



**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 4



### As above and:

- Use knowledge of root words to understand meanings of words.
- Use prefixes to understand meanings e.g. *sub-, inter-, anti-, auto-*.
- Use suffixes to understand meanings e.g. *-ation, -ous, -tion, -sion, -ssion, -cian*.
- Read and understand meaning of words on Y3/4 word list – see bottom.
- Use punctuation to determine intonation and expression when reading aloud to a range of audiences.

### As above and:

#### Develop pleasure in reading, motivation to read, vocabulary and understanding by:

- Listening to, reading and discussing a range of fiction, poetry, plays and non-fiction in different forms e.g. *advertisements, formal speeches, leaflets, magazines, electronic texts.*
- Regularly listening to whole novels read aloud by the teacher.
- Analysing and evaluate texts looking at language, structure and presentation.
- Analysing different forms of poetry e.g. *haiku, limericks, kennings.*
- Reading books and texts for a range of purposes and responding in a variety of ways.
- Analysing and comparing a range of plot structures.
- Retelling a range of stories, including less familiar fairy stories, myths and legends.
- Identifying, analysing and discussing themes e.g. *safe and dangerous, just and unjust, origins of the earth, its people and animals.*
- Identifying, discussing and collecting effective words and phrases which capture the reader's interest and imagination e.g. *metaphors, similes.*
- Learning a range of poems by heart and rehearsing for performance.
- Preparing poems and playscripts to read aloud, showing understanding through intonation, tone, volume and action.

#### Discussing their understanding of the text

- Explaining the meaning of key vocabulary within the context of the text.
- Making predictions based on information stated and implied.
- Demonstrating active reading strategies e.g. generating questions, finding answers, refining thinking, modifying questions, constructing images.
- Drawing inferences around characters' thoughts, feelings, actions and motives, and justify with evidence from the text using point and evidence.
- Identifying main ideas drawn from more than one paragraph and summarising these e.g. *character is evil because...1/2/3 reasons, Clitheroe Castle is a worthwhile place to visit because 1/2/3 reasons across a text.*

#### Retrieve and record information from non-fiction.

- Analysing and evaluating how specific information is organised within a non-fiction text e.g. *text boxes, sub-headings, contents, bullet points, glossary, diagrams.*
- Scanning for dates, numbers and names.
- Explaining how paragraphs are used to order or build up ideas, and how they are linked.
- Navigating texts to locate and retrieve information in print and on screen.

#### Participate in discussion about what is read to them and books they have read independently, taking turns and listening to what others say.

- Develop, agree on and evaluate rules for effective discussion.
- Making and responding to contributions in a variety of group situations e.g. *whole class, independent reading groups, book circles.*

## Key Learning in Writing: Year 4



Composition		Transcription	
Vocabulary, grammar and punctuation	Composition	Vocabulary, grammar and punctuation	Composition
<p><b>As above and:</b></p> <ul style="list-style-type: none"> <li>■ <b>Create complex sentences with adverb starters</b> e.g. <i>Silently trudging through the snow, Sam made his way up the mountain.</i></li> <li>■ <b>Create sentences with fronted adverbials for when</b> e.g. <i>As the clock struck twelve, the soldiers sprang into action.</i></li> <li>■ <b>Create sentences with fronted adverbials for where</b> e.g. <i>In the distance, a lone wolf howled.</i></li> <li>■ <b>Use commas to mark clauses in complex sentences.</b></li> <li>■ <b>Use inverted commas and other punctuation to indicate direct speech</b> e.g. <i>The tour guide announced, "Be back here at four o' clock."</i></li> <li>■ <b>Identify, select and effectively use pronouns.</b></li> <li>■ <b>Explore, identify, collect and use noun phrases</b> e.g. <i>The crumbly cookie with tasty marshmallow pieces melted in my mouth.</i></li> <li>■ <b>Explore, identify and use Standard English verb inflections for writing</b> e.g. <i>We were instead of we was. I was instead of I were, I did instead of I done. She saw it instead of she seen it.</i></li> <li>■ <b>Use apostrophes for singular and plural possession</b> e.g. <i>the dog's bone and the dogs' bones.</i></li> </ul>	<p><b>As above and:</b></p> <p><b>Plan their writing by:</b></p> <ul style="list-style-type: none"> <li>■ <b>Reading and analysing narrative, non-fiction and poetry in order to plan and write their own.</b></li> <li>■ <b>Identifying and discussing the purpose, audience, language and structures of narrative, non-fiction and poetry for writing.</b></li> <li>■ <b>Discussing and recording ideas for planning</b> e.g. <i>story mountain, story map, text map, non-fiction bridge, story board, boxing-up text types to create a plan.</i></li> </ul> <p><b>Draft and write by:</b></p> <ul style="list-style-type: none"> <li>■ <b>Developing settings and characterisation using vocabulary to create emphasis, humour, atmosphere, suspense.</b></li> <li>■ <b>Planning and writing an opening paragraph which combines the introduction of a setting and character/s.</b></li> <li>■ <b>Organising paragraphs in narrative and non-fiction.</b></li> <li>■ <b>Linking ideas within paragraphs</b> e.g. <i>fronted adverbials for when and where.</i></li> <li>■ <b>Generating and select from vocabulary banks</b> e.g. <i>powerful adverbs, adverbial phrases, technical language, persuasive phrases, alliteration appropriate to text type.</i></li> </ul> <p><b>Evaluate and edit by:</b></p> <ul style="list-style-type: none"> <li>■ <b>Proofreading to check for errors in spelling, grammar and punctuation in own and others' writing.</b></li> <li>■ <b>Discussing and proposing changes with partners and in small groups.</b></li> <li>■ <b>Improving writing in light of evaluation</b></li> </ul> <p><b>Perform own compositions for different</b></p>	<p><b>As above and:</b></p> <ul style="list-style-type: none"> <li>■ <b>Create complex sentences with adverb starters</b> e.g. <i>Silently trudging through the snow, Sam made his way up the mountain.</i></li> <li>■ <b>Create sentences with fronted adverbials for when</b> e.g. <i>As the clock struck twelve, the soldiers sprang into action.</i></li> <li>■ <b>Create sentences with fronted adverbials for where</b> e.g. <i>In the distance, a lone wolf howled.</i></li> <li>■ <b>Use commas to mark clauses in complex sentences.</b></li> <li>■ <b>Use inverted commas and other punctuation to indicate direct speech</b> e.g. <i>The tour guide announced, "Be back here at four o' clock."</i></li> <li>■ <b>Identify, select and effectively use pronouns.</b></li> <li>■ <b>Explore, identify, collect and use noun phrases</b> e.g. <i>The crumbly cookie with tasty marshmallow pieces melted in my mouth.</i></li> <li>■ <b>Explore, identify and use Standard English verb inflections for writing</b> e.g. <i>We were instead of we was. 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**audiences**

- Use appropriate intonation, tone and volume to present their writing to a range of audiences.

