 Year 5 Curriculum concepts and milestones

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|  | Autumn | Spring | Summer |
| Concepts and Milestones to cover in Science | Biology –  To investigate living things  I can describe the different life cycles of mammals, amphibians, insects and birds  I can describe the process of reproduction in some plants and animals  Chemistry –  To investigate materials  I can understand how some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution  I can use knowledge of solids, liquids and gases to decide how mixtures might be separated including filtering, sieving and evaporating  Physics –  To understand movement, forces and magnets  I can describe magnets as having two poles  I can predict whether two magnets will attract or repel  I can identify the effect of drag forces e.g. water resistance and friction  I understand that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect | Biology –  To understand animals and humans  I can describe changes as humans develop to old age  I can identify and name the main parts of the human circulatory system and describe their functions  I can recognise the importance of diet, exercise, drugs and lifestyle on the way the human body functions  I can describe the ways in which nutrients and water are transported within animals and humans  Chemistry –  To investigate materials  I can group together materials based on evidence from comparative fair tests  I can give reasons based on evidence from fair tests for the particular uses of materials  Physics –  To understand movement, forces and magnets  I can explain that unsupported objects fall towards the Earth because of gravity  To understand the Earth’s movement in space  I can describe the movement of the Earth and other planets relative to the sun  I can describe the movement of the moon relative to the Earth  I can describe the Sun, Earth and Moon as approximately spherical bodies  I can use the idea of the Earth’s rotation to explain day, night and the apparent movement of the sun across the sky | Biology –  To investigate living things  I can describe how living things are classified in to broad groups according to common observable characteristics  I can give reasons for classifying plants and animals based on specific characteristics  Chemistry –  To investigate materials  I can demonstrate that dissolving, mixing and changes of state are reversible but that some changes result in the formation of new materials and that this kind of change is not reversible  Physics –  To understand the Earth’s movement in space  I can use the idea of the Earth’s rotation to explain day, night and the apparent movement of the stars across the night sky  All experiments should also include working scientifically:  To work scientifically  I can plan enquiries including variables I can use appropriate techniques and apparatus I can take accurate measurements I can record data using scientific diagrams and labels, classification keys, graphs and models |
| Concepts and milestones to cover in Geography | To investigate places  I can use different types of fieldwork to observe and measure the local area  I can name and locate some of the countries and cities of the world and their identifying human and physical characteristics  To investigate patterns  I can identify and describe the geographical significance of latitude, longitude, equator, northern and southern hemisphere, tropics of cancer and Capricorn, arctic and Antarctic circle and time zones  I can understand some of the reasons for geographical similarities and differences between countries  I can describe how locations around the world are changing and explain some of the reasons for change  I can describe geographical diversity across the world and discuss how some regions are interconnected or interdependent  To communicate geographically  I can describe key aspects of physical geography  Climate zones, biomes, vegetation belts, rivers, mountains, volcanoes, earthquakes and water cycle  I can describe key aspects of human geography  Settlements, land use, economic activity, distribution of natural resources  I can use the eight points of a compass, four figure grid references, symbols and a key to communicate knowledge about the UK and the world  I can create maps of locations | To communicate geographically I can describe key physical and human features of Earth | To investigate places  I can name and locate some of the countries and cities of the world including North and South America and their identifying human and physical characteristics  To investigate patterns  I can identify and describe the geographical significance of latitude, longitude, equator, northern and southern hemisphere, tropics of cancer and Capricorn, arctic and Antarctic circle and time zones  I can understand some of the reasons for geographical similarities and differences between countries  I can describe how locations around the world are changing and explain some of the reasons for change  I can describe geographical diversity across the world and discuss how some regions are interconnected or interdependent  To communicate geographically  I can describe key aspects of physical geography  Climate zones, biomes, vegetation belts, rivers, mountains, volcanoes, earthquakes and water cycle  I can describe key aspects of human geography  Settlements, land use, economic activity, distribution of natural resources  I can use the eight points of a compass, four figure grid references, symbols and a key to communicate knowledge about the UK and the world  I can create maps of locations |
