Curriculum Map 2014 / 2015: Year Group: 5 & 6 Mr Price; Mrs Mortlock & Mrs McAuliffe/Ms Cunningham's classes

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic:	Holes		Symbols & Signs		Attack!	
Art & Design	Mythical creature sewing project Design; make, evaluate		Scaling: enlarging & shrinking Acrylic painting on papyrus		3D Books Printing Study of the artist, Picasso and his work	
Computing	Multimedia – Microsoft Office package Stop frame animation filming E-Safety		Programming Worldwide E-Safety		Computerised Design (CAD) Google Sketchup	
Design Technology	Volcano models		Mask making Cookery		Building catapults	
Geography	Local geography and mapping World maps and globes Earthquakes and volcanoes Courses of rivers		Geographical features of Egypt			
History			A study of Ancient Egypt: Museum visit		Castles through the ages Sense of Chronology Class Museum	
MFL	Numbers to 100 The family Body parts Illness and the pharmacy Chrsitmas		Animals Zoo Colours and numbers A story in French Easter		School objects & opinions French handwriting Clothes French life	
Music	Songs for Harvest & Christmas Studying the composers Mendelssohn & Grieg Composing songs ad backing tracks using lyrics from *The Hobbit*		Songs for the Joint Concert Reading and composing musical notation Studying the composers Handel and Strauss		Medieval Music	
PE	Dance & gymnastics based on the story of The Hobbit Tag Rugby Hockey 2 classes go swimming		Gymnastics and dance Netball Football Basketball		Athletics Rounders Football Circuits & fitness 3rd class goes swimming	
PSHCE	Remembrance Personal Safety (inc: e-safety) Anti-bullying Peer pressure		New Challenges Anti-social behaviour Warning Zone Visit - safety		Healthy Lifestyle "Moving on" Sex Education Avoiding Drugs	
RE	Diwali Harvest Christmas		The story of King Solomon Easter		St George's Day The story of David & Goliath	
Science	Sound Evolution & inheritance Lifecycles Electricity Sound			Forces Classification of living things Blood Reproduction and growth Light Earth, sun and moon		

Year 5 & 6 Art and Design

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
to create sketch books to record their observations and use them to review and revisit ideas	The national curriculum for art and design aims to ensure that all pupils: • produce creative work, exploring their ideas and recording their experiences • become proficient in drawing, painting, sculpture and other art, craft and design techniques • evaluate and analyse creative works using the language of art, craft and design • know about great artists, craft makers and designers.	**Note:** Schools should decide how they organize their Art and Design curriculum so that the range of materials are used across Key Stage 2 **Link to History:** • *a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066* *[Theme could be based upon artwork]* • *For example, you could link with early bronzes from the Shang Dynasty*

SKILLS

ART & DESIGN		Lower School (Years 1 & 2)	Middle School (Years 3 &4)	Upper School (Years 5 & 5)
To develop ideas		• Respond to ideas and starting points. • Explore ideas and collect visual information. • Explore different methods and materials as ideas develop.	• Develop ideas from starting points throughout the curriculum. • Collect information, sketches and resources. • Adapt and refine ideas as they progress. • Explore ideas in a variety of ways. • Comment on artworks using visual language.	• Develop and imaginatively extend ideas from starting points throughout the curriculum. • Collect information, sketches and resources and present ideas imaginatively in a sketch book. • Use the qualities of materials to enhance ideas. • Spot the potential in unexpected results as work progresses. • Comment on artworks with a fluent grasp of visual language.
To master techniques	Painting	• Use thick and thin brushes. • Mix primary colours to make secondary. • Add white to colours to make tints and black to colours to make tones. • Create colour wheels.	• Use a number of brush techniques using thick and thin brushes to produce shapes, textures, patterns and lines. • Mix colours effectively. • Use watercolour paint to produce washes for backgrounds then add detail. • Experiment with creating mood with colour.	• 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. • Use brush techniques and the qualities of

				paint to create texture. • Develop a personal style of painting, drawing upon ideas from other artists.
	Collage	• Use a combination of materials that are cut, torn and glued. • Sort and arrange materials. • Mix materials to create texture.	• Select and arrange materials for a striking effect. • Ensure work is precise. • Use coiling, overlapping, tessellation, mosaic and montage.	• Mix textures (rough and smooth, plain and patterned). • Combine visual and tactile qualities. • Use ceramic mosaic materials and techniques.
	Sculpture	• Use a combination of shapes. • Include lines and texture. • Use rolled up paper, straws, paper, card and clay as materials. • Use techniques such as rolling, cutting, moulding and carving.	• Create and combine shapes to create recognisable forms (e.g. shapes made from nets or solid materials). • Include texture that conveys feelings, expression or movement. • Use clay and other mouldable materials. • Add materials to provide interesting detail.	• Show life-like qualities and real-life proportions or, if more abstract, provoke different interpretations. • Use tools to carve and add shapes, texture and pattern. • Combine visual and tactile qualities. • Use frameworks (such as wire or moulds) to provide stability and form.
	Drawing	• Draw lines of different sizes and thickness. • Colour (own work) neatly following the lines. • Show pattern and texture by adding dots and lines. • Show different tones by using coloured pencils.	• Use different hardnesses of pencils to show line, tone and texture. • Annotate sketches to explain and elaborate ideas. • Sketch lightly (no need to use a rubber to correct mistakes). • Use shading to show light and shadow. • Use hatching and cross hatching to show tone and texture.	• 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.
	Print	• Use repeating or overlapping shapes. • Mimic print from the environment (e.g. wallpapers). • Use objects to create prints (e.g. fruit, vegetables or sponges). • Press, roll, rub and stamp to make prints.	• Use layers of two or more colours. • Replicate patterns observed in natural or built environments. • Make printing blocks (e.g. from coiled string glued to a block). • Make precise repeating patterns.	• Build up layers of colours. • Create an accurate pattern, showing fine detail. • Use a range of visual elements to reflect the purpose of the work.
	Textiles	• Use weaving to create a pattern. • Join materials using glue and/or a stitch. • Use plaiting. • Use dip dye techniques.	• Shape and stitch materials. • Use basic cross stitch and back stitch. • Colour fabric. • Create weavings. • Quilt, pad and gather fabric.	• Show precision in techniques. • Choose from a range of stitching techniques. • Combine previously learned techniques to create pieces.
	Digital media	• Use a wide range of tools to create	• Create images, video and sound recordings and	• Enhance digital media by editing (including

		different textures, lines, tones, colours and shapes.	explain why they were created.	sound, video, animation, still images and installations).
To take inspiration from the greats (classic and modern)		• Describe the work of notable artists, artisans and designers. • Use some of the ideas of artists studied to create pieces.	• Replicate some of the techniques used by notable artists, artisans and designers. • Create original pieces that are influenced by studies of others.	• Give details (including own sketches) about the style of some notable artists, artisans and designers. • Show how the work of those studied was influential in both society and to other artists. • Create original pieces that show a range of influences and styles.

Generic art skills

P4	**P5**	**P6**	**P7**	**P8**	**Early Years**
• Show some awareness of cause and effect in a creative process. • Explore materials systematically. • Show awareness of starting or stopping a process. • Make marks intentionally on a surface with fingers or tools. • Repeat an activity to make the same or similar effect. • Show an active interest in a range of tools and materials, taking part in familiar activities with some support.	• Handle or use tools and materials purposefully. • Show preferences for activities and begin to carry out simple processes. • Choose tools and materials which are appropriate to the activity. • Create and apply familiar techniques to a task.	• Show an intention to create. • Start to use tools, materials and simple actions to produce a piece of work. • Imitate the use of tools, materials and simple actions. • Practise new skills with less support, developing knowledge of the process of making.	• Communicate ideas, events or experiences through the use of colour, form, line and tone. • Intentionally represent or symbolise an object or an emotion in either 2D or 3D work. • Purposefully choose colours or techniques. • Show confidence in using a variety of processes and make appropriate use of tools and materials.	• Develop ideas and use materials and processes working in two and three dimensions. • Finish a piece of work following an established pattern of activity. • Know that paintings, sculptures and drawings have meaning. • Use a growing art vocabulary and begin to express meaning.	• Use simple tools and techniques competently and appropriately. • Explore what happens when colours are mixed. • Experiment to create different textures. • Understand that different media can be combined to create new effects. • Manipulate materials to achieve a planned effect. • Choose particular colours for a purpose. • Create simple representations of events, people and objects.

