

Barwell Infant School KS1 Computing Curriculum

Year 1	Year 2
<p>Simulations and modelling</p> <ul style="list-style-type: none"> • Explore simulations of real and virtual environments, plant or pets • Make informed choices when exploring what happens in a simulation • Talk about the rules found in simulations • Understand computer simulations can represent real and virtual scenarios 	<p>Simulations and modelling</p> <ul style="list-style-type: none"> • Discuss the use of simulations and compare with reality • Understand that computer simulations allow the user to explore options and make choices, recognising that different decisions produce different outcomes
<p>Programming and algorithms</p> <ul style="list-style-type: none"> • Give and follow commands (one at a time) to navigate other children and programmable toys around a course (including straight and turning movements) • Make predictions when controlling devices and describe the effects • Understand that devices respond to commands • Make changes to improve commands • Talk about devices in the home that are controlled by commands 	<p>Programming and algorithms</p> <ul style="list-style-type: none"> • Plan, generate and follow a sequence of commands (actual and onscreen) to complete a given task or solve a given problem • Explore and create a sequence of commands to create a simple geometric shape or pattern on screen • Understand that prediction, trial and error are important considerations when controlling movement to achieve a specific outcome • Understand that there are different ways to produce a sequence of commands (including verbal, recorded, graphical, pressing buttons and on screen methods)
<p>Creating and sharing content</p> <ul style="list-style-type: none"> • Continue to develop correct use of the keyboard (spacebar, backspace, delete, shift for capital letters and enter) • Word process short texts, working directly at the computer (rather than typing up work) • Navigate around text in different ways when editing work (mouse or arrow keys) • Select text using an appropriate method (highlighting or double clicking) • Make simple changes to text (colour, style and size) • Select text from word banks or lists • Make use of graphics, video and sound to enhance text in multimedia work • Create simple presentations using templates • Know that ICT can be used to communicate ideas in different ways (text, images, tables and sound) • Talk about their use of text graphics and sound (incl. how these change moods) • Begin to understand that text, graphics and sound may be subject to copyright • Save, print and retrieve work 	<p>Creating and sharing content</p> <ul style="list-style-type: none"> • Begin to use both hands for typing • Select appropriate images to add to work • Select or record sounds to add to work • Add captions to photographs and graphics • Begin to understand that text, graphics and sound may be subject to copyright
<p>Images, video and animation</p> <ul style="list-style-type: none"> • Refine the use of shape, line and colour to communicate a specific idea or artistic style through various tools (including brushes, pens, lines, flood, fill, spray and stamps) • Begin to use paint packages or photo manipulation software to edit or change and image (e.g. adjusting colour or brightness and cropping) 	<p>Images, video and animation</p> <ul style="list-style-type: none"> • Use ICT to source, generate and amend ideas for their work (e.g. searching the Internet for images by a particular artist) • Use a range of digital devices to capture and save both still and moving images (e.g. camera, microscope, web cams, etc.) • Understand the need to frame an image or scene and keep the camera still • Upload images or movies from cameras and other devices to a computer (with support, if needed) • Begin to make changes to changes using basic tools in an image manipulation software • Understand that some software packages enable an image to be animated • Create a sequence of images to create a short animation • Understand the differences between a graphics package and paper-based art activities • Understand that there are a variety of tools in a graphics package, each fulfilling a different purpose • Talk about their use of a graphics package and their choice of tools
<p>Sound</p> <ul style="list-style-type: none"> • Explore a range of electronic music and sound devices and software • Be able to select and listen to a sound from a bank of pre-recorded sounds • Use sound recorders (both at and away from the computer) to record and play back sounds • Be able to save sound files • Be able to share recordings with a known audience • Understand that most device have 'stop', 'record' and 'playback' functions 	<p>Sound</p> <ul style="list-style-type: none"> • Use software to explore and create sound and musical phrases for a specific purpose • Use basic editing tools to change recorded sounds to alter the mood of their work (speed up, slow down, reverse, echo, etc.) • Use recorded sound files in other software applications • Begin to understand that sounds and music can be subject to copyright
<p>Data logging and data handling</p> <ul style="list-style-type: none"> • Understand that ICT can be used to sort items and information • Understand that ICT can be used to create, display, and change graphs easily • Develop classification skills by carrying out sorting activities (practically and on screen) which may include Carroll or Venn diagrams • Use simple graphing software to produce pictograms, basic tables and graphs • Use graphing software to enter data and change a graph • Interpret and draw conclusions from graphs, discuss information contained and answer simple questions • Use basic search tools in a prepared database to answer simple questions • Save, retrieve and edit their work 	<p>Data logging and data handling</p> <ul style="list-style-type: none"> • Participate in whole class demonstrations on an IWB using a data logger to monitor live data (e.g. sound levels over time) • Develop an awareness of data logging through the use of various peripheral devices (e.g. thermometers, microscopes, etc.) • Be aware that digital devices can be used to show external changes • Sort and classify a group of items by asking simple yes/no questions (at or away from the computer, e.g. playing "Guess Who") • Use a branching database program to sort and identify items • Begin to understand that, unless it has been entered accurately, data cannot be used to provide correct answers to questions
<p>Using the Internet</p> <ul style="list-style-type: none"> • Use and explore appropriate buttons, arrows, menus and hyperlinks to navigate teacher-selected websites • Use key words to search a specific resource for information • Understand that websites have unique addresses (and the need for precision when entering web addresses) • Understand that the Internet can give quick access to a wide variety of information and resources (including TV, video and films) • Talk about their use of ICT and other ways of finding information (e.g. books) • Understand the need for caution when using the Internet to search for images, and what to do if they find offensive images • Know how to take images from the Internet safely and appropriately 	<p>Using the Internet</p> <ul style="list-style-type: none"> • Locate teacher-defined websites through a favourites menu and/or typing a web address (URL) into the address bar in a browser • Begin to evaluate websites by giving opinions preferred or most useful websites • Understand that different forms of information exist (text, images, multimedia, etc.) and that some are more useful than others for a specific purpose • Understand and discuss how information can be obtained and used to answer specific questions • Begin to understand that not everything on the Internet is true • Be aware that they can be accidentally diverted from a chosen website through links, advertising or pop-ups • Know that they should ignore all pop-ups and tell a trusted adult

