



Riversdale Primary School

MEDIUM TERM PLANNING

YEAR GROUP	Year 5
TERM	Autumn 1

CLASS READER	VEHICLE TEXT(S) FOR READING & WRITING

LEARNING OVERVIEW
From the Solar System to the Kingdom of Benin, Year 5 will embark on a half term filled with exploration, creativity and discovery. In Science, pupils will investigate the relationship between the Earth, Sun and Moon and consider how scientific understanding of space has changed over time, while Geography will challenge them to navigate the world using maps, grid references, latitude and longitude. In History, they will discover the sophistication, culture and achievements of the Kingdom of Benin. Pupils will develop accuracy, proportion and perspective through Art, programme micro:bits to respond to different inputs in Computing, and design moving toys powered by cam mechanisms in Design and Technology. They will explore chords, melodies and mood through Music, strengthen their teamwork and tactical awareness through football in PE, consider how marriage is understood and celebrated across religious and non-religious traditions in Religious Education, and build their confidence in describing family and friends in Spanish.

SIGNIFICANT PEOPLE PAST & PRESENT	
• Katherine Johnson (English) • Ptolemy (Science) • Abu Sa'id al-Sijzi (Science) • Copernicus (Science)	• Oba Ewuare (History) • Oba Esigie (History) • Oba Orhogbua (History)

UNCRC LINKED ARTICLES	
- Article 12 – Respect for the views of the child - Article 13 – Freedom of expression - Article 14 – Freedom of thought, belief and religion	- Article 29 – Goals of education - Article 30 – Culture, language and religion - Article 31 – Leisure, play and culture

SUBJECT	CONSOLIDATING: WHAT SKILLS SPECIFIC TO THIS TOPIC ARE BEING BUILT UPON? WHAT KNOWLEDGE SPECIFIC TO THIS TOPIC IS BEING CONSOLIDATED?	HEAD* WHAT SUBSTANTIVE KNOWLEDGE SHOULD THE CHILDREN LEARN?	HAND* WHAT DISCIPLINARY KNOWLEDGE AND SKILLS SHOULD THE CHILDREN LEARN?	HEART* WHAT VALUES AND EMOTIONAL INTELLIGENCE CONCEPTS SHOULD THE CHILDREN DEVELOP?
READING:	Year 4: - Listen to and confidently discuss a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks. - Increase their familiarity with a wide range of stories and retelling (including myths and legends) some of these orally with an appropriate use of story-book language. - Read a wide range of books that are structured in different ways and read for a range of purposes. - Confidently participate in discussion about both books that are read to them and those they read independently. - Identify themes and conventions in an increasing range of books. - Confidently retrieve and record information from non-fiction. - Identify how language, structure and presentation contribute to meaning. - Recognise a range of poetic forms [for example, free verse, narrative poetry]. - Prepare poems play scripts to read aloud and to perform, showing an increasing understanding through	Ready, Steady, Read Together Scheme: Fiction: - Between Worlds - Secrets of a Sun King Non-Fiction: - Knowledge Encyclopaedia: Space - The Moon Poetry: - Where My Wellies Take Me - Wicked World Comprehension: - Read and discuss a range of fiction, poetry, plays, non-fiction and reference books or textbooks. - Increase their familiarity with a wide range of books, including modern fiction, myths and legends and books from other cultures and traditions. - Read books that are structured in different ways and read for a range of purposes. - Participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging some views. - Retrieve, record and present some information from fiction and non-fiction.	Reading Skills: - Use a range of strategies to make meaning from words and sentences, including knowledge of phonics, word roots, word families, syntax, text organisation and prior knowledge of context. - Self-correction, including re-reading and reading ahead. - Reading widely and frequently for pleasure and information. - Identify how punctuation relates to sentence structure and how meaning is constructed in complex sentences. - Through discussion and read aloud, demonstrate how an understanding of sentence structure and punctuation help make meaning. - Connecting prior knowledge and textual information to make inferences and predictions. - Scan to find specific details using graphic and textual organisers, e.g. sub-headings, diagrams etc. - Use information on-screen and on paper. - Connecting prior knowledge and textual information to make inferences and predictions. - Read closely, annotating for specific purposes.	- Pupils will develop respect by engaging thoughtfully with texts from different cultures, traditions, time periods and viewpoints, recognising the value of diverse voices and experiences. - Pupils will show respect during reading discussions, debates and presentations by listening carefully, responding appropriately and considering interpretations that may differ from their own. - Pupils will develop responsibility by taking ownership of their reading, applying strategies such as re-reading, self-correcting, annotating, questioning and clarifying meaning when texts become more complex. - Pupils will show responsibility by preparing carefully for discussions, performances, debates and presentations, using notes and textual evidence to support focused contributions. - Pupils will develop reflection by considering how authors use language, structure, figurative language and vocabulary to shape meaning, mood, tension and the reader's response. - Pupils will show reflection by comparing themes across texts,

