

YEAR 6

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 6

Word Reading

As above and:

- Use knowledge of root words, prefixes and suffixes to investigate how the meanings of words change e.g. *un+happy+ness, dis+repute+able, dis+respect+ful, re+engage+ment.*
- Use suffixes to understand meanings e.g. *-cious, -tious, -tial, -cial.*
- Read and understand meaning of words on Y5/6 word list – see bottom.
- Use etymology to help the pronunciation of new words e.g. *chef, chalet, machine, brochure – French in origin.*
- Employ dramatic effect to engage listeners whilst reading aloud.
- Read extensively for pleasure.
- Skim texts to ascertain the gist.
- Use a combination of scanning and close reading to locate information.

As above and:

- Evaluate texts quickly in order to determine their usefulness or appeal.
- Understand underlying themes, causes and consequences within whole texts.
- Understand the structures writers use to achieve coherence; (headings; links within and between paragraphs; connectives).
- Recognise authors' techniques to influence and manipulate the reader.

Comprehension

As above and:

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

- Listening to, reading and discussing an increasingly wide range of fiction, poetry, plays and non-fiction.
- Regularly listening to novels read aloud by the teacher from an increasing range of authors, which they may not choose themselves.
- Recognising themes within and across texts e.g. *hope, peace, fortune, survival.*
- Making comparisons within and across texts e.g. similar events in different books, such as being an evacuee in *Carrie's War* and *Goodnight Mr Tom.*
- Comparing texts written in different periods.
- Analysing the conventions of different types of writing e.g. *use of dialogue to indicate geographical and/or historical settings for a story.*
- Independently read longer texts with sustained stamina and interest.
- Recommending books to their peers with detailed reasons for their opinions.
- Expressing preferences about a wider range of books including modern fiction, traditional stories, fiction from our literary heritage and books from other cultures and traditions.
- Learning a wider range of poems by heart.
- Preparing poems and playscripts to read aloud and perform using dramatic effects.

Understand what they read by:

- Using a reading journal to record on-going reflections and responses to personal reading.
- Exploring texts in groups and deepening comprehension through discussion.
- Exploring new vocabulary in context.
- Demonstrating active reading strategies e.g. *challenging peers with questions, justifying opinions, responding to different viewpoints within a group.*
- Inferring characters feelings, thoughts and motives from their actions, justifying inferences with evidence e.g. *Point; Evidence; Explanation.*
- Predicting what might happen from information stated and implied.
- Re-read and reads ahead to locate clues to support understanding and justifying with evidence from the text.
- Scanning for key information e.g. looking for descriptive words associated with a setting.
- Skimming for gist.
- Using a combination of skimming, scanning and close reading across a text to locate specific detail.
- Identifying how language, structure and presentation contribute to meaning e.g. *persuasive leaflet, balanced argument.*

Discuss / evaluate how authors use language including figurative language, considering the impact on the reader by:

- Exploring, recognising and using the terms personification, analogy, style and effect.
- Explaining the effect on the reader of the authors' choice of language and reasons why the author may have selected these.

Distinguish between statements of fact or opinion across a range of texts e.g. *first-hand account of an event compared with a reported example such as Samuel Pepys' diary and a history textbook.*

Participate in discussions about books building on their own and others' ideas and challenging views courteously.

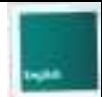
Explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary by:

- 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 issues related to reading (fiction/non-fiction).

Provide reasoned justifications for their views

- Justifying opinions and elaborating by referring to the text e.g. *Point; Evidence; Explanation*