<p>Digital communication and social networking (Year 1 and Year 2)</p> <ul style="list-style-type: none"> • Understand the different ways that messages can be sent • Understand that messages can be in the form of text, pictures or sound • Understand that messages can be sent quickly over distances and that people can reply to them • Understand that an email has to be sent to a unique email address (and the need for accuracy when typing it) • Understand that some emails may be malicious or inappropriate 	<p>Digital communication and social networking (Year 1 and Year 2)</p> <ul style="list-style-type: none"> • Contribute ideas to class and group emails • Send an email, using a subject heading, to a known member of the school community • Open and reply to an email from a known person • Contribute to a blog, journal or forum on the school's VLE • Develop an awareness of appropriate language to use in email and other forms of digital communication • Begin to use webcams/video conferences as a class, if appropriate
<p>E-Safety (Year 1 and Year 2)</p> <ul style="list-style-type: none"> • Understand that personal information should not be shared (online or offline) without a trusted adult's permission • Recognise situations where they don't feel safe and know to ask a trusted adult for help • Know that they should not ask or agree to meet anyone from the online world without a trusted adult's permission • Know that they should tell a trusted adult immediately if somebody from the online world asks to meet them • Know what to do and who to tell if they see something inappropriate online so that they can stay safe • Talk openly about their use of online communication in school and at home • Know and abide by the school's rules for keeping safe online 	<p>E-Safety (Year 1 and Year 2)</p> <ul style="list-style-type: none"> • Understand that personal information should not be shared (online or offline) without a trusted adult's permission • Recognise situations where they don't feel safe and know to ask a trusted adult for help • Know that they should not ask or agree to meet anyone from the online world without a trusted adult's permission • Know that they should tell a trusted adult immediately if somebody from the online world asks to meet them • Know what to do and who to tell if they see something inappropriate online so that they can stay safe • Talk openly about their use of online communication in school and at home • Know and abide by the school's rules for keeping safe online

