set foot on



Key Vocabulary

Endurance: A three-masted wooden vessel in which Sir Ernest Shackleton sailed for the Antarctic on the 1914 Imperial Trans-Antarctic Expedition

Explorer: A person who explores a new or unfamiliar place

Navigate: To move through a particular course in an unfamiliar area

Antarctica: The continent surrounding the South Pole; almost entirely covered by an ice sheet

Equator: The imaginary east-west line encircling the Earth midway between the North and South poles.

Southern Hemisphere: The half sphere of Earth which is South of the equator

Pack ice: A large area of ice floating in the sea, formed by smaller pieces freezing together

Expedition: A journey undertaken by a group of people with a particular purpose

Titanic

The RMS *Titanic* sank on 15th April 1912. Four days after leaving Southampton, UK and just 300 miles from its destination of New York, USA, the lookout crew spotted an iceberg in the *Titanic*'s path. The ship collided with the iceberg, damaging its hull. At 2:20am on 15th April, the *Titanic* began to sink. Although the crew sent distress signals, none of the ships who responded were able to reach the *Titanic* before she sank. It is estimated that 1500 people were killed and only 700 survived.

Life on board *Titanic* depended on who you were and how much money you had...

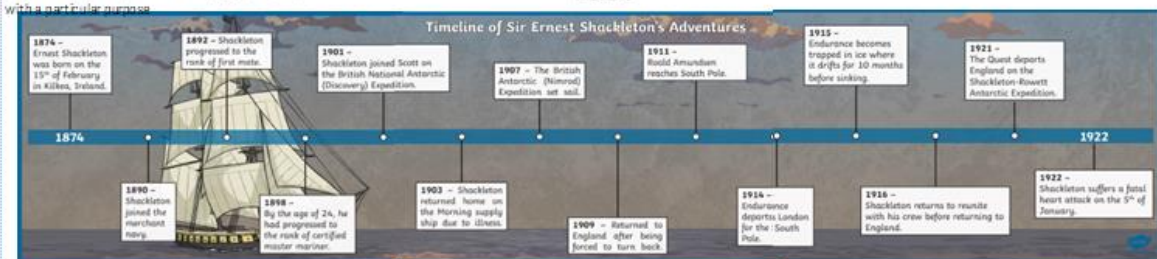
First class: the wealthiest people travelled in first class. They slept in private, spacious suites and enjoyed delicious food in an elaborate dining room. They had access to lots of facilities, like cafes, a swimming pool, squash courts, barber shop and a reading and writing room.

Second class: not too shabby, either, second class accommodation consisted of cabins with two or four beds and a sofa, storage facilities, a sink and a mirror. Second class passengers could also enjoy an outdoor promenade, relaxation room, library and dining room.

Third class: the third class facilities were much more basic, but they were still far better than those on other boats at that time. Located at the bottom of the ship, cabins slept up to ten people and each had a sink and mirror. There was also a dining

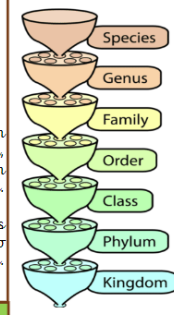


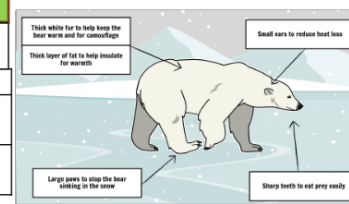


RMS Titanic



Science

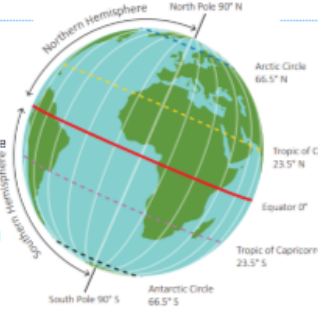
Evolution & Inheritance | Living things & their habitats

