



YEAR 5

Teachers at The Wolds and Vale Federation work to a skills based curriculum, which helps ensure that children learn not only factual information, but also develop the skills they need to function well in the future.

This document is designed to give you an overview of what skills your child will be taught within each year group. However, it is only provided as a guide, as the curriculum varies each year, based on:-

- **The needs of the children with the class (e.g. Social/Academic)**
- **Children's prior experiences**
- **Special occasions – e.g. Olympics, Major news events etc**

Key Learning in Reading: Year 5

Word Reading

As above and:

- Use knowledge of root words to understand meanings of words.
- Apply knowledge of prefixes to understand meaning of new words.
- Use suffixes to understand meanings e.g. *-ant, -ance, -ancy, -ent, -ence, -ency, -ible, -able, -ibly, -ably*.
- Read and understand meaning of words on Y5/6 word list – see bottom.
- Use punctuation to determine intonation and expression when reading aloud to a range of audiences.

Comprehension

As above and:

Maintain positive attitudes to reading and understanding what they read by:

- Listening to and discussing a range of fiction/poetry/non-fiction which they might not choose to read themselves.
- Regularly listening to whole novels read aloud by the teacher from an increasing range of authors.
- Exploring themes within and across texts e.g. loss, heroism, friendship.
- Making comparisons within a text e.g. characters' viewpoints of same events.
- Analysing the conventions of different types of writing e.g. *use of first person in autobiographies and diaries*.
- Recommending books to their peers with reasons for choices.
- Reading books and texts that are structured in different ways for a range of purposes.
- Expressing preferences about a wider range of books including modern fiction/traditional stories/myths/legends.
- Learning a wider range of poems by heart.
- Preparing poems and playscripts to read aloud and perform, showing understanding through intonation, tone, volume and action so the meaning is clear to an audience.

Understand what they read by:

- Checking that the book makes sense to them and demonstrating understanding e.g. *through discussion, use of reading journals*.
- Exploring meaning of words in context.
- Demonstrating active reading strategies e.g. *generating questions to refine thinking, noting thoughts in a reading journal*.
- Inferring characters feelings, thoughts and motives from their actions and justifying inferences with evidence.
- Predicting what might happen from information stated and implied.
- Re-read and reads ahead to locate clues to support understanding.
- Scanning for key words and text marking to locate key information.
- Summarising main ideas drawn from more than one paragraph and identifying key details which support this.
- Identifying how language, structure and presentation contribute to meaning e.g. *formal letter, informal diary, persuasive speech*.

Discuss and evaluate how authors use language including figurative language, considering the impact on the reader

- Exploring, recognising and using the terms metaphor, simile, imagery.
- Explaining the effect on the reader of the authors' choice of language.

Distinguish between statements of fact or opinion within a text.

Participate in discussions about books that are read to them and those they can read for themselves, building on their own and others ideas and challenging views courteously.

Explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary by:

- Preparing formal presentations individually or in groups.
- Using notes to support presentation of information.
- Responding to questions generated by a presentation.
- Participating in debates on an issue related to reading (fiction or non-fiction).

Provide reasoned justifications for their views by:

- Justifying opinions and elaborating by referring to the text. (Point + Evidence + Explanation).

Key Learning in Writing: Year 5

Composition		Transcription	
Vocabulary, grammar and punctuation	Composition	Spelling <i>(see also the Lancashire Supporting Spelling document for further detail and advice)</i>	Handwriting
<p>As above and:</p> <ul style="list-style-type: none"> ▪ Create complex sentences by using relative clauses with pronouns <i>who, which, where, whose, when, that</i> e.g. <i>Sam, who had remembered his wellies, was first to jump in the river. The robberies, which had taken place over the past month, remained unsolved.</i> ▪ Create and punctuate complex sentences using <i>ed</i> openers. ▪ Create and punctuate complex sentences using <i>ing</i> openers. ▪ Create and punctuate complex sentences using simile starters. ▪ Demarcate complex sentences using commas and explore ambiguity of meaning. ▪ Explore, collect and use modal verbs to indicate degrees of possibility e.g. <i>might, could, shall, will, must.</i> ▪ Use devices to build cohesion within a paragraph e.g. <i>firstly, then, presently, subsequently.</i> ▪ Link ideas across paragraphs using adverbials for time, place and numbers e.g. <i>later, nearby, secondly.</i> ▪ Identify and use brackets and dashes ▪ Use suffixes –ate, -ise, -ify to convert nouns and adjectives into verbs. ▪ Investigate verb prefixes e.g. <i>dis-, re-, pre-, mis-, over-.</i> 	<p>As above and:</p> <p>Plan their writing by:</p> <ul style="list-style-type: none"> ▪ Identifying the audience and purpose ▪ Selecting the appropriate language and structures. ▪ Using similar writing models. ▪ Noting and developing ideas. ▪ Drawing on reading and research. ▪ Thinking how authors develop characters and settings (in books, films and performances). <p>Draft and write by:</p> <ul style="list-style-type: none"> ▪ Selecting appropriate grammar and vocabulary. ▪ Blending action, dialogue and description within and across paragraphs. ▪ Using devices to build cohesion (see VGP column). ▪ Using organisation and presentational devices e.g. <i>headings, sub headings, bullet points, diagrams, text boxes.</i> <p>Evaluate and edit by:</p> <ul style="list-style-type: none"> ▪ Assessing the effectiveness of own and others' writing in relation to audience and purpose. ▪ Suggesting changes to grammar, vocabulary and punctuation to enhance effects and clarify meaning. ▪ Ensuring consistent and correct use of tense throughout a piece of writing. ▪ Ensuring consistent subject and verb agreement. ▪ Proofreading for spelling and punctuation errors. <p>Perform own compositions for different audiences:</p> <ul style="list-style-type: none"> ▪ Using appropriate intonation and volume. ▪ Adding movement. ▪ Ensuring meaning is clear. 	<p>As above and:</p> <ul style="list-style-type: none"> ▪ Spell words that they have not yet been taught by using what they have learnt about how spelling works in English. ▪ Use further prefixes and suffixes and understand the guidelines for adding them. ▪ Spell some words with 'silent' letters, e.g. <i>knight, psalm, solemn.</i> ▪ Continue to distinguish between homophones and other words which are often confused. ▪ Use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically. ▪ Use dictionaries to check the spelling and meaning of words. ▪ Use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary. ▪ Use a thesaurus. ▪ Use suffixes –ate, -ise, -ify to convert nouns and adjectives into verbs. ▪ Investigate verb prefixes e.g. <i>dis-, re-, pre-, mis-, over-.</i> 	<p>As above and:</p> <ul style="list-style-type: none"> ▪ Write fluently. ▪ Choose when it is appropriate to print or join writing e.g. <i>printing for labelling a scientific diagram.</i>

