



Year 6 Long Term Plan

Subject	Autumn	Spring	Summer
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English	Letters from the Lighthouse By Emma Carroll	Holes By Louis Sachar	Clockwork By Philip Pullman
	Reciprocal Reading Focus Texts Fiction Kensuke's Kingdom - Michael Morpurgo Non-Fiction The Giant Panda Bear Swimming the English Channel Poetry Grannie *Walter de La Mare Writing from a different perspective-another hospital patient Contrasting diary entries- Olive and Cliff before being evacuated. setting description - Budmouth point and enemy aircraft crash Non chronological report - evacuation Balanced argument -to help or not help injured enemy pilot Recount in role -boat arrives from France Journalistic writing- Kristallnacht Letter writing -to the author Emma Carroll Biographical writing - author Emma Carroll Autobiographical writing - their life so far and imagined in the future Reading for Pleasure - Shrapnel Boys by Jenny Pearson Cirque du Freak Darren Shan	Reciprocal Reading Focus Texts Fiction Albion's Dream Gaby to the rescue An Encounter at sea The Lost Queen Wild Ride The Lost World Non-Fiction The Way of the Dodo Space Tourism Poetry Giants Setting description - first day of digging Letter writing -letter home in role as Stanley Persuasive leaflet - Green Lake Biographical writing x2 Louis Sachar and Kissin' Kate Barlow Diary entry- in role as Stanley when Zero runs away. Diary entry from different perspective - someone at camp after Zero and Stanley have gone Balanced argument - Is it ever right to steal? Reading for Pleasure - The boy at the back of the class - Onjali Rauf	Reciprocal Reading Focus Texts Fiction There's a boy in the girl's bathroom - Louis Sachar Non-Fiction Poetry Wind Cat Poems about the Sea Poetry about clocks and time Contrasting diary entries for Karl and Fritz. Newspaper reports for night before unveiling Narrative about scary clockwork story or animal Newspaper reports about Karl's death Argument - Who was to blame? Reading for Pleasure - Happy Here - Introduced by Sharna Jackson



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Maths	Number – Place value - 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, multiplication and division - 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 the 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. - Use estimation to check answers to calculations and determine in the context of	Number – Decimals - Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. - Multiply one-digit numbers with up to 2 decimal places by whole numbers. - Use written division methods in cases where the answer has up to 2 decimal places. - Solve problems which require answers to be rounded to specified degrees of accuracy. Number – Percentages - Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison. - Recall and use equivalences between simple fractions, decimals and percentages including in different contexts. Number – Algebra - Use simple formulae - Generate and describe linear number sequences. - Express missing number problems algebraically. - Find pairs of numbers that satisfy an equation with two unknowns. - Enumerate possibilities of combinations of two variables. Measurement – Converting units - Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.	Geometry: Properties of Shapes - Draw 2-D shapes using given dimensions and angles. - Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. - Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Statistics - Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. - Interpret and construct pie charts and line graphs and use these to solve problems. - Calculate the mean as an average. Investigations
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	a problem, an appropriate degree of accuracy. Fractions • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. • Compare and order fractions, including fractions > 1 • Generate and describe linear number sequences (with fractions) • Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. • Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example $1/4 \times 1/2 = 1/8$] • Divide proper fractions by whole numbers [for example $1/3 \div 2 = 1/6$] • Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example 3/8] • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Geometry – Position and direction • Describe positions on the full coordinate grid (all four quadrants). • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	• Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3dp. • Convert between miles and kilometres. • Measurement – Perimeter, area and volume • Recognise that shapes with the same areas can have different perimeters and vice versa. • Recognise when it is possible to use formulae for area and volume of shapes. • Calculate the area of parallelograms and triangles. • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm^3, m^3 and extending to other units (mm^3, km^3) Number – Ratio • Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. • Solve problems involving similar shapes where the scale factor is known or can be found. • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	
