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| Extreme Weather -  Natural Disasters | **STEM Unit Overview**  The Effects of a Natural Disaster - Geological changes and extreme weather can affect Earth’s surface  What are extreme weather events and sudden geological changes? Are these the same as natural disasters?  What are volcanoes and how do they change Earth’s surface? Is it important for people in the UK to be prepared for a volcanic eruption?  What are earthquakes and how do they change Earth’s surface? Is it important for people in the UK to be prepared for an earthquake?  What are tsunamis and how do they form? Does the magnitude of an earthquake affect the size of a resulting tsunami?  What are cyclones and how do they change Earth’s surface? How to scientists monitor cyclones to minimise the effects of this natural disaster?  What is a drought and how does it affect the landscape? How does flash flooding occur after a drought?  **STEM Group Project**  The Three Little Pigs Sequel - Create a landscape scene with the three little pigs’ houses in three different natural disaster zones and an evacuation centre. Create a story that teaches the little pigs about the dangers of building a house in areas that are commonly affected by natural disasters. |  |
| Autumn – Cycle B  Year 5/6 |

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| Maths | English |
| White Rose Scheme  **Number - Place Value**  Year 5   * *Read, write, order and compare numbers to at least 1000000 and determine the value of each digit.* * *Count forwards or backwards in steps of powers of 10 for any given number up to 1000000.* * *Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero.* * *Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000* * *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.*   Year 6   * *Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.* * *Round any whole number to a required degree of accuracy.* * *Use negative numbers in context, and calculate intervals across zero.* * *Solve number and practical problems that involve all of the above.*   **Number - Addition & Subtraction**  Year 5   * *Add and subtract numbers mentally with increasingly large numbers.* * *Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).* * *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**  Year 5   * *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 (nonprime) 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 and cubed.* * *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.*   **Number - Addition, Subtraction, Multiplication & Division**  Year 6   * *Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.* * *Multiply multi-digit number up to 4 digits by a 2 digit number using the formal written method of long multiplication.* * *Divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context.* * *Divide numbers up to 4 digits by a 2 digit number using the formal written method of short division, interpreting remainders according to context.* * *Perform mental calculations, including with mixed operations and large numbers.* * *Identify common factors, common multiples and prime numbers.* * *Use their knowledge of the order of operations to carry out calculations involving the four operations.*   *Solve problems involving addition, subtraction, multiplication and division.* | **Reading - Word Reading**   * *Apply their growing knowledge of root words, prefixes and suffixes both to read aloud and to understand the meaning of new words that they meet.*   **Reading - Comprehension**   * *Maintain positive attitudes to reading and understanding of what they read by: continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks, reading books that are structured in different ways and reading for a range of purposes, increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions, recommending books that they have read to their peers, giving reasons for their choices, identifying and discussing themes and conventions in and across a wide range of writing, making comparisons within and across books, learning a wider range of poetry by heart and preparing 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.* * *Understand what they read by: checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context, asking questions to improve their understanding, drawing inferences such as inferring characters’ feelings, thoughts and motives from their actions, and justifying inferences with evidence, predicting what might happen from details stated and implied, summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas and identifying how language, structure and presentation contribute to meaning.* * *Discuss and evaluate how authors use language, including figurative language, considering the impact on the reader.* * *Distinguish between statements of fact and opinion.* * *Retrieve, record and present information from non-fiction.* * *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 views courteously.* * *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.* * *Provide reasoned justifications for their views.*   **Writing - Transcription**   * *Use further prefixes and suffixes and understand the guidance for adding them.* * *Spell some words with ‘silent’ letters.* * *Continue to distinguish between homophones and other words which are often confused.* * *Use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically.* * *Use dictionaries to check the spelling and meaning of words.* * *Use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary.* * *Use a thesaurus.*   **Writing - Composition**   * *Plan their writing.* * *Draft and write.* * *Evaluate and edit.* * *Proof-read for spelling and punctuation errors.* * *Perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear.*   **Writing - Vocabulary, Grammar & Punctuation**   * *Develop their understanding of the concepts set out in English Appendix 2 by: recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms, using passive verbs to affect the presentation of information in a sentence, using the perfect form of verbs to mark relationships of time and cause, using expanded noun phrases to convey complicated information concisely, using modal verbs or adverbs to indicate degrees of possibility, using relative clauses beginning with who, which, where, when, whose, that or with an implied (i.e. omitted) relative pronoun* * *Indicate grammatical and other features by: using commas to clarify meaning or avoid ambiguity in writing, using hyphens to avoid ambiguity, using brackets, dashes or commas to indicate parenthesis, using semi-colons, colons or dashes to mark boundaries between independent clauses, using a colon to introduce a list, punctuating bullet points consistently* * *Use and understand the grammatical terminology in English Appendix 2 accurately and appropriately in discussing their writing and reading.* |

