

# Welcome to the Computing Curriculum map for Year 2

## Curriculum Overview

YEAR 2	Text & Multimedia	Digital Research	Digital Media (Graphics & Sound)	Sound	Communication & Collaboration	Programming & Control
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### 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 2 Computing- Autumn 1**  
**'Text & Multimedia'**

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><b><u>Multimedia &amp; Word Processing National Curriculum</u></b></p> <ul style="list-style-type: none"> <li>use technology purposefully to create, organise, store, manipulate and retrieve <i>digital content</i></li> </ul>	<ul style="list-style-type: none"> <li>I can begin to word process short narrative and non-narrative texts</li> <li>I can develop basic editing skills including different presentational features (font size, colour and style)</li> <li>I can select from different presentational features e.g. title, paragraph, label etc</li> <li>I can word process short narrative and non-narrative texts</li> <li>I can save, print, retrieve and amend my work</li> <li>I can use the mouse or arrow keys to insert words and sentences</li> <li>I can use appropriate editing tools to improve my work</li> <li>I can make use of graphics, video and sound to enhance my text on screen</li> <li>I can talk about my use of graphics and sound and how it may enhance or change the mood and atmosphere of my presentation and make changes where appropriate</li> <li>I can use different layouts and templates for different purposes</li> </ul>	<p><b>2Create A Super Story Simple Mode- house icon</b> A simple story editor that allows children to add pages and draw pictures to go with their story. Simple animations can then be chosen for the pictures.</p> <p><b>2Publish</b> Many templates to include a number of pictures and sentences.</p> <p><b>CLICKER6</b> Text can be added to images.</p> <p><b>J2e – Jit software</b> Accessible via my.uso.im Paint &amp; text program.</p> <p><a href="http://www.wordle.com">www.wordle.com</a> Option to input text and manipulate it in different ways (eg. shapes, colours).</p>	<p><i>Combine text, images and possibly other features to create either a printable document or a simple multimedia presentation. Ensure all choices suit the purpose.</i></p> <p><b><u>CURRICULUM LINKS</u></b></p> <p><b>ENGLISH</b></p> <ul style="list-style-type: none"> <li>Use word processing to draft, a piece of their writing. For example, a story, poem, newspaper report, captions for pictures.</li> </ul> <p><b>MATHS</b></p> <ul style="list-style-type: none"> <li>Put events in chronological order.</li> <li>Using mathematical language to describe position, direction and movements in their animations.</li> </ul>

## Year 2 Computing- Autumn 2 'Digital Research'

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><b>E-Safety</b> <b>National Curriculum</b></p> <ul style="list-style-type: none"> <li>• use technology purposefully to create, organise, store, manipulate and retrieve <i>digital content</i></li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• I can talk about the different forms of information that computers can give us.(text, images, sound, multimodal)</li> <li>• I can recognise the layout of a web page, recognise web addresses, menu buttons and links.</li> <li>• I can understand and talk about how digital information can be used to answer specific questions.</li> <li>• Understand that web sites have a specific address e.g. <a href="http://www.bbc.co.uk/">www.bbc.co.uk/</a>.</li> <li>• I can locate links to web sites from Favourites or saved hyperlinks.</li> <li>• I can use key words search a specific resource for information, e.g., Espresso and other websites, under the guidance and supervision of an adult.</li> <li>• I can begin to develop key questions and find information to answer them.</li> <li>• I know that some information that we find can be more useful than others.</li> <li>• I can begin to manipulate information using copy and paste for a specific purpose.</li> <li>• I can use basic information from the internet.</li> </ul>	<p><b>Espresso</b> Can access information through the main menu or search feature.</p> <p><b>Internet Explorer</b> Save addresses in 'favourites' for the children to use. (Has to be done on individual computers).</p> <p><b>Child-friendly Search Engines</b> <b>DO NOT</b> encourage the children to use <a href="http://www.google.com">www.google.com</a> as the content cannot be controlled. <a href="http://www.kidrex.org">www.kidrex.org</a> <a href="http://www.safesearchkids.com">www.safesearchkids.com</a> (google-based) <a href="http://www.searchypants.com">www.searchypants.com</a> (Teacher can create a search list)</p> <p><b>my.uso.im</b> Teacher can save links here for children to access.</p> <p><b>CLICKER6</b> Import in the information found and clicker will read it/identify key words/create a dictionary that can be used.</p>	<p><b>CURRICULUM LINKS</b></p> <p><b>ENGLISH</b></p> <ul style="list-style-type: none"> <li>• Use the information found to support the writing of newspaper reports, reports, information texts, explanations and labelling of diagrams.</li> </ul> <p><b>MATHS</b></p> <ul style="list-style-type: none"> <li>• Put events in chronological order.</li> <li>• Understanding mathematical language in relation to time and measure where appropriate.</li> <li>• Recognising numerals (reading the number of web results).</li> </ul> <p><b>SCIENCE</b></p> <ul style="list-style-type: none"> <li>• Research animals and humans. Eg. their needs, life cycles.</li> </ul>