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Science	Living things - classification This unit will teach your class about the classification of living things, including micro-organisms. The children will build on their work in Year 4 by sorting animals into groups based on their similarities and differences. They will extend their learning to find out about the standard system of classification first developed by Carl Linnaeus, choosing an animal and researching its classification. The children will have the opportunity to design their own 'curious creature' and classify it based on its characteristics. They will learn about micro-organisms, and conduct an investigation into the growth of mould on bread. Furthermore, the children will use play dough to create a new single celled micro-organism and explain how it is classified and why. Finally, the children will put their learning into practice by creating a field guide to the living things in their local area, showing how and why each one is classified. Animals including humans This unit recaps the children's learning from year 4 about how animals survive and stay healthy and helps children to learn more about how different organ systems work. This unit teaches the importance of diet, exercise and lifestyle in the way that bodies function. In this unit, they learn about the three main parts of the circulatory system and the job of the heart. They also learn about what blood is comprised of and how it is transported around the body.	Animals including humans cont'd... Children carry out an investigation to explore how heart rate is affected by exercise. They discuss how to plan a fair test and measure and record accurately. Children learn the importance of exercise and conduct a survey to find the most popular exercise in their class. They then apply their understanding by discussing different people's lifestyles and how this can affect their bodies. Finally, children will learn about drugs and alcohol and how they can have an impact on our bodies, specifically in relation to the circulatory system. Evolution and inheritance This unit builds on the children's learning from the Year 3 Rocks unit as well as the Animals including Humans and Living Things and their Habitats units. As such, it is important that children have the appropriate understanding of fossils, habitats and human development in order to grasp the concepts and ideas presented to them in these lessons. Children will learn about variation and adaptation. They will be able to explore how both Charles Darwin and Alfred Wallace separately developed their theories of evolution. They will examine the scientific evidence from plants and animals that has been gathered to support the theory of evolution.	Light This 'Light' unit will teach your class about light, how we see, shadows, reflection and refraction. The children will learn how light travels and how this enables us to see objects. They will demonstrate their knowledge by making and starring in their own television programme. The children will have the opportunity to make a functioning periscope, finding out about mirrors and the angles of reflection and incidence. They will work scientifically and collaboratively to investigate refraction, carrying out some fascinating experiments into the effects of bending light. Furthermore, they will have chance to predict what will happen in an exciting investigation into the visible spectrum. They will work in a hands-on way to explore how light creates the colours we see, designing coded messages. Finally, they will learn about Isaac Newton and his theory of light and colour, performing a shadow puppet play about his discoveries and ideas. Electricity This unit builds on from the Year 4 Electricity unit. Children will learn to represent circuits using symbols in a diagram. They will learn about two of the most important scientific inventors in the field of electricity - Thomas Edison and Nikola Tesla. Children will get the opportunity to develop their understanding of what electricity is and how to measure it. As well as conducting their own investigation, they will get the opportunity to create their own torch!
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History	<i>Who was making history in faraway places in the year 1000? The Mayans- who was making history in faraway places?</i> NC ref: non-European society that provides contrast to British history Focus: Chronology - developing terminology of periods, contemporaneous developments, key features of a contrasting society and its development, similarity and difference to Britain in c.1000, use of primary sources, identification of key points in historical interpretations. Suggestion: Mayans.		<i>Aspect or theme since 1066</i> What's in a name?- a local study NC Ref: Local History unit - Seaham Focus: Chronological security, key features of an era, use of primary sources, Lord Byron, Mining, George Elmy disaster