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| Science | Geography | History |
| **Forces**  Year 5   * *Identify the effects of air resistance and friction that a between moving surfaces.* * *Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.* * *Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.*   Vocabulary   * Force, gravity, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears.   Working scientifically   * 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 a 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. | KS2 Locational knowledge   * *Locate the world’s countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities.* * *Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time.* * *Identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night).*   Human and physical geography   * *Describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.*   Geographical skills and fieldwork   * *Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied.* * *Use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world.* | History of Pompeii |

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| Art and Design | Design and Technology | Music |
| How can we interpret the weather through art?  Links between different colours and the representation they have.  KS2   * *Create sketch books to record their observations and use them to review and revisit ideas* * *Improve mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]* * *Learn about great artists, architects and designers in history.* | Design and build a volcano that can erupt, create a small scale Pompeii and evaluate the effect the volcano had on the city.  KS2  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 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 structure.* * *Understand and use mechanical systems in their products.* * *Understand and use electrical systems in their products.* * *Apply their understanding of computing to program, monitor and control their products.* | Charanga Music Scheme  **Livin’ on a Prayer - Year 5 Unit**  How Rock music developed from the Beatles onwards. Analysing performance.  KS2   * *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.* * *Listen with attention to detail and recall sounds with increasing aural memory.* * *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.* |

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| Languages | Physical Education | Outdoor Learning |
| French  **Getting to know you - Year 5 Unit** | **Monday:**  Paceball/Netball   * *Use running, jumping, throwing and catching in isolation and in combination.* * *Play competitive games, modified where appropriate and apply basic principles suitable for attacking and defending.*   **Friday:**  Swimming   * *Swim competently, confidently and proficiently over a distance of at least 25 metres.* * *Use a range of strokes effectively.* * *Perform safe self-rescue in different water-based situations.*   Football   * *Use running, jumping, throwing and catching in isolation and in combination.* * *Play competitive games, modified where appropriate and apply basic principles suitable for attacking and defending.* | Outdoor learning as and when throughout the topic.  Forest School sessions when timetabled. |

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| PSHE/RSE | Religious Education | Computing/E-Safety |
| Derbyshire Scheme of Work: PSHE Matters  **Being Healthy**  Core theme: Health and Wellbeing   * H1 - Identifying what affects their physical and mental health. * H2 - Understanding what a balanced, healthy lifestyle means. * H3 - Identifying what influences our choices to have a balanced lifestyle. BNF Healthy Eating Week * H4 - Recognising that habits can have both positive/negative effects on a healthy lifestyle. * H5 - Recognising early signs of physical illness. * H6 - Exploring a balanced/unbalanced diet and the effects. * H7 - Recognising opportunities/risks associated with an active/inactive lifestyle. * H8 - Identifying routines that support good quality sleep; the effects of lack of sleep. * H9 - Understand the importance of personal hygiene and how to maintain it. * H11 - Identifying good oral hygiene; the impact of lifestyle choices on dental care. * H12 - Identifying how to keep safe from sun damage and reduce the risk of skin cancer. * H13 - Identifying strategies for managing/ balancing time online/offline. * H14 - Identifying how and when to seek support if they are worried about their health. * H16 - Identify strategies and behaviours that support mental health.   **Relationships**  Core theme: Relationships   * R1 - Recognising that there are different types of relationships. * R3 - Understanding what marriage and civil partnership means. * R4 - Understanding that forced marriage is a crime. * R5 - Recognising different types of loving, caring and committed relationships. * R6 - Identifying the difference between healthy/ unhealthy relationships. * R7 - Recognising and respecting that there are different family structures. * R8 - Recognising the characteristics of healthy family life. * R9 - Recognising how to seek advice if family relationships make them unhappy. * R10 - Identifying the strategies to build positive friendships and how friendship can support wellbeing. * R11 - Identifying what constitutes a positive healthy friendship. * R14 - Comparing the difference between healthy/ unhealthy friendships. * R16 - Exploring how friendships can change and the benefits of having different types of friends. | Derbyshire Agreed Syllabus 2020 onwards  **Unit U2.2: Believing (Religious beliefs, teachings, sources; questions of meaning purpose and truth) - Christians**  What would Jesus do? (Can we live by the values of Jesus in the twenty-first century?)   * Outline Jesus’ teaching on how his followers should live. (A2) * Offer interpretations of two of Jesus’ parables and say what they might teach Christians about how to live. (B3) * Explain the impact Jesus’ example and teachings might have on Christians today. (B1) * Express their own understanding of what Jesus would do in relation to a moral dilemma from the world today. (C3) | Teach Computing  **Computer Systems and Networks: Communication**  Computer Science   * *Design, write and debug programs that accomplish specific goals, including controlling or stimulating physical systems. (A)* * *Solve problems by decomposing them into smaller parts. (A)* * *Understand computer networks (including the internet, World Wide Web), how they can provide multiple services and the opportunities they offer for communication and collaboration. (D)* * *Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. (E)*   Information Technology   * *Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, system and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. (F)* |