Key Learning in Mathematics – Year 5

Number – number and place value

- **Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.**
- *Count forwards and backwards in decimal steps.*
- **Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.**
- **Read, write, order and compare numbers with up to 3 decimal places.**
- *Identify the value of each digit to three decimal places.*
- *Identify represent and estimate numbers using the number line.*
- *Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number.*
- **Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.**
- **Round decimals with two decimal places to the nearest whole number and to one decimal place.**
- **Multiply/divide whole numbers and decimals by 10, 100 and 1000.**
- **Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero.**
- *Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal.*
- **Read Roman numerals to 1000 (M); recognise years written as such.**
- **Solve number and practical problems that involve all of the above.**

Number – addition and subtraction

- *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).*
- *Select a mental strategy appropriate for the numbers involved in the calculation.*
- *Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place).*
- *Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places).*
- **Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places.**
- **Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction).**
- **Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.**
- **Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.**
- *Solve addition and subtraction problems involving missing numbers.*

Number – multiplication and division

- *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).*
- **Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.**
- **Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.**
- **Establish whether a number up to 100 is prime and recall prime numbers up to 19.**
- **Recognise and use square (2) and cube (3) numbers, and notation.**
- *Use partitioning to double or halve any number, including decimals to two decimal places.*
- **Multiply and divide numbers mentally drawing upon known facts.**
- **Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.**
- **Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers.**
- **Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.**
- *Use estimation/inverse to check answers to calculations; determine, in the context of a problem, an appropriate degree of accuracy.*
- **Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.**
- **Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.**

Number – fractions, decimals and percentages

- **Recognise mixed numbers and improper fractions and convert from one form to the other.**
- **Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$).**
Count on and back in mixed number steps such as $\frac{1}{2}$.
- **Compare and order fractions whose denominators are all multiples of the same number (including on a number line).**
- **Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.**
- **Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.**
- **Add and subtract fractions with denominators that are the same and that are multiples of the same number (using diagrams).**
- **Write statements > 1 as a mixed number (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1 \frac{1}{5}$).**
- **Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.**
- **Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.**
Solve problems involving fractions and decimals to three places.
- **Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and fractions with a denominator of a multiple of 10 or 25.**

Geometry – properties of shapes

- **Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.**
- **Use the properties of rectangles to deduce related facts and find missing lengths and angles.**
- **Identify 3-D shapes from 2-D representations.**
- **Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.**
- **Draw given angles, and measure them in degrees ($^{\circ}$).**
- **Identify:**
 - angles at a point and one whole turn (total 360°).
 - angles at a point on a straight line and half a turn (total 180°).
 - other multiples of 90° .

Geometry – position and direction

- *Describe positions on the first quadrant of a coordinate grid.*
- *Plot specified points and complete shapes.*
- **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.**

Measurement

- *Use, read and write standard units of length and mass.*
- **Estimate (and calculate) volume ((e.g., using 1 cm^3 blocks to build cuboids (including cubes)) and capacity (e.g. using water).**
- *Understand the difference between liquid volume and solid volume.*
- *Continue to order temperatures including those below 0°C .*
- **Convert between different units of metric measure.**
- **Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.**
- **Measure/calculate the perimeter of composite rectilinear shapes.**
- **Calculate and compare the area of rectangle, use standard units square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes.**
- *Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks.*
- **Solve problems involving converting between units of time.**
- **Use all four operations to solve problems involving measure using decimal notation, including scaling.**

Statistics

- *Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes).*
- **Complete, read and interpret information in tables and timetables.**
- **Solve comparison, sum and difference problems using information presented in all types of graph including a line graph.**
- *Calculate and interpret the mode, median and range.*

Key Learning in Science: Year 5

Environment - Observing Life cycles	Material Properties – Testing Material Properties	Material Changes - Reversible changes
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> 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. <p>Notes and Guidance (non-statutory): 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.</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> 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. Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. Compare a variety of materials and measure their effectiveness (e.g. hardness, strength, flexibility, solubility, transparency, thermal conductivity, electrical conductivity). <p>Temperature and Thermal Insulation</p> <ul style="list-style-type: none"> Heat always moves from hot to cold. Some materials (insulators) are better at slowing down the movement of heat than others. Objects/liquids will warm up or cool down until they reach the temperature of their surroundings. <p>Notes and Guidance (non-statutory): Pupils should build a more systematic understanding of materials by exploring and comparing the properties of a broad range of materials and relating these to what they learnt about magnetism in Year 3 and about electricity in Year 4.</p> <p>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.</p>	<ul style="list-style-type: none"> 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. Demonstrate that dissolving, mixing and changes of state are reversible changes. Changes can occur when different materials are mixed. Some material changes can be reversed and some cannot. Recognise that dissolving is a reversible change. Distinguish between melting and dissolving. Mixtures of solids (of different particle size) can be separated by sieving. Mixtures of solids and liquids can be separated by filtering if the solid is insoluble (un-dissolved). Evaporation helps us separate soluble materials from water. Changes to materials can happen at different rates (factors affecting dissolving, factors affecting evaporation – amount of liquid, temperature, wind speed). Freezing, melting and boiling changes can be reversed (revision from YR4). <p>Notes and Guidance (non-statutory): Pupils should explore reversible changes including evaporating, filtering, sieving, melting and dissolving, recognising that melting and dissolving are different processes.</p>
<p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> 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. Suggesting reasons for similarities & differences. They might try to grow new plants from different parts of the parent plant, for example, seeds, stem and root cuttings, tubers, bulbs. Observe changes in an animal over a period of time (for example, by hatching and rearing chicks). Comparing how different animals reproduce and grow. 	<p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> Carry out tests to answer questions such as ‘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?’ Compare materials in order to make a switch in a circuit. 	<p style="text-align: center;">Material Changes – Irreversible changes</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> 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. <p>Notes and Guidance (non-statutory): 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.</p> <p>Note: Safety guidelines should be followed when burning materials.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> Observing and comparing the changes that take place, for example, when burning different materials or baking bread or cakes. Researching and discussing how chemical changes have an impact on our lives, for example cooking. Discuss [research] the creative use of new materials such as polymers, super-sticky and super-thin materials.