Challenge
Years 7, 8 and 9

Art and design opportunities	**Developing ideas**	**Mastering techniques**	**Taking inspiration from the greats**
• Use a range of drawing techniques to record observations and to generate ideas. • Use a range of media including oils, watercolours, videos and installations. • Study the history of art, craft and design, including major movements from ancient to modernist periods.	• Develop ideas and increase proficiency in their execution. • Develop a critical understanding of artists, architects and designers, expressing reasoned judgments that can inform work.	• Increase proficiency in drawing and in handling different materials. • Analyse and evaluate work to strengthen the visual impact.	• Apply knowledge and ideas from the great artists, architects and designers from ancient to modernist periods

Year 5 & 6 Design and Technology

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
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**	The national curriculum for design and technology aims to ensure that all pupils: • develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world • build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users • critique, evaluate and test their ideas and products and the work of others • understand and apply the principles of nutrition and learn how to cook.	**Links to Computing:** • *use sequence, selection, and repetition in programs; work with variables and various forms of input and output* • *design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.* • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* **Link to Mathematics (Geometry):** • *recognise, describe and build simple 3-D shapes, including making nets*
Make • **select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], 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**	Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.	**Link to Science (electricity):** • *compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches* • *compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches* • *use recognised symbols when representing a simple circuit in a diagram.* **Link to Science (animals including humans):** *recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function*
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**		**Link to Art and Design:** • *To create sketch books to record their observations and use them to review and revisit ideas* **Link to Science (Properties of Materials):** • *compare and group together everyday materials on the basis of*

design and technology have helped shape the world **Technical knowledge** • **apply their understanding of how to strengthen, stiffen and reinforce more complex structures** • **understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]** • **understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]** • **apply their understanding of computing to program, monitor and control their products.** **Cooking and nutrition** • **understand and apply the principles of a healthy and varied diet** • **prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques** • **understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.**		*their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets* **Link to Art and Design:** • *To improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials (e.g. pencil, charcoal, paint, clay)* **Link to Science (Properties of Materials):** • *compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets* **Link to Science (Forces):** • *identify the effects of air resistance, water resistance and friction, that act between moving surfaces* • *recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.* **Link to History:** • *Ancient Greece – a study of Greek life and achievements and their influence on the western world* • *a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066* **[Theme being Food]** •

D&T		Lower School (Years 1 & 2)	Middle School (Years 3 &4)	Upper School (Years 5 & 6)
To master practical skills	Food	• Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients.	• Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling	• Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). • Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.

			the temperature of the oven or hob, if cooking).	• Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including ingredients, methods, cooking times and temperatures.
	Materials	• Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen).	• Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs). • Select appropriate joining techniques.	• Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).
	Textiles	• Shape textiles using templates. • Join textiles using running stitch. • Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).	• Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles.	• Create objects (such as a cushion) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).
	Electricals and electronics	• Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).	• Create series and parallel circuits	• Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).
	Computing	• Model designs using software.	• Control and monitor models using software designed for this purpose.	• Write code to control and monitor models or products.
	Construction	• Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	• Choose suitable techniques to construct products or to repair items. • Strengthen materials using suitable techniques.	• Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).

	Mechanics	• Create products using levers, wheels and winding mechanisms.	• Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).	• Convert rotary motion to linear using cams. • Use innovative combinations of electronics (or computing) and mechanics in product designs.
To design, make, evaluate and improve		• Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Use software to design.	• Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs.	• Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high quality finish, using art skills where appropriate. • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.
To take inspiration from design throughout history		• Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created.	• Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.	• Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience.

Generic design and technology skills

P4	P5	P6	P7	P8	Early Years
• With help, begin to assemble components provided for an activity. • Contribute to activities by coactively grasping and moving simple tools. • Explore options within a limited range of materials.	• Use a basic tool, with support. • Demonstrate preferences for products, materials and ingredients.	• Recognise familiar products and explore the different parts they are made from. • Watch others using a basic tool and copy the actions. • Begin to offer responses to making activities.	• Operate familiar products, with support, and explore how they work. • Use basic tools or equipment in simple processes, chosen in negotiation with the teacher. • Begin to communicate preferences in designing and making.	• Explore familiar products and communicate views about them when prompted. • With help, manipulate a range of basic tools in making activities. • Begin to contribute to decisions about what to do and how.	• Manipulate materials to achieve a planned effect. • Construct with purpose in mind, using a variety of resources. • Select appropriate resources and adapt work where necessary. • Select tools and techniques needed to shape, assemble and join materials. • Create simple

					representations of events, people and objects.

Challenge
Years 7, 8 and 9

Design and technology opportunities	**Mastering practical skills**	**Designing, making, evaluating and improving**	**Taking inspiration from design throughout history**
• Work in a number of fields including: • materials (including textiles) • horticulture • electricals and electronics • construction • mechanics • cooking • emerging areas of design and technology (such as food design, design for disability, and age-related design).	• Increase skills, knowledge and competence in using materials, machinery, technique and processes. • Complete common practical, diagnostic, repair and maintenance tasks and multi-stage processes. • Develop well-conceived and well-executed practical solutions. • Select and use complex tools, equipment, machinery and techniques skillfully. • Develop sophisticated practical skills and carry out diagnostic, repair and maintenance tasks in a range of contexts. • Explore materials and technological developments, and experiment with using them. • Understand the importance of nutrition, a balanced diet and about the characteristics of a broad range of ingredients in choosing and preparing food. • Cook a repertoire of savoury meals and become confident in a range of cooking techniques.	• Plan, design, make and evaluate a range of quality products, in a variety of materials, that are fit for purpose. • Communicate ideas and designs skilfully and accurately in 2D and 3D, using a variety of techniques, including computing.	• Analyse the work of others, including iconic designs, to inform work. • Use historical and contextual references to influence and improve work. • Understand developments in design and technology and the responsibilities of designers, including environmental responsibilities.

Year 5 & 6 Geography

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
Location 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** • **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)** **Place knowledge** • **Understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America**	Pupils should extend their knowledge and understanding beyond the local area to include the United Kingdom and Europe, North and South America. This will include the location and characteristics of a range of the world's most significant human and physical features. They should develop their use of geographical tools and skills to enhance their locational and place knowledge. **A high-quality geography education should inspire in pupils a curiosity and fascination about the world and its people that will remain with them for the rest of their lives. Teaching should equip pupils with knowledge about diverse places, people, resources and natural and human environments, together with a deep understanding of the Earth's key physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge provides the tools and approaches that explain how the Earth's features at different scales are shaped, interconnected and change over time.**	**Link to History:** • *a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066* • *Ancient Greece – a study of Greek life and achievements and their influence on the western world* **Links with Science (Earth and Space)** **Links with Mathematics (Measurement)** **Link to History:** • *a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066* • *Ancient Greece – a study of Greek life and achievements and their influence on the western world* **Link to History:** • *a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066* • *Ancient Greece – a study of Greek life and achievements and their influence on the western world* **Link to Mathematics (Position and Direction):** • *Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.*
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** • **human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water**		**Links to Computing:** • *understand computer networks including the internet; how they can provide multiple services, such as the world-wide web; and the opportunities they offer for communication and collaboration.* ***(Google Earth)*** • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* **Links to Computing:** • *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content* **Link to Science (evolution and inheritance):** • *identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.* **Link to Computing:** • *use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs* • *design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems*
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** • **use fieldwork to observe, measure and record the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies.**		

		by decomposing them into smaller parts • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.*

Geography Skills

GEOGRAPHY	**Lower School (Years 1 & 2)**	**Middle School (Years 3 &4)**	**Upper School (Years 5 & 6)**
To investigate places	• Ask and answer geographical questions (such as: What is this place like? What or who will I see in this place? What do people do in this place?). • Identify the key features of a location in order to say whether it is a city, town, village, coastal or rural area. • Use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied. • Use simple fieldwork and observational skills to study the geography of the school and the key human and physical features of its surrounding environment. • Use aerial images and plan perspectives to recognise landmarks and basic physical features. • Name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas. • Name and locate the world's continents and oceans.	• Ask and answer geographical questions about the physical and human characteristics of a location. • Explain own views about locations, giving reasons. • Use maps, atlases, globes and digital/computer mapping to locate countries and describe features. • Use fieldwork to observe and record the human and physical features in the local area using a range of methods including sketch maps, plans and graphs and digital technologies. • Use a range of resources to identify the key physical and human features of a location. • Name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, including hills, mountains, cities, rivers, key topographical features and land-use patterns; and understand how some of these aspects have changed over time. • Name and locate the countries of Europe and identify their main physical and	• Collect and analyse statistics and other information in order to draw clear conclusions about locations. • Identify and describe how the physical features affect the human activity within a location. • Use a range of geographical resources to give detailed descriptions and opinions of the characteristic features of a location. • Use different types of fieldwork sampling (random and systematic) to observe, measure and record the human and physical features in the local area. Record the results in a range of ways. • Analyse and give views on the effectiveness of different geographical representations of a location (such as aerial images compared with maps and topological maps - as in London's Tube map). • Name and locate some of the countries and cities of the world and their identifying human and physical characteristics, including hills, mountains, rivers, key topographical features and land-use patterns; and understand how some of these aspects have changed over

		human characteristics.	time. • Name and locate the countries of North and South America and identify their main physical and human characteristics.
To investigate patterns	• Understand geographical similarities and differences through studying the human and physical geography of a small area of the United Kingdom and of a contrasting non-European country. • Identify seasonal and daily weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles. • Identify land use around the school.	• Name and locate the Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle and date time zones. Describe some of the characteristics of these geographical areas. • Describe geographical similarities and differences between countries. • Describe how the locality of the school has changed over time.	• Identify and describe the geographical significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, and time zones (including day and night). • Understand some of the reasons for geographical similarities and differences between countries. • Describe how locations around the world are changing and explain some of the reasons for change. • Describe geographical diversity across the world. • Describe how countries and geographical regions are interconnected and interdependent.
To communicate geographically	• Use basic geographical vocabulary to refer to: • **key physical features**, including: beach, coast, forest, hill, mountain, ocean, river, soil, valley, vegetation and weather. • **key human features**, including: city, town, village, factory, farm, house, office and shop. • Use compass directions (north, south, east and west) and locational language (e.g. near and far) to describe the location of features and routes on a map. • Devise a simple map; and use and construct basic symbols in a key. Use simple grid references (A1, B1).	• Describe key aspects of: • **physical geography**, including: rivers, mountains, volcanoes and earthquakes and the water cycle. • **human geography**, including: settlements and land use. • Use the eight points of a compass, four-figure grid references, symbols and key to communicate knowledge of the United Kingdom and the wider world.	• Describe and understand key aspects of: • **physical geography**, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes and the water cycle. • **human geography**, including: settlements, land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals, and water supplies. • Use the eight points of a compass, four-figure grid references, symbols and a key (that uses standard Ordnance Survey symbols) to communicate knowledge of the United Kingdom and the world. • Create maps of locations identifying patterns (such as: land use, climate zones, population densities, height of land).

