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| Flash 'n' Crash! | **STEM OVERVIEW:** Physical Sciences- light and sound How are sound and light made and how do we detect them. What are natural sound sources and what are man-made sources of sound. What is the relationship between white light and colour. How we can feel sound. How are sounds different and how can they be changed.**TOPIC VOCABULARY: light, white light, natural, artificial, man-made, sound, sense, source, vibration, sun, strike, blow, scrape, shake, high, low, loud, soft, volume, pitch.** |
| Autumn 1/2Cycle AYear 2/3 |

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| Maths | English |
| **Y2****Place value**Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward.Recognise the place value of each digit in a two-digit number.Identify, represent and estimate numbers to 100 using different representations including the number line.Compare and order numbers from 0 up to 100 and use the signs <, > and =.Read and write numbers to at least 100 in numerals and words.Use place value and number facts to solve word problems.Addition and subtraction- recall and use addition and subtraction facts to 20 fluently and derive and use related facts to 100.Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.**Addition and subtraction.**Add and subtract numbers using concrete objects, pictorial representations and mentally, including: a 2-digit number and units; a 2-digit number and tens; two 2-digit numbers; adding three 1-digit numbers.Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.Solve problems with addition and subtraction.Continue revision and consolidation of previously taught topics and skills through the use of the Maths Box and Flashback**Multiplication & Division**Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers.Show that the multiplication of 2 numbers can be done in any order (commutative) and the division of one number by another cannot.Calculate mathematical statements for multiplication and division within the multiplication tables and write them using x ÷ and = signs.Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.**Y3****Place value**Read and write numbers up to 1000 in numerals and in words. Identify, represent and estimate numbers up to 1000 using different representations. Find 10 or 100 more or less than a given number. Recognise the place value of each digit in a 3-digit number. Order and compare numbers to 1000. Count from 0 in multiples of 4, 8, 50 and 100 Solve number problems and practical problems involving these ideas. **Addition and Subtraction** Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction Estimate the answer to a calculation and use inverse operations to check answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Add and subtract amounts of money to give change using both £ and p in practical contexts. **Multiplication & Division**Recall and use multiplication and division facts for the 3, 4 and 8 times tables.Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods.Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which N objects are connected to M objects. | **Phonics** in RWI and literacy lessons:continue to apply phonic knowledge and skills as the route to decode words, until automatic decoding has become embedded and reading is fluent read accurately by blending the sounds in words that contain the graphemes taught so far, especially recognising alternative sounds for graphemes read accurately words of two or more syllables that contain the same graphemes as above read words containing common suffixes read further common exception words, noting unusual correspondences between spelling and sound and where these occur in the word read most words quickly and accurately, without overt sounding and blending, when they have been frequently encountered read aloud books closely matched to their improving phonic knowledge, sounding out unfamiliar words accurately, automatically and without undue hesitation  re-read these books to build up their fluency and confidence in word reading.**Reading** comprehension in RWI, guided reading, 'Read to Succeed', class reading: develop pleasure in reading motivation to read, vocabulary and understanding by:listening to, discussing and expressing views about a wide range of contemporary and classic poetry, stories and non-fiction at a level beyond that at which they can read independently discussing the sequence of events in books and how items of information are related becoming increasingly familiar with and retelling a wider range of stories, fairy stories and traditional tales being introduced to non-fiction books that are structured in different ways recognising simple recurring literary language in stories and poetry discussing and clarifying the meanings of words, linking new meanings to known vocabulary discussing their favourite words and phrases. **Spelling** in RWI, Spellzoo, Hammer Grammar, literacy and cross curricula writing:segmenting spoken words into phonemes and representing these by graphemes, spelling many correctly learning new ways of spelling phonemes for which one or more spellings are already known, and learn some words with each spelling, including a few common homophones learning to spell common exception words learning to spell more words with contracted forms learning the possessive apostrophe (singular) distinguishing between homophones and near-homophones add suffixes to spell longer words, including –ment, –ness, –ful, –less, –ly write from memory simple sentences dictated by the teacher that include words using the  GPCs, common exception words and punctuation taught so far.**Grammar and Punctuation** in RWI, Hammer Grammar, literacy and cross curricula writing:use both familiar and new punctuation correctly including full stops, capital letters, exclamation marks, question marks, commas for lists and apostrophes for contracted forms and the possessive (singular)use sentences with different forms: statement, question, exclamation, commanduse expanded noun phrases to describe and specifyuse the present and past tenses correctly and consistently including the progressive formuse subordination (when, if, that, or because) and co-ordination (using or, and, but)use some features of written Standard Englishuse and understand the grammatical terminology when discussing our writing.**Writing** composition in RWI, literacy and cross curricula writing:writing narratives about personal experiences and those of others, Florence Nightingale and Mary Seacole -linked to Black History Monthwriting about real events, Florence Nightingale, Mary Seacole and Grace Darling. writing for different purposes: retelling the story of The Lighthouse Keeper's Lunch,  write a biography of Joseph Wright, write a diary entry for a day with Grace Darling at the lighthouse. |

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| Science | Geography | History |
| **Ongoing: working scientifically**-asking simple questions and recognising that they can be answered in different ways; observing closely, using simple equipment; performing simple tests; identifying and classifying; using observations and ideas to suggest answers to questions; gathering and recording data to help in answering questions.Year 3 Light Objectives:Recognise that we need light in order to see things and that dark is the absence of light.Notice that light is reflected from surfaces.Recognise that light from the sun can be dangerous and that there are ways to protect our eyes.Recognise that shadows are formed when the light from a light source is blocked by an opaque object.Find patterns in the way that the size of shadows change.Year 4 Sound Objectives:Identify how sounds are made, associating some of them with something vibrating.Recognise that vibrations from sounds travel through a medium to the ear.Find patterns between the pitch of a sound and the features of the object that produced it.Find patterns between the volume of a sound and the strength of vibrations that produced it.Recognise that sounds get fainter as the distance from the sound source increases. | Use world map, atlases, globes to identify places studied.Use aerial photos and plans to recognise landmarks and basic human and physical features-when locating the Crimea (Florence Nightingale), the Caribbean (Mary Seacole), Farne Islands (Grace Darling).  | Learn about the lives of significant individuals in the past who have contributed to national and international achievements- Mary Seacole, Martin Luther-King, (BHM link) Florence Nightingale and Grace Darling.Study events beyond living memory that are significant nationally or globally-Florence Nightingale and nursing, Grace Darling and the Forfarshire. |

