

Maths

Develop mastery through reasoning and problem solving and the use of answering in full sentences to embed understanding.

Fractions

Multiplying a fraction by a whole number / fraction. Dividing a fraction by a whole number. Four rules with fractions. Calculating fractions of amounts

Measure – imperial and metric measures:

Metric measures. Converting metric measures. Miles and Km. Imperial measures.

Ratio and Proportion:

The ratio symbol. Scale drawing. Scale factors. Similar shapes. Problem solving using ratios.

Algebra:

Finding a rule. Using a rule. Formulae. Solving equations.

Decimals:

Multiplying by 10, 100 and 1000. Dividing by multiples of 10, 100 and 1000. Decimals as fractions. Fractions as decimals. Multiplying decimals. Dividing decimals.

Percentages:

Find percentages of a range of amounts. Find missing values. Converting fractions to percentages. Equivalent fractions, decimals and percentages.

Science

Living things and their habitats

History and foundation of classification. Sorting and grouping using a classification key. Producing a classification key.

Electricity

Naming circuit components. Recognised circuit symbols. Recording circuits. Exploring circuit components. Voltage and cells. Researching batteries and cells. Investigating voltage. Programming tasks. Sensors and monitoring.

Experiences

Frozen Kingdom Immersive Day.
Presentation by speaker Al Sylvester MBE
Mountain Rescue and Expeditions

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Art & DT

Inuit Art: Inuit soapstone sculpture. Stencilling – how to paint with a stencil.

Environmental Artists: Recycle, reuse and repurpose – making a recycled montage.

D&T: Engineering - remarkable engineers and significant bridges. Bridge-building engineering challenge to create a bridge prototype

Music

Ukulele.

Step dance performance – exploring rhythm and melody in singing, movement and dance.

English

Text: Shackleton's Journey by William Grill. Brightstorm by Vashti Hardy.

- Formal letter
- Diary entry
- Biography
- Newspaper report

History

Emigration and exploration in the early 1900s. Creating a timeline to show the history and development of polar exploration.

Geography

Polar climates. Polar day and night. Polar oceans. Polar landscapes. Climate change. Natural resources.

Computing

Designing a game with variables. Creating a website with Google sites.

Spanish

Mi Casa (My Home). Saying where you live. Talking about your home. Rooms in a house.

PE

Hockey. Gymnastics. Dodgeball. Basketball.

RE

Exploring the Christian teaching of eternal life and unconditional love.

Maths

Fractions

Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.

Multiply simple pairs of proper fractions, writing the answer in its simplest form.
Divide proper fractions by whole numbers.
Use written division methods in cases where the answer has up to two decimal places.

Measure – imperial and metric measures:

Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.
Convert between miles and kilometres.

Ratio and Proportion

Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

Solve problems involving similar shapes where the scale factor is known or can be found.

solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Algebra:

Generate and describe linear number sequences.

Use simple formulae.

Express missing number problems algebraically.

Find pairs of numbers that satisfy an equation with two unknowns.

Enumerate possibilities of combinations of two variables.

Spanish

Speak in sentences, using familiar vocabulary, phrases and basic language structures.

Engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help

History

A study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066.

The Frozen Kingdom

Decimals:

Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to three decimal places. Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$].

Use written division methods in cases where the answer has up to two decimal places. Multiply one-digit numbers with up to two decimal places by whole numbers.

Solve problems which require answers to be rounded to specified degrees of accuracy.

Percentages:

Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.

Science

Living things and their habitats

Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals. Give reasons for classifying plants and animals based on specific characteristics.

Electricity

Use recognised symbols when representing a simple circuit in a diagram. Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches. Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit.

Art and DT

To improve their mastery of art and design techniques. Investigate and analyse a range of existing products. Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

Geography

Describe and understand human geography including types of settlement and land use, economic activity including trade links and the distribution of natural resources. Identify the position and significance of latitude and longitude, Equator, Northern and Southern Hemisphere, Tropics of Capricorn, Cancer, Arctic and Antarctic Circles and time zones.

English

Texts: Shackleton's Journey by William Grill and Brightstorm by Vashti Hardy.

Grammar

Clauses and Phrases

Use adverbs to indicate degrees of possibility.

Possessive Pronouns

Writing

Identifying audience and purpose of the writing.

Select appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning. Evaluate and edit by assessing the effectiveness of their own and others' writing.

Ensuring consistent and correct use of tense throughout.

Proofread for spelling and punctuation errors.

Proposing changes to vocabulary, punctuation and grammar to enhance effects and clarify meaning.

Reading

Drawing inferences such as inferring characters' feelings, thoughts and motives from their actions and justifying inferences with evidence.

Identify how language, structure and presentation contribute to meaning.

Computing

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Select, use, and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems, and content that accomplish given goals, including collecting, analysing, evaluating, and presenting data and information.

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PE

Play competitive games and apply basic principles for attacking and defending. Develop flexibility, strength, technique, control and balance.

Music

Play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression. Improvise and compose music for a range of purposes using the inter-related dimensions of music

RE

Theme: Beliefs and Meaning

Concept: Salvation

Key Question: Is anything ever eternal?

Religion: Christianity

Theme: Easter

Concept: Gospel

Key Question: Is Christianity still a strong religion 2000 years after Jesus was on Earth?

Religion: Christianity



Year 6 - Topic 2 - Frozen Kingdom

Key Enquiry Question: Shackleton's 1914 expedition: a tragedy or triumph ?

Key Skills:

- ◆ To produce accurate scaled maps.
- ◆ Explain how climate zones, biomes and vegetation belts affect the physical and human features of a place in the world.
- ◆ Describe how animals must be adapted to their habitats for a survival.
- ◆ Create, from memory, a timeline from dates/details/eras showing knowledge of how to check for accuracy.

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.

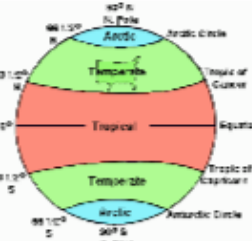
Prior Knowledge:

- In Year 4, I learnt about how mountains are formed, altitudinal zones and contour lines. I learnt about eco-systems and the processes that shape them and the land around them.
- In Year 5, I learnt about the eight planets in the solar system and their position and movement relative to the sun. I learnt about what a moon is and how they maintain an orbit around a planet.

Key Person:



Ernest Shackleton



Key Information:

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.

Key Vocabulary:

	Word	Definition
1	adaption	Physical changes to the animal's body or behavioural changes in how an individual animal or society do things in their daily
2	biomes	A large region of Earth that has a certain climate and certain types of living things.
3	climate	A long term pattern of the weather conditions.
4	Endurance	A three-masted wooden vessel in which Sir Ernest Shackleton sailed for the Antarctic on the 1914 imperial Trans-Antarctic Expedition.
5	Equator	The imaginary east-west line encircling the Earth mid-way between the North and South poles.
6	global warming	Change in the climate that makes the world warm up. Global warming is caused by pollution made by humans.
7	lines of Latitude	Imaginary lines around the globe that measure how many degrees north or south of the equator a place is.
8	lines of Longitude	Imaginary lines down the globe that measure how many degrees east or west of the Greenwich/Prime meridian (Greenwich, London) a place is.
9	pack ice	A large area of ice floating in the sea, formed by smaller pieces freezing together.