Vocabulary	Carl Linnaeus (Linnaeus Classification Example Humans)										
<p>Organism: an individual animal, plant or single-celled life form.</p> <p>Theory: A system of ideas intended to explain something.</p> <p>Taxonomy: Classification of living things (as plants and animals) using a system that is usually based on natural relationships.</p> <p>Characteristics: Special qualities or appearances that make an individual or group of things different to others.</p> <p>Classify: To sort things into different groups.</p> <p>Biomes: A large naturally occurring community of flora and fauna occupying a major habitat, e.g. forest or tundra.</p> <p>Climate: The weather conditions prevailing in an area in general or over a long period.</p> <p>Ecosystems: A community of plants and animals and their non-living environment.</p>	<p>Carlus Linnaeus was a Swedish naturalist. He created two scientific systems: the system for classifying plants and animals and the system for naming all living things.</p> <p>His scientific process involved observing, recording the information and making conclusions.</p> <p>He divided animals into seven classes: 1. mammals, 2. Birds, 3. amphibians, 4. Fish, 5. Insects, 6. Worms.</p> <p>He gave each organism a two part Latin scientific name and used hierarchy, which showed how important each animal was.</p> <p>The system could be used across the whole world. Humans are homo sapiens; a house cat would be felus catus.</p>	 <p>Species: <i>Homo sapiens</i> Member of the genus Homo with a high forehead and thin skull bones.</p> <p>Genus: <i>Homo</i> Hominids with upright posture and large brains.</p> <p>Family: <i>Hominids</i> Hominids with relatively flat faces and three-dimensional vision.</p> <p>Order: <i>Primates</i> Primates with collar bones and grasping fingers.</p> <p>Class: <i>Mammals</i> Mammals with fur or hair and milk glands.</p> <p>Phylum: <i>Chordates</i> Chordates with a backbone.</p> <p>Kingdom: <i>Animals</i> Organisms able to move on their own.</p>									
<p style="text-align: center;">Biomes and Habitats</p> <p>Biomes are ways to categorise the Earth's surface. These categories are based on climate patterns, soil types and the animals and plants that inhabit an area.</p> <p style="text-align: center;">The Tundra</p> <p>The coldest of all biomes with very little rain or snow. Winters are long and summers are short. Part of the soil is frozen all year round, although the top part defrosts in summer and plants such as mosses can grow.</p>	<p style="color: red; font-weight: bold;">Who was he? Why was his work so important in the classification of living things?</p>										
 	<p style="text-align: center;">Adaptation</p> <p>Adaptations are special features that plants and animals develop to suit the place where they live</p> <table border="1"> <thead> <tr> <th>Living thing</th> <th>Habitat</th> <th>Adaptive Traits</th> </tr> </thead> <tbody> <tr> <td>Polar Bear</td> <td>Arctic</td> <td>Its white fur enables it to camouflage in the snow.</td> </tr> <tr> <td>Camel</td> <td>Desert</td> <td>It has wide feet to make it easier to walk on sand.</td> </tr> </tbody> </table>		Living thing	Habitat	Adaptive Traits	Polar Bear	Arctic	Its white fur enables it to camouflage in the snow.	Camel	Desert	It has wide feet to make it easier to walk on sand.
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	 <p>Thick white fur to help keep the bear warm and for camouflage</p> <p>Small ears to reduce heat loss</p> <p>Sharp teeth to eat prey easily</p> <p>Large paws to stop the bear sinking in the snow</p> <p>Thick layer of fat to help insulate the bear</p>										



Geography

The Polar Regions

The earth has two polar regions: the Arctic Circle in the Northern Hemisphere and the Antarctic Circle in the Southern Hemisphere. Polar regions have long cold, winters and temperatures mostly below freezing. The weather can be very windy with little precipitation.



North Pole 90° N
Arctic Circle 66.5° N
Tropic of Cancer 23.5° N
Equator 0°
Tropic of Capricorn 23.5° S
Antarctic Circle 66.5° S
South Pole 90° S

emperor penguin humpback whale

Arctic Region

The Arctic region consists of the Arctic Ocean and the northern parts of Canada, Alaska, Russia, Finland, Sweden, Norway, Greenland and Iceland. Winter temperatures can reach -55°C and summer temperatures can reach 10°C. The Arctic region has a varied landscape including mountains, tundra and boreal forest. It is home to small populations of people and an amazing variety of plants and animals including the polar bear, Arctic fox, Arctic hare and walrus.

Antarctic region


Antarctica is the world's fifth-largest continent and is covered in an ice sheet that is up to 4800m thick. It is the coldest, driest, highest and windiest continent on Earth. Temperatures can drop to -80°C, there is little precipitation, and wind speeds can reach 80km per hour. There are only two native species of flowering plants in Antarctica, but there is a rich sea life, including the emperor penguin, humpback whale and leopard seal. No people live permanently in the Antarctic. However, scientists stay for part of the year to carry out research and tourists visit in the summer months to see the landscape and wildlife.

Polar landscapes

Much of the polar regions is covered with snow and ice all year round. Polar landscape features include glaciers, ice fields and icebergs.


