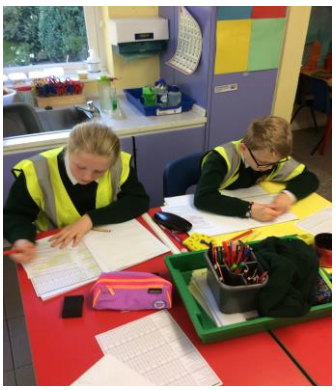
BISHOP CORNISH SCHOOL
TERMLY Year 5 OVERVIEW

Maths

Number: Number & Place Value



• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit

• count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000

• interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero

• round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000

• solve number problems and practical problems that involve all of the above

• read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

Number: Addition & Subtraction

• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)

• add and subtract numbers mentally with increasingly large numbers

• use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Number: Multiplication & Division

• identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers

• know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers

• establish whether a number up to 100 is prime and recall prime numbers up to 19

• multiply numbers up to 4 digits by a one - or two digit number using a formal written method, including long multiplication for two-digit numbers

• multiply and divide numbers mentally drawing upon known facts

• divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context

• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000

• recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)

• solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes

• solve problems involving addition, subtraction, multiplication and division and a combination of these, including

understanding the meaning of the equals sign

• solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Geometry: Properties of Shapes

• identify 3-D shapes, including cubes and other cuboids, from 2-D representations

• use the properties of rectangles to deduce related facts and find missing lengths and angles

• distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

• know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles

• draw given angles, and measure them in degrees (o)

• identify angles at a point and one whole turn (total 360°)

• identify angles at a point on a straight line and half a turn (total 180°)

• identify other multiples of 90°

Number: Fractions

• compare and order fractions whose denominators are all multiples of the same number

• identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths

• recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements

> 1 as a mixed number [for example, 2/5 + 4/5 = 6/5 = 1 1/5]

• add and subtract fractions with the same denominator and denominators that are multiples of the same number

• multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

• read and write decimal numbers as fractions [for example, 0.71 = 71/100]

• recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

• round decimals with two decimal places to the nearest whole number and to one decimal place

• read, write, order and compare numbers with up to three decimal places

• solve problems involving number up to three decimal places

• recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal

• solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5, and those

fractions with a denominator of a multiple of 10 or 25.

Measurement

• convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre

and millimetre; gram and kilogram; litre and millilitre)

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	• understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes • estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • solve problems involving converting between units of time • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. **Geometry: Position & Direction** • identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. **Statistics** • solve comparison, sum and difference problems using information presented in a line graph • complete, read and interpret information in tables, including timetables. 
Literacy	**Speaking and Listening** • Speak clearly in a range of contexts, using Standard English where appropriate • Monitor the reactions of listeners and react accordingly • Consider different viewpoints, listening to others and responding with relevant views • Use appropriate language, tone and vocabulary for different purposes  **Reading** • Read a wide range of fiction, non-fiction, poetry, plays and reference books • Learn a range of poetry by heart • Perform plays and poems using tone, volume and intonation to convey meaning • Use knowledge of spelling patterns and related words to read aloud and understand new words • Make comparisons between different books, or parts of the same book • Read a range of modern fiction, classic fiction and books from other cultures and traditions • Identify and discuss themes and conventions across a wide range of writing • Discuss understanding of texts, including exploring the meaning of words in context • Ask questions to improve understanding of texts • Summarise ideas drawn from more than one paragraph, identifying key details • Predict future events from details either written in a text or by 'reading between the lines' • Identify how language, structure and presentation contribute to meaning

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• Discuss how authors use language, including figurative language, to affect the reader
• Make book recommendations, giving reasons for choices
• Participate in discussions about books, building on and challenging ideas
• Explain and discuss understanding of reading
• Participate in formal presentations and debates about reading
• Provide reasoned justifications for views

Writing Skills

• Write with increasing speed, maintaining legibility and style
• Spell some words with silent letters, such as knight and solemn
• Recognise and use spellings for homophones and other often-confused words from the Y5/6 list
• Use a dictionary to check spelling and meaning
• Identify the audience and purpose before writing, and adapt accordingly
• Select appropriate grammar and vocabulary to change or enhance meaning
• Develop setting, atmosphere and character, including through dialogue
• Write a summary of longer passages of writing
• Use a range of cohesive devices
• Use advanced organisational and presentational devices, such as bullet points
• Use the correct tense consistently throughout a piece of writing
• Ensure correct subject and verb agreement
• Perform compositions using appropriate intonation, volume and movement
• Use a thesaurus
• Use expanded noun phrases to convey complicated information concisely
• Use modal verbs or adverbs to indicate degrees of possibility
• Use relative clauses