Animals - Human Life Cycles

Pupils should be taught to:

- Describe the changes as humans develop to old age.
- Animals are alive; they move, feed, grow, use their senses, reproduce, breathe/respire and excrete.

Notes and Guidance (non-statutory):

Pupils should draw a timeline to indicate stages in the growth and development of humans. They should learn about the changes experienced in puberty.

Pupils might work scientifically by:

- Researching the gestation periods of other animals and comparing them with humans.
- By finding out and recording the length and mass of a baby as it grows.

Light and Astronomy – Earth and Space

Pupils should be taught to:

- 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 Sun/Earth/Moon as approximately spherical bodies.
- Use the idea of the Earth's rotation to explain day and night.
- The Earth spins once around its own axis in 24 hours, giving day and night.
- The Earth orbits the Sun in one year.
- We can see the Moon because the Sun's light reflects off it.
- The Moon orbits the Earth in approximately 28 days and changes to the appearance of the moon are evidence of this.
- The Sun appears to move across the sky from East to West and this causes shadows to change during the day.
- Changes to shadow length over a day or changes to sunrise and sunset times over a year are evidence supporting the movement of the Earth.

Notes and Guidance (non-statutory):

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.

Forces – Effects on Movement

Pupils should be taught to:

- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- 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.
- There are different types of forces (push, pull, friction, air resistance, water resistance, magnetic forces, gravity).
- Gravity can act without direct contact between the Earth and an object.
- Friction, air resistance and water resistance are forces which slow down moving objects.
- Friction, air resistance and water resistance can be useful or unwanted.
- The effects of friction, air resistance and water resistance can be reduced or increased for a preferred effect.
- More than one force can act on an object simultaneously (either reinforcing or opposing each other).

Notes and Guidance (non-statutory):

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 such as 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.
- Designing and making [exploring] a variety of parachutes.
- Carrying out fair tests to determine which designs are the most effective.
- Exploring resistance in water by making and testing boats of different shapes.
- Design and make artefacts that use simple levers, pulleys, gears and/or springs and explore their effects.

Sort/group/compare/classify/identify	Research <i>finding things out using a wide range of secondary sources of information and recognising that scientific ideas change and develop over time</i>	Modelling	Recording of 'Explore / Observe' <i>developing a deeper understanding of a wide range of scientific ideas encountering more abstract ideas</i>	Questioning <i>asking their own questions about scientific phenomena</i>	Planning <i>using different types of scientific enquiry making decisions about and explaining choices for testing</i>
<ul style="list-style-type: none"> ▪ Compare and contrast things beyond their locality. ▪ Compare more complex processes, systems, functions (e.g. life cycles of different living things, organ systems of different animals). ▪ Suggest reasons for similarities and differences. 	<ul style="list-style-type: none"> ▪ Research the work of famous scientists (historical and modern day) and use this to find out how scientific ideas have changed over time. ▪ Find things out using a wide range of secondary sources of information. 	<ul style="list-style-type: none"> ▪ Create simple models to describe scientific ideas (e.g. circulatory system). ▪ Use simple models to describe scientific ideas (e.g. of movements of the Sun and Earth, solar system, shadow clocks, magnetic compasses for navigation). 	<ul style="list-style-type: none"> ▪ Read, spell and pronounce scientific vocabulary correctly (Y5/6). ▪ Use their developing scientific knowledge and understanding and relevant scientific language to discuss, communicate and explain their findings. ▪ Explore more abstract systems/functions/changes and record their understanding of these (e.g. circulatory system). ▪ Observe changes over different periods of time. 	<ul style="list-style-type: none"> ▪ Raise different kinds of questions (Y5/6) ▪ Refine a scientific question so that it can be investigated. ▪ Ask their own pertinent questions. 	<ul style="list-style-type: none"> ▪ Explain which variables need to be controlled and why. ▪ Make most of the planning decisions about and carry out fair tests. ▪ Recognise when it is appropriate to carry out a fair test and plan how to set it up.
Equipment and measurement <i>increasing complexity with increasing accuracy and precision make their own decisions about the data to collect</i>	Communicating Recording <i>recording data, reporting findings, presenting findings</i>	Considering the results of an investigation / writing a conclusion			Collaborating
		Describe results <i>Looking for patterns analysing functions, relationships and interactions more systematically</i>	Explain results <i>Draw conclusions based on evidence</i>	Trusting my results	
<ul style="list-style-type: none"> ▪ Recording data and results of increasing complexity (Y5/6). ▪ Follow safety guidelines (Y5/6). ▪ Make their own decisions about what observations to make or measurements to use and how long to make them for [recognising the need for repeat readings on some occasions]. ▪ Decide how to record data from a choice of familiar approaches. ▪ Choose the most appropriate equipment to make measurements. ▪ Explain how to use equipment accurately. 	<ul style="list-style-type: none"> ▪ Record data and results of increasing complexity using tables, bar and line graphs, and models. ▪ Report findings from enquiries using discussion, drawings [annotated], oral and written explanations of results, and conclusions. ▪ Present findings in written form, displays and other presentations (Y5/6) 	<ul style="list-style-type: none"> ▪ Identify patterns that might be found in the natural environment. ▪ Look for patterns and notice relationships between things [and describe these]. 	<ul style="list-style-type: none"> ▪ Use their developing scientific knowledge and understanding and relevant scientific language to explain their findings. ▪ Draw conclusions based on their data and observations. ▪ Read, spell and pronounce scientific vocabulary correctly (Y5/6). 	<ul style="list-style-type: none"> ▪ Use test results to make predictions to set up further comparative and fair tests. ▪ Comment on how reliable their data is. 	