Geography	Why does population change? Looking at global population distribution, children think about why certain areas are more populated than others. They explore the factors that influence birth and death rates and use case studies to illustrate these. Children consider and discuss the social, economic and environmental push and pull factors that influence migration. Fieldwork is carried out to explore the impact of population on the local environment.	Where does our energy come from? Learning about time zones around the world while exploring natural resources and energy found in the United States and the United Kingdom. Children learn about renewable and non-renewable energy sources and the impacts these have on society, economy and environment. They carry out a fieldwork investigation considering the best location for a solar panel on the school grounds.	Independent fieldwork enquiry Planning and carrying out their own independent enquiry, children explore an issue in their local area. They develop an enquiry question, design their own data collection methods, and then record, analyse and present their findings. (Possible transition unit)



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Art	Focus- Painting Learning Intentions • Sketch (lightly) before painting to combine line and colour. • Create a colour palette based upon colours observed in the natural or built world. • Use the qualities of watercolour and acrylic paints to create visually interesting pieces. • Combine colours, tones and tints to enhance the mood of a piece. • Develop a personal style of painting, drawing upon ideas from other artists. • To use sketchbooks to record and review observations and ideas Children will focus on the artwork of Gustav Klimt • To give detailed responses about the style and to show how influential the work of studied artists are/were to society.	Focus - Drawing Learning Intentions • Use a variety of techniques to add interesting effects (e.g. reflections, shadows, direction of sunlight). • Use a choice of techniques to depict movement, perspective, shadows and reflection. • Choose a style of drawing suitable for the work (e.g. realistic or impressionistic). • Use lines to represent movement. • To use sketchbooks to record and review observations and ideas • Children will focus on the artwork of Banksy • To give detailed responses about the style and to show how influential the work of studied artists are/were to society.	Focus - Sculpting/ designing Learning Intentions • Describe the different qualities involved in modelling, sculpture and construction. • Use recycled, natural and man-made materials to create sculpture. E.g. Modroc, recycled materials, air drying clay • Plan a sculpture through drawing and other preparatory work. • Create sculpture and constructions with increasing independence. Focus on the architect Zaha Hadid
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DT	Structures Focus: Frame structures <u>Prior learning</u> • Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with construction materials. • Basic understanding of what structures are and how they can be made stronger, stiffer and more stable. <u>Designing</u> • Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. • Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. • Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. <u>Making</u> • Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. • Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. • Use finishing and decorative techniques suitable for the product they are designing and making. <u>Evaluating</u> • Investigate and evaluate a range of existing frame structures.	Electrical Systems Programming and control <u>Prior Learning</u> • Constructed a simple series electrical circuit, using bulbs, batteries, switches and buzzers. • Cut and joined a variety of construction materials, such as wood, card, plastic, reclaimed materials and glue. <u>Designing</u> • Gather information about users' needs and wants, and develop design criteria to inform the design of products that are fit for purpose. • Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. <u>Making</u> • Order the main stages of making. Select from and use tools and equipment to cut, shape, join and finish with some accuracy. • Connect simple electrical components and a battery in a series circuit to achieve a functional outcome. • Program a standalone control box, microcontroller or interface box to enhance the way the product works. <u>Evaluating</u> • Investigate and analyse a range of existing battery-powered products, including pre-programmed and programmable products. • Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.	Textiles Using Computer Aided Design (CAD) in Textiles <u>Prior learning</u> • Experience of stitching, joining and finishing techniques in textiles. • Experience of making and using textiles pattern pieces. • Experience of simple computer-aided design applications. <u>Designing</u> • Generate innovative ideas through research including surveys, interviews and questionnaires. • Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes including using computer-aided design. • Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. <u>Making</u> • Produce detailed lists of equipment and fabrics relevant to their tasks. • Formulate step-by-step plans and, if appropriate, allocate tasks within a team. • Select from and use a range of tools and equipment, including CAD, to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost. <u>Evaluating</u> • Investigate and analyse textile products linked to their final product.