**Year 2 Computing- Spring 1**  
**'Digital Media (Graphics)**

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><u>Digital Media National Curriculum</u></p> <ul style="list-style-type: none"> <li>use technology purposefully to create, organise, store, manipulate and retrieve <b>digital content</b></li> <li>recognise common uses of information technology beyond school</li> </ul>	<p><b>Introduction to Digital Media</b></p> <ul style="list-style-type: none"> <li>I know there are a variety of ways to capture still and moving images.</li> <li>I can use a digital camera to take well-focussed images.</li> </ul> <p><b>Graphics</b> <b>1 session</b></p> <ul style="list-style-type: none"> <li>I can acquire, store and retrieve images from cameras and scanners.</li> <li>I can use a graphics program to select specific areas of an image to create a repeating motif.</li> </ul> <p><b>Animation</b> <b>2-3 Sessions</b></p> <ul style="list-style-type: none"> <li>I understand that animation is a sequence of still images.</li> <li>I understand that some software packages enable images to be animated. <ul style="list-style-type: none"> <li>I can create a sequence of images to form a short animation.</li> </ul> </li> </ul>	<p><b>Digital Cameras</b> <i>May need to borrow from other classes for this lesson.</i></p> <p><b>2publish</b> Repeating images program. <i>You will need to change the tools (ctrl+shift+o) to enable a right click so the children can import a photograph they have taken.</i></p> <p><b>my.uso.im</b> JiT J2e infant tools – animate <i>The children can create a progression of images to animate a character of their choice. There are also options to add text and background images. Work is saved to their LGFL account</i></p>	<p><b>CURRICULUM LINKS</b></p> <p><b>ENGLISH</b></p> <ul style="list-style-type: none"> <li>Create animations to support stories they have written.</li> <li>Understand written instructions and create an animation based on them.</li> </ul> <p><b>MATHS</b></p> <ul style="list-style-type: none"> <li>Order and arrange combinations of mathematical objects in patterns and sequences.</li> <li>Use mathematical vocabulary to describe position, direction and movement</li> </ul> <p><b>ART</b></p> <ul style="list-style-type: none"> <li>develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space</li> </ul>

## Year 2 Computing- Spring 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"> <li>• use technology purposefully to create, organise, store, manipulate and retrieve <b>digital content</b></li> <li>▪ recognise common uses of information technology beyond school</li> </ul>	<p><b><u>Recording &amp; Using Sounds</u></b> <b><u>2-3 sessions</u></b></p> <ul style="list-style-type: none"> <li>• I can explore a variety of devices and software to record &amp; playback voice &amp; other sounds.</li> <li>• I understand that recorded sounds are saved as sound files on a computer / device.</li> <li>• I can talk about the way others have used sounds in their work.</li> </ul> <p><b><u>Music</u></b> <b><u>2-3 sessions</u></b></p> <ul style="list-style-type: none"> <li>• I can explore sound and music using onscreen music software.</li> <li>• I can use a computer to compose and record.</li> <li>• I can play my composition to an audience and make improvements.</li> </ul>	<p><b><u>Easi-speak Microphones</u></b> Use these microphones to record voices/other sounds.</p> <p><b><u>2 beat (infant music toolkit)</u></b> The children plan and create a musical sequence that can be saved and retrieved the following lesson. They could 'perform' to each other and make improvements. <i>(Use ctrl+shift+o to save the compositions in a suitable location)</i> <a href="http://primarygamesarena.com/music">http://primarygamesarena.com/music</a> - Several simple to use music games</p>	<p><b><u>CURRICULUM LINKS</u></b></p> <p><b><u>ENGLISH</u></b></p> <ul style="list-style-type: none"> <li>• Record pieces of writing they have written.</li> <li>• Record news broadcasts, interviews an podcasts.</li> </ul> <p><b><u>MATHS</u></b></p> <ul style="list-style-type: none"> <li>• Order and arrange combinations of mathematical objects in patterns and sequences. (instrumental sounds)</li> <li>• Measure time in different ways. Eg. create a three minute recording/piece of music.</li> </ul> <p><b><u>MUSIC</u></b></p> <ul style="list-style-type: none"> <li>• Experiment with, create, select and combine sounds using the inter-related dimensions of music.</li> <li>• Record sound-effects.</li> </ul>