	intonation, tone, volume and action. • Prepare play scripts to read aloud and to perform, showing an increasing understanding through intonation, tone, volume and action. • Predict what might happen from details stated and implied. • Check that the text makes sense to them, discuss most of their understanding and explain the meaning of many words in context, asking questions to improve their understanding of a text. • Draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying most inferences with evidence. • Ask some questions to improve their understanding of the text. • Identify main ideas drawn from more than two paragraphs and summarise these. • Discuss many words and phrases that capture the reader's interest and imagination. • Begin to use more complex dictionaries to check the meaning of many unknown words that they have read. • Read texts, including those with few visual clues, increased independence and concentration. • Use a range of strategies to make meaning from words and sentences, including knowledge of phonics, word roots, word families, text organisation and prior knowledge of context. • With increased independence develop views about what is read.	• Identify and discuss themes and conventions in and across a wide range of writing. • Identify how language, structure and presentation contribute to meaning. • Learn a wider range of age-appropriate poetry by heart. • Prepare poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience. • Predict what might happen from details stated and implied. • Check that the book makes sense to them, discussing their understanding and exploring the meaning of words in context. • With occasional prompting, draw inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence. • Ask questions to improve their understanding. • With support, locate relevant information in a text, summarise the main ideas drawn from more than one paragraph and identifying key details that support the main ideas. • Make comparisons within and across books e.g. plot, genre and theme. • Provide reasoned justifications for their views. • Identify, discuss and evaluate the difference between literal and figurative language, commenting on the effectiveness of the author's language to create mood	• Use a range of strategies for skimming, e.g. gist, main ideas, themes and scanning, e.g. finding key words or phrases. • Identify features of texts, e.g. introduction to topic, sequence, illustrations, degree of formality and formality through language choices. • Finding the main idea of a text.	distinguishing between fact and opinion, and considering how texts influence readers' thinking and feelings. • Pupils will develop reflection by forming personal responses to texts and justifying their views with evidence, while refining their interpretations of characters, themes and authorial choices. • Pupils will develop resilience by tackling challenging texts with increasingly complex sentence structures, abstract themes and sophisticated vocabulary. • Pupils will show resilience by persevering when meaning is not immediately clear, using reading strategies and discussion to deepen their understanding. • Pupils will develop respect and reflection by empathising with characters, inferring thoughts, feelings and motives, and considering how writers create emotional responses in the reader. • Pupils will develop responsibility and resilience by reading widely for pleasure and information, building stamina, independence and confidence as readers.
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	• Develop positive attitudes to reading and understanding of what is read. • Read aloud using punctuation to aid expression and intonation. • Self-correction, including re-reading and reading ahead. • Skim to gain an overview of a text, e.g. topic, purpose. • Skim to gain the gist of a text or the main idea in a chapter. • Read short information texts independently with concentration. • Identify how texts differ in purpose, structure and layout. • Identify different purposes of texts, e.g. to inform, instruct, explain, persuade, recount. • Enhance understanding in information text through, e.g. illustration, photographs, diagrams and charts. • Scan for specific information using a variety of features in texts, e.g. titles, illustrations, pre-taught vocabular, bold print, captions, bullet points. • Identify how texts are organised, e.g. lists, numbered points, diagrams with arrows, tables and bullet points. • Identify and use text features, e.g. titles, headings and pictures, to locate and understand specific information. • Look for specific information in texts using contents, indexes, glossaries, dictionaries. • Re-reading sentences for clarity.	and build tension and the impact on the reader. • Distinguishing between statements of fact and opinion. • Explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary. <i>Vocabulary:</i> <i>figurative language, (reasoned) justification, justify, fact, opinion, debate, metaphor, simile, analogy, imagery, style, effect, compare</i>		
WRITING:	Year 4:	Ready, Steady, Write Scheme: Vehicle Text:	Pupils to apply grammar, purpose for writing and specific text type features in Writing to Narrate:	• Pupils will show respect by listening carefully to one another's ideas, taking turns to