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	• Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. • Research key events and individuals relevant to frame structures. <u>Technical knowledge and understanding</u> • Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevant to the topic.	<u>Technical Knowledge and Understanding</u> • Understand and use computing to program and control products containing electrical systems, such as series circuits incorporating switches, bulbs and buzzers. • Know and use technical vocabulary relevant to the project.	• Compare the final product to the original design specification. • Test products with intended user, where safe and practical, and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • Consider the views of others to improve their work. <u>Technical Knowledge and Understanding</u> • A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics • Fabrics can be strengthened, stiffened and reinforced where appropriate
Computing	<u>Computing Systems and Networks</u> <u>Communication and Collaboration</u> - Explain the importance of internet addresses - Recognise how data is transferred across the internet - Explain how sharing information online can help people to work together - Evaluate different ways of working together online - Recognise how we communicate using technology - Evaluate different methods of online communication <u>Creating Media A</u> <u>Web-page creation</u> - Design a webpage with multiple sections - Consider purpose and audience - Consider appearance on different devices - Use subpages and internal and external hyperlinks - Evaluate design and make improvements	<u>Programming A</u> <u>Variables in games</u> - Define a 'variable' as something that is changeable - Explain why a variable is used in a program - Choose how to improve a game by using variables - Design a project that builds on a given example - Use my design to create a project - Evaluate my project <u>Data Information</u> <u>Intro to spreadsheets</u> - Create a data set in a spreadsheet - Build a data set in a spreadsheet - Explain that formulas can be used to produce calculated data - Apply formulas to data - Create a spreadsheet to plan an event - Choose suitable ways to present data	<u>Creating Media B</u> <u>3D modelling</u> - Recognise that you can work in three dimensions on a computer - Identify that digital 3D objects can be modified - Recognise that objects can be combined in a 3D model - Create a 3D model for a given purpose - Plan my own 3D model - Create my own digital 3D model <u>Programming B</u> <u>Sensing Movement</u> Create a program to run on a controllable device - Explain that selection can control the flow of a program - Update a variable with a user input - Use a conditional statement to compare a variable to a value - Design a project that uses inputs and outputs on a controllable device - Develop a program to use inputs and outputs on a controllable device



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PE	Invasion Games Tag Rugby Dance Making the grade Invasion games Wide Attack Gymnastics Group dynamics	Invasion games Basketball Dance Masquerade Gymnastics Assess level 4-5 Invasion Games Hockey - Calling the shots	Net/wall games Long/thin/short/fat Strike/Fielding Games Pairs cricket Athletics Distance challenges Outdoors Activity Beat the Clock/Electric Fence
RE	What can we learn about religious diversity in our area? What can we find out about a local Muslim community?	What do the gospels tell us about the birth of Jesus? How and why do people care about the environment?	Why are Good Friday and Easter Sunday the most important days to Christians? What do we know about Christianity?
French	Chez Moi (My Home) and Phonics 4 Les Vetements (Clothes) Grammar - Adjectival agreement/Possessive adjectives	Au salon de the (At the tea room) A l'ecole (At School) (P) Grammar - Nouns	Manger et Bouger (Healthy Lifestyles) (P) Grammar - Regular Verbs Grammar - Irregular Verbs
Music	Music Specialist - cornet, trumpet or baritone During the project, all pupils will develop musical skills through learning either the cornet, trumpet or baritone. They will learn notes within an octave range by ear, how to read basic rhythmic and pitch notation, develop their vocal skills, perform songs with accompaniment on their instruments, copy rhythmic and melodic phrases and improvise on their instrument. They will also develop many other skills, such as working in a team and becoming independent learners, while gaining confidence and enjoyment through making music together. They will have the opportunity to share their success with performances during the school year for parents and friends. Year 6 will further develop the skills they learned in Year 5.		