Generic geography skills

P4	P5	P6	P7	P8	Early Years
• Extend skills to enable exploration of the world. • Handle artefacts and materials that are given. • Know that certain actions produce predictable results. • Know familiar places and people and what they are there for. • Use gestures, signs, symbols or single words to communicate knowledge.	• Consolidate a sense of place and direction. • Show awareness (through gestures, signs, symbols or words) of significant differences between specific physical/ natural and human/made features of places. • Answer simple questions about places and people. • Start to sort and classify objects in terms of simple features or properties.	• Understand the differences between the physical/natural and human/made features of places. • Use pictures or symbols to show familiar places and what they are for. • Answer simple questions about places and people.	• Communicate preferences about the physical/natural and human/made features of places. • Begin to use symbols to represent direction and represent and record key features of a place using models or symbols. • Show awareness of caring for the immediate environment.	• Recognise the physical/natural and human/made features of places. • Use simple geographical language to communicate ideas about various locations, functions and roles. • Use resources that are given along with own observations to respond to simple questions about places and people. • Recognise simple symbols or representations on maps and plans. • Show some understanding of environmental awareness and how it relates to everyday life. • Express views on features of the environment found attractive or unattractive.	• Talk about features of the immediate environment and how environments may differ from one another. • Know about similarities in relation to places, objects, materials and living things. • Make observations about animals and plants and explain why some things occur. • Talk about changes in environments.

Challenge

Years 7, 8 and 9

Geography opportunities	Investigating places	Investigating patterns and processes	Communicating geographically
• Extend locational knowledge and deepen spatial awareness of the world's countries using maps of the world to focus on Africa, South and East Asia (including China and India), the Middle East and Russia, focusing on their environmental regions, including polar and hot deserts, key physical and human characteristics, countries and major cities.	• Interpret Ordnance Survey maps in the classroom and the field, including using six-figure coordinates and scale, topographical and other thematic mapping and aerial and satellite photographs. • Use Geographical Information Systems (GIS) to view, analyse and interpret places and data. • Use fieldwork to collect, analyse and draw conclusions from geographical data, using multiple sources of increasingly complex information. • Analyse and interpret different data sources.	• Understand geographical similarities and differences through the study of human and physical geography of a region or area within Africa. • Understand the physical geography relating to: glaciation, plate tectonics, rocks, soils, weathering, geological timescales, weather and climate, rivers and coasts. • Understand human geography relating to: population, international development, economic activity in the primary, secondary, tertiary and quaternary sectors, urbanisation, and the use of natural resources. • Understand how human and physical processes interact to have an impact on the form of distinctive landscapes.	• Communicate knowledge of complex geographical systems

Year 5 & 6 History

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
A non-European society that provides contrasts with British history – one study chosen from: early Islamic civilization, including a study of Baghdad c. AD 900; Mayan civilization c. AD 900; Benin (West Africa) c. AD 900-1300.	By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study The changing power of monarchs using case studies such as John, Anne and Victoria ▪ changes in an aspect of social history, such as crime and punishment from the Anglo-Saxons to the present or leisure and entertainment in the 20th Century ▪ the legacy of Greek or Roman culture (art, architecture or literature) on later periods in British history, including the present day ▪ a significant turning point in British history, for example, the first railways or the Battle of Britain .	**Links with Computing:** • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* • *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content* **Link to Art and Design:** *about great artists, architects and designers in history.* **Link to Geography:** • *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* **Link to Geography:** • *Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied* • *human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water* **Link to Design Technology:** • *understand and apply the principles of a healthy and varied diet* • *prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques* • *understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.*
The achievements of the earliest civilizations – an overview of where and when the first civilizations appeared and a depth study of one of the following: Ancient Sumer; The Indus Valley; Ancient Egypt; The Shang Dynasty of Ancient China		
a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066		
Ancient Greece – a study of Greek life and achievements and their influence on the western world		

SKILLS

HISTORY	Lower School (Years 1 & 2)	Middle School (Years 3 &4)	Upper School (Years 5 & 5)
To investigate and interpret the past	• Observe or handle evidence to ask questions and find answers to questions about the past. • Ask questions such as: What was it like for people? What happened? How long ago? • Use artefacts, pictures, stories, online sources and databases to find out about the past. • Identify some of the different ways the past has been represented.	• Use evidence to ask questions and find answers to questions about the past. • Suggest suitable sources of evidence for historical enquiries. • Use more than one source of evidence for historical enquiry in order to gain a more accurate understanding of history. • Describe different accounts of a historical event, explaining some of the reasons why the accounts may differ. • Suggest causes and consequences of some of the main events and changes in history.	• Use sources of evidence to deduce information about the past. • Select suitable sources of evidence, giving reasons for choices. • Use sources of information to form testable hypotheses about the past. • Seek out and analyse a wide range of evidence in order to justify claims about the past. • Show an awareness of the concept of propaganda and how historians must understand the social context of evidence studied. • Understand that no single source of evidence gives the full answer to questions about the past. • Refine lines of enquiry as appropriate.
To build an overview of world history	• Describe historical events. • Describe significant people from the past. • Recognise that there are reasons why people in the past acted as they did.	• Describe changes that have happened in the locality of the school throughout history. • Give a broad overview of life in Britain from ancient until medieval times. • Compare some of the times studied with those of other areas of interest around the world. • Describe the social, ethnic, cultural or religious diversity of past society. • Describe the characteristic features of the past, including ideas, beliefs, attitudes and experiences of men, women and children.	• Identify continuity and change in the history of the locality of the school. • Give a broad overview of life in Britain from medieval until the Tudor and Stuarts times. • Compare some of the times studied with those of the other areas of interest around the world. • Describe the social, ethnic, cultural or religious diversity of past society. • Describe the characteristic features of the past, including ideas, beliefs, attitudes and experiences of men, women and children.
To understand chronology	• Place events and artefacts in order on a time line. • Label time lines with words or phrases such	• Place events, artefacts and historical figures on a time line using dates. • Understand the concept of change over	• Describe the main changes in a period of history (using terms such as: social, religious, political, technological and cultural).

	as: past, present, older and newer. • Recount changes that have occurred in their own lives. • Use dates where appropriate.	time, representing this, along with evidence, on a time line. • Use dates and terms to describe events.	• Identify periods of rapid change in history and contrast them with times of relatively little change. • Understand the concepts of continuity and change over time, representing them, along with evidence, on a time line. • Use dates and terms accurately in describing events.
To communicate historically	• Use words and phrases such as: a long time ago, recently, when my parents/carers were children, years, decades and centuries to describe the passing of time. • Show an understanding of the concept of nation and a nation's history. • Show an understanding of concepts such as civilisation, monarchy, parliament, democracy, and war and peace.	• Use appropriate historical vocabulary to communicate, including: • dates • time period • era • change • chronology. • Use literacy, numeracy and computing skills to a good standard in order to communicate information about the past.	• Use appropriate historical vocabulary to communicate, including: • dates • time period • era • chronology • continuity • change • century • decade • legacy. • Use literacy, numeracy and computing skills to a exceptional standard in order to communicate information about the past. • Use original ways to present information and ideas.

Generic history skills

P4	P5	P6	P7	P8	Early Years
• Recognise self and other people in pictures of the recent past. • Link the passage of time with a variety of indicators. • Use single words, signs or symbols to confirm the	• Show appreciation of taking part in past events. • Listen and respond to familiar stories about the past. • Begin to communicate about activities and events in	• Recognise and make comments about familiar people in pictures of the more distant past. • Communicate some obvious distinctions between past and	• Begin to communicate some distinctions between the past and present in other people's lives as well as their own. • Listen to stories about people and events in the past.	• Indicate if personal events and objects belong in the past or present. • Begin to use some common words, signs or symbols to indicate	• Talk about past and present events in their own life and of family members. • Use everyday language related to time.

function of everyday items from the past.	the past. • With prompts or support, answer simple questions about historical artefacts and buildings.	present experiences.	• Sort objects to given criteria.	the passage of time. • Recount episodes from own past and some details from other historical events with prompts. • Answer simple questions about historical stories and artefacts.	