	• Noun phrases expanded by the addition of modifying adjectives, nouns and prepositional phrases. • Extend the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because and although. • Use conjunctions, adverbs and prepositions to express time and cause. • Use fronted adverbials. • Use paragraphs to organise ideas around a theme. • Choose nouns or pronouns appropriately for clarity and cohesion and to avoid repetition. • Compose and rehearse sentences orally, progressively building a varied vocabulary and an increasing range of sentence structures. • Use commas after fronted adverbials. • Use inverted commas and other punctuation to indicate direct speech. • Use and punctuate direct speech.	• Curiosity Grammar: Word • Develop an understanding of the use of verb prefixes. Grammar: Sentence • Indicate degrees of possibility using modal verbs. • Expanded noun phrases to convey complicated information concisely. • Develop understanding of relative clauses. Grammar: Text • Use of a range of sentence types for impact and cohesion. Grammar: Punctuation • Indicate parenthesis using dashes and brackets. • Commas after fronted adverbials (reinforce from Y4). • Inverted commas to indicate direct speech (reinforce from Y4). <i>Vocabulary:</i> <i>modal verb, relative pronoun, relative clause, parenthesis, bracket, dash, cohesion, ambiguity</i>	• A space journey. Pupils to apply grammar, purpose for writing and specific text type features in Writing to Report: • A formal mission report. Handwriting: • Write increasing legibly, fluently and with increasing speed through improving choices of which the shape of a letter to use when given choices and deciding whether to join specific letters. Composition: • Plan by identifying the audience for and purpose of the writing, and desired impact upon the audience. • Plan by noting and developing initial ideas, drawing on reading where necessary. • Draft and write by selecting appropriate grammar and vocabulary for the desired impact. • Edit own work independently, applying current learning around spelling, punctuation and grammar.	speak and valuing the different stories, sentences and vocabulary choices shared by others. • Pupils will take responsibility for their writing by trying their best, using the resources available to them and making careful choices about words, punctuation and presentation. • Pupils will take responsibility when working with a partner or group by sharing ideas, helping others and contributing positively to writing tasks. • Pupils will develop reflection by reading back their own writing, noticing what they have done well and identifying simple ways to improve with support. • Pupils will use reflection to respond to feedback, edit their writing and begin to set small targets for improvement. • Pupils will show resilience by building confidence as writers, having a go at new vocabulary, sentence structures and spelling patterns, and continuing even when writing feels challenging. • Pupils will show resilience by learning that writing improves through practice, drafting, editing and trying again. • Pupils will develop a positive attitude towards writing by enjoying stories, poems and non-fiction texts, and using these as inspiration for their own writing. • Pupils will show respect and kindness when responding to the work of others, giving feedback in a supportive way and recognising the effort that has gone into each piece of writing.
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MATHEMATICS:	Year 4: - Count in multiples of 6, 7, 9, 25 and 1,000. - Find 1,000 more or less than a given number. - Count backwards through 0 to include negative numbers. - Recognise the place value of each digit in a four-digit number. - Order and compare numbers beyond 1,000. - Identify, represent, and estimate numbers using different representations. - Round any number to the nearest 10, 100 or 1,000. - Solve number and practical problems that involve all of the above and with increasingly large positive numbers. - Read Roman numerals to 100 (I to C). - Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. - Estimate and use inverse operations to check answers to a calculation. - Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. - Recall multiplication and division facts for multiplication tables up to 12×12. - Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers.	- Know the place value names (ones, tens, hundreds, thousands, etc.). - Understand that digits represent multiples of powers of 10 based on their position. - Recognise that the value of a digit is determined by its place in the number. - Understand the symbols $>$, $<$, and $=$ for comparing numbers. - Explain the pattern when counting in multiples of 10, 100, 1,000, etc. - Know that negative numbers are less than 0. - Understand that moving to the left on a number line represents negative values. - Know the meaning of rounding. - Explain the rules for rounding numbers. - Understand the significance of the digit being rounded and the place value being considered. - Memorise the values of Roman numerals (I = 1, V = 5, X = 10, L = 50, C = 100, D = 500, M = 1000). - Recognise common Roman numeral patterns (e.g., IV = 4, IX = 9, XL = 40). - Understand how to align numbers properly for column addition and subtraction. - Explain the steps for renaming and regrouping - Know strategies for mental addition and subtraction, such as adding tens and then ones. - Understand that rounding helps approximate an answer to a calculation.	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 0. - Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000. - Solve number problems and practical problems that involve all of the above. - Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals. Addition & Subtraction: - Add and subtract whole numbers with more than 4 digits, including using formal written methods. - 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. Multiplication: - 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.	- Pupils will show respect by listening carefully to others' mathematical ideas and explanations. - Pupils will show respect by taking turns when discussing and solving problems collaboratively. - Pupils will show respect by recognising that different methods can be equally valid. - Pupils will show respect by agreeing, questioning and challenging ideas appropriately. - Pupils will demonstrate responsibility by selecting appropriate methods, equipment and resources. - Pupils will demonstrate responsibility by explaining their mathematical thinking rather than simply giving others the answer. - Pupils will demonstrate responsibility by checking their calculations and correcting errors. - Pupils will demonstrate responsibility by contributing positively when working with a partner or group. - Pupils will develop reflection by reviewing their methods and considering whether their answers are reasonable. - Pupils will develop reflection by learning from mistakes and using feedback to improve. - Pupils will develop reflection by comparing different strategies and identifying efficient approaches. - Pupils will develop reflection by explaining what they have learned and identifying their next steps. - Pupils will develop resilience by persevering when calculations,
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	Recognise and use factor pairs and commutativity in mental calculations.	- Explain how to use rounding to estimate whether an answer is reasonable. - Recognise keywords that indicate addition or subtraction in word problems (e.g., "sum," "difference"). - Explain how to break down multi-step problems into smaller parts. - Understand that multiples are numbers that a given number can be evenly divided by/the product of a multiplication. - Recognise that factors are numbers that can evenly divide a given number. - Identify that factors can be common to two or more numbers. - Recognise common factor pairs of a number. - Define prime numbers as numbers greater than 1 that have only two factors, 1 and themselves. - Understand that prime factors are the prime numbers that can multiply to give the original number. - Define composite numbers as numbers that have factors other than 1 and themselves. - Recognise prime numbers up to 19. - Determine if a number up to 100 is prime or composite. - Understand that to multiply by 10, 100, 1000 shifts place value. - Define square numbers as numbers that are the result of multiplying a number by itself. Define cube numbers as numbers that result from multiplying a number by itself twice.	- Establish whether a number up to 100 is prime and recall prime numbers up to 19. - Multiply whole numbers by 10, 100 and 1,000. - Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³).	reasoning or problems are challenging. - Pupils will develop resilience by trying a different strategy when their first approach is unsuccessful. - Pupils will develop resilience by breaking complex problems into smaller, manageable steps. - Pupils will develop resilience by recognising that mistakes and misconceptions are an important part of mathematical learning.
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		- Recognise the notation for squared (²) and cubed (³) numbers. - Understand the meaning of the equals sign as representing a balance between two expressions.		
SCIENCE:	Year 1: - Observe changes across the four seasons. - Observe and describe weather associated with the seasons and how day length varies. Year 4: - Consider their prior knowledge when asking questions. - Independently use a range of question stems. Where appropriate, they answer these questions. - Answer questions posed by the teacher. - Given a range of resources, decide for how to gather evidence to answer the question. - Recognise when secondary sources can be used to answer questions that cannot be answered through practical work. - With support, decide how to record and present evidence. - Answer own and others' questions based on information gained from secondary sources. - With support, check answers are consistent with evidence. - Interpret data to generate simple comparative statements based on evidence. - Begin to identify naturally occurring patterns and causal relationships.	Earth & Space: - The Sun, Earth and Moon are approximately (roughly) spherical objects. - The Sun is a star at the centre of our Solar System which provides us with light and heat. - The Earth is the planet we live on. It is considered special because it has the right conditions to sustain life. - The Earth rotates on its axis, an imaginary line between the North to the South Pole. - The rotation takes about 24 hours. - Light travels in straight lines from the sun. - As the Earth rotates, the side facing the Sun has light reaching it (the day), while the other side is in shadow (the night). - The Moon takes 28 days to complete its orbit of the Earth. - As it orbits around the Earth, it appears to change shape, but it is always a sphere. Each shape is called a phase. - The Moon's phases are caused by its changing position relative to the Sun and Earth. - The solar system includes the Sun, eight major planets (Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune), as well as other objects.	Ask Questions: - Recognise how secondary sources can be used to answer questions that cannot be answered through practical work. - Given a wide range of resources decide for themselves how to gather evidence to answer a scientific question. - Independently ask scientific questions to developed understanding following an enquiry. Enquiry: - Look for patterns and relationships using a suitable sample. Record/Present: - Decide how to record and present evidence. - Record observations, for example: using annotated photographs, videos, labelled diagrams, observational drawings, labelled scientific diagrams or writing. Conclusions: - Answer own and others' questions based on information gained from secondary sources. - Talk about how new discoveries change scientific understanding. Communicate: - Communicate findings to an audience using relevant scientific language and illustrations.	- Pupils will develop respect by recognising the importance of the Earth, Sun and Moon and appreciating the conditions that make life on Earth possible. - Pupils will reflect on how the Earth's rotation explains the pattern of day and night experienced around the world. - Pupils will develop resilience by using models and repeated observations to understand a challenging scientific concept. - Pupils will demonstrate responsibility by gathering accurate information from reliable sources and presenting the planets in the correct order. - Pupils will show respect by listening to others' research and recognising the distinctive features of each planet. - Pupils will reflect on how scientific ideas change when new evidence, observations and technology improve our understanding.