Key Learning in Computing: Years 5 and 6

Information Technology

Programme of Study

- **Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.**
- **Use search technologies effectively.**

Skills

Design, create, manage and manipulate digital content

- **Select, use and combine internet services to create digital 'content' (inc. programs and systems).**
- **Demonstrate awareness of intended audience in work.**
- **Independently select the most appropriate ICT tools for intended purpose and audience.**
- **Routinely evaluate and improve work as part of the design process.**
- **Use a range of digital devices to produce digital 'content'.**

Text and images

- **Develop and use criteria to evaluate design and layout of a range of resources including web sites, pages on VLE, online resources and presentations.**
- **Evaluate design and layout of a range of resources including web sites, pages on VLE, online resources and presentations.**
- **Select suitable text, sounds and graphics from other electronic sources, and import into own work.**
- **Create an outline plan for a non-linear presentation; producing a diagram to demonstrate understanding how pages link and the need for clarity.**
- **Develop the use of hyperlinks to produce more effective, interactive, non-linear presentations.**
- **Use of hyperlinks to produce more effective, interactive, non-linear presentations.**
- **Develop consistency across a document - same style of font, colour, body text size, etc.**
- **Make effective use of transitions and animations in presentations. Consider their appropriateness and overall effect on the audience. Independently select, process and import images, video and sounds from a variety of sources to enhance work.**
- **Format and edit work to improve clarity and purpose using a range of tools, e.g. cut and paste, justify, tabs, insert and replace.**
- **Through peer and self assessment, evaluate presentations and make improvements.**
- **Make use of transitions and special effects in video editing software, understanding the effect on the audience.**
- **Export images, presentations and movies in formats appropriate for the purpose and use them in multimedia presentations.**
- **Plan and create a short animated sequence to communicate a specific idea, using a storyboard and timeline.**
- **Design and create a short animated sequence.**

Knowledge and Understanding

Design, create, manage and manipulate digital content

- **Understand the importance of content and editing to produce digital content for specific audiences.**
- **Understand that many different devices can be used in isolation and sometimes together to produce digital 'content'.**
- **Understand that you can convert between different formats of files.**

Text and images

- **Understand the importance of evaluation and adaptation of individual features to enhance an overall presentation.**
- **Understand the potential of multimedia to inform or persuade and know how to integrate words, images and sounds imaginatively for different audiences and purposes.**
- **Recognise the features of good design in different printed and electronic texts, (e.g. a poster, website, presentation). Talk about design in the context of own work.**
- **Understand that images, sounds and text can be subject to copyright and abide by copyright rules**
- **Know that images (still and moving) can be used to enhance presentations or communicate ideas.**
- **Understand the differences between object based graphics packages and paint packages.**
- **Be aware when it is more appropriate to use an object based graphics package or a paint package.**
- **Discuss and evaluate own and others' images and movies, refining for given audience or task.**
- **Understand that computers can save digital images, graphics and movies in many different file formats and that some are better suited to certain purposes than others.**
- **Understand the need for caution when using the Internet to search for images and what to do if unsuitable images are found.**
- **Know how to take images appropriately and responsibly**
- **Understand the implications of copyright and apply this to work.**
- **Know how to select suitable software tools to accomplish specific goals and tasks**

Sound

- Independently select and use a variety of devices to record musical and non-musical sounds.
- Independently select, edit, manipulate and combine sound files from a range of sources to create a composition which could be broadcast for a specific purpose and audience, e.g. a soundbyte or podcast.
- Upload and download projects to other devices and online space e.g. VLE, blog or website, collaborating and communicating with audiences in locations beyond school.
- Create their own sounds and compositions to add to presentations, animations and films.
- Use ICT to produce music or sound effects for a specific purpose, considering the impact on the audience, e.g. length, style, genre.

Data handling

- Construct, refine and interpret bar charts, scatter graphs, line graphs and pie charts.
- Discuss how IT enables you to search and sift through large amounts of different types of information and describe the advantages of using the tools
- Design questions and perform complex searches using key words, to search a large pre-prepared database looking for relationships and patterns, e.g. data on the Internet; census data.
- Check the reliability of the data; identify and correct inaccuracies.
- Solve complex enquiries involving selecting, processing and presenting data; drawing conclusions, e.g. is there a relationship between minibeast habitat and diet?
- Design a data capture form, e.g. a questionnaire or table to collect information to answer a specific question.
- Search data according to more than one criterion.
- Present data to a specified audience and display findings in other software, e.g. through presentation software.
- Compare different charts and graphs, e.g., in tables, frequency diagrams, pictograms, bar charts, databases or spreadsheets and understand that different ones are used for different purposes.
- Select and use the most appropriate method to organise present, analyse and interpret data.
- Use a datalogger's settings to log data over a chosen time span (Science)
- Use a range of sensors including in a variety of situations in the course of scientific investigations. (Science)
- Use a datalogger to make and record accurate measurements or observations and produce graphical information to answer questions and solve simple problems. (Science)
- Be able to design experiments which require use of dataloggers, recognising what measurements will be needed, how many repeats and the most appropriate means of recording data. (Science)

Sound

- Be aware of different sound file formats, e.g., MP3, WAV; save and use appropriately.
- Know when it is appropriate to use sound/music to communicate with an audience.

Data handling

- Recognise the need for accuracy when designing, entering and interrogating data and how this will affect the quality of information gained.
- Recognise the consequences of using inaccurate data and relate to the outside world, e.g. police, doctors, banks, school databases. .
- Understand which searches and graph types are relevant to a specific problem and types of information.
- Understand that there are different types of data, e.g., numeric, alphabetic, date, alphanumeric, currency.
- Understand the importance of presentation techniques aimed at a specific audience.
- Understand the need for data protection and some of the rights of individuals over stored data and how it affects use and storage of data in the real world.
- Know when to choose dataloggers as the most appropriate tool for capturing data for a particular purpose and explain /justify their choices. (Science)
- Appreciate that use of technology can bring added accuracy to results but also that occasional anomalies may need moderation and further investigation. (Science)

Digital research - searching

- Choose to use the internet when appropriate as a tool for independent research, e.g., gathering text, images, videos and sound as resources to use in their own work.
- Use more advanced searching techniques (e.g. Boolean and relational operators).
- Choose the most appropriate search engine for a task, e.g., image search, search within a specific site or searching the wider internet.
- Be able to create and use folders within lists of book-marks or favourites to organise content.
- Apply their knowledge of what to do and who to tell if they discover something inappropriate or offensive on a website, at home and in school.

Digital research - searching

- Know and understand what to do and who to tell if they discover something inappropriate or offensive on a website, at home and in school.
- Understand when and where the internet can be used as a research tool.
- Understand that you should not publish other peoples' material on the Internet without their permission but you can hyperlink to their websites and acknowledge the source.
- Know how Boolean and relational operators can be used in searching.
- Understand that good online research involves processing information, and interpreting it for others rather than direct copying

Digital Literacy

Programme of Study

- Be discerning in evaluating digital content.
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
- Understand the opportunities computer networks offer for communication and collaboration.