| Concepts and milestones to cover in History  Always cover communicate historically i.e. using English/ICT/  Maths to communicate | To investigate and interpret the past  I can use evidence to deduce information about the past  I can suggest suitable sources of evidence for historical enquiries and use a wide range of evidence to ensure it isn’t biased  I can understand propaganda and how we must always look at the social context of the evidence we are looking at  I understand no single source of evidence will give the full answer to questions about the past  To build an overview of world history  I can compare the times I am studying to those I studied in previous years  I can describe the social, ethnic, cultural or religious diversity of past society  I can describe the characteristic features of the past  Ideas, beliefs, attitudes and experiences of men, women and children  To understand chronology  I can describe the main changes in a period of history  I can identify periods of rapid change in history  To communicate historically  I can use appropriate historical vocabulary | To investigate and interpret the past  I can use evidence to deduce information about the past  I can suggest suitable sources of evidence for historical enquiries and use a wide range of evidence to ensure it isn’t biased  I can understand propaganda and how we must always look at the social context of the evidence we are looking at  I understand no single source of evidence will give the full answer to questions about the past  To build an overview of world history  I can compare the times I am studying to those I studied in previous years  I can describe the social, ethnic, cultural or religious diversity of past society  I can describe the characteristic features of the past  Ideas, beliefs, attitudes and experiences of men, women and children  To understand chronology  I can describe the main changes in a period of history  I can identify periods of rapid change in history  To communicate historically  I can use appropriate historical vocabulary | To investigate and interpret the past  I can use evidence to deduce information about the past  I can suggest suitable sources of evidence for historical enquiries and use a wide range of evidence to ensure it isn’t biased  I can understand propaganda and how we must always look at the social context of the evidence we are looking at  I understand no single source of evidence will give the full answer to questions about the past  To build an overview of world history  I can compare the times I am studying to those I studied in previous years  I can describe the social, ethnic, cultural or religious diversity of past society  I can describe the characteristic features of the past  Ideas, beliefs, attitudes and experiences of men, women and children  To understand chronology  I can describe the main changes in a period of history  I can identify periods of rapid change in history  To communicate historically  I can use appropriate historical vocabulary |
| Concepts and milestones to cover in Computing | To code  I can use if, then, else conditions to control events  To connect  I can collaborate with others online on sites approved and moderated by teachers  To collect  I can devise and construct databases and present in an effective manner | To code  I can set events to control other events by broadcasting information as a trigger  To connect  I can collaborate with others online on sites approved and moderated by teachers  To collect  I can devise and construct databases and present in an effective manner | To code  I can use Boolean and reporter operators  I can use lists to create a set of variables  To connect  I can collaborate with others online on sites approved and moderated by teachers  To collect  I can devise and construct databases and present in an effective manner  (Please note that there is a separate e- safety curriculum to be followed) |
| Concepts and milestones to cover in Art  (developing ideas by responding to ideas and exploring and collecting visual information as well as commenting on art works should happen at all times) | To draw  I can use a variety of techniques to add interesting effects  I can use a choice of techniques to depict movement, perspective, shadows and reflection  I can choose a style of drawing suitable for the work  To sculpt  I can show lifelike qualities and real life proportions or abstract interpretations  I can use tools to carve and add shapes, texture and pattern  I can combine visual and tactile qualities  I can use frameworks to provide stability and form  To use digital media  I can enhance digital media by editing | To paint  I can sketch before painting  I can create a colour palette  I can use watercolours and acrylics  I can combine colours, tones and tints to enhance the mood  I can use brush techniques to create texture  I can develop a personal style of painting, drawing upon ideas from other artists  To take inspiration from the greats  I can give details about the style of some notable artists  I can show how the work of my artist was influential to others  I can create an original piece that shows a range of influences and styles | To print  I can build up layers of colours  I can create an accurate pattern showing fine detail  I can use a range of visual elements to reflect the purpose of the work  To collage  I can mix textures  I can combine visual and tactile qualities  I can use ceramic mosaic materials and techniques |