Challenge

Years 7, 8 and 9

History opportunities • The development of Church, state and society in Medieval Britain 1066-1509. • The development of Church, state and society in Britain 1509-1745. • Ideas, political powers, industry and empire: Britain, 1745-1901. • Challenges for Britain, Europe and the wider world 1901 to the present day. • A local history study. • The study of an aspect or theme in British history that consolidates and extends pupils' chronological knowledge from before 1066. • At least one study of a significant society or issue in world history and its interconnections with other world developments.	Using evidence to find out about the past • Sift evidence and select appropriate sources. • Understand the need to use a range of information from a wide variety of sources. • Evaluate the reliability of sources. • Create and test hypotheses, using evidence to make claims.	Building an overview of world history • Build upon a growing knowledge about the significant people and events that have shaped our nation and the world. • Look at history from different cultural perspectives. • Understand how some of the political, religious, social and economic circumstances that prevail today may be linked to past events throughout history.	Understanding chronology • Understand the changes within and between time periods. • Understand how some changes take centuries whilst others are more rapid and give examples with evidence.	Communicating historically • Become fluent in the use of historical vocabulary and techniques

Year 5 & 6 Languages

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
• **listen attentively to spoken language and show understanding by joining in and responding** • **explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words** • **engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help*** • **speak in sentences, using familiar vocabulary, phrases and basic language structures** • **develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases*** • **present ideas and information orally to a range of audiences*** • **read carefully and show understanding of words, phrases and simple writing** • **appreciate stories, songs, poems and rhymes in the language** • **broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary** • **write phrases from memory, and adapt these to create new sentences, to express ideas clearly** • **describe people, places, things and actions orally* and in writing.**	Teaching may be of any modern or ancient foreign language and should focus on enabling pupils to make substantial progress in one language. The teaching should provide an appropriate balance of spoken and written language and should lay the foundations for further foreign language teaching at key stage 3. It should enable pupils to understand and communicate ideas, facts and feelings in speech and writing, focused on familiar and routine matters, using their knowledge of phonology, grammatical structures and vocabulary. The focus of study in modern languages will be on practical communication. If an ancient language is chosen the focus will be to provide a linguistic foundation for reading comprehension and an appreciation of classical civilisation. Pupils studying ancient languages may take part in simple oral exchanges, while discussion of what they read will be conducted in English. A linguistic foundation in ancient languages may support the study of modern languages at key stage 3. The starred (*) content above will not be applicable to ancient languages.	**Link to Computing:** • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.*
• **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 instance, to build sentences; and how these differ from or are similar to English. **The starred (*) content above will not be applicable to ancient languages.**		

Modern Foreign Langaugaes Skills

	Year1 & 2 (OPTIONAL)	**Year 3 & 4**	**Year 5 & 6**
To read fluently	• Read out loud everyday words and phrases. • Use phonic (or logographic in Mandarin) knowledge to read words. • Read and understand short written phrases. • Read out loud familiar words and phrases. • Use books or glossaries to find out the meanings of new words.	• Read and understand the main points in short written texts. • Read short texts independently. • Use a translation dictionary or glossary to look up new words.	• Read and understand the main points and some of the detail in short written texts. • Use the context of a sentence or a translation dictionary to work out the meaning of unfamiliar words. • Read and understand the main points and opinions in written texts from various contexts, including present, past or future events. • Show confidence in reading aloud, and in using reference materials.
To write imaginatively	• Write or copy everyday words correctly. • Label items and choose appropriate words to complete	• Write a few short sentences using familiar expressions. • Express personal experiences	• Write short texts on familiar topics. • Use knowledge of grammar (or

	short sentences. • Write one or two short sentences. • Write short phrases used in everyday conversations correctly.	and responses. • Write short phrases from memory with spelling that is readily understandable.	pitch in Mandarin) to enhance or change the meaning of phrases. • Use dictionaries or glossaries to check words. • Refer to recent experiences or future plans, as well as to everyday activities. • Include imaginative and adventurous word choices. • Convey meaning (although there may be some mistakes, the meaning can be understood with little or no difficulty). • Use dictionaries or glossaries to check words.
To speak confidently	• Understand a range of spoken phrases. • Understand standard language (sometimes asking for words or phrases to be repeated). • Answer simple questions and give basic information. • Give responses to questions about everyday events.	• Understand the main points from spoken passages. • Ask others to repeat words or phrases if necessary. • Ask and answer simple questions and talk about interests. • Take part in discussions and tasks.	• Understand the main points and opinions in spoken passages. • Give a short prepared talk that includes opinions. • Take part in conversations to seek and give information. • Refer to recent experiences or future plans, everyday activities and interests.

	• Pronounce words showing a knowledge of sound (or pitch in Mandarin) patterns.	• Demonstrate a growing vocabulary.	• Vary language and produce extended responses. • Be understood with little or no difficulty.
To understand the culture of the countries in which the language is spoken	• Identify countries and communities where the language is spoken. • Demonstrate some knowledge and understanding of the customs and features of the countries or communities where the language is spoken. • Show awareness of the social conventions when speaking to someone.	• Describe with some interesting details some aspects of countries or communities where the language is spoken. • Make comparisons between life in countries or communities where the language is spoken and this country.	• Give detailed accounts of the customs, history and culture of the countries and communities where the language is spoken. • Describe, with interesting detail, some similarities and differences between countries and communities where the language is spoken and this country.

Year 5 & 6 Music

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
Pupils should be taught to sing and play musically with increasing confidence and control. They should develop an understanding of musical composition, organising and manipulating ideas within musical structures and reproducing sounds from aural memory.	Pupils should be taught to sing and play musically with increasing confidence and control. They should develop an understanding of musical composition, organising and manipulating ideas within musical structures and reproducing sounds from aural memory.	**Link to Computing:** • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* • *use sequence, selection, and repetition in programs; work with variables and various forms of input and output.* • *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.* **Link to Spoken Language** **Link to History:** • *A study of an aspect or theme in British History that extends pupils' chronological knowledge beyond 1066.* • **Link to History:** *A study of an aspect or theme in British History that extends pupils' chronological knowledge beyond 1066.*
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.		

Music Skills

MUSIC	**Lower School (Years 1 & 2)**	**Middle School (Years 3 & 4)**	**Upper School (Years 5 & 6)**
To perform	• Take part in singing, accurately following the melody. • Follow instructions on how and when to sing or play an instrument. • Make and control long and short sounds, using voice and instruments. • Imitate changes in pitch.	• Sing from memory with accurate pitch. • Sing in tune. • Maintain a simple part within a group. • Pronounce words within a song clearly. • Show control of voice. • Play notes on an instrument with care so that they are clear. • Perform with control and awareness of others.	• Sing or play from memory with confidence. • Perform solos or as part of an ensemble. • Sing or play expressively and in tune. • Hold a part within a round. • Sing a harmony part confidently and accurately. • Sustain a drone or a melodic ostinato to accompany singing. • Perform with controlled breathing (voice)

			and skillful playing (instrument).
To compose	• Create a sequence of long and short sounds. • Clap rhythms. • Create a mixture of different sounds (long and short, loud and quiet, high and low). • Choose sounds to create an effect. • Sequence sounds to create an overall effect. • Create short, musical patterns. • Create short, rhythmic phrases.	• Compose and perform melodic songs. • Use sound to create abstract effects. • Create repeated patterns with a range of instruments. • Create accompaniments for tunes. • Use drones as accompaniments. • Choose, order, combine and control sounds to create an effect. • Use digital technologies to compose pieces of music.	• Create songs with verses and a chorus. • Create rhythmic patterns with an awareness of timbre and duration. • Combine a variety of musical devices, including melody, rhythm and chords. • Thoughtfully select elements for a piece in order to gain a defined effect. • Use drones and melodic ostinati (based on the pentatonic scale). • Convey the relationship between the lyrics and the melody. • Use digital technologies to compose, edit and refine pieces of music.
To transcribe	• Use symbols to represent a composition and use them to help with a performance.	• Devise non-standard symbols to indicate when to play and rest. • Recognise the notes EGBDF and FACE on the musical stave. • Recognise the symbols for a minim, crotchet and semibreve and say how many beats they represent.	• Use the standard musical notation of crotchet, minim and semibreve to indicate how many beats to play. • Read and create notes on the musical stave. • Understand the purpose of the treble and bass clefs and use them in transcribing compositions. • Understand and use the # (sharp) and ♭ (flat) symbols. • Use and understand simple time signatures.
To describe music	• Identify the beat of a tune. • Recognise changes in timbre, dynamics and pitch.	• Use the terms: duration, timbre, pitch, beat, tempo, texture and use of silence to describe music. • Evaluate music using musical vocabulary to identify areas of likes and dislikes. • Understand layers of sounds and discuss their effect on mood and feelings.	• Choose from a wide range of musical vocabulary to accurately describe and appraise music including: • pitch • dynamics • tempo • timbre • texture • lyrics and melody • sense of occasion • expressive • solo

			• rounds • harmonies • accompaniments • drones • cyclic patterns • combination of musical elements • cultural context. • Describe how lyrics often reflect the cultural context of music and have social meaning.