Skills

Online safety

- Locate and respond appropriately to the terms and conditions on websites.
- Identify unsuitable posts (e.g. on blogs, a forum ...) pertaining to content and conduct.
- Identify inappropriate and unacceptable behavior when analysing resources such as videos, text-based scenarios and electronic communications.
- Continue to develop the skills to identify risks involved with contact, content and their own conduct whilst online.
- Use electronic communication and collaboration tools safely.

Knowledge and Understanding

Online safety

- Be aware that file sharing is usually illegal due to copyright laws and can also spread viruses.
- Know a range of ways to report concerns about content and contact.
- Know what a 'strong' password / understand the importance of keeping personal data secure.
- Understand what a digital footprint is.
- Know that resources and materials can be covered by copyright and downloading these materials is illegal.
- Understand that web users have to observe the terms and conditions of websites.
- Understand that electronic communication can be malicious or inappropriate and recognise when an attachment may be unsafe to open.
- Understand that social network or other online environments have security settings, which can be altered, to protect the user.
- Understand the need to respect privacy of other individuals, e.g., through using bcc function on an email, not uploading/using images or personal information without permission.
- Understand the benefits of developing a 'nickname' for online use where appropriate.
- Understand they have a right to be protected from inappropriate use of technology by others and the need to respect the rights of other users.
- Understand some malicious adults may use various techniques on the Internet to make contact, elicit personal information and 'groom' young children, e.g., fake profiles.
- Understand the risks involved in arranging to meet and subsequently meeting anybody from the online world in the offline world.
- Know that they should tell a trusted adult immediately if they are asked to meet anybody from the online world in the offline world.
- Know how to report any suspicions, e.g., through school's eSafety policies and procedures

- and the use of CEOP's 'report abuse' button, which links directly to the police.
- Recognise that cyber bullying is unacceptable and will be sanctioned according to the school's eSafety policies and procedures /AUP.
- Know how to report an incident of cyber bullying if and when it occurs, according to the school's eSafety policies and procedures /AUP.
- Understand that they should not publish other peoples' pictures/tag them without permission.
- Know that content, e.g., photographs and videos, put online are very difficult to remove
- Understand how their own inappropriate conduct can put them at risk whilst online

Electronic communication and collaboration

- Independently, and with regard for eSafety, select and use appropriate communication tools to solve problems by collaborating and communicating with others within and beyond school, e.g., email, discussion forums, blogs, wikis, text messages and other digital communication tools.
- Make use of webcams and/or video conferencing, if appropriate and available, e.g., to exchange ideas and collaborate on projects with external providers, another class or school, or abroad.
- Extend online publishing to a more global audience, e.g. creating and publishing web pages, blog and podcasting.
- Evaluate the effectiveness of a variety of digital communication tools for communicating and collaborating.

Example- e-mail

- Add e-mail addresses to a class address book.
- Create group or distribution lists of contacts from an address book.
- Learn how to use the cc and bcc facilities when sending an e-mail and discuss when these should be used.
- Send 'group' e-mails and be aware of the benefits and risks in 'replying to all'.

Digital research - search

- Use strategies to verify the accuracy and reliability of information, distinguishing between fact and opinion, e.g. cross checking with different websites or books.
- Identify whether a file has copyright restrictions and can be legally downloaded from the internet then used in their own work.
- Use appropriate strategies for finding, critically evaluating, validating and verifying information, e.g., using different keywords, skim-reading to check relevance of information, cross checking with different websites or other non ICT resources.
- Distinguish between fact and opinion and make informed choices about the sources of online information used to inform their work.
- Apply their knowledge of the meaning of domain names and common website extensions, e.g., .co.uk, .com, .ac, .sch .org, .gov, .net, to support the validation process.
- Develop skills to question where web content might originate from and understand that this gives clues to its authenticity and reliability, e.g., by looking at web address, author, contact us sections, linked pages.
- Use acquired search skills to question where web content might originate from and understand that this gives clues to its authenticity and reliability, e.g., by looking at web address, author, contact us sections, linked pages.
- Identify how copyright restrictions can affect how a file can be used in their own work, e.g., those produced under Creative Commons Licensing.

Electronic communication and collaboration

- Understand the potential benefits and risks of digital communication and that methods will vary according to purpose.
- Understanding of which tools are better for communicating or collaborating and those that can be used both.
- Understand what open-source software is and the conditions of use when using it.

Digital research - search

- Understand when and where the internet can be used as a research tool.
- Understand how search engines work and know that there are different search engines; some to search within sites, and some to search the wider Internet. Be aware that copying text directly from websites or non-digital resources is equivalent to stealing other people's work (plagiarism).
- Understand the concept of copyright and how it applies to material they find/download and to their own work.
- Understand the concept of plagiarism and the importance of acknowledging and referencing sources.
- Understand that you should not publish other peoples' material on the Internet without their permission but you can hyperlink to their websites.
 - Become aware that file sharing is usually illegal due to copyright laws and can also spread viruses.
 - Talk about validity, plausibility and appropriateness of information, especially on the internet.
 - Understand some of the potential dangers and impact of not validating information.
- Understand that good online research involves processing information, and interpreting it for others rather than direct copying.

Computer Science

Programme of Study

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
- Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web.
- Appreciate how results are selected and ranked.

Skills

Programming

- Use repetition* and selection* in programs.
- Use variables* in programs.
- Design and create programs using decomposition.
- Design programs to accomplish specific tasks or goals.
- Use logical reasoning to develop systematic strategies that can be used to debug algorithms and programs.
- Use procedures in programs..
- Design, test and refine programs to control robots or floor turtles taking account of purpose and needs.
- Use programming software to create simulations.

Simulations and modelling/IT – Data handling

- Explore the effects of changing variables in models and simulations in order to solve a problem.
- Make and test predictions.
- Enter formulae into a pre-prepared spreadsheet - explore the effects of changing variables.
- Develop simple spreadsheet models to investigate a real life problem.
- Create simple spreadsheet models to investigate a real life problem.
- Identify and enter the correct formulae into cells. Make predictions of the outcome of changing variables.