	• Draw conclusions based on evidence and current subject knowledge. • Communicate findings to an audience both orally and in writing, using appropriate scientific language.	• Pluto was reclassified as a "dwarf planet" in 2006 and is not considered a major planet anymore. • The geocentric model believed Earth was the centre of the universe, while the heliocentric model proposed the Sun as the centre, supported by observations and understanding of planetary motion. Significant People Ptolemy: • believed in the geocentric model, which thought Earth was at the centre of the universe. Abu Sa'id al-Sijzi • wrote in the 10th century that he believed the Earth rotated on its Axis. Copernicus • proposed the heliocentric model, suggesting that the Sun was at the centre and planets, including Earth, orbited it. <i>Vocabulary:</i> spherical, star, orbit, Moon, moon, planet, axis, phase, Solar System, solar system		
ART:	Year 4: • Use a sketchbook to collect and record visual information from different sources as well as experimentations/ planning/trying out ideas for future works. • Express thoughts and feelings about their own work and that of others through annotation. • Use a sketchbook to make notes on how they would adapt and improve their work.	Drawing – Introduction to Drawing 5: • Accurate proportions are used when drawing something real/realistic. • Changing proportions can help to create a sense of exaggeration. • Perspective techniques create depth and dimension in drawings. • They can also be used to support with scale and proportion. • The grid method helps us to break up a drawing into smaller, more manageable parts.	Exploring & Developing Ideas: • Use a sketchbook to collect and record visual information from different sources as well as experimentations/ planning/trying out ideas for future works. • Start to develop own style based on learning around artists and techniques, including mixed media. • Use a sketchbook to make notes on how they can adapt and	• Pupils will develop resilience by practising familiar drawing techniques and persevering when accuracy and control are difficult to achieve. • Pupils will reflect carefully on the relationships between objects and their individual parts to improve the accuracy of their drawings. • Pupils will demonstrate responsibility by working carefully and systematically through each section of the grid.

	- Discuss and review own and others work, expressing thoughts and feelings, supported by their views with their knowledge or artists and techniques. - Reflect and explain the successes and challenges in a piece of art they have created. - Identify changes they might make or how their work could be developed further. - Explore a wider range of great artists and designers, making detailed comparisons with clear links to their own work. - Draw for a sustained period of time. - Explore drawing more complex shapes and forms, e.g. cylinders, cones, pyramids and spheres. - Begin to show that objects have a third dimension, e.g. through two-point perspective. - Experiment with more complex compositions including middle ground, horizon line, focal points and movement. - Use different grades of pencils and other drawing implements to achieve variation in tone. - Experiment with different shading techniques including hatching and cross hatching, stippling, scribbling and circling. - Create accurate drawings from observation, including photographs.	- Blending techniques such as layering or smudging help to soften the transitions between tones. - Viewfinders aid composition and support with developing detail. <i>Vocabulary:</i> observational drawing, three-dimensional, perspective, scale, proportion, detail, tonal, contrast, blending, smudging, viewfinder	improve their work, throughout the creative process. - Express thoughts and feelings about their own work and that of others through clear and well explained annotations Responding to Art: - Reflect on own work identifying modifications that can be made, in relation to styles and approaches to develop this further. - Discuss and review own and others work, expressing thoughts and feelings with clear explanations that are supported by their knowledge or artists and techniques Drawing: - Apply different techniques learnt for different purposes. - Confidently compose drawings building on prior knowledge. - Work from a variety of sources including observation, photographs and digital images. - Begin to develop an awareness of scale and proportion. - Develop perspective in their drawing through one-point or two-point perspective. - Work in a sustained and independent way to create a detailed drawing. - Develop close observation skills using a variety of view finders.	- Pupils will reflect on how light, shadow and different tones can be used to create depth and a three-dimensional effect. - Pupils will persevere with a sustained drawing, using observation and repeated practice to develop detail and accuracy. - Pupils will show respect by giving thoughtful feedback, listening to the views of others and using suggestions to improve their artwork.
COMPUTING:	Year 4: Breaking down a problem into smaller parts makes it easier to solve the problem.	Kapow Computing Scheme: Programming: BBC Micro:Bit: Lessons 1 – 3 To know:	- Making links between different programming interfaces that they are faced with. - Recognising examples of programming elements in real-life applications (e.g. live loops in	Pupils will demonstrate responsibility by exploring the micro:bit purposefully, handling the device carefully and recognising how inputs and outputs affect its behaviour.

