

Welcome to the Computing Curriculum map for Year 1

Curriculum Overview

YEAR	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2	
YEAR 1	Digital Media (Graphics)	Text & Multimedia	Digital Research	Simulations & Modelling	Data Handling	Data Logging	Sound

Key stage 1

Pupils should be taught to:

- understand what *algorithms* are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and *debug* simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve *digital content*
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Please see below for each module.

Year 1 Computing- Autumn 1
'Text and Multimedia'

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><u>'Text & Multimedia'</u> <u>National Curriculum</u></p> <ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve <i>digital content</i> 	<p><u>Lesson 1</u></p> <ul style="list-style-type: none"> I can turn a computer on and logon successfully. I know that I must keep my passwords safe and private. <p><u>Lesson 2 +</u></p> <ul style="list-style-type: none"> I can develop familiarity with the keyboard – spacebar, backspace, shift, enter, to provide text on screen that is clear and error free I can select appropriate images I can begin to select or record a sound to add to my work I can add text to photographs, graphics (images) and sound e.g. captions, labelling and simple sentences through the use of e.g. <i>2create A Story</i> I can use pre-defined layouts or templates for presentations I can begin to explain reasons why choices have been made to teacher or talk partner. 	<p>Clicker6 Children use a word bank alongside their own text input to make sentences.</p> <p>2CreateASuperStory (Simple Mode) A simple story editor that includes pages and an area for pictures. Simple animations can then be chosen for the pictures.</p> <p>2Simple Infant Video Toolkit – 2Publish - has many templates to include a number of pictures and sentences.</p> <p>Photostory 3 (as whole class) – Combines photos into a slideshow and allows sound, voice commentary and titles to be added.</p>	<p>Children need to be given their usernames and passwords. If the children are given time to practise logging on, it should save time in future lessons.</p> <p><i>Check where the children will be saving their work to.</i></p> <p><u>CURRICULUM LINKS</u></p> <p>ENGLISH</p> <ul style="list-style-type: none"> Story writing – stories with familiar settings/range of cultures /fantasy worlds Stories and rhymes with predictable and repetitive language. <p>MATHS</p> <ul style="list-style-type: none"> The story could be structured around the days of the week. Eg. “On Monday...”. Sequencing events in chronological order.

Year 1 Computing- Autumn 2
'Digital Media (Graphics)

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWEAR/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><u>Digital Media (Graphics)</u> <u>National Curriculum</u></p> <ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve <i>digital content</i> 	<ul style="list-style-type: none"> I can use a paint package to create a picture to communicate my ideas I can explore shape, line and colour to communicate a specific idea I can talk about my use of a paint package and my choice of tools I can talk about the differences between a graphics package and paper based art activities (undo, changes quickly and easily made) I can print my work. I can save my work with help. 	<p>Infant Video Toolkit - 2paint (ctrl shift o – tools (including spray, shapes, fill tool & straight lines)</p> <p>2publish – creating different types of pictures. (eg. <i>Symmetrical, a repeating pattern</i>) Adding captions/text to their work.</p> <p>LGFL Busythings (accessible through my.uso.im) Has a range of paint packages for the children to explore.</p>	<p><i>Check where the children will be saving their work to. (staffpupil/year1)</i></p> <p><u>CURRICULUM LINKS</u></p> <p>ENGLISH</p> <ul style="list-style-type: none"> Writing captions. <p>MATHS</p> <ul style="list-style-type: none"> Describing the position, direction and movement of shapes. Symmetry Creating and describing patterns.

Year 1 Computing– Spring 1
'Digital Research'

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p>'Digital Research' National Curriculum</p> <ul style="list-style-type: none"> Use technology purposefully to create, organise, store, manipulate and retrieve <i>digital content</i> Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 	<p>How to carry out research</p> <ul style="list-style-type: none"> I know that information comes from different sources e.g. books, web sites, TV etc I understand that ICT can give access quickly to a wide variety of resources. <p>Using a computer to find specific information</p> <ul style="list-style-type: none"> I am aware of the risks involved when using the internet. I can talk about my use of ICT and the internet and other methods to find information. I can explore a variety of electronic information as part of a given topic I know buttons/icons can represent different functions e.g. record, pause, play I can select appropriate buttons to navigate web sites or stored information I can begin to understand that computers use icons, menus, hyperlinks to provide information and instructions e.g. Select a specific part of the CBeebies site to find an activity. <p>What do we do with the information we find?</p> <ul style="list-style-type: none"> I can record the information I find in an appropriate way. (doesn't have to be electronically) <p>Using other technology to find out information.</p> <ul style="list-style-type: none"> I can access different types of information from different sources e.g. using CD players, web sites, TV, video, interviewing using easi-speak, DVD etc) 	<p><i>The children are not expected to do 'open searching'.</i> <i>Links must already have been found and monitored by the class teacher.</i></p> <p>Espresso Searching for specific resources & changing search criteria eg. key stage/type of resource. Children could explore a 'route' made by the teacher.</p> <p>Child-friendly Search Engines <u>DO NOT</u> encourage the children to use www.google.com as the content cannot be controlled. www.kidrex.org www.safesearchkids.com (google-based) www.searchypants.com (Teacher can create a search list)</p> <p>Internet Explorer – Favourites Teacher to save specific links that children can access through the 'favourites' menu.</p> <p>my.uso.im Teacher can save links here for children to access.</p>	<p>CURRICULUM LINKS</p> <p>ENGLISH</p> <ul style="list-style-type: none"> The research can be used to support a writing activity such as making a non-fiction book. Pupils could create an oral presentation based on their research. Comprehension activities to practise pupils' understanding text. Listening and understanding spoken information. <p>MATHS</p> <ul style="list-style-type: none"> Recognising language relating to time. Eg. Days of the week, months of the year.