Knowledge and Understanding

Programming

- Know the meaning of the key terms:
 - selection.
 - variables.
 - decomposition.
- Know the meaning of logical reasoning.
- Understand what a procedure is and why it is important in programs.
- Know that programs can be represented in different formats including written and diagrammatic.
- Understand the need for precision when creating sequences to ensure reliability.
- Understand how experiences of programming / control relate to control systems in the real world.
- Understand that there are often different ways to solve the same problem or task
- Understand that programming software can create simple and complex simulations.

Simulations and modelling/IT – Data handling

- Understand when and where it is appropriate to use a spreadsheet model or a simulation to support an investigation and explain their choices.
- Understand that spreadsheets can automate functions, making it easier to test variables, e.g. when planning a budget you can change the number of items and see the changes to total cost.
- Understand that spreadsheets can be used to explore mathematical models.
- Understand the need for accuracy and frequent checking when entering formulae.
- Understand the possible consequences of using inaccurate data or formulae.

Digital research - search

- Understand how search engines work and know that there are different search engines; some to search within sites, and some to search the wider Internet.
- Understand what 'ranking' is when related to search engines
- Understand the importance of keywords and 'linked' pages in the listing/ranking of websites.

Understand computer networks

- Understand the difference between the internet and the world wide web.
- Understand that the Internet provides many different services.
- Know about the key components of a network and how networks work.
- Understand what an IP (Internet Protocol) address is.

Key Learning in Geography: Years 5 and 6



Locational knowledge		Place knowledge		Human and Physical Geography	
<ul style="list-style-type: none"> Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America. Name and locate counties and cities of the United Kingdom. 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). 		<ul style="list-style-type: none"> A region of the United Kingdom. A region in a European country. A region within North or South America. 		<ul style="list-style-type: none"> Describe and understand key aspects of: <ul style="list-style-type: none"> 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. 	
Skills					
Mapping	Fieldwork	Enquiry and Investigation	Communication	Use of ICT / technology	
<ul style="list-style-type: none"> Use a wide range of maps, atlases, globes and digital maps to locate countries and features studied. Relate different maps to each other and to aerial photos. Begin to understand the differences between maps e.g. Google maps vs. Google Earth, and OS maps. Choose the most appropriate map/globe for a specific purpose. Follow routes on maps describing what can be seen. Interpret and use thematic maps. Understand that purpose, scale, symbols and style are related. Recognise different map projections. Identify, describe and interpret relief features on OS maps. Use six figure coordinates. Use latitude/longitude in a globe or atlas. Create sketch maps using symbols and a key. Use a wider range of OS symbols including 1:50K symbols. Know that different scale OS maps use some different symbols. Use models and maps to discuss land shape i.e. contours and slopes. Use the scale bar on maps. Read and compare map scales. Draw measured plans. 	<ul style="list-style-type: none"> Use eight cardinal points to give directions and instructions. Observe, measure and record human and physical features using a range of methods including sketch maps, cameras and other digital technologies e.g. data loggers to record (e.g. weather) at different times and in different places. Interpret data collected and present the information in a variety of ways including charts and graphs. 	<ul style="list-style-type: none"> Ask and answer questions that are more causal e.g. Why is that happening in that place? Could it happen here? What happened in the past to cause that? How is it likely change in the future? Make predictions and test simple hypotheses about people and places. 	<ul style="list-style-type: none"> Identify and explain increasing complex geographical features, processes (changes), patterns, relationships and ideas. Use more precise geographical language relating to the physical and human processes detailed in the PoS e.g. tundra, coniferous/deciduous forest when learning about biomes. Communicate geographical information in a variety of ways including through maps, diagrams, numerical and quantitative skills and writing at increasing length. Develop their views and attitudes to critically evaluate responses to local geographical issues or events in the news e.g. for/against arguments relating to the proposed wind farm. 	<ul style="list-style-type: none"> Use appropriate search facilities when locating places on digital/online maps and websites. Use wider range of labels and measuring tools on digital maps. Start to explain satellite imagery. Use and interpret live data e.g. weather patterns, location and timing of earthquakes/volcanoes etc. Collect and present data electronically e.g. through the use of electronic questionnaires/surveys. Communicate geographical information electronically e.g. multimedia software, webpage, blog, poster or app. Investigate electronic links with schools/children in other places e.g. email/video communication. 	



Key Learning in History: Years 5 and 6

Chronology	Events, People and Changes	Communication
<p>Show their chronologically secure knowledge by:</p> <ul style="list-style-type: none">▪ Sequencing events and periods through the use of appropriate terms relating to the passing of time (<i>empire, civilisation, parliament, peasantry...</i>).▪ Identifying where periods studied fit into a chronological framework by noting connections, trends and contrasts over time.▪ Know and understand the history of these islands as a coherent, chronological narrative, from the earliest times to the present day.▪ In depth study of different periods, using appropriate vocabulary when describing the passing of time and historical concepts (<i>propaganda, bias, primary source, secondary source, reliability...</i>).▪ Analyse connections, trends and contrasts over time.	<p>Show their knowledge and understanding of local, national and international history by:</p> <ul style="list-style-type: none">▪ Understanding significant aspects of history – nature of ancient civilisations; expansion and dissolution of empires; characteristic features of non-European societies; achievements and follies of mankind.▪ Gaining historical perspective by placing their growing knowledge into different contexts...between cultural, economic, military, political religious and social history.▪ Establishing a narrative showing connections and trends within and across periods of study.▪ Begin to recognise and describe the nature and extent of diversity, change and continuity and suggest relationships between causes.▪ Presenting a clear narrative within and across periods that notes connections, contrasts and trends over time.	<ul style="list-style-type: none">▪ Produce structured work that makes connections, draws contrasts, analyses trends, frames historically-valid questions involving thoughtful selection and organisation of relevant historical information using appropriate dates and terms.▪ Produce detailed structured work to select and deploy information and make appropriate use of historical terminology and contrasting evidence.
Enquiry, Interpretation and Using Sources		
<ul style="list-style-type: none">▪ Understand the methods of historical enquiry, how evidence is used to make historical claims, and begin to discern how and why contrasting arguments and interpretations of the past have been constructed.▪ Use sources as a basis for research from which they will begin to use information as evidence to test hypotheses.▪ Begin to evaluate sources to make historical claims, and discern how and why contrasting arguments and interpretations of the past have been constructed, and establish evidence for particular enquiries.	<ul style="list-style-type: none">▪ Understand how our knowledge of the past is constructed from a range of different sources and that different versions of past events often exist, giving some reasons for this.▪ Begin to recognise why some events, people and changes might be judged as more historically significant than others.	