Glacier

Glaciers are slow-moving masses of flowing ice, formed by the compaction of snow. They can vary in depth from 50m to 1500m




Ice field

Ice fields are large areas of connected glaciers covering flat areas, such as valleys and high plateaus. They are made from compressed and frozen snow.



Iceberg

Icebergs are chunks of ice that calve, or break off, from glaciers and ice sheets and float in the sea. Wind and water erode icebergs into sculptural shapes.



Key Vocabulary

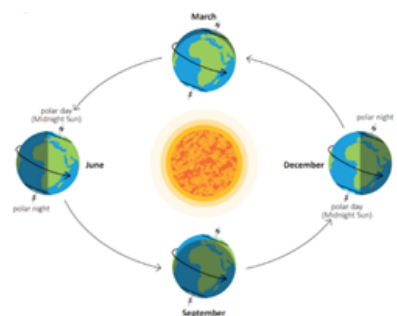
Antarctic Circle: An imaginary circle of latitude that lies 66.5° south of the equator. Everything south of this line is known as the Antarctic.

Arctic Circle: An imaginary circle of latitude that lies 66.5° north of the equator. Everything north of this line is known as the Arctic.

Polar day: Near constant daylight in the Arctic or Antarctic during the summer months when the Sun does not set below the horizon. Also known as Midnight Sun.

Polar night: Near constant darkness in the Arctic or Antarctic during the winter months when the Sun does not rise above the horizon.

Precipitation: Water that falls from clouds in the sky



March, June, September, December

polar day (Midnight Sun), polar night

Polar day and night

Due to the tilt of the Earth, the poles experience nearly 24 hours of daylight during the summer months. This is called polar day, or Midnight Sun. In the winter, the poles experience nearly 24 hours of darkness. This is called

Natural resources

Natural resources in the Arctic include oil, gas, minerals, metals, fish, wood and freshwater. Arctic inhabitants use the natural resources available for fuel, food and to sell to other countries. However, many of the resources have not yet been touched as they are difficult to extract, especially those that underneath the frozen waters of the Arctic Ocean.



Matthew Henson

One of the pioneering polar explorers from the Golden Age of Exploration grew up as a poor orphan in Baltimore, and his achievements later in life were largely ignored because of his race.

Climate change

Human activities such as burning fossil fuels and deforestation are releasing gases into the atmosphere that are causing the temperature of the Earth to rise and its climate to change. The Arctic landscape and wildlife are at risk due to this change. Scientists are concerned that the rising global temperature is causing the polar ice to melt. If the polar ice melts, sea levels and temperatures will rise, weather patterns will change and the polar regions will be damaged.



Arctic landscape

Inuit People

The Inuit are a group of culturally similar indigenous peoples inhabiting the Arctic and subarctic regions of Greenland, Canada, and Alaska.



Key Vocabulary

Climate: The usual weather conditions that occur in a place over a long period.

Horizon: The line where the sky appears to meet the Earth.

Indigenous: Occurring naturally or originating in a particular place.

Native: Referring to the animals and plants that occur naturally in a place.

North Pole: The most northern geographical point of the Earth.

South Pole: The most southern geographical point of the Earth.

Tundra: An area of land where it is too cold for trees to grow and the ground below the surface is permanently frozen.



Impact of Tourism

There are both positive and negative effects of tourism on an area, such as an increase in income, use of land for building hotels and venues, overcrowding of popular areas and pollution. No one lives permanently on Antarctica so there are no towns, hotels or facilities. Most tourists visit Antarctica on large cruise ships that depart from South America. Scientists believe that wildlife could be made anxious by human visitors as they are not accustomed to their presence and therefore the voluntary rule is that no human should stand within 5m of an Antarctic animal.



Home Learning

Create a diorama of one of the Polar regions.



Children to use the knowledge organisers provided to help them further their learning regarding the enquiry question.

Make a diorama of an Inuit's temporary home also known as an Igloo.

Plan and design an animal that lives in one of the polar regions. Use recycled materials to create one. This can be a drawing or 3D model.

Research and discuss global warming and climate change. What are the effects of this on our planet? How can we help to slow it down or reduce it?

Conduct research into who Matthew Henson was, what he is recognised for and why he was and is so significant today.

Create a non-chronological report about him and his achievements.

Useful Links:

<https://discoveringthearctic.org.uk/>

<https://www.natgeokids.com/uk/home-is-good/save-our-polar-habitats/>