

Computing Curriculum Map 2016-17

Foundation Stage



	Autumn	Spring	Summer
Nursery and Reception	<p><u>Ourselves</u> <u>Light and Dark</u> 22-36 months Seeks to acquire basic skills in turning on and operating some ICT equipment.</p> <p>30-50 months Knows that information can be retrieved from computers.</p> <p>40-60 months Completes a simple program on a computer. Interacts with age-appropriate computer software</p>	<p><u>Fairy Tales</u> <u>The Rainbow</u> 22-36 months Seeks to acquire basic skills in turning on and operating some ICT equipment.</p> <p>30-50 months Knows that information can be retrieved from computers</p> <p>40-60 months Completes a simple program on a computer. Interacts with age-appropriate computer software</p>	<p><u>Growing and Food</u> <u>Journeys</u> 22-36 months Seeks to acquire basic skills in turning on and operating some ICT equipment.</p> <p>30-50 months Knows that information can be retrieved from computers</p> <p>40-60 months Completes a simple program on a computer. Interacts with age-appropriate computer software</p>

Key Stage 1

	Autumn	Spring	Summer
Year 1	<p>We are painters. Aims: To illustrate an e-book. To use the web to find ideas for an illustration. To select and use appropriate painting tools to create and change images on the computer.</p> <p>We are celebrating. Aims: To create a card digitally. To develop basic keyboard skills through typing and formatting text. To develop skills in storing and retrieving files. To develop skills in combining text and images.</p>	<p>We are collectors. Aims: To find and use pictures on the web. To sort and organise images into more than two groups. To know what to do when they encounter pictures that cause concern.</p> <p>We are TV chefs. Aims: To film the steps of a recipe. To use different features of a video camera. Develop collaboration skills by discussing their work and thinking about how it can be improved.</p>	<p>We are storytellers. Aims: To create a story by: recording sounds using sound equipment and saving and storing sounds on the computer.</p> <p>We are treasure hunters. Aims: To know that a programmable toy can be controlled by inputting a sequence of instructions. To develop and record sequences of instructions as an algorithm and program a toy to follow the instructions.</p>
Year 2	<p>We are detectives Aims: To understand that email can be used to communicate. To develop skills in opening, composing and sending emails. To gain skills in opening and listening to audio files on the computer. To use appropriate language in emails. To develop skills in editing and formatting text in emails. To be aware of e-safety issues when using email.</p>	<p>We are game testers Aims: To describe carefully what happens in computer games. To use logical reasoning to make predictions of what a program will do. To test these predictions. To think critically about computer games and their use. To be aware of how to use games safely and in balance with other activities.</p>	<p>We are researchers Aims: To develop collaboration skills through working as part of a group To develop research skills through searching for information on the internet To improve note-taking skills through the use of mind mapping. To develop presentation skills through creating and delivering a short multimedia presentation.</p>

	<p>We are photographers</p> <p>Aims:</p> <p>To consider the technical and artistic merits of photographs.</p> <p>To use a digital camera or camera app to take digital photographs.</p> <p>To review and reject or pick the images they take.</p> <p>To edit and enhance their photographs</p> <p>To select their best images to include in a shared portfolio.</p>	<p>We are zoologist</p> <p>Aims:</p> <p>To sort and classify a group of items by answering questions</p> <p>To collect data using tick charts or tally charts</p> <p>To use simple charting software to produce pictograms and other basic charts</p>	<p>We are astronauts</p> <p>Aims:</p> <p>To have a clear understanding of algorithms as sequences of instructions.</p> <p>To convert simple algorithms to programs.</p> <p>To predict what a simple program will do.</p> <p>To spot and fix (debug) errors in their programs.</p>
--	--	--	--