Key Learning in Art and Design: Years 5 and 6



Exploring and Developing Ideas	Evaluating and Developing Work
<ul style="list-style-type: none"> ▪ Select and record from first hand observation, experience and imagination, and explore ideas for different purposes. ▪ Question and make thoughtful observations about starting points and select ideas to use in their work. ▪ Explore the roles and purposes of artists, craftspeople and designers working in different times and cultures. 	<ul style="list-style-type: none"> ▪ Compare ideas, methods and approaches in their own and others' work and say what they think and feel about them. ▪ Adapt their work according to their views and describe how they might develop it further. ▪ Annotate work in a journal.

Drawing

<ul style="list-style-type: none"> ▪ Work from a variety of sources including observation, photographs and digital images. ▪ Work in a sustained and independent way to create a detailed drawing. ▪ Develop close observation skills using a variety of view finders. ▪ Use a journal to collect and develop ideas. ▪ Identify artists who have worked in a similar way to their own work. 	<p>Lines, Marks, Tone, Form and Texture</p> <ul style="list-style-type: none"> ▪ Use dry media to make different marks, lines, patterns and shapes within a drawing. ▪ Experiment with wet media to make different marks, lines, patterns, textures and shapes. ▪ Explore colour mixing and blending techniques with coloured pencils. ▪ Use different techniques for different purposes i.e. shading, hatching within their own work. ▪ Start to develop their own style using tonal contrast and mixed media. 	<p>Perspective and Composition</p> <ul style="list-style-type: none"> ▪ Begin to use simple perspective in their work using a single focal point and horizon. ▪ Begin to develop an awareness of composition, scale and proportion in their paintings e.g. foreground, middle ground and background. ▪ Show an awareness of how paintings are created i.e. Composition.
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Digital Media	Painting	Printing	Textiles	3-D	Collage
<ul style="list-style-type: none"> ▪ Record, collect and store visual information using digital cameras etc. ▪ Present recorded visual images using software e.g. Photostory, Powerpoint. ▪ Use a graphics package to create and manipulate new images. ▪ Be able to Import an image (scanned, retrieved, taken) into a graphics package. ▪ Understand that a digital image is created by layering. ▪ Create layered images from original ideas. 	<ul style="list-style-type: none"> ▪ Develop a painting from a drawing. ▪ Carry out preliminary studies, trying out different media and materials and mixing appropriate colours. ▪ Create imaginative work from a variety of sources e.g. observational drawing, themes, poetry, music. <p>Colour</p> <ul style="list-style-type: none"> ▪ Mix and match colours to create atmosphere and light effects. ▪ Be able to identify and work with complementary and contrasting colours. 	<ul style="list-style-type: none"> ▪ Create printing blocks by simplifying an initial journal idea. ▪ Use relief or impressed method. ▪ Create prints with three overlays. ▪ Work into prints with a range of media e.g. pens, colour pens and paints. 	<ul style="list-style-type: none"> ▪ Use fabrics to create 3D structures. ▪ Use different grades of threads and needles. ▪ Experiment with batik techniques. ▪ Experiment with a range of media to overlap and layer creating interesting colours and textures and effects. 	<ul style="list-style-type: none"> ▪ Shape, form, model and construct from observation or imagination. ▪ Use recycled, natural and man-made materials to create sculptures. ▪ Plan a sculpture through drawing and other preparatory work. ▪ Develop skills in using clay including slabs, coils, slips, etc. ▪ Produce intricate patterns and textures in a malleable media. 	<ul style="list-style-type: none"> ▪ Add collage to a painted, printed or drawn background. ▪ Use a range of media to create collages. ▪ Use different techniques, colours and textures etc. when designing and making pieces of work. ▪ Use collage as a means of extending work from initial ideas.

Key Learning in Design and Technology: Years 5 and 6



Design		Make	Evaluate
<ul style="list-style-type: none"> ▪ List tools needed before starting the activity. ▪ Plan the sequence of work e.g. using a storyboard. ▪ Record ideas using annotated diagrams. ▪ Use models, kits and drawings to help formulate design ideas. ▪ Combine modelling and drawing to refine ideas. ▪ Devise step by step plans which can be read / followed by someone else. ▪ Use exploded diagrams and cross-sectional diagrams to communicate ideas. ▪ Sketch and model alternative ideas. ▪ Decide which design idea to develop. 		<ul style="list-style-type: none"> ▪ Make prototypes. ▪ Develop one idea in depth. ▪ Use researched information to inform decisions. ▪ Produce detailed lists of ingredients/ components/ materials and tools. ▪ Use a computer to model ideas. ▪ Select from and use a wide range of tools. ▪ Cut accurately and safely to a marked line. ▪ Select from and use a wide range of materials. ▪ Use appropriate finishing techniques for the project. ▪ Refine their product – review and rework/improve. 	<ul style="list-style-type: none"> ▪ Research and evaluate existing products (including book and web based research). ▪ Consider user and purpose. ▪ Identify the strengths and weaknesses of their design ideas. ▪ Give a report using correct technical vocabulary. ▪ Consider and explain how the finished product could be improved related to design criteria. ▪ Discuss how well the finished product meets the design criteria of the user. Test on the user! ▪ Understand how key people have influenced design.
Food	Textiles	Structures	Mechanical and Electrical Systems and ICT
<ul style="list-style-type: none"> ▪ Prepare food products taking into account the properties of ingredients and sensory characteristics. ▪ Weigh and measure using scales. ▪ Select and prepare foods for a particular purpose. ▪ Work safely and hygienically. ▪ Show awareness of a healthy diet (using the eatwell plate). ▪ Use a range of cooking techniques. ▪ Know where and how ingredients are grown and processed. ▪ Consider influence of chefs e.g. Jamie Oliver and school meals, Hugh Fearnley-Whittingstall and sustainable fishing etc. 	<ul style="list-style-type: none"> ▪ Use the correct vocabulary appropriate to the project. ▪ Create 3D products using patterns pieces and seam allowance. ▪ Understand pattern layout. ▪ Decorate textiles appropriately (often before joining components). ▪ Pin and tack fabric pieces together. ▪ Join fabrics using over sewing, back stitch, blanket stitch or machine stitching (closer supervision). ▪ Combine fabrics to create more useful properties. ▪ Make quality products. 	<ul style="list-style-type: none"> ▪ Use the correct terminology for tools materials and processes. ▪ Use bradawl to mark hole positions. ▪ Use hand drill to drill tight and loose fit holes. ▪ Cut strip wood, dowel, square section wood accurately to 1mm. ▪ Join materials using appropriate methods. ▪ Build frameworks to support mechanisms. ▪ Stiffen and reinforce complex structures. 	<ul style="list-style-type: none"> ▪ Develop a technical vocabulary appropriate to the project. ▪ Use mechanical systems such as cams, pulleys and gears. ▪ Use electrical systems such as motors. ▪ Program, monitor and control using ICT.

