



Information Technology	
Programme of Study	
<ul style="list-style-type: none"> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> </ul>	
Skills	Knowledge and Understanding
Create, Manage and Manipulate Digital Content	Create, Manage and Manipulate Digital Content
Text and images	Text and images
<p>On a range of devices:</p> <ul style="list-style-type: none"> <li>Develop correct use of the keyboard (e.g. spacebar, backspace, delete, shift (not caps lock) and enter keys).</li> <li>Add captions to photos and graphics.</li> <li>Select text appropriately e.g. highlighting or clicking text to select.</li> <li>Make simple changes to text e.g. colour, style and size.</li> <li>Select text from word lists (if necessary).</li> <li>Select appropriate images to add to work.</li> <li>Word process short texts directly onto the computer (i.e. do not just copy up handwritten work).</li> <li>Navigate round text in a variety of ways e.g. mouse, arrow keys, touch, when editing work.</li> </ul> <ul style="list-style-type: none"> <li>Save and store work in an appropriate area, and be able to print, retrieve and amend it.</li> <li>Use a range of digital devices to capture and save both still and moving images. These could include digital cameras, video cameras, tablets,</li> <li>Refine the use of shape, line and colour to communicate a specific idea or artistic style/effect through various tools including brushes, pens, lines, flood fill, spray and stamps.</li> <li>Talk about their use of graphics package and their choice of tools.</li> <li>Begin to make changes to images e.g. cropping using basic tools in image manipulation software.</li> <li>Upload images or video from cameras and other digital devices to a computer, or into a document, with support if needed.</li> <li>Create a sequence of images to form a short animation.</li> <li>Change the content of a project for a specific audience.</li> <li>Begin to add different forms of media together e.g. text and images in blogs or word processing documents.</li> <li>Organise and name files appropriately and accurately.</li> </ul>	<ul style="list-style-type: none"> <li>Know that text can be different colours, sizes and styles and that these can easily be changed.</li> <li>Know that technology can be used to communicate ideas in different ways, e.g. text, images, tables and sound.</li> <li>Understand there are a variety of tools in graphics packages, each fulfilling a different purpose.</li> <li>Know that there are various ways of capturing still and moving images.</li> <li>Know the importance of giving an appropriate name to files.</li> <li>Know that files can be stored in folders and how the structure of the directory is ordered.</li> <li>Understand that files can be retrieved from their location and edited.</li> <li>Know what the term multimedia means.</li> <li>Understand the differences between a graphics package and paper based art activities.</li> <li>Understand the need to frame an image or scene and keep the camera still.</li> <li>Understand that animation is a sequence of still images.</li> <li>Know how to take images appropriately and responsibly.</li> <li>Understand how the mood of a piece can easily be changed through use of text, graphics and sound.</li> <li>Begin to understand that images, sounds and text can be subject to copyright.</li> <li>Start to understand that content needs to be changed according to the audience.</li> <li>Understand the importance that files need to be Organised and named files appropriately and accurately.</li> </ul>

## Key Learning in Computing: Years 1 and 2

- Explore a range of electronic music and sound devices and software.
- **Be able to listen to and to select a sound from a bank of pre-recorded sounds.**
- **Use sound recorders, both at and away from the computer, to record and playback sounds e.g. voices, instruments, environmental sounds.**
- Use software to explore and create sound and musical phrases for a purpose.
- **Use basic editing tools to change recorded sounds (speed up, slow down, reverse, echo) to alter the mood or atmosphere**
- Use recorded sound files in other software applications.
- **Be able to save sound files.**
- Be able to share recordings with a known audience.

- **Understand that most devices have stop, record and playback functions.**
- **Be aware that sound can be recorded and stored on the computer as a sound file.**

### Data handling

- **Develop classification skills by carrying out sorting activities**
- Use simple graphing software to produce pictograms and other basic tables, charts or graphs.
- **Use graphing software to enter data and change a graph type, e.g. pictogram to bar chart.**
- **Interpret the graphs, discuss the information contained and answer simple questions.**
- Sort and classify a group of items by asking simple yes / no questions. This may take place away from the computer, e.g. a 'Guess Who' game.
- Use a branching database program to sort and identify items.
- Use basic search tools in a prepared database to answer simple questions e.g. how many children have brown hair?

### Data handling

- **Understand that IT can be used to sort items and information.**
- **Understand that IT can be used to create and display charts graphs.**
- Develop an understanding of what datalogging can be used for (Science).
- **Understand that IT can be used to add to and change charts and graphs quite easily.**
- Begin to understand that unless data has been entered accurately it cannot be used to provide correct answers to questions.

### Digital research – searching

- **Locate specific, teacher defined, age appropriate websites through a favourites menu and /or by typing a website address (URL) into the address bar in a web browser.**
- Use technology to source, generate and amend ideas e.g. searching a resource such as Espresso for images by a specific artist.
- **Talk about their use of technology and other ways of finding information, e.g. books, asking other people.**
- **Use and explore appropriate buttons, arrows, menus and hyperlinks to navigate teacher selected web sites, and other sources of stored information.**
- Use key words to search a specific resource for information, e.g. Espresso and other websites, under the guidance and supervision of an adult.
- Be able to retrieve files from a computer using a search of the computer.