Key Learning in Writing: Year 6



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"> Manipulate sentences to create particular effects. Use devices to build cohesion between paragraphs in persuasive, discursive and explanatory texts e.g. <i>on the other hand, the opposing view, similarly, in contrast, although, additionally, another possibility, alternatively, as a consequence.</i> Use devices to build cohesion between paragraphs in narrative e.g. <i>in the meantime, meanwhile, in due course, until then.</i> Use ellipsis to link ideas between paragraphs. Identify and use colons to introduce a list. Identify and use semi-colons to mark the boundary between independent clauses e.g. <i>It is raining; I am fed up.</i> Investigate and collect a range of synonyms and antonyms e.g. <i>mischievous, wicked, evil, impish, spiteful, well-behaved.</i> Explore how hyphens can be used to avoid ambiguity e.g. <i>man eating shark versus man-eating shark.</i> Punctuate bullet points consistently Explore and collect vocabulary typical of formal and informal speech and writing e.g. <i>find out-discover, ask for-request, go in-request.</i> Identify the subject and object of a sentence. Explore and investigate active and passive e.g. <i>I broke the window in the greenhouse versus the window in the greenhouse was broken.</i> 	<p>As above and:</p> <p>Plan their writing by:</p> <ul style="list-style-type: none"> Identifying audience and purpose. Choose appropriate text-form and type for all writing. Selecting the appropriate language and structures. Drawing on similar writing models, reading and research. Using a range of planning approaches e.g. <i>storyboard, story mountain, discussion group, post-it notes, ICT story planning.</i> <p>Draft and write by:</p> <p>Selecting <i>appropriate</i> vocabulary and language effects, appropriate to task, audience and purpose, for precision and impact.</p> <ul style="list-style-type: none"> Introducing and developing characters through blending action, dialogue and description within sentences and paragraphs e.g. <i>Tom stomped into the room, flung down his grubby, school bag and announced, through gritted teeth, "It's not fair"</i> Using devices to build cohesion. Deviating narrative from linear or chronological sequence e.g. <i>flashbacks, simultaneous actions, time-shifts.</i> Combining text-types to create hybrid texts e.g. <i>persuasive speech.</i> Evaluating, selecting and using a range of organisation and presentational devices for different purposes and audiences. Finding examples of where authors have broken conventions to achieve specific effects and using similar techniques in own writing – 	<p>(see also the Lancashire Supporting Spelling document for further detail and advice)</p> <p>As above and:</p> <ul style="list-style-type: none"> Be secure with all spelling rules previously taught. Write increasingly confidently, accurately and fluently, spelling with automaticity. Use a number of different strategies interactively in order to spell correctly. Develop self-checking and proof-checking strategies. Use independent spelling strategies for spelling unfamiliar words. 	<p>As above and:</p> <ul style="list-style-type: none"> Write with increasing speed. Choosing the writing implement that is best suited for a task (e.g. <i>quick notes, letters</i>).

e.g. repeated use of 'and' to convey tedium, one word sentence.

- **Make conscious choices about techniques to engage the reader including appropriate tone and style e.g.** rhetorical questions, direct address to the reader.
- **Use active and passive voice to achieve intended effects e.g.** in formal reports, explanations and mystery narrative.

Evaluate and edit by:

- **Reflecting upon the effectiveness of writing in relation to audience and purpose, suggesting and making changes to enhance effects and clarify meaning.**
- **Proofreading for grammatical, spelling and punctuation errors.**

Evaluate and improve performances of compositions focusing on:

- **Intonation and volume.**
- **Gesture and movement.**
- **Audience engagement.**

Key Learning in Mathematics – Year 6

Number – number and place value

- Count forwards or backwards in steps of integers, decimals, powers of 10.
- **Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.**
- **Identify the value of each digit to three decimal places.**
- Identify, represent and estimate numbers using the number line.
- Order and compare numbers including integers, decimals and negative numbers.
- Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than a given number.
- **Round any whole number to a required degree of accuracy.**
- Round decimals with three decimal places to the nearest whole number or one or two decimal places.
- **Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.**
- **Use negative numbers in context, and calculate intervals across zero.**
- Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal.
- **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 in the calculation.
- Recall and use addition and subtraction facts for 1 (with decimals to two decimal places).
- **Perform mental calculations including with mixed operations and large numbers and decimals.**
- Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction).
- **Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.**
- **Use knowledge of the order of operations to carry out calculations.**
- **Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.**
- **Solve problems involving all four operations, including those with 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 common factors, common multiples and prime numbers.**
- Use partitioning to double or halve any number.
- **Perform mental calculations, including with mixed operations and large numbers.**
- **Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.**
- **Multiply one-digit numbers with up to two decimal places by whole numbers.**
- **Divide numbers up to 4 digits by a two-digit whole number using the formal written methods of short or long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.**
- **Use written division methods in cases where the answer has up to two decimal places.**
- **Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.**
- **Use knowledge of the order of operations to carry out calculations.**
- **Solve problems involving all four operations, including those with missing numbers.**