• Recognise vocabulary and structures that are appropriate for formal use
• Use passive verbs to affect the presentation of information
• Use the perfect form of verbs to mark relationships of time and cause
• Recognise the difference in informal and formal language
• Use grammatical connections and adverbials for cohesion
• Use ellipses, commas, brackets and dashes in writing
• Use hyphens to avoid ambiguity
• Use semi-colons, colons and dashes between independent clauses

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	Fiction	Non-fiction	Poetry
	• Myths. Legends and Fables - and writing own myths • Fiction - Story by a significant author • Plays/Drama • Fiction - science fiction / fantasy • Fiction - extended writing of stories - story structure.	• Persuasive writing • Instructional writing • Recounts • Balanced argument • Non-chronological reports • Biography / autobiography • Explanation texts • Reports and journalistic writing	• Fiction - poetry - imagery • Poetry - poetic style • Classic/narrative poems. • Poetry - choral & performance poetry
History	**Houston We Have a Problem:**  As a cross curricular link with our science topic space, year 5 will investigate some of the key events in space exploration. This will include: investigating astronomy in ancient civilisations and some of the advances that were made during the ages, especially by the ancient Greeks; finding out about key events in space exploration between 1940 and 1970; researching the 'Space Race' and the first landing on the moon. **Greek Ideas Today - Ancient Greece** Year 5 will carry out a study of Greek life and achievements and their influence on the western world. In this topic, children will investigate the legacy of Ancient Greece and how we use these ideas today. Children will find out about areas such as language, the alphabet, education, Greek Scholars, architecture, democracy and the Olympics. Children will then evaluate the contributions of the Ancient Greeks in our lives today.  **VIKING RAIDERS vs ANGLO SAXON SETTLERS** In this topic, year 5 will investigate: ➢ Britain's settlement by Anglo-Saxons and Scots and the Viking ➢ The Anglo-Saxon fight for the Kingdom of England to the time of Edward the Confessor. Within this topic, we will investigate the following areas: The Roman withdrawal for Britain in c. AD410 and the fall of the western Roman Empire; Scots invasions from Ireland to north Britain (now Scotland); Anglo-Saxon invasions, settlements and kingdoms: place names and village life; Anglo-		

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	Saxon art and culture and Christian conversion Canterbury, Iona and Lindisfarne; Viking raids; invasion including Danegeld; Resistance by Alfred the Great and Athelstan, first King of England and finally, Anglo-Saxon laws and justice and Edward the Confessor and his death in 1066.
Geography	**Houston we have a Problem - North America** Within this topic, year 5 will: ➢ Locate the world's countries, using maps to focus on North America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities. Alaska, Canada – down to Mexico. ➢ Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, and a region within North America.  **Destructive Disasters** Year 5 will investigate how extreme our Earth can be and: ➢ Describe and understand key aspects of physical geography, volcanoes and earthquakes. This topic will include: learning about how and why these natural phenomena occur; the ways in which they affect people and the environment; learning about the structure of our earth; identifying areas in the world where these happen and children will also investigate how the strength of Earthquakes are measured. **Enough to Share** Within this topic, children will: ➢ Describe and understand key aspects of human geography. ➢ Understand the distribution of natural resources including energy, food, minerals and water.
Science	**Working Scientifically (Upper Key Stage 2)** • planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary • taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs • using test results to make predictions to set up further comparative and fair tests • reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • identifying scientific evidence that has been used to support or refute ideas or arguments.

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Living Things & their Habitats

- describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- describe the life process of reproduction in some plants and animals.

Animals (including humans)

- describe the changes as humans develop to old age.

Properties & Changes of Materials

- compare and group together everyday materials on the basis of their properties, including
- testing their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.
- know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- demonstrate that dissolving, mixing and changes of state are reversible changes
- explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.

Earth & Space

- describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- describe the movement of the Moon relative to the Earth
- describe the Sun, Earth and Moon as approximately spherical bodies
- use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.