	• Loops are used to save time when writing code by reducing repetition. • A variable is a container or holder for storing information that can change, e.g. numbers or text. • Conditional statements tell the computer what to do next based on a user's input. • It is important to identify where the mistake is in the programming as part of the debugging process. • Errors in a program could result from sequencing errors, coding errors or missing code. • Working towards a given goal that a program needs to accomplish. • Breaking down what they want to achieve into smaller, manageable parts. • Tinkering with an existing text-based code to see how it affects a program. • Remixing code to alter and add to an existing program. • Creating loops to make code more efficient in block-based programs. • Beginning to use variables in block-based programming languages to make programs more interactive. • Including a conditional statement in block-based programming languages. • Recognising the relationship between what is happening in a program and the written (block) code. • Working backwards, beginning to identify the code they think a program uses. • Running small chunks of code at a time to find the error or 'bug.'	• Code may sometimes need to be downloaded onto a physical system/device. • Devices with sensors (such as pedometers, security systems, thermostats and light sensors) are often programmed to perform specific tasks in reaction to the input from the sensors. <i>Vocabulary:</i> conditional statement, condition, variable	music or variables in pedometers). • Planning a program to be downloaded to a physical system/device to solve a particular problem. • Programming a physical system that has the capability for sensory input (e.g. a micro:bit). • Independently using loops to make code more efficient in text-based or block-based programs. • Using nested loops to make code more efficient.	• Pupils will develop reflection by considering how the sequence and repetition of instructions affect the animation produced. • Pupils will develop resilience by testing and refining their program until the sensor, variable and code work together to count movement accurately.
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DT:	Year 2: - Identify wheels and axles in context, e.g. skateboard or wheelbarrows, and explain how they work. - Use correct vocabulary to describe wheels and axles and how they move, e.g. free and fixed axles. - Explore how different size wheels and axle placement affect movement. - Recognise that friction can impact the movement of the wheel. Year 3: - Understand that mechanical systems have an input, process and an output. Year 4: - Evaluating Existing Products: - how well products have been designed, - who designed and made the products, - where products were designed and made, - when products were designed and made, - whether products can be recycled or reused, - how well products have been made, - why materials have been chosen, - what methods of construction have been used, - how well products work, - how well products achieve their purposes, - how well products meet user needs and wants. - Work within a range of contexts, such as the home, school, leisure,	Cam Mechanism Toys: Lessons 1 – 3 CONTEXT: <i>"Hello, I'm Azar and I need your help. I have a nephew who is 3 and I want to make him a toy. He enjoys toys that are bright and colourful and that he can make move. He also loves to turn things. Can you help me design and make something for him?"</i> - A cam turns rotary motion into linear motion. - This movement (called reciprocating motion) is repeated and in a straight line. - A crank is used to turn an axle which turns the cam. - The outer edge of the cam is in contact with a follower. As the cam rotates, it pushes the follower. - The movement of the cam causes the follower to move in a direction that is different to that of the cam. - Cams come in different shapes and sizes. Each shape determines the movement of the follower. - Toys with cam mechanisms need sturdy frameworks to support the moving parts. - Adding support structures like braces to frames can strengthen the toy's overall stability. Vocabulary: <i>crank, axle, cam, follower, motion, rotary, linear, force, framework, exploded diagram</i>	Mechanisms: - Confidently use appropriate vocabulary for tools, materials and their properties. - Explain how simple cams mechanisms work using appropriate vocabulary e.g. input and output. - Recognise that cam mechanisms consist of a crank, follower, cam, frame and axle. - Experiment with different cam shapes and how these affect movement. - Know that the crank uses a circular motion to create a reciprocating linear movement. - Identify familiar objects that use cams mechanisms to make them work. - Investigate ways of using cam mechanisms in combination with other materials to create a product. Designing: - Clearly describe the purpose of their products. - Indicate the design features of their products that will appeal to intended users, with clear reasoning. - Explain how particular parts of their products work. - Carry out research, using surveys, interviews, questionnaires and web-based resources. - Identify the needs, wants, preferences and values of individuals and groups. - Develop a simple design specification to guide their thinking.	- Pupils will develop reflection by examining how the different components of a cam mechanism work together to change rotary motion into linear movement. - Pupils will show respect by considering the intended user's age, needs and preferences when making their design choices. - Pupils will demonstrate responsibility by ensuring that the framework supporting the mechanism is strong, stable and safe to use.
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	local community, culture, and enterprise. - Describe the purpose of their products. - Indicate the design features of their products that will appeal to intended users. - Explain how particular parts of their products work. - Gather information about the needs and wants of individuals and groups. - Develop their own design criteria and use these to inform their idea. - Share and clarify ideas through discussion. - Model their ideas using prototypes and pattern pieces. - Use annotated sketches and cross-sectional drawings to develop and communicate their ideas. - Generate realistic ideas, focusing on the needs of the user. - Make design decisions that take account of the availability of resources.		- Use exploded diagrams to develop and communicate their ideas. - Generate innovative ideas, drawing on research. - Share and clarify ideas through discussion. - Model their ideas using prototypes and pattern pieces. Evaluating: - Existing Products: - how well products have been designed, - what impact products have beyond their intended purpose, - how well products have been made, - why materials have been chosen, - what methods of construction have been used, - how well products work, - how well products achieve their purposes, - how well products meet user needs and wants. - Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.	
GEOGRAPHY:	Year 4: - Name and locate the Equator, Northern and Southern Hemisphere. - Locate the Tropic of Cancer and the Tropic of Capricorn. - Name and locate the three climate zones of the world: Polar, Temperate and Tropical. - Compare geographical regions using topographical features and	A Long-Haul Journey: Lessons 1 – 3 - OS maps are specifically for navigation, outdoor activities and land use planning. - Ordnance Survey maps are scaled to represent real-world distances. - The space between contour lines of an area can tell how steep or flat the land is.	Interpret a Range of Sources: - Analyse and explain views on the effectiveness of different geographical representations e.g., aerial view and topological maps. - Establish whether the geographical questions posed, the methods used, and the answers found are valid. Communicate Geographical Information:	- Pupils will develop reflection by considering how scale, symbols and contour lines represent real geographical features. - Pupils will develop resilience by working systematically, checking their accuracy and correcting errors when locating places precisely. - Pupils will demonstrate responsibility by using