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## Key Learning in Mathematics – Year 4

### Number – number and place value

- **Count in multiples of 6, 7, 9, 25 and 1000.**
- **Count backwards through zero to include negative numbers.**
- **Count up and down in hundredths.**
- *Read and write numbers to at least 10000.*
- *Read and write numbers with up to two decimal places.*
- **Recognise the place value of each digit in a four-digit number.**
- *Identify the value of each digit to two decimal places.*
- *Partition numbers in different ways (e.g.  $2.3 = 2 + 0.3$  &  $1 + 1.3$ ).*
- **Identify, represent and estimate numbers using different representations (including the number line).**
- **Order and compare numbers beyond 1000.**
- *Order and compare numbers with the same number of decimal places up to two decimal places.*
- **Find 0.1, 1, 10, 100 or 1000 more or less than a given number.**
- **Round any number to the nearest 10, 100 or 1000.**
- **Round decimals (one decimal place) to the nearest whole number.**
- **Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer.**
- *Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps.*
- **Read Roman numerals to 100 and know that over time, the numeral system changed to include the concept of zero and place value.**
- **Solve number and practical problems that involve all of the above and with increasingly large positive numbers.**

### 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 100.*
- *Recall and use +/- facts for multiples of 100 totalling 1000.*
- *Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place).*
- *Add and subtract mentally combinations of two and three digit numbers and decimals to one decimal place.*
- **Add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written methods of columnar addition and subtraction where appropriate.**
- **Estimate; use inverse operations to check answers to a calculation.**
- **Solve addition and subtraction two-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).*
- **Recognise and use factor pairs and commutativity in mental calculations.**
- **Recall multiplication and division facts for multiplication tables up to  $12 \times 12$ .**
- *Use partitioning to double or halve any number, including decimals to one decimal place.*
- **Use place value, known and derived facts to multiply and divide mentally, including:**
  - multiplying by 0 and 1.
  - dividing by 1.
  - multiplying together three numbers.
- **Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.**
- *Divide numbers up to 3 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.*
- *Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.*
- **Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, division (including interpreting remainders), integer scaling problems and harder correspondence problems such as n objects are connected to m objects.**

## Number – fractions, decimals and percentages

- Understand that a fraction is one whole number divided by another (e.g.  $\frac{3}{4}$  can be interpreted as  $3 \div 4$ ).
  - Recognise, find and write fractions of a discrete set of objects including those with a range of numerators and denominators.
  - **Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.**
  - Count on and back in steps of unit fractions.
  - Compare and order unit fractions and fractions with the same denominators (including on a number line).
  - **Recognise and show, using diagrams, families of common equivalent fractions.**
  - **Recognise and write decimal equivalents of any number of tenths or hundredths.**
  - **Recognise and write decimal equivalents to  $\frac{1}{10}$ ,  $\frac{1}{100}$ .**
- 4 2 4
- **Add and subtract fractions with the same denominator** (using diagrams).
  - **Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.**
  - **Solve simple measure and money problems involving fractions and decimals to two decimal places.**

## Geometry – properties of shapes

- **Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.**
  - **Identify lines of symmetry in 2-D shapes presented in different orientations.**
  - **Complete a simple symmetric figure with respect to a specific line of symmetry.**
  - Continue to identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
  - **Identify acute and obtuse angles and compare and order angles up to two right angles by size.**
- **Describe positions on a 2-D grid as coordinates in the first quadrant.**
  - **Plot specified points and draw sides to complete a given polygon.**
  - **Describe movements between positions as translations of a given unit to the left/right and up/down.**

## Measurement

- **Estimate, compare and calculate different measures, including money in pounds and pence.**
  - Order temperatures including those below  $0^{\circ}\text{C}$ .
  - **Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.**
  - Know area is a measure of surface within a given boundary.
  - **Find the area of rectilinear shapes by counting squares.**
  - **Convert between different units of measure [e.g. kilometre to metre; hour to minute].**
  - **Read, write and convert time between analogue and digital 12- and 24-hour clocks.**
  - Write amounts of money using decimal notation.
  - Recognise that one hundred 1p coins equal £1 and that each coin is  $\frac{1}{100}$  of £1.
  - **Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days and problems involving money and measures.**
- Use a variety of sorting diagrams to **compare and classify numbers and geometric shapes based on their properties and sizes.**
  - **Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts, time graphs.**
  - **Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.**

## Key Learning in Science - Year 4



### Environment – Living things and their habitats)

**Pupils should be taught to:**

- Recognise that living things can be grouped in a variety of ways.
- Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment.
- Recognise that environments can change and that this can sometimes pose dangers to living things.
- Use and make identification keys for plants and animals.

**Notes and Guidance (non-statutory):**

Pupils should use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitat. They should identify how the habitat changes throughout the year. Pupils should explore possible ways of grouping a wide selection of living things that include animals and flowering plants and non-flowering plants, Pupils could begin to put vertebrate animals into groups such as fish, amphibians, reptiles, birds, and mammals; and invertebrates into snails and slugs, worms, spiders, and insects.

**Note:** Plants can be grouped into categories such as flowering plants (including grasses) and non-flowering plants, such as ferns and mosses.

Pupils should explore examples of human impact (both positive and negative) on environments, for example, the positive effects of nature reserves, ecologically planned parks or garden ponds, and the negative effects of population and development, litter or deforestation.

**Pupils might work scientifically by:**

- Using and making simple guides or keys [sorting, grouping, comparing, classifying] to explore and identify local plants and animals.
- Making a guide [sorting, grouping, comparing, classifying] to local living things.
- Raising and answering questions based on their observations of animals.
- What they have found out about other animals that they have researched.

### Animals – Teeth, Eating and Digestion)

**Pupils should be taught to:**

- Describe the simple functions of the basic parts of the digestive system in humans.
- Identify the different types of teeth in humans and their simple functions.
- Construct and interpret a variety of food chains, identifying producers, predators and prey.
- Describe how teeth and gums have to be cared for in order to keep them healthy.

**Notes and Guidance (non-statutory):**

Pupils should be introduced to the main body parts associated with the digestive system, for example, mouth, tongue, teeth, oesophagus, stomach and small and large intestine and explore questions that help them understand their special functions.

**Pupils might work scientifically by:**

- Comparing the teeth of carnivores and herbivores.
- Suggesting reasons for differences.
- Finding out what damages teeth and how to look after them.
- Drawing and discussing their ideas about the digestive system.
- Comparing them with models or images.



## Material Properties and Changes – States of Matter)

Pupils should be taught to:

- Compare and group materials together, according to whether they are solids, liquids or gases.
- Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C).
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
- Solids, liquids and gases can be identified by their observable properties.
- Solids have a fixed size and shape (the size and shape can be changed but it remains the same after the action).
- Liquids can pour and take the shape of the container in which they are put.
- Liquids form a pool not a pile.
- Solids in the form of powders can pour as if they were liquids but make a pile not a pool.
- Gases fill the container in which they are put.
- Gases escape from an unsealed container.
- Gases can be made smaller by squeezing/pressure.
- Liquids and gases can flow.