**Year 2 Computing- Summer 1  
'Communication & Collaboration'**

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><b><u>Communication &amp; Collaboration</u></b> <b><u>National Curriculum</u></b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<p><b><u>E-Safety Recap (1 lesson)</u></b></p> <ul style="list-style-type: none"> <li>I can talk openly about their use use of online communication in school and at home</li> <li>I know what to do and who to tell if they see something inappropriate online.</li> <li>I understand that personal information, e.g., email address, usernames, passwords, home address or telephone number should not be shared, either online or offline, without a trusted adult’s permission.</li> <li>I know that I should not ask to meet anybody from the online world in the offline world.</li> </ul> <p><b><u>Blogging (1-2 lessons)</u></b> <i>(Continue from last half term if the children got to use the blog)</i></p> <ul style="list-style-type: none"> <li>I understand that messages can quickly be sent electronically over distances and that people can reply to them.</li> <li>I can contribute to a blog.</li> </ul> <p><b><u>Email (3-4 lessons)</u></b></p> <ul style="list-style-type: none"> <li>I can send an email, using a subject heading, to a known</li> <li>I can email a member of the school community.</li> <li>I can open and reply to an email from a known person.</li> <li>I can develop an awareness of appropriate language to use in email and other forms of digital communication.</li> <li>I understand that an email has to be sent to a unique email address and the need for accuracy in typing the address.</li> </ul>	<p><b><u>J2Webby (Blogging)</u></b> <b>(accessible through my.uso.im)</b></p> <p>Children ‘upload their work to the school blog for others to look at and give feedback (verbal feedback will do)</p> <ul style="list-style-type: none"> <li>You will need to teach them how click on the J2Webby button when they have finished to send it to a moderation area.</li> <li>A teacher must moderate each piece of work in the moderation area before publishing. (in J2Launch).</li> </ul> <p><b><u>2simple Email (in-school email)</u></b></p> <p>See the 2simple Email user guide (on network) for full support.</p> <p>Children login and choose email formats eg. A picture with text.</p> <p>They can select recipients to email, check their ‘inbox’ and reply to messages.</p> <p>You can also add attachments and use the ‘address book’ feature’.</p>	<p><b><u>CURRICULUM LINKS</u></b></p> <p><b>ENGLISH</b></p> <ul style="list-style-type: none"> <li>Use the school blog to publish, riddles, poems &amp; other pieces of writing for children to offer feedback on.</li> <li>Write emails for different audiences.</li> </ul> <p><b>HUMANTIES</b></p> <ul style="list-style-type: none"> <li>The blog could relate to the topics being covered</li> </ul>

## Year 2 Computing- Summer 2 'Programming & Control'

COMPUTING ELEMENT	LEARNING OBJECTIVES/SKILLS	HARDWARE/SOFTWARE	CROSS-CURRICULAR LINKS/NOTES
<p><b><u>National Curriculum</u></b></p> <ul style="list-style-type: none"> <li>understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>create and debug simple programs</li> <li>use logical reasoning to predict the behaviour of simple programs</li> <li>use technology safely and respectfully</li> <li>recognise common uses of information technology beyond school.</li> </ul>	<p><b><u>Introduction to Programming/Non-computer based</u></b></p> <ul style="list-style-type: none"> <li>I can recognise common uses of information technology outside school.</li> <li>I can begin to think about how computer technology works.</li> <li>I know what algorithms are.</li> <li>I can accurately follow commands.</li> <li>I can give specific commands.</li> <li>I can adapt commands so they are more accurate.</li> </ul> <p><b><u>Floor Robots</u></b></p> <ul style="list-style-type: none"> <li>I can navigate programmable toys around a course or a familiar journey.</li> <li>I can program a sequence of instructions.</li> <li>I can 'debug' an algorithm.</li> </ul> <p><b><u>On-Screen Turtle</u></b></p> <ul style="list-style-type: none"> <li>I can make predictions and follow a set of commands in order to move an on-screen turtle.</li> <li>I can create a sequence of commands to reproduce a simple geometric shape or pattern on screen.</li> <li>I can 'debug' an algorithm for an on-screen turtle.</li> </ul>	<p><b><u>Non-computer based</u></b></p> <ul style="list-style-type: none"> <li>Think about technology in and out of school that need computer instructions to make them work. Eg. microwaves, traffic lights, photocopier (See them in action) Get the children to analyse them eg. <i>when you press the button at a pelican crossing, what happens?</i></li> <li>Play games involving giving and understanding instructions. Eg. The children 'program' each other to move from A to B</li> <li>Barrier games – give specific instructions to draw/make a picture from shapes.</li> </ul> <p>*The emphasis is that the instructions given must be specific.</p> <p><b><u>Beebots</u></b> (EYFS have 4) <i>Ensure batteries are charged.</i> Children should be programming a sequence of instructions before pressing 'go'. Writing down the 'algorithm' will support their work.</p> <p><b><u>2simple 2go</u></b> Star The children can program a 'turtle' to move on screen. Ctrl+shift+O will change the level of complexity. Start with the basic tools first.</p>	<p><b><u>CURRICULUM LINKS</u></b></p> <p><b>ENGLISH</b></p> <ul style="list-style-type: none"> <li>Instructions – accurately give oral instructions, written instructions and understand instructions.</li> </ul> <p><b>MATHS</b></p> <ul style="list-style-type: none"> <li>Order and arrange combinations of mathematical objects in patterns and sequences.</li> <li>Use mathematical vocabulary to describe position, direction and movement</li> <li>Measure the distances travelled by the floor robots.</li> <li>Create and describe 2D shapes with the on-screen turtle.</li> </ul>