	land use patterns describing how some of these aspects have changed over time. • Use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features. • Start to explain the effectiveness of different geographical representations e.g., aerial view and topological maps. • Using a range of maps, including digital maps, to locate a range of given countries. • Use map symbols. • Accurately plot North, East, South, West on a map. • Use eight points of a compass, symbols, and keys to communicate knowledge of the UK and the wider world. • Begin to use four figure grid references.	• Six-figure grid references are more precise than four-figure grid references. • Latitude measures north and south of the Equator. The Equator is at 0° latitude. • Longitude measures east and west of the Prime Meridian (0° longitude). • Latitude and longitude create a grid on the Earth that helps to pinpoint exact locations. <i>Vocabulary:</i> <i>Ordnance Survey (OS), contour lines, longitude, latitude</i>	• Find possible answers to their own geographical questions. • Choose the best way to collect information needed and decide the most appropriate units of measure. Mapwork: • Use eight points of a compass, four figure grid reference, ordnance survey maps (physical and digital) and symbols to communicate geographical knowledge. • Use and create grid references to locate on a map. Locational Knowledge: • Use longitude, latitude, coordinates to locate on a map. • Name and locate a wide range of countries on a world map, including within Europe.	geographical coordinates carefully and accurately to identify locations around the world.
HISTORY:	Year 4: • An empire is kingdom that rules over many lands and people. • Empires grow by taking over land, people and their resources. • A civilization is a very advanced and organised society with its own culture. • Civilizations grown using the resources in their own lands. • Different civilizations lived at the same time across the world. • Summarise the main events from a period of history and place them in order. • Accurately sequence several events, artefacts, and/or historical figures on a timeline. • Understand that some historical events/periods occurred	The Kingdom of Benin (Lessons 1 – 3): • The Kingdom of Benin was a sophisticated kingdom that began around 900 AD. • It was situated in present-day Nigeria in West Africa. • The Benin people were skilled artisans known for their bronze and ivory artwork. • The Benin society had a hierarchical structure with the Oba at the top. • Benin was a significant trading power in West Africa. • Goods were exchanged for imported commodities such as textiles, beads and firearms. Significant People: Oba Ewuare:	Chronology: • Establish clear narratives within and across the periods studied. • Chronologically summarise the main events from a time period, with relation to specific historical concepts (e.g. Change and Continuity/Cause and Consequence etc.) • Continue to develop a chronologically secure knowledge and understanding of British, local and world history. Similarities and Differences: • Describe the most significant features of past societies and periods. • Describe similarities and differences between social, cultural, religious and ethnic	• Pupils will reflect on where the Kingdom of Benin fits within world history, compared to other well-known periods of history. • Pupils will show respect by recognising the sophistication of Benin's society and valuing its culture, traditions and achievements. • Pupils will consider how the choices made through trade and contact with other societies can bring both opportunities and consequences.

	concurrently in different locations. • Begin to develop a chronologically secure knowledge of local, national and global history, including significant dates. • Understand that timelines can be divided into BCE and CE using words and phrases: century, decade, BCE, CE, after, before, during. • Recognise that BCE is sometimes referred to as BC and CE is sometimes referred to as AD. • Recognise the difference between primary and secondary sources. • Using a range of sources, to find out about a period. • Use evidence to build up a picture of a past event. • Observe the small details when using artefacts and pictures. • Identify some key features of past societies and periods. • Identify similarities and differences between social, cultural, religious and ethnic diversity in Britain and the wider world. • Explain the impact of an event (including people's actions) on society within a time period. • Recognise significant people from historical sources/accounts. • To know that significant archaeological findings are those which change how we see the past. • Identify some significant features of the past, including ideas and beliefs. • Discuss the significance of particular people and events and the impact they had on society,	• Introduced hereditary succession. Oba Esigie • Expanded his kingdom eastwards to form an empire. • Encouraged trade with Europe. Oba Orhogbua • During his reign, the empire reached its largest size. <i>Vocabulary:</i> <i>Nigeria, Oba (king), artefact, legacy, ivory, hierarchy, culture, trade</i>	diversity in Britain and the wider world. Cause and Consequence: • Identify a range of causes of major events in history. • Begin to analyse the reasons for, and results of these historical events, including long-term changes in society. Using Sources for Enquiry: • Using a range of sources to find out about a particular aspect of the past. • Know that the most reliable sources are primary sources which were created for official purposes. Historical Significance: • Describe the significant features of the past, including ideas, beliefs, attitudes and experiences of men, women, and children. • Describe the social and cultural significance of a past society, for example their impact on Britain, using evidence to support reasoning.	
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	including Britain, using simple evidence to support reasoning.			
MUSIC:	Year 4: - Listening with attention to detail, focusing on a specific feature of the music (e.g. 'What do you notice about the pitch?'). - Recognising simple patterns that combine rhythm and pitch. - Adapting their playing to be loud or quiet at the direction of a leader. - Improvising or composing short pieces that represent a stimulus, choosing sounds or instruments to match an idea or character. - Creating short sequences of sound within certain parameters (e.g. using given notes or rhythms, such as the pentatonic scale). - Exploring how the inter-related dimensions of music can be used to improve a piece or create contrast (e.g. changing speed or volume). - Beginning to choose words that match a melody or rhythm, considering the syllables (e.g. 'hap-py' using paired quavers). - Beginning to develop a repeated melody within given parameters (e.g. adding suggested notes). - Beginning to offer constructive thoughts and opinions on peer performances. - Reflecting on their own performance and expressing what went well. - Beginning to maintain an individual part (e.g. bass, chords or melody) within a group.	Kapow Music Scheme: Music in Nature: Chords and Melodies Listening and Evaluating To know: - Composers choose musical elements to create particular effects or moods. - Contrast is created by changing elements, such as dynamics, tempo or instruments. Inter-related Dimensions - Dynamics: To know that changes in dynamics (e.g. crescendo and decrescendo) can create contrast or mood. - Melody: To know that melodic ideas can be repeated, developed or varied. <i>Vocabulary:</i> <i>chords, crescendo, diminuendo, drone, dynamics, melody, musical contrast</i>	Listening and Evaluating - Listening and noticing relevant details with increasing independence and focusing on a range of musical features. - Considering how the composer uses rhythm and pitch to create a mood. - Beginning to understand how the interrelated dimensions of music work together to create contrast and mood. Creating Sound - Adapting their playing to be loud or quiet to create contrast and add to the mood of a piece. Improvising and Composing - Improvising or composing music to represent a stimulus and create a specific mood or atmosphere. - Creating musical ideas whilst carefully considering rhythm, pitch and notation. - Making musical decisions to create different moods, such as choosing appropriate notes, tempo (speed) or dynamics (volume). - Confidently developing melodic ideas, exploring different pitches and rhythms. Performing - Offering constructive thoughts and opinions on peer performances, using musical vocabulary and reasoning. - Evaluating their performance by identifying strengths and suggesting next steps for improvement.	- Pupils will develop reflection by considering how composers use musical elements to represent nature and create particular moods or atmospheres. - Pupils will demonstrate responsibility by controlling the volume of their voice or instrument carefully to contribute to the intended mood and contrast. - Pupils will develop resilience by practising and maintaining a repeated chord or drone part accurately within a group. - Pupils will reflect on how different pitches and rhythms can be selected, repeated and varied to communicate a musical idea. - Pupils will take responsibility for making purposeful choices about melody, chords, tempo and dynamics so that their composition creates the intended effect. - Pupils will show respect by listening attentively to performances and offering constructive feedback using appropriate musical vocabulary.