Key Learning in Music: Years 5 and 6



Performing	Listening	Creating	Knowledge & Understanding
<ul style="list-style-type: none"> ▪ Sing songs, speak chants and rhymes in unison and two parts, with clear diction, control of pitch, a sense of phrase and musical expression. ▪ Play tuned and untuned instruments with control and rhythmic accuracy. ▪ Practise, rehearse and present performances with an awareness of the audience. 	<ul style="list-style-type: none"> ▪ Listen with attention to a range of high quality live and recorded music, to detail and to internalise and recall sounds with increasing aural memory. ▪ Experience how the combined musical elements of pitch, duration, dynamics, tempo, timbre, texture and silence can be organised within musical structures (for example, ostinato) and used to communicate different moods and effects. ▪ Experience how music is produced in different ways (for example, through the use of different resources, including ICT) and described through relevant established and invented notations. ▪ Know how time and place can influence the way music is created, performed and heard (for example, the effect of occasion and venue). 	<ul style="list-style-type: none"> ▪ Improvise and develop rhythmic and melodic material when performing. ▪ Explore, choose, combine and organise musical ideas within musical structures. 	<ul style="list-style-type: none"> ▪ Analyse and compare sounds. ▪ Explore and explain their own ideas and feelings about music using movement, dance, expressive language and musical vocabulary. ▪ Improve their own and others' work in relation to its intended effect. ▪ Use and understand staff and other musical notations. ▪ Develop an understanding of the history of music.

Musical Elements

Pitch	Duration	Dynamics	Tempo	Timbre	Texture	Structure
<ul style="list-style-type: none"> ▪ Identify short phrases and long phrases. ▪ Identify the prominent melody patterns in a piece of music. ▪ Improvise a melodic pattern. ▪ Improvise a melody. 	<ul style="list-style-type: none"> ▪ Perform rhythmic patterns and ostinati (<i>repeated melody lines</i>). ▪ Identify a silence in a rhythmic pattern with a gesture. ▪ Create rhythmic patterns including silences and note. ▪ Indicate strong and weak beats through movements. ▪ Recognise a metre (<i>the way beats are grouped</i>) of 3 or 4. ▪ Recognise a change in metre. 	<ul style="list-style-type: none"> ▪ Recognise crescendo (<i>gradually getting louder</i>) and diminuendo (<i>grad. getting quieter</i>). ▪ Assess the appropriateness of dynamic choices such as accents (<i>sudden loud notes, or sudden quiet notes</i>). 	<ul style="list-style-type: none"> ▪ Identify the differences between fast and slow tempos. ▪ Identify the tempo of music as fast, moderate, slow, getting faster or getting slower. 	<ul style="list-style-type: none"> ▪ Identify groupings of instruments – e.g. strings, woodwind, orchestra, and rock band. ▪ Recognise the instruments heard in a piece of music. 	<ul style="list-style-type: none"> ▪ Understand the process by which a round (<i>one melody, sung/played by groups starting at different times e.g. 'London's Burning'</i>) works. ▪ Identify the various and varying textures in a round. ▪ Show how rounds and canons (<i>more than one melody line, sung/played on top of each other by groups starting at different times e.g. 'Pachelbel's Canon'</i>) are constructed. ▪ Understand how the texture might vary in a song. 	<ul style="list-style-type: none"> ▪ Identify binary and ternary form from notational devices. ▪ Identify binary and ternary form when listening. ▪ Identify rondo (a form which always returns back to the first 'A' melody line e.g. ABACADAE etc) form.

Key Learning in PSHE: Years 5 and 6



Understanding Self and Others	Working With Others	Speaking and Listening	Negotiation	Compassion and Empathy	Body Language - Verbal and Non-Verbal
<ul style="list-style-type: none"> Recognise their own and other people's personality traits, individual preferences and characteristics. Recognise challenging behaviours and the negative effects these can have on relationships. 	<ul style="list-style-type: none"> Know that different people react in different ways when working in a group. Demonstrate their knowledge of group dynamics. 	<ul style="list-style-type: none"> Demonstrate speaking and listening skills. Consider how they respond to challenging circumstances e.g. conflict and violence. Demonstrate strategies for calmness. 	<ul style="list-style-type: none"> Recognise the importance of skills and how different people bring different skills to tasks. Demonstrate negotiation and compromise. 	<ul style="list-style-type: none"> Demonstrate respectful interactions with others. 	<ul style="list-style-type: none"> Recognise more complex body language and non-verbal signals. Understand that sometimes non-verbal signals can be misinterpreted by others and develop strategies for dealing with this. Demonstrate speaking and listening skills.
Assertiveness	Making Choices	Risk Taking	Influences	Making Decisions	
<ul style="list-style-type: none"> Further understand the skill of being assertive. Speak using the assertive 'I'. Know that it is OK to make mistakes. Say 'No' and mean it. Know where to go for help. 	<ul style="list-style-type: none"> Recognise choices and decisions they will have to make in the future. Identify ways of helping and supporting friends under pressure. 	<ul style="list-style-type: none"> Know ways of coping in difficult situations. Appreciate the importance of taking responsibility. Justify personal opinions confidently. Be able to identify risky situations. Calculate risk. Recognise risk in different situations and make judgements about how to respond in order to keep safe. Develop a positive approach towards personal safety and risk taking. 	<ul style="list-style-type: none"> Recognise peer influence. Understand ways in which peer influence can have positive and negative outcomes. Develop strategies for resisting negative peer influence. 	<ul style="list-style-type: none"> Know the process for making a decision. Demonstrate the use of the process. 	