Generic Music Skills

P4	**P5**	**P6**	**P7**	**P8**	**Early Years**
• Use single words, gestures, signs, objects, pictures or symbols to communicate about familiar musical activities or name familiar instruments. • With some support, listen and attend to familiar musical activities and follow and join in familiar routines. • Show an awareness of cause and effect in familiar events. • Begin to look for an instrument or noise maker played out of sight. • Repeat, copy and imitate actions, sounds or words in songs and musical performances.	• Take part in simple musical performances. • Respond to signs given by a musical conductor. • Pick out a specific musical instrument when asked. • Play loudly, quietly, quickly and slowly in imitation. • Play an instrument when prompted by a cue card. • Listen to, and imitate, distinctive sounds played on a particular instrument. • Listen to a familiar instrument played behind a screen and match the sound to the correct instrument on a table.	• Respond to other pupils in music sessions. • Join in and take turns in songs and play instruments with others. • Begin to play, sing and move expressively in response to the music or the meaning of words in a song. • Explore the range of effects that can be made by an instrument or sound maker. • Copy simple rhythms and musical patterns or phrases. • Play groups of sounds indicated by a simple picture- or symbol-based score. • Begin to categorise percussion instruments by how they can be played.	• Listen to and describe music by describing musical experiences, using phrases or statements, combining a small number of words, signs, symbols or gestures. • Respond to prompts to play faster, slower, louder or softer. • Follow simple graphic scores with symbols or pictures and play simple patterns or sequences of music. • Listen and contribute to sound stories. • Improvise and make basic choices about the sound and instruments used. • Make simple compositions.	• Listen carefully to music. • Understand and respond to words, symbols and signs that relate to tempo, dynamics and pitch, e.g. faster, slower, louder, higher and lower. • Create own simple compositions, carefully selecting sounds. • Create simple graphic scores using pictures or symbols. • Use a growing musical vocabulary of words, signs or symbols to describe what is played and heard. • Make and communicate choice when performing, playing, composing, listening and appraising.	• Begin to build a repertoire of songs. • Explore the different sounds of musical instruments. • Create simple representations of events, people and objects.

Challenge

Years 7, 8 and 9

Music opportunities	Performing	Composing	Transcribing	Describing music
• Build on their previous knowledge through performing, composing and listening. • Play and perform in solo or ensemble contexts.	• Identify and use expressively the inter-related dimensions of music with increasing sophistication (such as through extended use of tonalities, different types of scales and other musical devices). • Develop vocal and/or instrumental fluency, accuracy and expressiveness.	• Compose, extend and develop musical ideas by drawing on a range of musical structures, styles, genres and traditions.	• Use the stave and other relevant notations appropriately and accurately in a range of musical styles, genres and traditions.	• Listen with increasing discrimination to a wide range of music from great composers. • Develop a deep understanding of the music that they perform and listen to, and its history. • Understand musical structures, styles, genres and traditions and identify the expressive use of musical elements. • Appreciate and understand a wide range of musical contexts and styles to inform judgments.

Year 5 & 6 Physical Education

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
Pupils should continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement. They should enjoy communicating, collaborating and competing with each other. They should develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success.	Pupils should continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement. They should enjoy communicating, collaborating and competing with each other. They should develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success.	**Note:** *Dances could be linked to different historical times.* **Link to History:** • *a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066* **Note:** All schools must provide swimming instruction either in key stage 1 or key stage 2. **Note:** *Dances could be linked to different historical times.*
use running, jumping, throwing and catching in isolation and in combination		
play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending		
develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics]		
perform dances using a range of movement patterns		
take part in outdoor and adventurous activity challenges both individually and within a team		
compare their performances with previous ones and demonstrate improvement to achieve their personal best.		

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PE		Lower School (Years 1 & 2)	Middle School (Years 3 & 4)	Upper School (Years 5 & 6)
To develop practical skills in order to participate, compete and lead a healthy lifestyle	Games	• Use the terms 'opponent' and 'team-mate'. • Use rolling, hitting, running, jumping, catching and kicking skills in combination. • Develop tactics. • Lead others when appropriate.	• Throw and catch with control and accuracy. • Strike a ball and field with control. • Choose appropriate tactics to cause problems for the opposition. • Follow the rules of the game and play fairly. • Maintain possession of a ball (with, e.g. feet, a hockey stick or hands). • Pass to team mates at appropriate times. • Lead others and act as a respectful team member.	• Choose and combine techniques in game situations (running, throwing, catching, passing, jumping and kicking, etc.). • Work alone, or with team mates in order to gain points or possession. • Strike a bowled or volleyed ball with accuracy. • Use forehand and backhand when playing racket games. • Field, defend and attack tactically by anticipating the direction of play. • Choose the most appropriate tactics for a game. • Uphold the spirit of fair play and respect in all competitive situations. • Lead others when called upon and act as a good role model within a team.
	Dance	• Copy and remember moves and positions. • Move with careful control and coordination. • Link two or more actions to perform a sequence. • Choose movements to communicate a mood, feeling or idea.	• Plan, perform and repeat sequences. • Move in a clear, fluent and expressive manner. • Refine movements into sequences. • Create dances and movements that convey a definite idea. • Change speed and levels within a performance. • Develop physical strength and suppleness by practising moves and stretching.	• Compose creative and imaginative dance sequences. • Perform expressively and hold a precise and strong body posture. • Perform and create complex sequences. • Express an idea in original and imaginative ways. • Plan to perform with high energy, slow grace or other themes and maintain this throughout a piece. • Perform complex moves that combine strength and stamina gained through gymnastics activities (such as cartwheels or handstands).
	Gymnastics	• Copy and remember actions. • Move with some control and awareness of space. • Link two or more actions to make a sequence. • Show contrasts (such as small/tall, straight/curved and wide/narrow). • Travel by rolling forwards, backwards and sideways. • Hold a position whilst balancing on different points of the body. • Climb safely on equipment. • Stretch and curl to develop flexibility.	• Plan, perform and repeat sequences. • Move in a clear, fluent and expressive manner. • Refine movements into sequences. • Show changes of direction, speed and level during a performance. • Travel in a variety of ways, including flight, by transferring weight to generate power in movements. • Show a kinesthetic sense in order to improve the placement and alignment of body parts (e.g. in balances experiment to find out how to get the centre of gravity successfully over base and organise body parts to create an interesting body shape). • Swing and hang from equipment safely (using hands).	• Create complex and well-executed sequences that include a full range of movements including: • travelling • balances • swinging • springing • flight • vaults • inversions • rotations • bending, stretching and twisting • gestures • linking skills. •Hold shapes that are strong, fluent and expressive. • Include in a sequence set pieces, choosing the most appropriate linking elements. • Vary speed, direction, level and body rotation during floor performances. • Practise and refine the gymnastic techniques used in performances (listed above).

		• Jump in a variety of ways and land with increasing control and balance.		• Demonstrate good kinesthetic awareness (placement and alignment of body parts is usually good in well-rehearsed actions). • Use equipment to vault and to swing (remaining upright).
	Swimming	• Swim unaided up to 25 metres. • Use one basic stroke, breathing correctly. • Control leg movements.	• Swim between 25 and 50 metres unaided. • Use more than one stroke and coordinate breathing as appropriate for the stroke being used. • Coordinate leg and arm movements. • Swim at the surface and below the water.	• Swim over 100 metres unaided. • Use breast stroke, front crawl and back stroke, ensuring that breathing is correct so as not to interrupt the pattern of swimming. • Swim fluently with controlled strokes. • Turn efficiently at the end of a length.
	Athletics	• Athletic activities are combined with games in Years 1 and 2.	• Sprint over a short distance up to 60 metres. • Run over a longer distance, conserving energy in order to sustain performance. • Use a range of throwing techniques (such as under arm, over arm). • Throw with accuracy to hit a target or cover a distance. • Jump in a number of ways, using a run up where appropriate. • Compete with others and aim to improve personal best performances.	• Combine sprinting with low hurdles over 60 metres. • Choose the best place for running over a variety of distances. • Throw accurately and refine performance by analysing technique and body shape. • Show control in take off and landings when jumping. • Compete with others and keep track of personal best performances, setting targets for improvement.
	Outdoor and adventurous activities	• Not applicable.	• Arrive properly equipped for outdoor and adventurous activity. • Understand the need to show accomplishment in managing risks. • Show an ability to both lead and form part of a team. • Support others and seek support if required when the situation dictates. • Show resilience when plans do not work and initiative to try new ways of working. • Use maps, compasses and digital devices to orientate themselves. • Remain aware of changing conditions and change plans if necessary.	• Select appropriate equipment for outdoor and adventurous activity. • Identify possible risks and ways to manage them, asking for and listening carefully to expert advice. • Embrace both leadership and team roles and gain the commitment and respect of a team. • Empathise with others and offer support without being asked. Seek support from the team and the experts if in any doubt. • Remain positive even in the most challenging circumstances, rallying others if need be. • Use a range of devices in order to orientate themselves. • Quickly assess changing conditions and adapt plans to ensure safety comes first.

Generic PE Skills

P4	P5	P6	P7	P8	Early Years
• Perform single actions. • Respond to simple commands. • Recognise familiar pieces of equipment. • Show awareness of cause and effect.	• Link two actions in a sequence. • Follow simple instructions with the support of symbols or other prompts. • Explore a variety of movements and show some awareness of space. • Understand basic concepts. • Take turns with a partner or in a small group. • Recognise and collect, on request, familiar pieces of equipment.	• Work in pairs and in small groups cooperatively (with support to follow instructions and keep on task). • Move in a variety of ways. • With support, link movements in a simple sequence. • Recognise small and large apparatus and use it with some basic control. • Throw and kick a ball, but lack direction.	• Show expression through repetitive and simple sequences and movement patterns. • Develop control and coordination skills. • Listen to instructions and stop and start with some accuracy. • Work closely in pairs, trios or small groups. • Share and take turns. • Show awareness of the changes that happen to the body during physical activity.	• Move with some control and coordination. • Follow and imitate sequences and patterns. • Use small and large apparatus safely. • Show awareness of space, self and others. • Play simple games with support to keep score and follow game rules. • Recognise changes that happen to the body during physical activity	• Jump off an object and land appropriately. • Show increasing control over an object when pushing, patting, throwing, catching or kicking. • Experiment with different ways of moving. • Travel with confidence and skill around, under, over and through balancing and climbing equipment. • Negotiate space successfully when playing racing and chasing games with others, adjusting speed or changing direction to avoid obstacles.