| Concepts and milestones to cover in Design  (design, make, evaluate and improve must be followed through each piece of design work) | To master practical skills with materials  I can cut materials with precision and refine the finish with appropriate tools  I can show an understanding of the qualities of materials to choose appropriate tools to cut and shape  To master practical skills with construction  I can develop a range of practical skills to create products | To master practical skills with mechanics  I can convert rotary motion to linear using cams  I can use innovative combinations of electronics and mechanics in product designs  To take inspiration from design throughout history  I can combine elements of design from a range of inspirational designers  I can create innovative designs that improve upon existing products | To master practical skills with food  I can understand the importance of the correct storage and handling of ingredients  I can measure accurately and calculate ratios of ingredients to scale up or down in a recipe  I can demonstrate a range of baking and cooking techniques  I can create and refine recipes |
| Concepts and milestones to cover in RE | To explore how Christians worship and celebrate  I can explain how Christian belief is expressed collectively  I can explore how worship creates a sense of community | To explore how Muslims worship and celebrate  I can explain how Muslims express their beliefs collectively  I can explore how worship builds a sense of community  To explore how Hindus worship and celebrate  I can explain how Hindus express their beliefs collectively  I can explore how worship builds a sense of community | To compare and understand religions  I can discuss what Sikh people believe about their god  I can discuss how being Sikh affects the way you live your life  I can explore how Sikh people worship  I can discuss key Sikh celebrations |
| Concepts and milestones to cover in PE | To play games  I can choose and combine techniques in game situations  I can work alone, or with team mates in order to gain points or possession  I can strike a bowled or volleyed ball with accuracy  I can use forehand and backhand when playing racket games  I can field, defend and attack tactically by anticipating the direction of play  I can choose the most appropriate tactics for a game  I can uphold the spirit of fair play and respect in all competitive situations  I can lead others when called upon and act as a good role model within a team  To perform gymnastics  can create complex and well executed sequences that include a full range of movements (including: travelling, balances, swinging, springing, flight, vaults, inversions, rotations, bending, stretching, twisting, gestures and linking skills)  I can hold shapes that are strong, fluent and expressive  I can include in a sequence set pieces, choosing the most appropriate linking elements  I can vary speed, direction, level and body rotation during floor performances  I can practice and refine the gymnastic techniques used in performances  I can demonstrate good kinaesthetic awareness  I can use equipment to vault and swing  To swim  I can swim unaided between 25 and 50 metres  I can use more than one stroke and co-ordinate breathing as appropriate for the stroke being used  I can co-ordinate leg and arm movements  I can swim at the surface and below the water | To play games  I can choose and combine techniques in game situations  I can work alone, or with team mates in order to gain points or possession  I can strike a bowled or volleyed ball with accuracy  I can use forehand and backhand when playing racket games  I can field, defend and attack tactically by anticipating the direction of play  I can choose the most appropriate tactics for a game  I can uphold the spirit of fair play and respect in all competitive situations  I can lead others when called upon and act as a good role model within a team  To perform gymnastics  can create complex and well executed sequences that include a full range of movements (including: travelling, balances, swinging, springing, flight, vaults, inversions, rotations, bending, stretching, twisting, gestures and linking skills)  I can hold shapes that are strong, fluent and expressive  I can include in a sequence set pieces, choosing the most appropriate linking elements  I can vary speed, direction, level and body rotation during floor performances  I can practice and refine the gymnastic techniques used in performances  I can demonstrate good kinaesthetic awareness  I can use equipment to vault and swing  To swim  I can swim unaided between 25 and 50 metres  I can use more than one stroke and co-ordinate breathing as appropriate for the stroke being used  I can co-ordinate leg and arm movements  I can swim at the surface and below the water  To dance  I can compose, creative and imaginative dance sequences  I can perform expressively and hold a precise and strong body posture  I can perform and create complex sequences  I can express an idea in original and imaginative ways  I can plan to perform with high energy, slow grace of other themes and maintain this throughout a piece  I can perform complex moves that combine strength and stamina gained through gymnastics activities | To play games  I can choose and combine techniques in game situations  I can work alone, or with team mates in order to gain points or possession  I can strike a bowled or volleyed ball with accuracy  I can use forehand