			Maintaining an individual part within a group.	
PE:	Year 4: - Width creates attacking opportunities. - Marking reduces attacking options. - Quick transitions create advantage. - Communication supports teamwork. - Maintaining possession can control the game. - Positioning affects attacking and defending success. - Apply dribbling, passing, receiving and shooting techniques consistently. - Apply principles of width, marking, possession and transition. - Evaluate tactical decisions and teamwork effectiveness. - Show resilience and communication during competition.	Invasion Games (Football) Learn that: - Tactical adaptations depend on opponents. - Positioning affects attacking and defensive balance. - Anticipation supports decision-making. - Team shape influences performance. - Different tactics suit different situations. - Communication and leadership improve team effectiveness. <i>Vocabulary:</i> <i>possession, space, attack, defence, positioning, team shape, tactics, transition, anticipation, communication, control, marking</i>	- Refine control, speed, agility and technical execution under pressure. - Adapt tactics strategically according to opponents and game situations. - Analyse gameplay critically and adapt performance independently. - Lead others positively and demonstrate sportsmanship and self-regulation.	- Pupils will show respect by demonstrating sportsmanship during competitive situations, recognising the efforts of teammates and opponents. - Pupils will show respect by communicating constructively, listening to others' ideas and supporting fair play during cricket activities. - Pupils will develop responsibility by making thoughtful decisions about risk and reward when batting, fielding and responding to game situations. - Pupils will develop responsibility by taking on leadership roles, helping to organise their team and contributing positively to attacking and defensive strategies. - Pupils will use reflection by analysing their tactical and technical performance and identifying how to improve their striking, bowling and fielding. - Pupils will use reflection by adapting strategies independently in response to opponents, feedback and changing gameplay situations. - Pupils will build resilience by maintaining focus, self-regulation and effort when playing under pressure. - Pupils will build resilience by responding positively to mistakes, setbacks and competitive challenges, using them to refine performance.