Challenge
Years 7, 8 and 9

Physical education opportunities	Developing practical skills	Being physically active	Competing
• Play competitive sports such as football, netball, rounders, cricket, hockey, basketball, badminton, tennis and rugby, athletics and gymnastics. • Perform dances using advanced movement patterns. • Take part in outdoor and adventurous activities which present mental and physical challenges and be encouraged to work in a team.	• Develop techniques and improve performances. • Compare performances with previous ones to achieve a personal best. • Become more competent, confident and expert in techniques. • Understand what makes a performance effective and apply these principles to own and others' work.	• Take part in competitive sports and activities outside school through community links or sports clubs. • Develop the confidence and interest to get involved in exercise and sports and activities out of school and in later life.	• Use a range of tactics and strategies to overcome opponents in face-to-face competition through team and individual games.

RE SKILLS

RE	**Year 1 & 2**	**Year 3 & 4**	**Year 5 & 6**
To understand beliefs and teachings	• Describe some of the teachings of a religion. • Describe some of the main festivals or celebrations of a religion.	• Present the key teachings and beliefs of a religion. • Refer to religious figures and holy books to explain answers.	• Explain how some teachings and beliefs are shared between religions. • Explain how religious beliefs shape the lives of individuals and communities.
To understand practices and lifestyles	• Recognise, name and describe some religious artefacts, places and practices.	• Identify religious artefacts and explain how and why they are used. • Describe religious buildings and explain how they are used. • Explain some of the religious practices of both clerics and individuals.	• Explain the practices and lifestyles involved in belonging to a faith community. • Compare and contrast the lifestyles of different faith groups and give reasons why some within the same faith may adopt different lifestyles. • Show an understanding of the role of a spiritual leader.
To understand how beliefs are conveyed	• Name some religious symbols. • Explain the meaning of some religious symbols.	• Identify religious symbolism in literature and the arts.	• Explain some of the different ways that individuals show their beliefs.
To reflect	• Identify the things that are important in their own lives	• Show an understanding that personal	• Recognise and express feelings about their

	and compare these to religious beliefs. • Relate emotions to some of the experiences of religious figures studied. • Ask questions about puzzling aspects of life.	experiences and feelings influence attitudes and actions. • Give some reasons why religious figures may have acted as they did. • Ask questions that have no universally agreed answers.	own identities. Relate these to religious beliefs or teachings. • Explain their own ideas about the answers to ultimate questions. • Explain why their own answers to ultimate questions may differ from those of others.
To understand values	• Identify how they have to make their own choices in life. • Explain how actions affect others. • Show an understanding of the term 'morals'.	• Explain how beliefs about right and wrong affect people's behaviour. • Describe how some of the values held by communities or individuals affect behaviour and actions. • Discuss and give opinions on stories involving moral dilemmas.	• Explain why different religious communities or individuals may have a different view of what is right and wrong. • Show an awareness of morals and right and wrong beyond rules (i.e. wanting to act in a certain way despite rules). • Express their own values and remain respectful of those with different values.

Support

P4	P5	P6	P7	P8	Early Years
• Use single elements of communicatio n to express feelings. • Show an understanding o f 'yes' and 'no'. • Begin to respond to the feelings of others. • Join in with activities by initiating ritual actions or sounds. • Demonstrate an appreciation of stillness and quietness.	• Respond appropriately to simple questions about familiar religious events or experiences and communicate simple meanings. • Respond to a variety of new religious experience s. • Take part in activities involving two or three other learners. • Engage in moments of individual reflection.	• Express and communicate feelings in different ways. • Respond to others in group situations and cooperate when working in small groups. • Listen to, and begin to respond to, familiar religious stories, poems and music, and make contributions to celebrations and festivals. • Carry out ritualised actions in familiar circumstance s. • Show concern and sympathy for others in distress. • Begin to be aware of own influence on events and other people.	• Listen to and follow religious stories. • Communicate their ideas about religion, life events and experiences in simple phrases. • Evaluate own work and behaviour in simple ways, beginning to identify some actions as right or wrong. • Find out about aspects of religion through stories, music or drama, answer questions and communicate responses. • Communicate feelings about what is special. • Begin to understand that other people have needs and to respect these. • Make	• Listen attentively to religious stories or to people talking about religion. • Begin to understand that religious and other stories carry moral and religious meaning. • Communicate ideas, feelings or responses to experiences or to retell religious stories. • Communicate simple facts about religion and important people in religions. • Realise the significance of religious artefacts, symbols and places. • Reflect on emotions (happy,	• Describe themselves in positive terms. • Describe own and others' feelings. • Describe own and others' feelings and their consequence s. • Understand that their own actions affect other people. • Know that some behaviour is wrong. • Know that others do not always enjoy the same things and show sensitivity to this.

			purposeful relationships with others in group activity.	sad, excited or lonely). • Demonstrate a basic understanding of what is right and wrong in familiar situations. • Show sensitivity to the needs and feelings of others and show self respect. • Treat living things and their environment with care and concern.	

Challenge

Years 7, 8 and 9

Religious education opportunities	Learning about religion	Learning from religion
• Extend knowledge and understanding of Christianity. • Become more familiar with the teaching and beliefs of other major world religions. • Appreciate the similarities and differences between religions. • Study some of the guidelines for living in various religions. • Explore the ideas of Rites of Passage.	• Explore the way religious figures are portrayed in art, poetry and music. • Understand beliefs in Christianity such as God the Father, Son and Holy Spirit. • Compare readings from religious scripture. • Understand the significance of religious festivals. • Explore the significance of religious stories in today's world. • Visit religious buildings and meet figures from different religions.	• Consider rituals in own life and compare to religious rituals. • Understand why divisions occur in groups and the feelings associated with them. • Consider material possessions and their value as opposed to spiritual fulfillment. • Consider suffering and what religions tell us about this. • Consider the concept of enlightenment. • Reflect on opportunities to show 'loving kindness'. • Identify the qualities of key religious figures. • Explore the concept of 'duty'. • Consider the significance of religious symbols. • Explore questions related to life and death. • Explore rituals that mark changes in life.

Year 5 & 6 Science
Working scientifically

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content: • **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 degree of trust in results, in oral and written forms such as displays and other presentations**	Pupils in years 5 and 6 should use their science experiences to: explore ideas and raise different kinds of questions; select and plan the most appropriate type of scientific enquiry to use to answer scientific questions; recognise when and how to set up comparative and fair tests and explain which variables need to be controlled and why. They should use and develop keys and other information records to identify, classify and describe living things and materials, and identify patterns that might be found in the natural environment. They should make their own decisions about what observations to make, what measurements to use and how long to make them for, and whether to repeat them; choose the most appropriate equipment to make measurements and explain how to use it accurately. They should decide how to record data from a choice of familiar approaches; look for different causal relationships in their data and identify evidence that refutes or supports their ideas. They should use their results to identify when further tests and observations might be needed; recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact. They should use relevant scientific language and illustrations to discuss, communicate and justify their scientific ideas and should talk about how scientific ideas have developed over time. These opportunities for working scientifically should be provided across years 5 and 6 so that the expectations in the programme of study can be met by the end of year 6. Pupils are not expected to cover each aspect for every area of study.	**Link to Computing:** • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* • *use sequence, selection, and repetition in programs; work with variables and various forms of input and output.* • *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content* **Link to Mathematics (Measurement):** • *convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)* • *calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes (Depending of the Investigation)* **Link to Mathematics (Statistics):** • *complete, read and interpret information in tables, including timetables.* • *solve comparison, sum and difference problems using information presented in a line graph* **Link to Computing:** • *select, use and combine a variety of software*

• **identifying scientific evidence that has been used to support or refute ideas or arguments.**		*(including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* **Link to Spoken Language:** • *Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas.* **Link to Computing:** • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* **Link to Spoken Language:** *Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas* **Link to Spoken Language:** • *use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas*

Living things and their habitats

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals	Pupils should build on their learning about grouping living things in year 4 by looking at the classification system in more detail. They should be introduced to the idea that broad groupings, such as micro-organisms, plants and animals can be subdivided. Through direct observations where possible, they should classify animals into commonly found invertebrates (such as insects, spiders, snails, worms) and vertebrates (fish, amphibians, reptiles, birds and mammals). They should discuss reasons why living things are placed in one group and not another. Pupils might find out about the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification. Pupils might work scientifically by: using classification systems and keys to identify some animals and plants in the immediate environment. They could research unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system. Pupils should study and raise questions about their local environment throughout the year. They should observe life-cycle changes in a variety of living things, for example, plants in the vegetable garden or flower border, and animals in the local environment. They should find out about the work of naturalists and animal behaviourists, for example, David Attenborough and Jane Goodall. Pupils should find out about different types of reproduction, including sexual and asexual reproduction in plants, and sexual reproduction in animals. Pupils might work scientifically by: observing and comparing the life cycles of plants and animals in their local environment with other plants and animals around the world (in the rainforest, in the oceans, in desert areas and in prehistoric times), asking pertinent questions and suggesting reasons for similarities and differences. They might try to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers,	**Links to Computing:** • *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.* • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* **Note:** This unit could easily be amalgamated with the Science Unit of Animals and could run alongside each other. **Potential Links with History:** • *Charles Darwin.* **Link to Computing:** • *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content .* **Link with PSHE Curriculum, in particular Sex Education.** **Link to Science (Working Scientifically):** • *recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs* **Link to Geography and the local environment.** **Links to Design Technology (Cooking):** • *understand and apply the principles of a*
give reasons for classifying plants and animals based on specific characteristics.		
describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird		
describe the life process of reproduction in some plants and animals.		