Key Stage 2

	Autumn	Spring	Summer
Year 3	<p><u>Topic work research</u></p> <p>Using search engines and hyperlinks</p> <p>Use to find information on the Stone Age, Iron Age and WW2.</p> <p>Cut and paste pictures and type information</p> <p>Change the size and edit digital images</p> <p>Save and organise work appropriately.</p> <p>Retrieve it to share with others.</p> <p><u>3.1 We are programmers</u></p> <p>Programming an animation</p> <p>Create an animated cartoon using characters they design using Scratch.</p> <p>This unit will enable the children to: create an algorithm for an animated scene in the form of a storyboard</p> <p>Write a program in Scratch to create the animation</p>	<p><u>3.1 We are programmers</u></p> <p>Programming an animation</p> <p>Stop Motion animation using ipads (WW2 and D+T link)</p> <p>Study animations including Wallace and Grommit</p> <p>Plan and design war time scenes for WW2 animations - storyboard</p> <p>Create war time scenes for animations in groups</p> <p>Create animations</p> <p>Add music/sounds</p> <p>Watch and evaluate animations</p> <p><u>3.3 We are presenters</u></p> <p>Videoing performance - (PE – using Movie Maker)</p> <p>Make a short narrated video of themselves</p>	<p>Typing up and presenting Non chronological reports about France</p> <p><u>3.5 We are communicators</u></p> <p>Sending emails e safety</p> <p>Learn about a number of e-safety matters in a positive way.</p> <p>Develop a basic understanding of how email works</p> <p>Gain skills in using email</p> <p>Be aware of broader issues surrounding email, including ‘netiquette’ and e-safety</p> <p>Work collaboratively with a remote partner</p> <p>Experience video conferencing.</p> <p>Learning how email works</p> <p>Using email safely</p>

	<p>Correct mistakes in their animation programs.</p>	<p>Performing gymnastic routines, and to use this to help improve their performance. Reviewing sports TV Working with video cameras, Shooting the videos, Editing the videos, Improving the videos, Evaluating the videos. Internet safety Day <u>3.2 We are bug fixers</u> Finding and correcting bugs in programs Work with Scratch projects. Create a script with a 'bug' and explain how the scripts work. Finding and correcting errors in them, and explore creative ways of improving them. Recognise some common types of programming error, and practise solving problems through logical thinking.</p> <p>Typing up and presenting Non chronological reports about Chipperfield</p>	<p>Set up a link with another school in France (Geography and French link) Send emails</p> <p><u>3.6 We are opinion pollsters</u> Collecting and analysing data Create own opinion polls, seek responses, and then analyse the results. Understand some elements of survey design Understand some ethical and legal aspects of online data collection Use the web to facilitate data collection Gain skills in using charts to analyse data Gain skills in interpreting results.</p>
Year 4	<p><u>We are musicians</u> <u>We are toy designers</u></p> <p>To begin to use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p>	<p><u>We are html editors</u> <u>We are games designers</u></p> <p>To understand how the internet can provide multiple services, such as the world wide web; and discuss the opportunities and problems this offers.</p>	<p><u>We are software developers</u> <u>We are meteorologists</u></p> <p>To research, discuss and select a variety of software and to design and create a basic programs, systems and content</p>
Year 5	<p><u>We are Cryptographers</u> <u>We are Game Developers</u></p> <ul style="list-style-type: none"> - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. - Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and 	<p><u>We are Artists</u> <u>We are Web Developers</u></p> <ul style="list-style-type: none"> - Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 	<p><u>We are Bloggers</u> <u>We are Architects</u></p> <ul style="list-style-type: none"> - Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration.

	<p>the opportunities they offer for communication and collaboration.</p> <ul style="list-style-type: none"> - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. - Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals. 	<ul style="list-style-type: none"> - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. - Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. - Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 	<ul style="list-style-type: none"> - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. - Be discerning in evaluating digital content.
<p>Year 6</p>	<p><u>E-safety</u> To use technology safely, respectfully and responsibly.</p> <p>Children start selecting the best ways to present different work e.g. using Word, Excel or Powerpoint, for a range of tasks. Use word processing to aid proofreading and improvement of written work. Refine ability to search online.</p>	<p><u>Esafety (Safer Internet Day)</u> To use technology safely, respectfully and responsibly.</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Teach them how to use formula in Excel and create graphs from data.</p>	<p><u>Esafety</u> To use technology safely, respectfully and responsibly.</p> <p><u>APP Developers, Planners Managers and Makers</u> AIMS: To develop an awareness of the capabilities of smartphones and tablets. To understand geolocation and understand computer networks.</p>

	<p>Using a database and creating their own identifying fields.</p> <p>AIMS: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.</p>	<p>Develop skills using Powerpoint- creating hyperlinks etc.</p> <p>AIMS: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.</p>	<p>To use search technologies effectively, appreciate how results are selected and ranked, and evaluate.</p> <p>To select, use and combine a variety of software to design and create a range of programmes.</p> <p>To solve problems by decomposing them into smaller parts.</p> <p>To be discerning in evaluating digital content.</p> <p>To use logical reasoning to explain how some simple algorithms work and detect and correct errors.</p>
--	--	--	--