and backhand when playing racket games  I can field, defend and attack tactically by anticipating the direction of play  I can choose the most appropriate tactics for a game  I can uphold the spirit of fair play and respect in all competitive situations  I can lead others when called upon and act as a good role model within a team  To pursue outdoor adventures  I can select appropriate equipment for outdoor and adventurous activity  I can identify possible risks and ways to manage them, asking for and listening carefully to expert advice  I can embrace both leadership and team roles and gain the commitment and respect of a team  I can empathise with others and offer support without being asked  I can remain positive even in the most challenging circumstances, rallying others if need be  I can use a range of devices in order to orient myself  I can adapt plans to suit changing conditions ensuring safety comes first  To practice athletics  I can combine sprinting with low hurdles over 60 metres  I can choose the best pace for running over a variety of distances  I can throw accurately and refine performance by analysing technique and body shape  I can show control in take off and landings when jumping  I can compete with others and keep track of personal best performances, setting targets for improvement |
| Concepts and milestones to cover in PSHE | Being me in my world  I can face new challenges positively and know how to set personal goals  I understand my rights and responsibilities as a British citizen and a member of my school  I can make choices about my own behaviour because I understand how rewards and consequences feel  I understand how an individual’s behaviour can impact on a group  I understand how democracy and having a voice benefits the school community and know how to participate in this  Celebrating difference  I understand that cultural differences sometimes cause conflict  I understand what racism is  I understand how rumour-spreading and name-calling can be bullying behaviours  I can explain the difference between direct and indirect types of bullying  I can compare my life with people in the developing world  I can enjoy the experience of a culture other than my own | Dreams and goals  I understand that I will need money to help me achieve some of dreams  I know about a range of jobs carried out by people I know and have explored how much people earn in different jobs  I can identify a job I would like to do when I grow up and understand what motivates me and what I need to do to achieve it  I can describe the dreams and goals of young people in a culture different to mine  I understand that communicating with someone in a different culture means we can learn from each other and I can identify a range of ways that we could support each other  I can encourage my peers to support young people here and abroad to meet their aspirations and suggest ways we might do this  Healthy me  I know the health risks of smoking and can tell you how tobacco affects the body  I know some of the risks of misusing alcohol, including anti-social behaviour  I know and can put in to practice basic emergency aid procedures and know how to get help in emergency situations  I understand how the media and celebrity culture promotes certain body types  I can describe the different roles food can play in people’s lives and can explain how eating problems can develop  I know what makes a healthy lifestyle including healthy eating | Relationships  I have an accurate picture of who I am as a person in terms of my characteristics and personal qualities  I can recognise how friendships change, know how to make new friends and how to manage when I fall out with my friends  I understand how it feels to be attracted to someone and what having a boyfriend/girlfriend might mean  I understand how to stay safe when using technology to communicate  Changing me  I am aware of my own self-image and how my body fits in to that  I can explain how a girl’s body changes during puberty and understand the importance of looking after yourself physically and emotionally  I can describe how bodies change during puberty  I understand that sexual intercourse can lead to conception and that is how babies are usually made  I can identify what I am looking forward to about becoming a teenager and understand this brings growing responsibilities |

Concepts and milestones covered by relevant schemes of work spread appropriately throughout the year:

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| Music |
| Listen and Appraise   * I know 5 songs from memory, who sang/wrote them, when they were written and why? * I know the style of 5 songs and I can name songs with similar styles * I can choose 2-3 songs and am able to talk about: some of the indicators of the style, Lyrics and what the song is about; the musical dimensions and where they are used- texture, dynamics, tempo, rhythm and pitch; identify the main sections of the song and name some of the instruments used. * I can discuss the historical context of the songs and can discuss what else was going on at the time. |
| Games   * I can explain how pulse, dynamics, pitch, tempo, dynamics, texture and structure work together and how they connect in a song. * I can create musical ideas for the class/group to copy or respond to |
| Singing   * I know and can confidently sing five songs and their parts from memory * I can choose a song and can discuss its main features * I can sing in unison, the solo, lead vocal, backing vocals or Rap. * I can explain what songs are about and the meaning of the lyrics * I can explain the importance of warming up your voice. |