	bulbs. They might observe changes in an animal over a period of time (for example, by hatching and rearing chicks), comparing how different animals reproduce and grow.	*healthy and varied diet* **This unit could be amalgamated within Science (Living Things and their Habitats)** **Link to PSHE Curriculum and Sex Education.**

Animals including humans

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood	Pupils should build on their learning from years 3 and 4 about the main body parts and internal organs (skeletal, muscular and digestive system) to explore and answer questions that help them to understand how the circulatory system enables the body to function. Pupils should learn how to keep their bodies healthy and how their bodies might be damaged – including how some drugs and other substances can be harmful to the human body. Pupils might work scientifically by: exploring the work of scientists and scientific research about the relationship between diet, exercise, drugs, lifestyle and health.	**Link to Design Technology:** • *understand and apply the principles of a healthy and varied diet* • *prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques* • *understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.* **This unit could be amalgamated within Science (Living Things and their Habitats)** **Link to PSHE Curriculum and Sex Education.**
recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function		
describe the ways in which nutrients and water are transported within animals, including humans.		
describe the changes as humans develop to old age.		

Evolution and inheritance

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago **recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents** **identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution.**	Building on what they learned about fossils in the topic on rocks in year 3, pupils should find out more about how living things on earth have changed over time. They should be introduced to the idea that characteristics are passed from parents to their offspring, for instance by considering different breeds of dogs, and what happens when, for example, labradors are crossed with poodles. They should also appreciate that variation in offspring over time can make animals more or less able to survive in particular environments, for example, by exploring how giraffes' necks got longer, or the development of insulating fur on the arctic fox. Pupils might find out about the work of palaeontologists such as Mary Anning and about how Charles Darwin and Alfred Wallace developed their ideas on evolution. **Note:** At this stage, pupils are not expected to understand how genes and chromosomes work. Pupils might work scientifically by: observing and raising questions about local animals and how they are adapted to their environment; comparing how some living things are adapted to survive in extreme conditions, for example, cactuses, penguins and camels. They might analyse the advantages and disadvantages of specific adaptations, such as being on two feet rather than four, having a long or a short beak, having gills or lungs, tendrils on climbing plants, brightly coloured and scented flowers.	**Links to Computing:** • *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.* • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.* **Link to Design Technology:** • *understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.* **Link to Geography:** • *physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle*

Light

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
recognise that light appears to travel in straight lines	Pupils should build on the work on light in year 3, exploring the way that light behaves, including light sources, reflection and shadows. They should talk about what happens and make predictions. Pupils might work scientifically by: deciding where to place rear-view mirrors on cars; designing and making a periscope and using the idea that light appears to travel in straight lines to explain how it works. They might investigate the relationship between light sources, objects and shadows by using shadow puppets. They could extend their experience of light by looking a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters (they do not need to explain why these phenomena occur).	**Link to Computing:** • *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.* • *select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.*
use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye		
explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes		
use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them.		

Electricity

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit	Building on their work in year 4, pupils should construct simple series circuits, to help them to answer questions about what happens when they try different components, for example, switches, bulbs, buzzers and motors. They should learn how to represent a simple circuit in a diagram using recognised symbols. **Note:** Pupils are expected to learn only about series circuits, not parallel circuits. Pupils should be taught to take the necessary precautions for working safely with electricity. Pupils might work scientifically by: systematically identifying the effect of changing one component at a time in a circuit; designing and making a set of traffic lights, a burglar alarm or some other useful circuit.	**Links to Computing:** • *use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs* • *use sequence, selection, and repetition in programs; work with variables and various forms of input and output* • *design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts* **Link to Design Technology:** • *understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]*
compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches		
use recognised symbols when representing a simple circuit in a diagram.		

Properties and Changes of Materials

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets	Pupils should build a more systematic understanding of materials by exploring and comparing the properties of a broad range of materials, including relating these to what they learnt about magnetism in year 3 and about electricity in year 4. They should explore reversible changes, including, evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes. Pupils should explore changes that are difficult to reverse, for example, burning, rusting and other reactions, for example, vinegar with bicarbonate of soda. They should find out about how chemists create new materials, for example, Spencer Silver, who invented the glue for sticky notes or Ruth Benerito, who invented wrinkle-free cotton. **Note:** Pupils are not required to make quantitative measurements about conductivity and insulation at this stage. It is sufficient for them to observe that some conductors will produce a brighter bulb in a circuit than others and that some materials will feel hotter than others when a heat source is placed against them. Safety guidelines should be followed when burning materials. Pupils might work scientifically by: carrying out tests to answer questions, for example, 'Which materials would be the most effective for making a warm jacket, for wrapping ice cream to stop it melting, or for making blackout curtains?' They might compare materials in order to make a switch in a circuit. They could observe and compare the changes that take place, for example, when burning different materials or baking bread or cakes. They might research and discuss how chemical changes have an impact on our lives, for example, cooking, and discuss the creative use of new materials such as polymers, super-sticky and super-thin materials.	**Link to Design Technology (*Design and Make elements):*** • *Possible activity may involve junk modelling, constructing, building, producing of a product and taking into account the properties of materials that are needed for that particular model.* • *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* **Link to Mathematics (Number and Place Value) For example: using temperature:** • *interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero* **Link to Speaking and Listening:** • *Articulate and justify answers, arguments and opinions.* **Link to Design Technology (Design, Making and Evaluating) for a purpose.** • **Link to Design Technology (Cooking)**
know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution		
use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating		
give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic		
demonstrate that dissolving, mixing and changes of state are reversible changes		
explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.		

Earth and Space

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
describe the movement of the Earth, and other planets, relative to the Sun in the solar system **describe the movement of the Moon relative to the Earth** **describe the Sun, Earth and Moon as approximately spherical bodies** **use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.**	Pupils should be introduced to a model of the Sun and Earth that enables them to explain day and night. Pupils should learn that the Sun is a star at the centre of our solar system and that it has eight planets: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune (Pluto was reclassified as a 'dwarf planet' in 2006). They should understand that a moon is a celestial body that orbits a planet (Earth has one moon; Jupiter has four large moons and numerous smaller ones). **Note:** Pupils should be warned that it is not safe to look directly at the Sun, even when wearing dark glasses. Pupils should find out about the way that ideas about the solar system have developed, understanding how the geocentric model of the solar system gave way to the heliocentric model by considering the work of scientists such as Ptolemy, Alhazen and Copernicus. Pupils might work scientifically by: comparing the time of day at different places on the Earth through internet links and direct communication; creating simple models of the solar system; constructing simple shadow clocks and sundials, calibrated to show midday and the start and end of the school day; finding out why some people think that structures such as Stonehenge might have been used as astronomical clocks.	**Link to Mathematics (Measurement):** • *solve problems involving converting between units of time* • *use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.* **Link to Mathematics (Properties of Shape):** • *identify 3-D shapes, including cubes and other cuboids, from 2-D representations* **Link to History:** • *Ancient Greece – a study of Greek life and achievements and their influence on the western world [for example: the Greek Influence on Astronomy]* **Link to Computing:** • select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information. **Link to Design Technology:** • *Potentially constructing/making a sun dial.* •

Forces

Statutory Objectives	Non Statutory Examples/Advice	Affinity Suggested Links
explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object	Pupils should explore falling objects and raise questions about the effects of air resistance. They should explore the effects of air resistance by observing how different objects such as parachutes and sycamore seeds fall. They should experience forces that make things begin to move, get faster or slow down. Pupils should explore the effects of friction on movement and find out how it slows or stops moving objects, for example, by observing the effects of a brake on a bicycle wheel. Pupils should explore the effects of levers, pulleys and simple machines on movement. Pupils might find out how scientists, for example, Galileo Galilei and Isaac Newton helped to develop the theory of gravitation. Pupils might work scientifically by: exploring falling paper cones or cup-cake cases, and designing and making a variety of parachutes and carrying out fair tests to determine which designs are the most effective. They might explore resistance in water by making and testing boats of different shapes. They might design and make products that use levers, pulleys, gears and/or springs and explore their effects	**Link to History: Isaac Newton** **Link to History: Titanic** **Link to Design Technology:** • *understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linkages* •
identify the effects of air resistance, water resistance and friction, that act between moving surfaces		
recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.		