**Notes and Guidance (non-statutory):**

Pupils should explore a variety of everyday materials and develop simple descriptions of the states of matter (solids hold their shape; liquids form a pool not a pile; gases escape from an unsealed container). Pupils should observe water as a solid, a liquid and a gas and should note the changes to water when it is heated or cooled.

**Note:** Teachers should avoid using materials where heating is associated with chemical change, e.g. through baking or burning.

**Pupils might work scientifically by:**

- Grouping and classifying a variety of different materials.
- Exploring the effect of temperature on substances such as chocolate, butter, cream (for example, to make food such as chocolate crispy cakes and ice-cream for a party).
- Researching the temperature at which materials change state, for example, when iron melts or when oxygen condenses into a liquid.
- Observing and recording evaporation over a period of time, such as a puddle in the playground or washing on a line.
- Investigating the effect of temperature on washing drying or snowmen melting.
- Additional suggestion from Lancashire for working scientifically opportunities which enhance learning and support using ICT.
- This unit provides an ideal opportunity for using data logging equipment to detect/measure and compare temperatures.

## Sound

Pupils should be taught to:

**Vibrations**

- Identify how sounds are made, associating some of them with something vibrating.
- Recognise that vibrations from sounds travel through a medium to the ear.
- Find patterns between the volume of a sound and the strength of the vibrations that produced it.
- Recognise that sounds get fainter as the distance from the sound source increases.
- Sounds can be made in a variety of ways (pluck, bang, shake, blow) using a variety of things (instruments, everyday materials, body).
- Sounds travel away from their source in all directions.
- Vibrations may not always be visible to the naked eye.

**Pitch**

- Find patterns between the pitch of a sound and features of the object that produced it.
- Sounds can be high or low pitched.
- The pitch of a sound can be altered.
- Pitch can be altered either by changing the material, tension, thickness or length of vibrating objects or changing the length of a vibrating air column.

**Muffling/blocking sounds**

- Recognise that vibrations from sounds travel through a medium to the ear.
- Sounds are heard when they enter our ears (although the structure of the ear is not important key learning at this age phase).
- Sounds can travel through solids, liquids and air/gas by making the materials vibrate.
- Sound travel can be reduced by changing the material that the vibrations travel through.
- Sound travel can be blocked.

**Notes and Guidance (non-statutory):**

Pupils should explore and identify the way sound is made through vibration in a range of different musical instruments from around the world; and find out how the pitch and volume of sounds can be changed in a variety of ways.

**Pupils might work scientifically by:**

- Finding patterns in the sounds that are made by different objects such as saucepan lids of different sizes or elastic bands of different thicknesses.
- They might make ear muffs from a variety of different materials to investigate which provides the best insulation against sound.
- They could make and play their own instruments by using what they have found out about pitch and volume.

Additional suggestion from Lancashire for working scientifically opportunities which enhance learning and support using ICT across the curriculum

- This unit provides an ideal opportunity for using data logging equipment to detect/measure and compare sounds.

## Electricity

Pupils should be taught to:

- Identify common appliances that run on electricity.
- Construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers.
- Identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery.
- Recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit.
- Recognise some common conductors and insulators, and associate metals with being good conductors.
- Electricity can be dangerous.
- Electricity sources can be mains or battery.
- Batteries 'push' electricity round a circuit and can make bulbs, buzzers and motors work.
- Faults in circuits can be found by methodically testing connections.
- Drawings, photographs and diagrams can be used to represent circuits (although standard symbols need not be introduced until UKS2).

**Notes and Guidance (non-statutory):**

Pupils should construct simple series circuits, trying different components, for example, bulbs, buzzers and motors, and including switches, and use their circuits to create simple devices. Pupils should draw the circuit as a pictorial representation, not necessarily using conventional circuit symbols at this stage; these will be introduced in Year 6.

**Note:** Pupils might use the terms current and voltage, but these should not be introduced or defined formally at this stage. Pupils should be taught about precautions for working safely with electricity.

**Pupils might work scientifically by:**

- Observing patterns, for example, that bulbs get brighter if more cells are added, that metals tend to be conductors of electricity, and that some materials can and some cannot be used to connect across a gap in a circuit.



<b>Sort/group/compare/classify/identify</b>	<b>Research</b> <i>finding things out using a wide range of secondary sources of information and recognising that scientific ideas change and develop over time</i>	<b>Modelling</b>	<b>Recording of 'Explore / Observe'</b> <i>developing a deeper understanding of a wide range of scientific ideas encountering more abstract ideas</i>	<b>Questioning</b> <i>asking their own questions about scientific phenomena</i>	<b>Planning</b> <i>using different types of scientific enquiry making decisions about and explaining choices for testing</i>
<ul style="list-style-type: none"> <li>▪ Make a simple guide to local living things.</li> <li>▪ Use guides or simple keys to classify/identify [local small invertebrates].</li> <li>▪ Use their observations] to identify and classify.</li> <li>▪ Record similarities, differences or changes related to simple scientific ideas or processes or more complex groups of objects/living things/events and begin to give reasons for these.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.</li> <li>▪ Create/invent/ design something based on what they have found out applying both research and/or practical experiences. (Y3/4).</li> <li>▪ Find out about the work of famous scientists (historical &amp; modern day) (Y3/4).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Make a visual representation or a model of something to represent something they have seen or a process that is difficult to see.</li> <li>▪ Suggest their own ideas on a concept and compare these with models or images.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Suggest their own ideas on a concept and compare these with what they observe / find out.</li> <li>▪ Develop simple descriptions from their observations use relevant scientific language to discuss their ideas.</li> <li>▪ Observe and record relationships between structure and function (Y3/4).</li> <li>▪ Observe and record changes /stages over time (Y3/4).</li> <li>▪ Explore / observe things in the local environment /real contexts and record observations (Y3/4).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Choose/select a relevant question that can be answered [by research or experiment/test].</li> <li>▪ Ask/raise their own relevant questions with increasing confidence and independence about what they observe and about the world around them.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Investigate the effect of something on something else.</li> <li>▪ Start to make their own decisions about the most appropriate type of science enquiry they might use to answer scientific questions [is a fair test the best way to investigate their question].</li> <li>▪ Recognise when a test is necessary.</li> <li>▪ Carry out simple fair tests [with increasing confidence and make some of the planning decisions about what to change and measure/observe].</li> </ul>
<b>Equipment and measurement</b> <i>increasing complexity with increasing accuracy and precision make their own decisions about the data to collect</i>	<b>Communicating Recording</b> <i>recording data, reporting findings, presenting findings</i>	<b>Considering the results of an investigation / writing a conclusion</b>			<b>Collaborating</b>
<ul style="list-style-type: none"> <li>▪ Begin to identify where patterns might be found and use this to begin to identify what data to collect.</li> <li>▪ Make more of the decisions about what observations to make, how long to make them for and the type of equipment that might be used.</li> <li>▪ Learn how to use new equipment, such as data loggers &amp; measure temperature in degrees Celsius (°C) using a thermometer.</li> <li>▪ Understand precautions for working safely.</li> <li>▪ Collect and record data from their own observations and measurements, using notes/simple tables/standard units, to help to make decisions.</li> <li>▪ Make accurate measurements using standard units [and more complex units and parts of units] using a range of equipment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Record findings using simple scientific language and vocabulary, including discussions, oral and written explanations, notes, drawings (annotated), pictorial representations, labelled diagrams, tables and bar charts [where intervals and ranges agreed through discussion], displays or presentations.</li> <li>▪ Begin to select the most useful ways to record, classify and present data from a range of choices.</li> <li>▪ Make decisions on how best to] communicate their findings in ways that are appropriate for different audiences. (Y3/4)</li> </ul>	<b>Describe results</b> <i>Looking for patterns analysing functions, relationships and interactions more systematically</i> <ul style="list-style-type: none"> <li>▪ Notice/find patterns in their observations and data.</li> <li>▪ Describe the effect of something/different factors on something else.</li> <li>▪ Help to make decisions about how to analyse their data.</li> </ul>	<b>Explain results</b> <i>Draw conclusions based on evidence</i> <ul style="list-style-type: none"> <li>▪ Begin to develop their ideas about relationships and interactions.</li> <li>▪ Reporting on findings from enquiries [beginning to identify the scientific facts in their data].</li> <li>▪ Use relevant scientific language to discuss, communicate, report their findings.</li> <li>▪ Read and spell scientific vocabulary correctly and with confidence (Y3/4).</li> </ul>	<b>Trusting my results</b> <ul style="list-style-type: none"> <li>▪ Use results to suggest improvements, new questions and predictions for setting up further tests.</li> <li>▪ With help, pupils should look for similarities and differences in their data [between different groups of results].</li> </ul>	<ul style="list-style-type: none"> <li>▪ Make a visual representation or a model of something to represent something they have seen or a process that is difficult to see.</li> <li>▪ Suggest their own ideas on a concept and compare these with models or images.</li> </ul>