| Playing   * I can discuss different ways of writing music down for example: staff notation and symbols. * I can demonstrate the notes C,D,E,F,G,A,B and C of the treble stave * I can discuss and identify instruments played in a band or orchestra |
| Improvisation   * I can make up my own tunes on the spot; * I can create tunes that have never been heard before; * I understand that using one or two notes confidently is better than using five * I understand that if I improvise using the notes I am given, I cannot make a mistake. * I can name three well known improvising musicians |
| Composition   * I know that a composition is music that is created by me and kept in some way. * I know that a composition has a pulse, rhythm and pitch that work together and are shaped by tempo, dynamics, texture and structure * I can recognise the difference between sound and symbol notation |
| Performance   * I understand that performing is sharing music with other people- an audience * I understand a performance doesn’t have to be a drama. It can be to one person or to each other. * I can sing and rap words clearly and play with confidence. * I know that a performance involves communicating feelings, thoughts and ideas about the song/music. |

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| MFL (French) |
| To Listen attentively to spoken language and show understanding by joining in and responding   * I can listen and show understanding of simple sentences containing familiar words through physical response * I can listen and understand the main points and some detail from short, spoken material in the target language   Explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words   * I can listen and identify rhyming words and specific sounds in songs and rhymes * I can follow the text of familiar songs and rhymes, identifying the meaning of words * I can read the text of familiar songs and identify patterns of language and link the sound to spelling   Engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help   * I can engage in a short conversation using a range of simple, familiar questions * I can ask and answer more complex questions with a scaffold of responses * I can express a wider range of opinions and begin to provide simple justifications * I can converse briefly without prompts   Speak in sentences using familiar vocabulary, phrases and basic language structures   * I can say a longer sentence using familiar language * I can use familiar vocabulary to say several longer sentences using a language scaffold * I can refer to everyday activities and interests, recent experiences and future plans * I can vary language and produce extended responses   Develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases   * I can pronounce familiar words accurately using knowledge of letter string sounds to support, observing silent letter rules * I can appreciate the impact of accents and elisions on sound and apply increasingly confidently when pronouncing words * I can start to predict the pronunciation of unfamiliar words in a sentence using knowledge of letter strings, liaison and silent letter rules * I can adapt intonation   Present ideas and information orally to a range of audiences   * I can manipulate familiar language to present ideas and information in simple sentences * I can present a range of ideas and information, using prompts, to a partner or a small group of people * I can present a range of ideas and information, without prompts, to a partner or a group of people   Appreciate stories, songs, poems and rhymes in the language   * I can follow the text of a familiar song or story * I can follow the text of a familiar song or story and sing or read aloud * I can understand the gist of an unfamiliar story or song using familiar language   Broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary   * I can use a range of strategies to determine the meaning of new words * I can use a bilingual dictionary to identify the word class * I can use a bilingual dictionary or online tool to find the meaning of unfamiliar words and phrases   Write phrases from memory and adapt these to create new sentences to express ideas clearly   * I can write a simple sentence from memory using familiar language * I can write several sentences from memory with familiar language with understandable accuracy * I can replace vocabulary in sentences written from memory to create new sentences with understandable accuracy   Read carefully and show understanding of words, phrases and simple writing   * I can read and show understanding of simple sentences containing familiar and some unfamiliar language * I can read and understand the main points from short, written material * I can read and understand the main points and some detail from short, written material   Describe people, places, things and actions orally and in writing   * I can say or write several simple sentences containing adjectives to describe people, places, things and actions using a language scaffold * I can manipulate familiar language to describe people, places, things and actions using a dictionary * I can use a wider range of descriptive language in my descriptions   Understand basic grammar appropriate to the language being studied including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instances, to build sentences; and how these differ from or are similar to English. |