Science Skills

SCIENCE		Lower School (Years 1 & 2)	Middle School (Years 3 & 4)	Upper School (Years 5 & 6)
	To work scientifically	• Ask simple questions. • Observe closely, using simple equipment. • Perform simple tests. • Identify and classify. • Use observations and ideas to suggest answers to questions. • Gather and record data to help in answering questions.	• Ask relevant questions. • Set up simple practical enquiries and comparative and fair tests. • Make accurate measurements using standard units, using a range of equipment, e.g. thermometers and data loggers. • Gather, record, classify and present data in a variety of ways to help in answering questions. • Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables. • Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions. • Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests. • Identify differences, similarities or changes related to simple, scientific ideas and processes. • Use straightforward, scientific evidence to answer questions or to support their findings.	• Plan enquiries, including recognising and controlling variables where necessary. • Use appropriate techniques, apparatus, and materials during fieldwork and laboratory work. • Take measurements, using a range of scientific equipment, with increasing accuracy and precision. • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, bar and line graphs, and models. • Report findings from enquiries, including oral and written explanations of results, explanations involving causal relationships, and conclusions. • Present findings in written form, displays and other presentations. • Use test results to make predictions to set up further comparative and fair tests. • Use simple models to describe scientific ideas, identifying scientific evidence that has been used to support or refute ideas or arguments.
Biology	To understand plants	• Identify and name a variety of common plants, including garden plants, wild plants and trees and those classified as deciduous and evergreen. • Identify and describe the basic structure of a variety of common flowering plants, including roots, stem/trunk, leaves and flowers. • Observe and describe how seeds and bulbs grow into mature plants. • Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.	• Identify and describe the functions of different parts of flowering plants: roots, stem, leaves and flowers. • Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. • Investigate the way in which water is transported within plants. • Explore the role of flowers in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.	• Relate knowledge of plants to studies of evolution and inheritance. • Relate knowledge of plants to studies of all living things.
	To understand animals and humans	• Identify and name a variety of common animals that are birds, fish, amphibians, reptiles, mammals and invertebrates. • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. • Describe and compare the structure of a variety of common animals (birds, fish, amphibians, reptiles, mammals and invertebrates, including pets). • Identify name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. • Notice that animals, including humans, have offspring which grow into adults.	• Identify that animals, including humans, need the right types and amounts of nutrition, that they cannot make their own food and they get nutrition from what they eat. • Describe the ways in which nutrients and water are transported within animals, including humans. • Identify that humans and some animals have skeletons and muscles for support, protection and movement. • Describe the simple functions of the basic parts of the digestive system in humans. • Identify the different types of teeth in humans and their simple functions.	• Identify and name the main parts of the human circulatory system, and explain the functions of the heart, blood vessels and blood (including the pulse and clotting).

		• Investigate and describe the basic needs of animals, including humans, for survival (water, food and air). • Describe the importance for humans of exercise, eating the right amounts of different types of food and hygiene.		
	To investigate living things	• Explore and compare the differences between things that are living, that are dead and that have never been alive. • Identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants and how they depend on each other.	• Identify and name a variety of living things (plants and animals) in the local and wider environment, using classification keys to assign them to groups. • Give reasons for classifying plants and animals based on specific characteristics. • Recognise that environments are constantly changing and that this can sometimes pose dangers to specific habitats.	• Describe the life cycles common to a variety of animals, including humans (birth, growth, development, reproduction, death), and to a variety of plants (growth, reproduction and death). • Explain the classification of living things into broad groups according to common, observable characteristics and based on similarities and differences, including plants, animals and micro-organisms. • Describe the life process of reproduction in some plants and animals. • Describe the changes as humans develop from birth to old age. • Recognise the impact of diet, exercise, drugs and lifestyle on the way human bodies function.
	To understand evolution and inheritance	• Identify how humans resemble their parents in many features.	• Identify how plants and animals, including humans, resemble their parents in many features. • Recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago. • Identify how animals and plants are suited to and adapt to their environment in different ways.	• Recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents. • Describe how adaptation leads to evolution. • Recognise how and why the human skeleton has changed over time, since we separated from other primates.
Chemistry	To investigate materials	• Distinguish between an object and the material from which it is made. • Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. • Describe the simple physical properties of a variety of everyday materials. • Compare and group together a variety of everyday materials on the basis of their simple physical properties. • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. • Identify and compare the uses of a variety of everyday materials, including wood, metal, plastic, glass, brick/rock, and paper/cardboard.	• Compare and group together different kinds of rocks on the basis of their simple, physical properties. • Relate the simple physical properties of some rocks to their formation (igneous or sedimentary). • Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock. • Compare and group materials together, according to whether they are solids, liquids or gases. • Observe that some materials change state when they are heated or cooled, and measure the temperature at which this happens in degrees Celsius (°C), building on their teaching in mathematics. • Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	• Compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets. • Understand how some materials will dissolve in liquid to form a solution and describe how to recover a substance from a solution. • Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating. • Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. • Demonstrate that dissolving, mixing and changes of state are reversible changes. • Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning, oxidisation and the action of acid on bicarbonate of soda.
Physics	To understand movement,	• Notice and describe how things move, using simple comparisons such as faster and slower.	• Notice that some forces need contact between two objects and some forces act at a distance.	• Describe magnets as having two poles. • Predict whether two magnets will attract or repel each

	forces and magnets	• Compare how different things move. • Observe the apparent movement of the Sun during the day. • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies.	• Observe how magnets attract or repel each other and attract some materials and not others. • Compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet and identify some magnetic materials.	other, depending on which poles are facing. • Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object. • Identify the effect of drag forces, such as air resistance, water resistance and friction that act between moving surfaces. • Describe, in terms of drag forces, why moving objects that are not driven tend to slow down. • Understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs.
	To understand light and seeing	• Observe and name a variety of sources of light, including electric lights, flames and the Sun, explaining that we see things because light travels from them to our eyes.	• Notice that light is reflected from surfaces. • Associate shadows with a light source being blocked by something; find patterns that determine the size of shadows.	• Understand that light appears to travel in straight lines. • Use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eyes. • Use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them, and to predict the size of shadows when the position of the light source changes.
	To investigate sound and hearing	• Observe and name a variety of sources of sound, noticing that we hear with our ears.	• Identify how sounds are made, associating some of them with something vibrating. • Recognise that sounds get fainter as the distance from the sound's source increases.	• Find patterns between the pitch of a sound and features of the object that produced it. • Find patterns between the volume of a sound and the strength of the vibrations that produced it.
	To understand electrical circuits	• Identify common appliances that run on electricity. • Construct a simple series electrical circuit.	• Identify whether or not a lamp will light in a simple series circuit based on whether or not the lamp is part of a complete loop with a battery. • Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit. • Recognise some common conductors and insulators and associate metals with being good conductors.	• Identify and name the basic parts of a simple electrical circuit, including cells, wires, bulbs, switches and buzzers. • Associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit. • Compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches.
	To understand the Earth's movement in space	• Observe the apparent movement of the Sun during the day. • Observe changes across the four seasons. • Observe and describe weather associated with the seasons and how day length varies.	• Describe the movement of the Earth relative to the Sun in the solar system. • Describe the movement of the Moon relative to the Earth.	• Describe the Sun, Earth and Moon as approximately spherical bodies. • Use the idea of the Earth's rotation to explain day and night.

Generic science skills

P4	P5	P6	P7	P8	Early Years
• Explore objects and materials provided, changing some materials by physical means and observing the outcomes. • Communicate awareness of changes in light, sound or movement. • Imitate actions involving main body parts. • Make sounds using their own bodies, and imitate or copy sounds. • Cause intentional movement by a pushing or pulling action.	• Take part in activities focused on the anticipation of and enquiry into specific environments. • Match objects and materials with single features or properties. • Indicate the before and after of material changes. • Try out a range of equipment in familiar and relevant situations.	• Recognise distinctive features of objects. • Begin to make generalisations, connections and predictions from regular experience. • Sort materials according to a single criterion when the contrast is obvious. • Observe closely changes that occur. • Identify some appliances that use electricity. • Show knowledge of some sources of sound and light.	• Understand the scientific use of some simple vocabulary, such as before, after, bumpy, grow, eat and move, and communicate related ideas and observations using simple phrases. • Demonstrate simple properties of light, sound and movement. • Make simple records of findings. • Begin to make suggestions for planning and evaluating work.	• Observe patterns or regular changes in features of objects, living things and events. • Make some contribution to planning and evaluation and to recording findings. • Identify a range of common materials and know about some of their properties. • Sort materials using simple criteria and communicate observations of materials in terms of these properties. • Make observations of changes of light, sound or movement that result from actions and describe the changes when questioned.	• Know about similarities in relation to places, objects, materials and living things. • Make observations of animals and plants and explain why some things occur. • Talk about changes.

Challenge

Years 7, 8 and 9 - Working scientifically

Experimental skills and investigations	Handling information and problem solving	Scientific attitudes	Measurement
• Ask questions and develop lines of enquiry based on observations. • Make predictions using scientific knowledge and understanding. • Plan and design investigations and experiments to make observations and test predictions. • Identify independent, dependent and control variables and other factors to be taken into account when collecting evidence and data. • Select appropriate techniques, apparatus, and materials during fieldwork and laboratory work, working safely. • Make and record observations and measurements using a range of methods for different investigations. • Evaluate the reliability of methods and suggest possible improvements.	• Present observations and data using appropriate methods, including tables and graphs. • Interpret observations and data. • Present reasoned explanations. • Evaluate data, showing awareness of potential errors. • Identify questions arising from results of investigations.	• Work objectively with concern for validity. • Understand the need for collaborative research and peer review. • Evaluate risks.	• Understand and use SI units and IUPAC (International Union of Pure and Applied Chemistry) chemical nomenclature. • Use and derive simple equations. • Undertake data analysis.