RE:	Year 3 & 4: - Describe a few things that a believer might learn from a religious story. - Talk about some of the things that are the same for religious people. - Briefly describe some similarities and differences between religions. - Describe some religious sources and explain that these teachings affect religious groups. - Use the right religious words to describe and to briefly compare different practices and experiences. - Compare some of the things that influence them with those that influence others. - Ask important questions about life and compare their ideas with those of other people. - Ask questions about the meaning of life and about identity. - Begin to link things that are important to them and other people with the way people behave. - Begin to give opinions with reasons and references to some sources of wisdom, such as inspirational people. - Ask questions about moral decisions, and suggest some solutions based on sources of wisdom.	Why Do People Get Married? - People get married to show love, make a promise, or start a family. - A wedding brings families and communities together to celebrate a couple. - A love marriage is chosen by the couple; an arranged marriage is chosen with family help. - Some people choose arranged marriage because of culture, religion, or family values. - Christian vows are promises like “for richer, for poorer” and “till death do us part.” - Christians see marriage as a covenant made in front of God. - In a Hindu wedding, the couple walk around the sacred fire to symbolise their shared journey in life. - Hindus believe marriage is a sacred duty that connects two families and souls. - Buddhist marriage is based on kindness, respect, and right intention. - Monks may chant blessings, sprinkle water, and tie thread around the couple’s wrists. - Non-religious people marry to show love and make a legal promise. - A humanist wedding reflects the couple’s own values without religion. <i>Vocabulary:</i> <i>marriage, wedding, commitment, vows, ceremony, covenant, blessing, tradition, symbol, values</i>	Learning about Religion & Beliefs: - Describe some reasons for why people belong to religions. - Explain how similarities and differences between religions can make a difference to the lives of individuals and communities. - Use a wider religious vocabulary. - Begin to suggest reasons for similarities and differences in the answers given to moral questions. - Begin to explain how religious sources are used to provide answers to moral questions. - Say what religions teach about some of the big questions of life and begin to use more sources to explain different views. Learning from Religion & Beliefs: - Give own views and describe the views of others on questions about identity and the meaning of life. - Use brief reasons and some references to sources of wisdom, such as inspirational people. - Begin to express much clearer opinions on matters of religion and belief and use some examples to support their views.	- Pupils will reflect on the different reasons people choose to marry and the importance of love, commitment, family and community. - Pupils will show respect for different cultural approaches to marriage while recognising that consent and personal choice are essential. - Pupils will consider how Christian wedding vows express the responsibility to remain faithful and support one another throughout life. - Pupils will show respect for the beliefs, symbols and traditions that make Hindu marriage ceremonies meaningful to couples and their families. - Pupils will reflect on how Buddhist values such as kindness, compassion and right intention can guide a committed relationship. - Pupils will respect that marriage can hold deep meaning for non-religious people and may express their personal values, love and commitment.
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RHW:	Year 4: • How to train their minds to focus on whatever they want. • They will learn that this is Neuroplasticity, and they can do anything they put their mind to. • How they use each part of Team H-A-P and reflect on when they use them to develop their understanding. • How the Amygdala reacts to real and perceived danger. • About what triggers their own Amygdala to fight, flight and freeze. • How they can train their brain to calm their Amygdala down. • About the brain's structure and how Neurons carry messages to create Neural Pathways. • How Neural Pathways help us to form habits. • More about how to look after their brains and what happens if they don't. • how our minds can feel like a snow globe, leaving us unable to see clearly. • That mental health, just like physical health, is part of daily life; the importance of taking care of mental health. • About strategies and behaviours that support mental health — including how good quality sleep, physical exercise/time outdoors, being involved in community groups, doing things for others, clubs, and activities, hobbies and spending time with family and friends can support mental health and wellbeing.	My Happy Mind: Meet Your Brain Lessons 1 - 5 To Learn: • The difference between their brain and mind. • More detail about each part of the brain and why they work the way they do. • How they can train their brains in times of stress by using Happy Breathing when their Amygdala gets triggered. • About how others react differently to them and that we all have different triggers that cause us to Fight, Flight or Freeze. • About how to more intentionally look after their brains to keep them healthy. • About the hormones in their brain and how they can manage them, including Dopamine and Cortisol. <i>Vocabulary:</i> <i>brain, cells, hippocampus, amygdala, prefrontal cortex, mind, focus, neuroplasticity, neuron, neural pathway, happy breathing, 'fight, flight, freeze', oxygen, real danger, perceived danger, trigger, cortisol</i>	My Happy Mind: Meet Your Brain • Recognise their own stress responses and identify personal triggers. • Use Happy Breathing to calm themselves during moments of stress or strong emotion. • Identify ways to look after their brain health through daily habits and choices. • Show empathy and tolerance towards people with different emotional triggers or behaviours. • Practise techniques to regulate emotions and maintain wellbeing. • Take greater responsibility for managing their own emotions and reactions.	• Pupils will develop reflection by considering the difference between the brain and the mind and how each influences thoughts, feelings and behaviour. • Pupils will reflect on how different parts of the brain work together and how their own triggers can affect the way they respond. • Pupils will take responsibility for recognising signs of stress and using strategies such as Happy Breathing to regulate their responses. • Pupils will show respect by recognising that people can have different emotional triggers and may respond differently to the same situation. • Pupils will develop responsibility by making choices that support brain health and by understanding how factors such as cortisol and dopamine can affect wellbeing and behaviour.
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	• To recognise that feelings can change over time and range in intensity. • About everyday things that affect feelings and the importance of expressing feelings. • A varied vocabulary to use when talking about feelings; about how to express feelings in different ways. • Strategies to respond to feelings, including intense or conflicting feelings; how to manage and respond to feelings appropriately and proportionately in different situations. • To recognise warning signs about mental health and wellbeing and how to seek support for themselves and others. • To recognise that anyone can experience mental ill health; that most difficulties can be resolved with help and support; and that it is important to discuss feelings with a trusted adult. • About change and loss, including death, and how these can affect feelings; ways of expressing and managing grief and bereavement. • Problem-solving strategies for dealing with emotions, challenges and change, including the transition to new schools.			
SPANISH:	Year 4: • Listening and responding to full sentences. • Using a bilingual dictionary to find the meaning of unknown words and check the spelling of unfamiliar words.	Kapow Spanish Scheme: Describing Family and Friends in Spanish Grammar • To know that plural nouns referring to nouns of mixed gender always take the masculine form.	Language Comprehension • Listening and selecting information from short audio passages to give an appropriate response. • Identifying key information in simple writing.	• Pupils will show respect by listening carefully when others speak Spanish. • Pupils will show respect by recognising that languages and cultures may communicate ideas in different ways.

	• Using contextual clues and cues to gist and make predictions about meanings. • Recognising and answering simple questions which involve giving personal information. • Selecting and writing short words and phrases. • Making short phrases or sentences using a scaffold (e.g. word cards, knowledge organisers). • That when talking about a singular noun in Spanish we use the definite article el for masculine singular nouns and, la for feminine singular nouns. • That when talking about a plural noun in Spanish we use the definite article los for masculine plural nouns and las for feminine plural nouns. • That the infinitive of a verb in Spanish, e.g. comer - to eat, means 'to do something'. • That me gusta + infinitive of a verb describes what you like to do. • That the infinitive of all verbs in Spanish end in either 'ar', 'er' or 'ir'.	• To know whether to use the pronouns el – he, or ella – she (or the gender-neutral pronoun elle) when describing someone. • To know that the ending of verbs change according to the subject. • To know how to form the first three persons of the verb tener – to have, llamarse – to be called, vivir – to live, and gustarse – to like. • To know that there is no possessive apostrophe in Spanish but that to say 'my mother's father' the Spanish would say el padre de mi madre – the father of my mother. <i>Vocabulary:</i> <i>hermano</i> <i>hermana</i> <i>se llama</i> <i>vive</i> <i>tiene</i> <i>le gusta</i> <i>este/esta</i> <i>¿Tienes hermanos?</i>	• Using a range of language detective strategies to decode new vocabulary. Language Production • Forming a question in order to ask for information. • Speaking in full sentences using known vocabulary. • Speaking and reading aloud with increasing confidence and fluency. • Adapting model sentences to express different ideas. • Writing a short text using a model or scaffold. • Using adapted phrases to describe a person.	• Pupils will show respect by responding positively to others' attempts to speak Spanish. • Pupils will show respect by valuing accurate pronunciation and clear communication. • Pupils will demonstrate responsibility by participating actively in speaking, listening, reading and writing activities. • Pupils will demonstrate responsibility by practising vocabulary and language structures regularly. • Pupils will demonstrate responsibility by using resources, such as word banks and dictionaries, appropriately. • Pupils will demonstrate responsibility by contributing positively during paired and group work. • Pupils will develop reflection by considering how Spanish is similar to and different from English and other languages they know. • Pupils will develop reflection by reviewing their pronunciation, vocabulary and grammatical accuracy. • Pupils will develop reflection by using feedback to improve their spoken and written Spanish. • Pupils will develop reflection by recognising the progress they have made as language learners. • Pupils will develop resilience by having the confidence to speak Spanish even when they are unsure. • Pupils will develop resilience by continuing to communicate when they cannot recall every word.
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