# Key Learning in Computing: Years 3 and 4



## Information Technology

### Programme of Study

- Use search technologies effectively.
- Use and combine a variety of software to accomplish given goals.
- Collect and present information.
- Design and create content.
- Collect and present data.
- Use search technologies effectively.
- Use and combine internet services.
- Analyse and evaluate information.

Skills	Knowledge and Understanding
<b>Design, create, manage and manipulate digital content</b>	<b>Design, create, manage and manipulate digital content</b>
<b>Text and images</b>	<b>Text and images</b>
<ul style="list-style-type: none"> <li>▪ Use different font sizes, colours and effects to communicate meaning for a given audience.</li> <li>▪ Use various layouts, formatting, graphics and illustrations for different purposes or audiences.</li> <li>▪ Use various software tools to complete a project, problem or task.</li> <li>▪ Use page setup to select different page sizes and orientations.</li> <li>▪ Use cut, copy and paste to refine and re-order content.</li> <li>▪ Combine and use various software tools to complete a project, problem or task.</li> <li>▪ Use appropriate editing tools to ensure their work is clear and error free, e.g. spell checker, thesaurus, find and replace.</li> <li>▪ Select and import sounds from other sources, e.g. own recordings, sound effects and music.</li> <li>▪ Select and import graphics from digital cameras, graphics packages and other sources and prepare for use, e.g. cropping, resizing and editing.</li> <li>▪ Use and combine internet services such as those that provide images, sounds, 3D representations and graphic software.</li> <li>▪ Recognise and use key layout and design features, e.g., text boxes, columns and borders.</li> <li>▪ Insert and edit simple tables.</li> <li>▪ Create a range of hyperlinks and produce a non-linear, interactive presentation.</li> <li>▪ Recognise intended audience and suggest improvements to make their work more relevant to that audience.</li> <li>▪ Through self and peer assessment, analyse and evaluate presentations and projects so that suitable improvements can be added to work.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recognise the features of good page design and multimedia presentations.</li> <li>▪ Consider how design features meet the needs of the audience e.g. poster, news paper, menu, instructions.</li> <li>▪ Understand that some tasks and problems require a variety of software tools to accomplish them.</li> <li>▪ Understands what is meant by Internet services.</li> <li>▪ Understand that evaluation and improvement are vital parts of the design process and that ICT allows changes to be made quickly and efficiently.</li> <li>▪ Demonstrate this through editing their work.</li> <li>▪ Has an awareness of Internet services.</li> <li>▪ Recognise that IT can automate manual processes e.g. find and replace and understand the advantages and disadvantages of this.</li> <li>▪ Compare and contrast the impact of using different sounds, words and images from a variety of electronic sources.</li> <li>▪ Develop an increasing sense of audience and talk.</li> <li>▪ Understand that images, 3D representations, sounds and text can be subject to copyright and abide by copyright rules when creating a presentation.</li> <li>▪ Understand that presentations and projects need to be analysed and evaluated and suitable changes suggested to improve it.</li> <li>▪ Understand that internet services such as those that provide images, sounds, 3D representations and graphic software can be used to achieve specific goals and tasks.</li> </ul>

### Images, video and animation – graphics (drawing and painting)

- Acquire, store and retrieve images from cameras, scanners and the internet for a purpose.
- Select specific areas of an image, copy and paste to make repeating patterns.
- Be able to resize various elements in a graphics or paint package.
- Use various tools in paint packages or photomanipulation software to edit/change an image, e.g. applying different special effects.
- Use the 'print screen' function to capture images.
- Explore the use of graphics and paint packages to design and plan an idea.

### Images, video and animation – digital photographs, video and animation

- Use a range of devices to capture still and moving images for a purpose. These could include digital cameras, video cameras, iPads, microscopes and webcams.
- Discuss and evaluate the quality of their own and others' captured images and make decisions whether to keep, delete or change them.
- Independently download and save images and video onto a computer.
- Independently upload images and movies from digital cameras and other devices to a computer and save in a relevant location.
- Be able to 'resize' images (pixels, resolution, aspect ratio and dimensions).
- Be able to use basic tools in a software package to change images according to purpose.
- Import music, stills or video into video editing software for a specific project.
- Arrange, trim and cut clips to create a short film that conveys meaning.
- Add simple titles, credits and special effects, e.g. transitions.
- Storyboard, then use captured images to create a short animated sequence which communicates a specific idea.