Year 1 Computing- Spring 2 'Simulations & Modelling'

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><u>Simulations & Modelling</u> <u>National Curriculum</u></p> <ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve <i>digital content</i> recognise common uses of information technology beyond school 	<p><u>1 lesson</u></p> <ul style="list-style-type: none"> I understand the difference between real or fantasy situations. I know that some things we see on computers are real and some things are fantasy (like cartoons). <i>Have some images/videos available for the children to sort. (Eg. Real-life photos and cartoons of similar situations).</i> <p><u>3 lessons</u></p> <ul style="list-style-type: none"> I understand that computer representation allows the user to make choices and that different decisions produce different outcomes I understand that computers and technology can be used to represent and model situations. I can explore a simulation to support a given topic and talk about what happens and why. <p><u>2 lessons</u> 'Make a Scene' <i>(Children will be dragging pictures and using paint tools to create a scene.</i></p> <ul style="list-style-type: none"> I can use an art package or drag and drop software to create a representation of a real or a fantasy situation. 	<p><i>Please save all links in Favourites menu. (The children learnt how to access this last term)</i></p> <p>my.uso.im i-board player – ICT – Year 1 – 1A (An introduction to modelling. There are lots of virtual situations for the children to manipulate & experiment with.</p> <p>'BBC Science clips' Age 5-6 Children</p> <p><u>Programs for making their 'Scene'</u> <i>Ensure children have a topic Eg. 'In the Woods', 'At the Beach', Fantasy' etc.</i> <u>JiT Toolkit – JiT Paint</u> Found in my.uso.im The children can choose a background image and ready made characters/pictures to add to their scene. They also have the option to paint their own additions.</p>	<p><u>CURRICULUM LINKS</u></p> <p style="background-color: #00FF00;">ENGLISH</p> <ul style="list-style-type: none"> Story writing – creating a fantasy story setting. Writing a description for a fantasy story setting. Creating illustrations for a non-fiction book. Labelling a diagram. <p style="background-color: #00FFFF;">MATHS</p> <ul style="list-style-type: none"> Describe the position, direction and movement of images. <p style="background-color: #FF0000;">SCIENCE</p> <ul style="list-style-type: none"> Create a simulation for different seasons/types of weather.

Year 1 Computing- Summer 1 'Data Handling'

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><u>National Curriculum</u></p> <ul style="list-style-type: none"> • use technology purposefully to create, organise, store, manipulate and retrieve digital content • select, use and combine a variety of software on a range of digital devices to design and create content that accomplish given goals, , including collecting, analysing, evaluating and presenting data and information • be discerning in evaluating digital content 	<p><i>To be completed in parallel to 'Data Handling' in Maths</i></p> <p><u>Pictograms (1-2 Sessions)</u></p> <ul style="list-style-type: none"> • I can use simple graphing software to complete a pictogram. • I can 'read' and answer questions relating to a pictogram. <p><u>Graphing (1-2 Sessions)</u></p> <ul style="list-style-type: none"> • I can use graphing software to enter data and change graph type. • I can discuss, interpret & draw conclusions from graphs. • I can answer simple questions about graphs. 	<p><u>2Simple 2Count</u></p> <ul style="list-style-type: none"> • Use a set of items and group them according to various attributes: colour, shape, size etc Count the number of items in each group. • When the pictogram is complete use it to count each category. • Display print outs. • Explore interests the children have which can also be used to create similar pictograms. <p><u>2simple 2graph</u></p> <ul style="list-style-type: none"> • Tallying (counting in 5s). • Turn tallying into a graph/chart (Select appropriate) • Demonstrate how to read from the top of the bar across to the scale • Pay attention to the chart's numeric axis where the scale might not always show in 1s. • Practice reading scales that count in 2s / 5s etc. 	<p><u>CURRICULUM LINKS</u></p> <p>ENGLISH</p> <ul style="list-style-type: none"> • Describe and compare the results of the pictograms and graphs. • Write a comparison for the graphs/pictograms created. • Comprehension – understanding questions about graphs. <p>MATHS</p> <ul style="list-style-type: none"> • Representing numbers using pictures. • Recognising numerals. • Counting accurately. • Understanding data. • Identify and represent numbers using objects and pictorial representations and use the language of: equal to, more than, less than (fewer), most, least. • Counting in groups of two, five and ten.