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| Art and Design | Design and Technology | Music |
| As part of our work towards the Artsmark Award we shall visit Derby Museum and Art Gallery to find out about the work of a range of artists, specifically Joseph Wright of Derby and his paintings about 'light at night'.Use drawing and painting to develop and share ideas, experiences and imagination based on the theme of light.To develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space to produce an original canvas for the Artsmark Award.To use a range of materials creatively to design and make products. | When making a sound source model and a lighthouse model:design purposeful, functional, appealing products for themselves and other users based on design criteria, generate, develop, model and communicate their ideas through talking and drawing.Select from and use a range of tools and equipment to perform practical tasks.Select from and use a wide range of materials and components, including construction materials and textiles, according to their characteristics.Evaluate their ideas and products against design criteria.Build structures, exploring how they can be made stronger, stiffer and more stable. | **Charanga 1: through the South African song Hands, Feet, Heart, and the R & B song Let Your Spirit Fly, we shall:*** use our voices expressively and creatively by singing songs and speaking chants and rhymes
* play tuned and untuned instruments musically
* experiment with, create, select and combine sounds using the inter-related dimensions of music.
* listen with concentration and understanding to a range of high-quality live and recorded music:

Symphony no.5 by Beethoven; The Entertainer by Scott Joplin; In the Hall of the Mountain King by Grieg; Adiemus by Karl Jenkins; Hungarian Dance no.5 by Brahms; Waltz from Sleeping Beauty by Tchaikovsky; Montagues and Capulets by Prokofiev.**Charanga 2: through the Christmas song Ho, Ho, Ho! we shall:*** use our voices expressively and creatively by singing songs and speaking chants and rhymes
* play tuned and untuned instruments musically
* experiment with, create, select and combine sounds using the inter-related dimensions of music.
* listen with concentration and understanding to a range of high-quality live and recorded music:

Night on a Bare Mountain by Mussorgsky; Firebird Finale by Stravinsky; Largo from New World Symphony by Dvorak; Minute Waltz by Chopin; Hallelujah Chorus from Messiah by Handel; Troika-Sleigh Ride by Prokofiev.Learning our songs for the Christmas musical. |

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| Languages | Physical Education | Outdoor Learning |
| French* Listen attentively to spoken language and show understanding by joining in and responding.
* Explore the patterns and sounds of language through songs and rhymes.
* Engage in conversations; ask and answer questions.
* Speak in sentences, using familiar vocabulary, phrases and basic language structures.
 | BSP CoachFundamental Movementsmaster basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities.School StaffThrowing and catchingmaster basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities.BSP CoachTeam Gamesparticipate in team games, developing simple tactics for attacking and defendingmaster basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activitiesSchool StaffMulti skillsmaster basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities. | From September until December, one afternoon per week:* Leaf art using different types and colours
* Leaf identification
* Twig frames
* Identifying different colours and textures
* Leaf necklaces and headbands
* Animal shelters
* Human shelters
* Woodland creature identification
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| PSHE/RSE | Religious Education | Computing |
| **Our first topic is Drug Education**Core Theme: Health and Wellbeing. H1. Identifying different ways to keep healthy.H5. Demonstrating simple hygiene routines that can stop germs from spreading.H6. Understanding how medicines can help people to stay healthy.H11. Naming different feelings.H28. Talking about rules and age restrictions that keep us safe.H31. Understanding that household products (including medicines) can be harmful if not used correctly.H33. Talking about the people whose job it is to help keep us safe.H37. Understanding that things that people put into their body or on their skin can affect how people feel.**The second topic is Being Me**Core themes: Living in the Wider World/Relationships/Health and Wellbeing. L4. Recognising the different groups they belong to. L14. Identifying that everyone has different strengths. R23. Recognising the ways in which they are the same and different to others. H21. Recognising what makes them special.H22. Identifying the ways in which we are all unique. H23. Identifying what they are good at, what they like and dislike. | Based on the Derbyshire Agreed Syllabus 2020 onwards.**Unit 1.7 Living: Christian and Jewish People.****What does it mean to belong to a faith community?**Recognise and name some symbols of belonging from their own experience, for Christians and at least one other religion, suggesting what these might mean and why they matter to believers (A3).Give an account of what happens at a traditional Christian infant baptism /dedication and suggest what the actions and symbols mean (A1).Identify two ways people show they belong to each other when they get married (A1).Respond to examples of co-operation between different people (C2) | **TOPIC 1:**Computer Systems and NetworksComputer science: * create and debug simple programs
* use logical reasoning to predict the behaviour of simple programs
* understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions

Information technology:* use technology purposefully to create, organise, store, manipulate and retrieve digital content

Digital literacy:* recognise common uses of information technology beyond school; use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

**TOPIC 2:**Creating Media-Digital PhotographyInformation technology:* use technology purposefully to create, organise, store, manipulate and retrieve digital content

Digital literacy:* recognise common uses of information technology beyond school; use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Ongoing through PSHE and assembly: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.STEM: use a QR code to find information about light and sound sources, recognising common uses of information technology beyond school. |