### Sound

- Use a variety of devices and software to select, playback and record voice and other sounds.
- Locate and use sound files from online sources, e.g. Audio Networks, and other multimedia resources.
- Select, import and edit existing sound files in sound editing software, e.g., Audacity.
- Use editing tools to refine and improve outcomes and performances.
- Use recorded sound files in other software applications.
- Be able to share sound recordings with a wider audience.
- Use music software to experiment with capturing, repeating and sequencing sound patterns.
- Use ICT to create and perform sounds or music that would otherwise not be possible in a live situation, e.g., editing a multi-part piece.

### Images, video and animation – digital photographs, video and animation

- Understand that a digital image can be captured from different devices and it can be stored and developed.
- Begin to understand how images from different sources (stills, video, graphics, animation) are used to enhance a presentation or communicate an idea.
- Begin to understand the meaning of 'resizing' i.e. the differences between pixel size, resolution and image dimensions and the need to maintain aspect ratios.
- Understand that planning is a vital part of the design process.
- Understand that evaluation and improvement are vital parts of the design process and ICT allows changes to be made quickly and efficiently.
- Understand the need for caution when using the Internet to search for images and what to do if they find unsuitable images (See school's Acceptable Use Policy/AUP).
- Know how to take images appropriately and responsibly (See school's Acceptable Use Policy/AUP).
- Understand that copyright exists on most digital images and video about the impact of choices and decisions in their work.
- Understand that images, sounds and text can be subject to copyright and abide by copyright rules when creating a presentation.

### Sound

- Talk about software which allows the creation and manipulation of sound and music. Understand that many types of sounds can be combined in editing software.
- Understand how sound can be used in multimodal texts to create meaning and provide effects.
- Understand that copyright exists on most recorded music.

## Data handling

- Create frequency diagrams and graphs to answer questions.
- Create and use a branching database to organise and analyse information to answer questions.
- Begin to identify what data should be collected to answer a specific question.
- Collect data and enter it into a database under appropriate field headings.
- Use a database to answer straightforward questions by searching, matching and ordering the contents of a single field.
- Based on the data collected, children should raise their own questions and translate them into search criteria that can be used to find answers to specific questions.
- 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 and present data.
- Use dataloggers to capture, record and analyse data continuously over time, including sound, temperature and light. (Science)
- Use a data logger to 'snap shot' a series of related but separate readings in the course of an appropriate investigation. (Science)

## Digital research - searching

- Use a range of child friendly search engines to locate different media, e.g. text, images or sound.
- Evaluate different search engines and explain their choices in using these for different purposes.
- Develop specific key questions and key words to search for information e.g., a question such as 'Where could we go on holiday?' would become a search for 'holiday destinations'.
- Consider the effectiveness of key questions on search results and refine where necessary.
- Use strategies to verify the accuracy and reliability of information, distinguishing between fact and opinion, e.g. cross checking with different websites or books.
- Use appropriate tools to save and retrieve accessed information, e.g. through the use of favourites, history, copy/paste and save as.
- Identify and cancel unwanted advertising, pop-ups and potentially malicious downloads by using the task manager function and NOT through buttons on the pop-up window, or the cross in the right hand corner.
- Know how to temporarily allow useful pop-ups from a website.
- Develop use of more advanced searching techniques, e.g., searching for a phrase using quotation marks to locate precise information.
- Choose the most appropriate search engine for a task, e.g., image search, search within a specific site or searching the wider internet.

## Data handling

- Understand that there are different types of data.
- Understand the need to structure information properly in a database.
- Know, understand and use the vocabulary: file, record, field, sort and search.
- Recognise similarities and differences between ICT and paper-based systems.
- Talk about the advantages of using IT to sort, interrogate and classify information quickly.
- Understand that effective yes/ no questions are key to organising data efficiently in a branching database.
- Understand that there are different types of data, e.g. numeric, alphabetic, date, alphanumeric.
- Know that ICT can enable the creation of a variety of tables and graphs for different purposes.
- Understand some graphs and charts are more appropriate and easier to read than others.
- Begin to make choices about how to present data to solve a specific problem.
- Understand that dataloggers can be used to sense external and physical changes and subsequently collect data in a range of simple investigations. (Science)
- Understand that data can be collected more efficiently by a datalogging device compared with manual methods. (Science)
- Know that datalogging devices can be pre-programmed to collect data for a given time and on different triggers and remotely for a long period of time. (Science).

## Digital research - searching

- Talk about and describe the process of finding specific information, noting any difficulties during the process and how these were overcome
- Understand that information found as a result of a search can vary in relevance.
- Begin to recognise that anyone can author on the internet and sometimes web content is inaccurate or even offensive.
- Understand that provision is made in schools to filter
- Begin to understand the concept of copyright, e.g. what images, videos or sounds are legal and safe to use in their own work.
- Begin to understand the need to acknowledge sources of information.
- Understand when and where the internet can be used as a research tool.
- Know that Boolean search 'operators' can effect web searches

## Programme of Study

- Use technology responsibly.
- Identify a range of ways to report concerns about contact.
- Identify a range of ways to report concerns about content.
- Recognise acceptable/unacceptable behaviour.
- Understand the opportunities computer networks offer for communication.

### Skills

#### Online safety

- Use technology responsibly.
- To create appropriate passwords.
- Keep passwords and personal data safe.
- Recognise acceptable behaviour.
- Recognise unacceptable behaviour.
- Be able to create a 'secure' password, e.g. combination of letters, symbols and numbers in accordance with the school's eSafety policies and procedures /AUP.
- Know what to do and who to tell if they discover something inappropriate or offensive on a website, at home and in school.

### Knowledge and Understanding

#### Online safety

- Know how to use technology responsibly.
- Understand that online actions can impact on other people.
- Understand the need to keep personal information and passwords private in order to protect themselves when communicating online.
- Know how to respond if asked for personal details or in the event of receiving unpleasant communications, e.g. saving the message and showing to a trusted adult –according to the school's eSafety policies and procedures /AUP.
- Understand the risks posed by the internet relating to contact e.g. bullying, grooming.
- Know a range of ways to report concerns about contact.
- Understand the risks posed by the internet relating to content e.g. violent and biased websites.
- Know a range of ways to report concerns about content.
- Understand the school's acceptable use policy.
- Understand what acceptable online behaviour is.
- Understand what unacceptable online behaviour is.
- 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 the risks involved in arranging to meet and subsequently meeting anybody from the online world in the offline world.
- Know what images are suitable to include in an online profile and ensure that appropriate permissions have been obtained, e.g. copyright or asking friends before uploading their images.
- Understand the need for certain rules of conduct particularly when using live forms of communication, e.g. chats and forums in the school's VLE, taking turns to speak when video conferencing.
- Know the school's rules for keeping safe online and be able to apply these beyond school.

### Electronic communication

- Use a range of digital tools to communicate, e.g. contributing to chats and/or discussion forums, in school's VLE, blog or text messages, making purposeful contributions to respond to another pupil's

### Electronic communication

- Understand that computer networks can be used for communication.