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Forces

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

RE

PLACES OF WORSHIP

Do you think it is easy for people to pray? If you could meet God face to face what would you ask Him?

GOD

What does it mean if God is holy and loving?

INCARNATION

Was Jesus the Messiah?

PEOPLE OF GOD -

How can following God bring freedom and justice?

SALVATION

What did Jesus do to save human beings?

Jesus the Leader

Which people would make good disciples today? What qualities does a leader need?

ISLAM – COMPARATIVE FAITH

Prayer and worship – What is the best way for a Muslim to show commitment to God?

Beliefs and moral values – Does belief in Akhirah (life after death) help Muslims lead good lives?

Why are the stories of the Prophets so important to Muslims?

Qur'an, Books of Guidance and Messengers of Allah.

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ICT

We are web developers - Creating a website about cyber safety.

- Understand computer networks including the internet; how they provide multiple services, such as the WWW; and the opportunities they offer for communication and collaboration.
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
- Select, use and combine a variety of software on a range of digital services to design & create programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data.

We are game developers. Developing an interactive game.

- Design, write and debug programs that accomplish specific goals.
- Use sequence, selection and repetition in programs: work with variables, & various forms or input and output.
- use logical reasoning to explain how some simple algorithms work & detect errors in algorithms & programs.

We are cryptographers - Cracking codes.

- Use logical reasoning to explain how simple algorithms work and to detect & correct errors in algorithms and programs.

Understand computer networks including the internet; how they provide multiple services, such as the WWW; and the opportunities they offer for communication and collaboration.

We are artists - Fusing geometry and art.

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PE

Hockey - Invasion games.

Children will: dribble the ball at speed holding the hockey stick correctly; pass and receive the ball to/from another player whilst moving; look for ways to use space to both travel into and to pass to teammates and select the best ways to attack and defend.

Swimming

Improve and develop skills and stamina in all four strokes: butterfly, breast stroke, backstroke and front crawl.

Dance

Children will: create and perform a dance that includes travel, jumps and turns; copy a number of set steps and then change their order, size, direction or speed to make a new dance phrase and teach a dance phrase to a partner.

High 5 - netball - invasion game.

In this unit of work, children will: apply the footwork rule; accurately pass the ball in 3 different ways; perform netball shots; develop attacking and defending skills within a game of High 5 and develop skills in being an effective team player by accurately and tactically applying a range of skills (footwork rule, accurate passing and shooting, moving into a space, defending and positions and responsibilities).

Gymnastics - Counter Balance and Counter tension.

In this unit children will: perform sequences of actions on floor and apparatus, showing elements of counter tension and counter balance; show changes in speed and direction within sequences;

perform actions on the floor and apparatus and show start and finish positions.

Outdoor and Adventure Activities The Year 5 children take part in these activities during their residential to Heatree.

Health Related Activity (circuits)

Athletics

In this unit of work, children will: develop sprinting techniques in the circular relay; sustain exercise to improve stamina; hurdle with control and rhythm; demonstrate appropriate body positions for throwing greater distances; demonstrate appropriate body positions for throwing greater distances and improve distance from take-off to landing in one jump.

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Tennis - Net games.

In this unit of work, children will develop ball and racquet skills.

KWIK Cricket - striking and fielding games.

In this unit of work, children will: bat effectively, using different types of shot; vary how the ball is bowled; restrict the runs batters can score by fielding in key positions; play a competitive striking game and hit a moving ball with a rounder's bat.

DT

Children will develop understanding and skills needed to engage in an iterative process of designing and making. When designing and making, pupils will:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- 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

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]

	➢ apply their understanding of computing to program, monitor and control their products  **Cooking and nutrition** As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils will: ➢ understand and apply the principles of a healthy and varied diet ➢ prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques (healthy hamburgers/ vegetable soup) ➢ understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.
Art	Children will develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design by: ➢ creating sketch books to record their observations and use them to review and revisit ideas ➢ improving their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] ➢ learning about great artists, architects and designers in history 
Music	Children will be given opportunities to: ➢ 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 different elements of music – dynamics, structure, timbre, texture, pitch, rhythm and metre ➢ compose, perform and evaluate their own compositions ➢ listen with attention to detail and recall sounds with increasing aural memory ➢ begin use and understand staff and other musical notations

- appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians
- develop an understanding of the history of music e.g. by looking at the music of Gustav Holst and the Planets Suite.