### Digital research – searching

- **Begin to understand that some websites are more useful than others when searching for topics.**
- Understand that technology can give rapid access to a wide variety of information and resources, including internet, TV, DVDs
- **Understand that there are different ways of finding information, e.g. books, asking other people**
- Understand that different forms of information, e.g. text, images, sound, multimedia exist and that some are more useful for specific purposes than others.
- **Understand that files can be retrieved and found on a computer using a search of the computer.**
- Understand and discuss how information can be obtained and used to answer specific questions.
- **Understand a website has a unique address and the need for precision when typing it.**
- **Begin to understand that not everything on the internet is true.**
- **Be aware that they can be accidently diverted from websites through a link to a new website, advertising or pop-ups.**

## Digital Literacy

### Programme of Study

- 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.



## Key Learning in Computing: Years 1 and 2

Skills	Knowledge and Understanding
<p><b>Online safety</b></p> <ul style="list-style-type: none"> <li>Use technology safely.</li> <li>Keep personal information safe.</li> <li>Use technology respectfully.</li> <li>Recognise situations involving content and contact that are not safe, (e.g. In emails, text messages, videos) and know where to go for help.</li> <li>Minimise screen, turn off the monitor, or use back buttons to return to the home page if anything inappropriate appears on the screen.</li> </ul>	<p><b>Online safety</b></p> <ul style="list-style-type: none"> <li>Know what it means to use technology safely.</li> <li>Understand what is meant by personal information.</li> <li>Understand how to keep personal information safe online.</li> <li>Know the rules for keeping safe online.</li> <li>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>Know that they should not ask to meet anybody from the online world in the offline world.</li> <li>Know and abide by the school's rules for keeping safe online (age appropriate).</li> <li>Understand that technology should be used respectfully.</li> <li>Know where to go for help and support when they have concerns about content they have seen on the internet or other technologies.</li> <li>Know where to go for help and support when they have concerns about contact on the internet or other technologies.</li> </ul>
<p><b>Electronic communication</b></p> <ul style="list-style-type: none"> <li>Contribute ideas to class and group emails.</li> <li>Send an email, using a subject heading, to a known member of the school community e.g. another class teacher, bursar.</li> <li>Open and reply to an email from a known person.</li> <li>Contribute to a blog, journal or forum on the school's VLE.</li> <li>Develop an awareness of appropriate language to use in email and other forms of digital communication such as blogs.</li> <li>Begin to use webcams and /or video conferencing as a class, if appropriate and available, with external providers, another class or school.</li> <li>Talk openly about their use of online communication in school and at home.</li> </ul>	<p><b>Uses of technology</b></p> <ul style="list-style-type: none"> <li>Recognise common uses of information technology beyond school.</li> </ul> <p><b>Electronic communication</b></p> <ul style="list-style-type: none"> <li>Understand that messages can quickly be sent electronically, via a range of devices, over distances and that people can reply to them.</li> <li>Understand that an email has to be sent to a unique email address and the need for accuracy in typing the address.</li> <li>Understand that electronic messages can be in the form of pictures, sound and/or text.</li> <li>Understand that some emails may be malicious or inappropriate and begin to recognise when an attachment may be unsafe to open.</li> <li>Understand the different ways that messages can be sent e.g. email, text messages, letter, phone, forums and begin to consider the advantages, or appropriateness, each one.</li> </ul>

## Computer Science

### Programme of Study

- 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.

Skills	Knowledge and Understanding
<p><b>Programming</b></p> <ul style="list-style-type: none"> <li>Give and follow commands (one at a time) to navigate other children and programmable toys around a</li> </ul>	<p><b>Programming</b></p> <ul style="list-style-type: none"> <li>Understand that algorithms are a series of steps or instructions to achieve a specific goal.</li> </ul>

## Key Learning in Computing: Years 1 and 2

<p>course or a familiar journey, including straight and turning movements.</p> <ul style="list-style-type: none"> <li>Plan, generate and follow a sequence of instructions (actual and on-screen) to make something happen; or complete a given task or problem to create a simple program.</li> <li>Explore and create sequences of commands/instructions in a variety of programs/devices.</li> <li><b>Make predictions and describe the effects when creating programs and controlling devices.</b></li> <li><b>Identify errors in instructions.</b></li> <li><b>Use logical reasoning to predict what will happen in simple programs.</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Understand that devices respond to commands.</b></li> <li>Understand the meaning of the term program.</li> <li><b>Talk about devices in the home that are controlled by commands.</b></li> <li>Understand that prediction, trial and error are important considerations when creating programs or controlling movement.</li> <li>Understand that there are different ways to create or produce a sequence of commands, including verbal, recorded, graphical, pressing buttons and on screen methods.</li> <li><b>Understand what debugging is and begin to understand that you can develop strategies to help find bugs.</b></li> <li>Understand what logical reasoning is and how it can be used to predict what happens in simple programs.</li> </ul>
<p><b>Simulations and modeling</b></p> <ul style="list-style-type: none"> <li><b>Explore simulations of real and virtual environments e.g. BBC science clips, virtual plants and pets.</b></li> <li>Make informed choices when exploring what happens in a simulation.</li> <li>Discuss use of simulations and compare with reality, e.g. a simulation of a science experiment.</li> <li>Talk about the rules found in simulations.</li> </ul>	<p><b>Simulations and modeling</b></p> <ul style="list-style-type: none"> <li><b>Understand that computer simulations can represent real and virtual environments.</b></li> <li>Understand that computer simulations allow the user to explore options and make choices, recognising that different decisions produce different outcomes.</li> </ul>