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PSHE	Families and Friendships	Belonging to a community	Physical health and Mental wellbeing
	- what it means to be attracted to someone and different kinds of loving relationships - that people who love each other can be of any gender, ethnicity or faith - the difference between gender identity and sexual orientation and everyone's right to be loved - about the qualities of healthy relationships that help individuals flourish - ways in which couples show their love and commitment to one another, including those who are not married or who live apart - what marriage and civil partnership mean e.g. a legal declaration of commitment made by two adults - that people have the right to choose whom they marry or whether to get married - that to force anyone into marriage is illegal - how and where to report forced marriage or ask for help if they are worried Safe relationships - to compare the features of a healthy and unhealthy friendship - about the shared responsibility if someone is put under pressure to do something dangerous and something goes wrong - strategies to respond to pressure from friends including online - how to assess the risk of different online 'challenges' and 'dares' - how to recognise and respond to pressure from others to do something unsafe or that makes them feel worried or uncomfortable - how to get advice and report concerns about personal safety, including online - what consent means and how to seek and give/not give permission in different situations	- what prejudice means - to differentiate between prejudice and discrimination - how to recognise acts of discrimination - strategies to safely respond to and challenge discrimination - how to recognise stereotypes in different contexts and the influence they have on attitudes and understanding of different groups - how stereotypes are perpetuated and how to challenge this Media literacy and Digital resilience - about the benefits of safe internet use e.g. learning, connecting and communicating - how and why images online might be manipulated, altered, or faked - how to recognise when images might have been altered - why people choose to communicate through social media and some of the risks and challenges of doing so - that social media sites have age restrictions and regulations for use - the reasons why some media and online content is not appropriate for children - how online content can be designed to manipulate people's emotions and encourage them to read or share things - about sharing things online, including rules and laws relating to this - how to recognise what is appropriate to share online - how to report inappropriate online content or contact Money and Work - about the role that money plays in people's lives, attitudes towards it and what influences decisions about money - about value for money and how to judge if something is value for money - how companies encourage customers to buy things and why it is important to be a critical consumer - how having or not having money can impact on a person's emotions, health and wellbeing - about common risks associated with money, including debt, fraud and gambling - how money can be gained or lost e.g. stolen, through scams or gambling and how these put people at financial risk	- that mental health is just as important as physical health and that both need looking after - to recognise that anyone can be affected by mental ill-health and that difficulties can be resolved with help and support - how negative experiences such as being bullied or feeling lonely can affect mental wellbeing - positive strategies for managing feelings - that there are situations when someone may experience mixed or conflicting feelings - how feelings can often be helpful, whilst recognising that they sometimes need to be overcome - to recognise that if someone experiences feelings that are not so good (most or all of the time) - help and support is available - identify where they and others can ask for help and support with mental wellbeing in and outside school - the importance of asking for support from a trusted adult - about the changes that may occur in life including death, and how these can cause conflicting feelings - that changes can mean people experience feelings of loss or grief - about the process of grieving and how grief can be expressed - about strategies that can help someone cope with the feelings associated with change or loss



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	Respecting ourselves and others • about the link between values and behaviour and how to be a positive role model • how to discuss issues respectfully • how to listen to and respect other points of view • how to constructively challenge points of view they disagree with • ways to participate effectively in discussions online and manage conflict or disagreements	• how to get help if they are concerned about gambling or other financial risks	• to identify how to ask for help and support with loss, grief or other aspects of change • how balancing time online with other activities helps to maintain their health and wellbeing • strategies to manage time spent online and foster positive habits e.g. switching phone off at night • what to do and whom to tell if they are frightened or worried about something they have seen online Growing and changing • to recognise some of the changes as they grow up e.g. increasing independence • about what being more independent might be like, including how it may feel • about the transition to secondary school and how this may affect their feelings • about how relationships may change as they grow up or move to secondary school • practical strategies that can help to manage times of change and transition e.g. practising the bus route to secondary school • identify the links between love, committed relationships and conception • what sexual intercourse is, and how it can be one part of an intimate relationship between consenting adults • how pregnancy occurs i.e. when a sperm meets an egg and the fertilised egg settles into the lining of the womb
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			- that pregnancy can be prevented with contraception - about the responsibilities of being a parent or carer and how having a baby changes someone's life Keeping safe - how to protect personal information online - to identify potential risks of personal information being misused - strategies for dealing with requests for personal information or images of themselves - to identify types of images that are appropriate to share with others and those which might not be appropriate - that images or text can be quickly shared with others, even when only sent to one person, and what the impact of this might be - what to do if they take, share or come across an image which may upset, hurt or embarrass them or others - how to report the misuse of personal information or sharing of upsetting content/ images online - about the different age rating systems for social media, T.V, films, games and online gaming - why age restrictions are important and how they help people make safe decisions about what to watch, use or play - about the risks and effects of different drugs - about the laws relating to drugs common to everyday life and illegal drugs - to recognise why people choose to use or not use drugs, including nicotine,
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			alcohol and medicines as well as illegal drugs
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