**question or comment.**

- **Investigate the different styles of language, layout and format of different electronic communications and how these vary depending on the audience.**
- **Continue to use webcams and/or video conferencing as a class, if appropriate and available, e.g. with external providers, another class or school, or abroad as part of a wider topic.**
- **Begin to publish their work to a wider audience, e.g. using VLE or podcasting tools.**

**Example - email**

- **Log on to an email account, open emails, create and send appropriate replies.**
- **Forward an e-mail.**
- **Save an e-mail in draft format and then return and edit prior to sending.**
- **Attach different files to emails, e.g. text document, sound file or image.**
- **Open and save attachments to an appropriate place.**
- **Select an email recipient from a class address book.**

- **Understand the opportunities computer networks offer for communication.**
- **Know a range of ways that computer networks can be used for communication.**
- **Understand that some emails and other forms of electronic communications may be malicious or inappropriate and recognise when an attachment may be unsafe to open.**
- **Recognise the effect that content in their communications may have on others.**
- **Respect the ideas and communications of others they encounter online.**
- **Discuss the differences between online communication tools used in school and those used internet content, recognising this is possibly not the case on computers used at home at home, e.g., those 'blocked' through the school's filtering.**

# Computer Science

## Programme of Study

- Work with various forms of input and output.
- Design and create programs that accomplish specific goals.
- Control or simulate physical systems.
- Use logical reasoning to detect and correct errors in programs.

Use sequence, repetition\* and selection\* in programs (\*next to a phrase or word e.g. repetition denotes a progression within that concept.)

## Skills

### Programming

- Write programs that accomplish specific goals.
- Read what a sequence in a program does.
- Work with various forms of input.
- Work with various forms of output.
- Use logical reasoning to predict outputs.
- Design programs, showing skills needed to plan and implement a task/problem that accomplish specific goals.
- Design programs showing appropriate planning and implementing skills.
- Create programs that implement algorithms to achieve specific goals.
- Debug programs that accomplish specific goals through self and peer assessment.
- Use sequence, repetition and selection in programs.
- Plan, test and evaluate programs that solve specific problems using a screen turtle or other programmable devices.
- Use sequences of commands to control physical devices using outputs.
- Demonstrate and develop a sense of audience when appropriate.
- Use and debug programs to control physical devices Note real or screen simulations could be used.
- Use logical reasoning to detect and correct errors in programs.

### Simulations and modelling

- Explore the effects of changing variables in models and simulations, asking 'What if?' questions.
- Make and test predictions.
- Use a pre-prepared spreadsheet to record data to answer questions and produce graphs.
- Use a pre-prepared spreadsheet to explore simple number patterns, e.g. multiples.
- Change the contents of cells in a pre-prepared spreadsheet and explore the consequences.

## Knowledge and Understanding

### Programming

- Understand how to plan and write programs that accomplish specific goals.
- Know a range of input devices and how they can be used.
- Know a range of output devices and how they can be used.
- Know the difference between an input and an output.
- Understand that computers can collect data from various inputs.
- Know what debugging is and how it can be used to achieve specific goals.
- Understand that planning is a vital part of designing programs.
- Understand that evaluation is a vital part of the design process.
- Understand what the terms sequence, repetition and selection mean and know how to use them in programs.
- Understand how to control physical devices.
- Be aware that everyday devices use sensors and outputs, e.g. automatic doors, traffic lights, intruder alarms.
- Understand how to use logical reasoning to detect errors in programs.
- Understand how to use logical reasoning to correct errors in programs.
- Understand that computers can collect data from various inputs.

### Simulations and modelling

- Understand how computer simulations can represent real or imaginary situations and how these can help in the widerworld.
- Understand how computer simulations and spread-sheet models allow changes to be made quickly and easily in comparison with real life situations.
- Understand that changes made to one element of a spreadsheet can impact on other calculations



## Key Learning in Geography: Years 3 and 4

Locational knowledge		Place knowledge		Human and Physical Geography	
<ul style="list-style-type: none"> <li>Locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America.</li> <li>Name and locate counties and cities of the United Kingdom.</li> <li>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).</li> </ul>		<ul style="list-style-type: none"> <li>A region of the United Kingdom.</li> <li>A region in a European country.</li> <li>A region within North or South America.</li> </ul>		<ul style="list-style-type: none"> <li>Describe and understand key aspects of:                             <ul style="list-style-type: none"> <li>physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.</li> <li>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.</li> </ul> </li> </ul>	
Skills					
Mapping		Fieldwork		Enquiry and Investigation	
<ul style="list-style-type: none"> <li>Use a wider range of maps (including digital), atlases and globes to locate countries and features studied.</li> <li>Use maps and diagrams from a range of publications e.g. holiday brochures, leaflets, town plans.</li> <li>Use maps at more than one scale.</li> <li>Recognise that larger scale maps cover less area.</li> <li>Make and use simple route maps.</li> <li>Recognise patterns on maps and begin to explain what they show.</li> <li>Use the index and contents page of atlases.</li> <li>Label maps with titles to show their purpose</li> <li>Recognise that contours show height and slope.</li> <li>Use 4 figure coordinates to locate features on maps.</li> <li>Create maps of small areas with features in the correct place.</li> <li>Use plan views.</li> <li>Recognise some standard OS symbols.</li> <li>Link features on maps to photos and aerial views.</li> <li>Make a simple scaled drawing e.g. of the classroom.</li> <li>Use a scale bar to calculate some distances</li> <li>Relate measurement on large scale maps to measurements outside.</li> </ul>		<ul style="list-style-type: none"> <li>Use the eight points of a compass.</li> <li>Observe, measure and record the human and physical features in the local area using a range of methods including sketch maps, cameras and other digital devices.</li> <li>Make links between features observed in the environment to those on maps and aerial photos.</li> </ul>		<ul style="list-style-type: none"> <li>Ask more searching questions including, 'how?' and, 'why?' as well as, 'where?' and 'what?' when investigating places and processes</li> <li>Make comparisons with their own lives and their own situation.</li> <li>Show increasing empathy and describe similarities as well as differences.</li> </ul>	
Communication		Use of ICT / technology			
<ul style="list-style-type: none"> <li>Identify and describe geographical features, processes (changes), and patterns.</li> <li>Use geographical language relating to the physical and human processes detailed in the PoS e.g. tributary and source when learning about rivers.</li> <li>Communicate geographical information through a range of methods including sketch maps, plans, graphs and presentations.</li> <li>Express opinions and personal views about what they like and don't like about specific geographical features and situations e.g. a proposed local wind farm.</li> </ul>		<ul style="list-style-type: none"> <li>Use the zoom facility on digital maps to locate places at different scales.</li> <li>Add a range of text and annotations to digital maps to explain features and places.</li> <li>View a range of satellite images</li> <li>Add photos to digital maps.</li> <li>Draw and follow routes on digital maps.</li> <li>Use presentation/multimedia software to record and explain geographical features and processes.</li> <li>Use spreadsheets, tables and charts to collect and display geographical data.</li> <li>Make use of geography in the news – online reports &amp; websites.</li> </ul>			