Year 1 Computing- Summer 2 'Data Logging'

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><u>Data Logging</u> <u>National Curriculum</u></p> <ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content select, use and combine a variety of software on a range of digital devices to design and create content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information 	<ul style="list-style-type: none"> I know that a 'data logger' collects information. I know the types of information a 'data logger' can collect. I can take a series of snap-shot readings and compare them. 	<p><u>Log-it boxes</u></p> <p>Ensure the batteries are charged and working prior to using them.</p> <p>Point the light sensor at a range of different objects & observe the <i>readings</i> on the device or via software. Show the <i>data-logger</i> LCD display under a visualiser or show digits / bar graph on computer screen / whiteboard. Discuss how the readings (numbers) relate to the brightness of different objects.</p>	<p><i>This needs to be taught in smaller groups/pairs so that all children can have a go using the log boxes.</i></p> <p>CURRICULUM LINKS</p> <p>ENGLISH</p> <ul style="list-style-type: none"> Writing a recount of how the experiments were carried out. <p>MATHS</p> <ul style="list-style-type: none"> Recognising and reading numerals. Understanding data. Identify numbers and use the language of: equal to, more than, less than (fewer), most, least. Measuring and recording time. <p>SCIENCE</p> <ul style="list-style-type: none"> Measuring different light/temperature conditions for plants.

Year 1 Computing- Summer 2 'Sound'

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p style="text-align: center;"><u>Sound</u> <u>National Curriculum</u></p> <ul style="list-style-type: none"> use technology purposefully to create, organise, store, manipulate and retrieve digital content select, use and combine a variety of software on a range of digital devices to design and create content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information 	<p><i>Small groups.</i></p> <p>Exploring sound-recording toys</p> <ul style="list-style-type: none"> I can explore a variety of devices and software to record & playback voice & other sounds I understand that recorded sounds are saved as sound files on a computer / device. <p><i>All children could be doing this at the same time.</i></p> <p>Manipulating PC Sounds</p> <ul style="list-style-type: none"> I can recognise that an electronic keyboard can be used to select and control sounds. I can explore a range of electronic music and sound devices including software and different peripherals. I can talk about my music when I share my recordings with the rest of the class. 	<p>Voice-recording toys <i>Ensure batteries are replaced/charged before using the devices.</i></p> <p><u>Talking Tins (EYFS)</u> Can record and play back up to 15 seconds of sound.</p> <p><u>Talking post-cards (EYFS)</u> Children could write something on the postcard and record it.</p> <p><u>Talking pegs (EYFS)</u> Add spoken text to work they have done/a display.</p> <p><u>Talking Dice (EYFS)</u> Record different messages for different faces.</p> <p><u>Talking Boxes (EYFS)</u> Make a sound/voice recording as a clue for something in the box</p> <p><u>Easi-speak microphones (AV Room)</u> Learn how to turn on, record and play back.</p> <p><u>Keyboards</u> Children could use the music keyboards to change sounds.</p> <p><u>Software</u> Clicker6 Espresso – sounds/music creator LGFL Busythings 2simple music toolkit (not 2beat) Teslboard</p>	<p><i>This needs to be taught in smaller groups/pairs so that all children can have a turn using the hardware.</i></p> <p><u>Activity Ideas</u></p> <ul style="list-style-type: none"> Use simple recording devices to record sounds / voice and playback. Fix to objects around the class (table / chair / computer / window) with voice recording modelling appropriate phrases / vocabulary / questions etc Record a “mystery sound” / “mystery person’s voice” from somewhere in the school. Can the children identify what / where / who it is? Get the children to do the same. <p><i>The children could present their recordings/a game to EYFS.</i></p> <p><u>CURRICULUM LINKS</u></p> <p><u>ENGLISH</u></p> <ul style="list-style-type: none"> Record a story, recount, poem or postcard they have written. <p><u>MATHS</u></p> <ul style="list-style-type: none"> Sequencing events in chronological order. Recording time – Eg. Make a 5 second recording.