<p>Number – fractions, decimals and percentages</p> <ul style="list-style-type: none"> ▪ Compare and order fractions, including fractions > 1 (<i>including on a number line</i>). ▪ Use common factors to simplify fractions; use common multiples to express fractions in the same denominator. ▪ Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. ▪ Associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375 and $\frac{3}{8}$). ▪ Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. ▪ Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{8} = \frac{1}{32}$). ▪ Divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$). ▪ <i>Find simple percentages of amounts.</i> ▪ <i>Solve problems involving fractions.</i> ▪ Solve problems which require answers to be rounded to specified degrees of accuracy. ▪ Solve problems involving the calculation of percentages (e.g. of measures and such as 15% of 260) and the use of percentages for comparison. 	<p>Geometry – properties of shapes</p> <ul style="list-style-type: none"> ▪ Compare/classify geometric shapes based on the properties and sizes. ▪ Draw 2-D shapes using given dimensions and angles. ▪ Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. ▪ Recognise, describe and build simple 3-D shapes, including making nets. ▪ Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. ▪ Find unknown angles in any triangles, quadrilaterals, regular polygons. 	<p>Measurement</p> <ul style="list-style-type: none"> ▪ Use, read and write standard units of length, mass, volume and time using decimal notation to three decimal places. ▪ Convert between standard units of length, mass, volume and time using decimal notation to three decimal places. ▪ Convert between miles and kilometres. ▪ Recognise that shapes with the same areas can have different perimeters and vice versa. ▪ Calculate the area of parallelograms and triangles. ▪ Recognise when it is possible to use formulae for area and volume of shapes. ▪ Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units (e.g. mm³ and km³). ▪ <i>Calculate differences in temperature, including those that involved a positive and negative temperature.</i> ▪ Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.
<p>Ratio and proportion</p> <ul style="list-style-type: none"> ▪ Solve problems involving the relative sizes of two quantities where missing values can be found using integer multiplication/division facts. ▪ Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. ▪ Solve problems involving similar shapes where the scale factor is known or can be found. 	<p>Algebra</p> <ul style="list-style-type: none"> ▪ Use simple formulae. ▪ Generate and describe linear number sequences. ▪ Express missing number problems algebraically. ▪ Find pairs of numbers that satisfy an equation with two unknowns. ▪ Enumerate possibilities of combinations of two variables. 	<p>Statistics</p> <ul style="list-style-type: none"> ▪ <i>Continue to complete and interpret information in a variety of sorting diagrams (including sorting properties of numbers and shapes).</i> ▪ Interpret and construct pie charts and line graphs and use these to solve problems. ▪ <i>Solve comparison, sum and difference problems using information presented in all types of graph.</i> ▪ Calculate and interpret the mean as an average.

Key Learning in Science: Year 6

Environment - Classification	Environment - Evolution And Inheritance	Animals/Health – Exercise, Health & The Circulatory System
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> 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. Give reasons for classifying plants and animals based on specific characteristics. Living things can be grouped into micro-organisms, plants and animals. Vertebrates can be grouped as fish, amphibians, reptiles, birds and mammals. Invertebrates can be grouped as snails and slugs, worms, spiders and insects. Plants can be grouped as flowering plants (incl. trees and grasses) and non-flowering plants (such as ferns and mosses). <p>Notes and Guidance (non-statutory): 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 (e.g. 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.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> Using classification systems and keys. Identifying some animals and plants in the immediate environment. Researching unfamiliar animals and plants from a broad range of other habitats and decide where they belong in the classification system. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> 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. <p>Notes and Guidance (non-statutory): Building on what they have learnt 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.</p> <p>Note: At this stage, pupils are not expected to understand how genes and chromosomes work.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> Observing and raising questions about local animals and how they are adapted to the environment. Comparing how some living things adapt to survive in extreme conditions, e.g. cactuses, penguins and camels. Analysing 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. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> Identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood. 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. The heart is a major organ and is made of muscle. The heart pumps blood around the body through vessels and this can be felt as a pulse. The heart pumps blood through the lungs in order to obtain a supply of oxygen. Blood carries oxygen/essential materials to different parts of the body. During exercise muscles need more oxygen so the heart beats faster and our breathing and pulse rates increase. Animals are alive; they move, feed, grow, use their senses, reproduce, breathe/respire and excrete. An adequate, varied and balanced diet is needed to help us grow and repair our bodies (proteins), provide us with energy (fats and carbohydrates) and maintain good health (vitamins and minerals). Tobacco, alcohol and other 'drugs' can be harmful. All medicines are drugs, not all drugs are medicines. <p>Notes and Guidance (non-statutory): 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.</p> <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> Exploring the work of scientists. Scientific research about the relationship between diet, exercise, drugs, lifestyle and health. <p>*Additional suggestion beyond NC2014 to support pupils working scientifically and to provide an opportunity to use ICT to collect/interpret data</p> <ul style="list-style-type: none"> Observing/Measuring changes to breathing, heart beat and or pulse rates after exercise.

Light and Astronomy – How Light Travels

Pupils should be taught to:

- Recognise 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 eye.
- Explain that we see things because the light that 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.

Notes and Guidance (non-statutory):

Pupils should build on the work 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 [observe/explore] 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.
- Investigating the relationship between light sources, objects and shadows by using shadow puppets.
- Extend their experience [explore and observe] of light by looking at 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).