# Key Learning in History: Years 3 and 4



Chronology	Events, People and Changes	Communication
<p><b>Show their increasing knowledge and understanding of the past by:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Using specialist dates and terms, and by placing topics studied into different periods (century, decade, Roman, Egyptian, BC, AD...).</b></li> <li>▪ <b>Making some links between and across periods, such as the differences between clothes, food, buildings or transport.</b></li> <li>▪ <b>Identifying where some periods studied fit into a chronological framework by noting connections, trends and contrasts over time.</b></li> </ul>	<p><b>Be able to describe some of the main events, people and periods they have studied by:</b></p> <ul style="list-style-type: none"> <li>▪ <b>Understanding some of the ways in which people's lives have shaped this nation.</b></li> <li>▪ <b>Describing how Britain has influenced and been influenced by the wider world.</b></li> <li>▪ <b>Understanding some significant aspects of history – nature of ancient civilisations; expansion of empires; characteristic features of non-European societies; achievements and follies of mankind.</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Construct informed responses that involve thoughtful selection and organisation of relevant historical information.</b></li> <li>▪ <b>When doing this they should use specialist terms like <i>settlement, invasion</i> and vocabulary linked to chronology.</b></li> <li>▪ <b>Produce structured work that makes some connections, draws some contrasts, frame historically-valid questions involving thoughtful selection and organisation of relevant historical information using appropriate dates and terms.</b></li> </ul>

## Enquiry, Interpretation and Using Sources

<ul style="list-style-type: none"> <li>▪ <b>Understand some of the methods of historical enquiry, and how evidence is used to make detailed observations, finding answers to questions about the past.</b></li> <li>▪ <b>Use some sources to start devising historically valid questions about change, cause, similarity and difference, and significance.</b></li> <li>▪ <b>Understand some of the methods of historical enquiry, how evidence is used to make historical claims.</b></li> <li>▪ <b>Use sources as a basis for research from which they will begin to use information as evidence to test hypotheses.</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Identify some of the different ways in which the past can be represented, and that different versions of the past such as an event may exist (<i>artist's pictures, museum displays, written sources</i>).</b></li> <li>▪ <b>Understand how our knowledge of the past is constructed from a range of different sources and that different versions of past events may exist, giving some possible reasons for this.</b></li> </ul>
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## Key Learning in Art and Design: Years 3 and 4

### Exploring and Developing Ideas

- 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.

### Evaluating and Developing Work

- 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 journal.

### Drawing

<ul style="list-style-type: none"> <li>▪ Experiment with ways in which surface detail can be added to drawings.</li> <li>▪ Use journals to collect and record visual information from different sources.</li> <li>▪ Draw for a sustained period of time at an appropriate level.</li> </ul>	<p><b>Lines and Marks</b></p> <ul style="list-style-type: none"> <li>▪ Make marks and lines with a wide range of drawing implements e.g. charcoal, pencil, crayon, chalk pastels, pens etc.</li> <li>▪ Experiment with different grades of pencil and other implements to create lines and marks.</li> </ul>	<p><b>Form and Shape</b></p> <ul style="list-style-type: none"> <li>▪ Experiment with different grades of pencil and other implements to draw different forms and shapes.</li> <li>▪ Begin to show an awareness of objects having a third dimension.</li> </ul>	<p><b>Tone</b></p> <ul style="list-style-type: none"> <li>▪ Experiment with different grades of pencil and other implements to achieve variations in tone.</li> <li>▪ Apply tone in a drawing in a simple way.</li> </ul>	<p><b>Texture</b></p> <ul style="list-style-type: none"> <li>▪ Create textures with a wide range of drawing implements.</li> <li>▪ Apply a simple use of pattern and texture in a drawing.</li> </ul>
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### Digital Media

- Record and collect visual information using digital cameras and video recorders.
- Present recorded visual images using software.
- Use a graphics package to create images and effects with; **lines** by controlling the brush tool with increased precision.
- Change the type of brush to an appropriate style.
- Create **shapes** by making selections to cut, duplicate and repeat.
- Experiment with **colours and textures** by using effects and simple filters to manipulate and create images for a purpose.

### Painting

- Experiment with different effects and textures including blocking in colour, washes, thickened paint creating textural effects.
  - Work on a range of scales e.g. thin brush on small picture etc.
  - Create different effects and textures with paint according to what they need for the task.
- Colour**
- Mix colours and know which primary colours make secondary colours.
  - Use more specific colour language.
  - Mix and use tints and shades.

### Printing

- Create printing blocks using a relief or impressed method.
- Create repeating patterns.
- Print with two colour overlays.

### Textiles

- Use a variety of techniques, e.g. printing, dyeing, weaving and stitching to create different textural effects.
- Match the tool to the material.
- Develop skills in stitching, cutting and joining.
- Experiment with paste resist.

### 3-D

- Plan, design and make models from observation or imagination.
- Join clay adequately and construct a simple base for extending and modelling other shapes.
- Create surface patterns and textures in a malleable material.
- Use papier mache to create a simple 3D object.

### Collage

- Experiment with a range of collage techniques such as tearing, overlapping and layering to create images and represent textures.
- Use collage as a means of collecting ideas and information and building a visual vocabulary.

Advised curriculum coverage maximum three media per year

## Key Learning in Design and Technology: Years 3 and 4



Design		Make	Evaluate
<ul style="list-style-type: none"> <li>Develop more than one design or adaptation of an initial design.</li> <li>Plan a sequence of actions to make a product.</li> <li>Record the plan by drawing using annotated sketches.</li> <li>Begin to use cross-sectional and exploded diagrams.</li> <li>Use prototypes to develop and share ideas.</li> <li>Think ahead about the order of their work and decide upon tools and materials.</li> <li>Propose realistic suggestions as to how they can achieve their design ideas.</li> <li>Consider aesthetic qualities of materials chosen.</li> <li>Use CAD where appropriate.</li> </ul>		<ul style="list-style-type: none"> <li>Prepare pattern pieces as templates for their design.</li> <li>Cut slots.</li> <li>Cut internal shapes.</li> <li>Select from a range of tools for cutting shaping joining and finishing.</li> <li>Use tools with accuracy.</li> <li>Select from techniques for different parts of the process.</li> <li>Select from materials according to their functional properties.</li> <li>Plan the stages of the making process.</li> <li>Use appropriate finishing techniques.</li> </ul>	<ul style="list-style-type: none"> <li>Investigate similar products to the one to be made to give starting points for a design.</li> <li>Draw/sketch products to help analyse and understand how products are made.</li> <li>Research needs of user.</li> <li>Identify the strengths and weaknesses of their design ideas in relation to purpose/user.</li> <li>Decide which design idea to develop.</li> <li>Consider and explain how the finished product could be improved.</li> <li>Discuss how well the finished product meets the design criteria of the user.</li> <li>Investigate key events and individuals in Design and Technology.</li> </ul>
Food	Textiles	Structures	Mechanical and Electrical Systems and ICT
<ul style="list-style-type: none"> <li>Develop sensory vocabulary/knowledge using, smell, taste, texture and feel.</li> <li>Analyse the taste, texture, smell and appearance of a range of foods (predominantly savoury).</li> <li>Follow instructions/recipes.</li> <li>Make healthy eating choices – use the <i>Eatwell plate</i>.</li> <li>Join and combine a range of ingredients.</li> <li>Explore seasonality of vegetables and fruit.</li> <li>Find out which fruit and vegetables are grown in countries/continents studied in Geography.</li> <li>Develop understanding of how meat/fish are reared/caught.</li> </ul>	<ul style="list-style-type: none"> <li>Develop vocabulary for tools materials and their properties.</li> <li>Understand seam allowance.</li> <li>Join fabrics using running stitch, over sewing, blanket stitch.</li> <li>Prototype a product using J cloths.</li> <li>Use prototype to make pattern.</li> <li>Explore strengthening and stiffening of fabrics.</li> <li>Explore fastenings (inventors?) and recreate some.</li> <li>Sew on buttons and make loops.</li> <li>Use appropriate decoration techniques.</li> </ul>	<ul style="list-style-type: none"> <li>Develop vocabulary related to the project.</li> <li>Create shell or frame structures.</li> <li>Strengthen frames with diagonal struts.</li> <li>Make structures more stable by giving them a wide base.</li> <li>Measure and mark square section, strip and dowel accurately to 1cm.</li> </ul>	<ul style="list-style-type: none"> <li>Develop vocabulary related to the project.</li> <li>Use mechanical systems such as gears, pulleys, levers and linkages.</li> <li>Incorporate a circuit into a model.</li> <li>Use electrical systems such as switches bulbs and buzzers.</li> <li>Use ICT to control products.</li> <li>Use lolly sticks/card to make levers and linkages.</li> <li>Use linkages to make movement larger or more varied.</li> </ul>

## Key Learning in Music: Years 3 and 4

Performing	Listening	Creating	Knowledge and Understanding
<ul style="list-style-type: none"> <li>▪ Sing songs, speak chants and rhymes in unison and two parts, with clear diction, control of pitch, a sense of phrase and musical expression.</li> <li>▪ Play tuned and untuned instruments with control and rhythmic accuracy.</li> <li>▪ Practise, rehearse and present performances with an awareness of the audience.</li> </ul>	<ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ 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.</li> <li>▪ 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.</li> <li>▪ Know how time and place can influence the way music is created, performed and heard (for example, the effect of occasion and venue).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improvise and develop rhythmic and melodic material when performing.</li> <li>▪ Explore, choose, combine and organise musical ideas within musical structures.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Analyse and compare sounds.</li> <li>▪ Explore and explain their own ideas and feelings about music using movement, dance, expressive language and musical vocabulary.</li> <li>▪ Improve their own and others' work in relation to its intended effect.</li> <li>▪ Use and understand staff and other musical notations.</li> <li>▪ Develop an understanding of the history of music.</li> </ul>

### Musical Elements

Pitch	Duration	Dynamics	Tempo	Timbre	Texture	Structure
<ul style="list-style-type: none"> <li>▪ Determine upwards and downwards direction in listening, performing and moving.</li> <li>▪ Recognise and imitate melody patterns in echoes.</li> <li>▪ Show the overall contour of melodies as moving upwards, downwards or staying the same.</li> <li>▪ Determine movement by step, by leaps or by repeats.</li> <li>▪ Perform simple melody patterns.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Indicate the steady beat by movement, including during a silence.</li> <li>▪ Respond to changes in the speed of the beat.</li> <li>▪ Respond to the strong beats whilst singing.</li> <li>▪ Use instruments to keep a steady beat.</li> <li>▪ Hold a beat against another part.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recognise differences in dynamic levels.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identify the differences between fast and slow tempos.</li> <li>▪ Identify the tempo of music as fast, moderate, slow, getting faster or getting slower.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Describe and aurally identify the tone colours of instruments.</li> <li>▪ Compare instrumental tone colour.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recognise the difference between <b>thick</b> (<i>many sounds</i>) and <b>thin</b> (<i>few sounds</i>) textures.</li> <li>▪ Recognise changes in texture.</li> <li>▪ Identify the melodic line in a texture.</li> <li>▪ Recognise rhythm on rhythm in music.</li> <li>▪ Recognise the difference between <b>unison</b> (<i>one same pitched sound</i>) and <b>harmony</b> (<i>various pitched sounds at the same time</i>).</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recognise call and response form.</li> <li>▪ Differentiate between the contrasting sections of a song.</li> <li>▪ Recognise the difference between the verse and refrain of a song.</li> <li>▪ Recognise <b>binary</b> (<i>one melody labeled 'A' is followed by a new melody labeled 'B' = AB melody form</i>) and <b>ternary</b> (<i>one melody labeled 'A' is followed by a new melody labeled 'B' which then goes back to melody A = ABA melody form</i>) form.</li> </ul>

## Key Learning in PSHE: Years 3 and 4



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"> <li>Recognise their own likes / dislikes, traits and individual preferences.</li> <li>Recognise other people's likes / dislikes, traits and preferences.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate that they can work in a pair and a small group.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate active listening skills.</li> <li>Speak in front of others.</li> </ul>	<ul style="list-style-type: none"> <li>Negotiate in small groups.</li> <li>Coming to a 'consensus'.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate compassion, empathy and tolerance.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise simple body language.</li> <li>Understand verbal and non-verbal communication.</li> <li>Demonstrate speaking and listening skills.</li> </ul>
Assertiveness	Making Choices	Risk Taking	Influences	Making Decisions	
<ul style="list-style-type: none"> <li>Understand the skill and can put it into practice.</li> <li>Speak using the assertive 'I'.</li> <li>Know that it is OK to make mistakes.</li> <li>Say 'No' and mean it.</li> <li>Ask for time to think things over.</li> </ul>	<ul style="list-style-type: none"> <li>Understand that they have choices.</li> <li>Identify points of choice.</li> <li>Explore factors which influence choosing.</li> <li>Make more informed choices.</li> </ul>	<ul style="list-style-type: none"> <li>Understand that accidents happen and we don't always have to blame someone but we need to consider what the risks are before we do something.</li> <li>Risk taking can be good when it means trying something new that we might like.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise the influences over choice and decisions, both internal and external.</li> <li>Understand where they can get help if something feels uncomfortable or if someone is trying to influence them in a negative way.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate that they know the process for decision making.</li> </ul>	