Electricity

Pupils should be taught to:

- 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.
- Use recognised symbols when representing a simple circuit in a diagram.
- Circuit diagrams can be used to construct a variety of more complex circuits predicting whether they will 'work'.

Notes and Guidance (non-statutory):

Building on their work in Year 4, pupils should construct simple series circuits, to help them 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 [thing] component at a time in a circuit.
- Designing and making a set of traffic lights, a burglar alarm or some other useful circuit.

<p>Sort/group/compare / classify /identify</p>	<p>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></p>	<p>Modelling</p>	<p>Recording of 'Explore / Observe' <i>developing a deeper understanding of a wide range of scientific ideas encountering more abstract ideas</i></p>	<p>Questioning <i>asking their own questions about scientific phenomena</i></p>	<p>Planning <i>using different types of scientific enquiry making decisions about and explaining choices for testing</i></p>
<ul style="list-style-type: none"> Compare and contrast things beyond their locality and analyse advantages/disadvantages, pros/cons of their findings. Use and develop classification systems, keys and other information records [databases] to classify or identify. Compare and contrast more complex processes, systems, functions (e.g. sexual and asexual reproduction). 	<ul style="list-style-type: none"> [Research the work of famous scientists (historical & modern day) and use this to] explain how scientific ideas have developed over time and had an impact on our lives. Interview [people to find out information and collect data]. Recognise which secondary sources will be most useful to research their ideas and begin to separate opinion from fact. 	<ul style="list-style-type: none"> [Identify some positives and some limitations of models used to describe/explain scientific ideas]. Use and make own versions of simple models to describe and explain scientific ideas (e.g. periscopes, simple lever, burglar alarm). 	<ul style="list-style-type: none"> Encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. Use correct scientific knowledge and understanding and relevant scientific language to explain their findings and justify their scientific ideas. Explore more abstract systems/functions /changes/behaviours and record their understanding of these (e.g. the relationship between diet, exercise, drugs, lifestyle and health; evolutionary changes; burning, rusting; reflection and refraction of light; friction, air resistance, gravity). Read, spell and pronounce scientific vocabulary correctly. 	<ul style="list-style-type: none"> Recognise scientific questions that do not yet have definitive answers. Use observations/data gathered to construct a further (testable or research) question. Raise different kinds of questions (Y5/6). 	<ul style="list-style-type: none"> Plan enquiries, including recognising and controlling variables where necessary. Select and plan the most appropriate type of science enquiry to use to answer scientific questions.
<p>Equipment and measurement <i>increasing complexity with increasing accuracy and precision make their own decisions about the data to collect</i></p>	<p>Communicating Recording <i>recording data, reporting findings, presenting findings</i></p>	<p>Considering the results of an investigation / writing a conclusion</p>		<p>Collaborating</p>	
<ul style="list-style-type: none"> Recognise that data might be unreliable and describe how to make it more reliable. Make their own decisions about what measurements to take [and identify the ranges and intervals used]. Take measurements, using a range of equipment, with increasing accuracy and precision. Choose and use the most appropriate equipment to support observation, make measurements, collect data. Record data and results of increasing complexity (Y5/6) Follow [and suggest] safety guidelines. 	<ul style="list-style-type: none"> Make decisions on the most appropriate format to present scientific data. Record data and results of increasing complexity using scientific diagrams and labels, recognised symbols, classification keys, tables, bar and line graphs, and models. Report findings from enquiries using discussion, drawings [annotated], oral and written explanations of results, explanations involving causal relationships, and conclusions. Present findings in written form, displays and other presentations (Y5/6). 	<p>Describe results <i>Looking for patterns analysing functions, relationships and interactions more systematically</i></p>	<p>Explain results <i>Draw conclusions based on evidence</i></p>	<p>Trusting my results</p>	
<ul style="list-style-type: none"> Look for different causal (cause and effect) relationships in their data (something effecting something else) and (describe the pattern succinctly). Identify patterns that might be found in the natural environment over long periods of time and describe how these have been used to develop scientific theories (e.g. evolution). 	<ul style="list-style-type: none"> Identify evidence that refutes or supports their ideas (Y5/6). Use their evidence to justify their ideas. Use correct scientific knowledge and understanding and relevant scientific language to explain their findings. Read, spell and pronounce scientific vocabulary correctly (Y5/6). 	<ul style="list-style-type: none"> Use their results to identify when further comparative tests and observations might be needed. Be able to explain differences in repeated measurements/readings or unexpected results. Recognise the limitations of some data. 			

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 notate. ▪ 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. 	