<table>
<tr><th colspan="4">Computer Science</th></tr>
<tr><td colspan="2">EYFS
EYFS incorporate technology into lessons and every day experiences to provide a foundation for Computing at Key Stage 1. The children will begin to engage in Computational thinking. 'Computational Thinking' is a set of problem-solving skills that we can use in everyday life.</td><td colspan="2">National Curriculum
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.</td></tr>
<tr><th>Nursery</th><th>Reception</th><th>Year 1</th><th>Year 2</th></tr>
<tr>
<td rowspan="2">The children will explore a variety of electronic devices in child-initiated sessions to gain an understanding of basic programming and cause and effect.
• I can use a variety of electronic toys in play situations (remote control toys)
• I can respond to simple cause and effect devices (push a button to hear a sound)</td>
<td rowspan="2">The children will explore a variety of electronic devices in free flow and adult led sessions to gain an understanding of basic programming and cause and effect.
• I can use a variety of electronic toys in play situations (e.g. remote control toys) using basic directional language
• I can explore toys that simulate control devices e.g. cash tills
• I can respond to simple cause and effect devices (push a button to hear a sound) Explore the commands needed to control a range of electronic toys
• I can explore and create simple patterns using 2 or more variables
• I can explore simple algorithms (simple instructions) and guide other children for a desired outcome
• I can begin to program a simple floor robot (Bee-Bot) to carry out a short sequence of steps to travel forward and backwards</td>
<td>Programming
• To explain what a given command will do.
• To act out a given word.
• To combine forwards and backwards commands to make a sequence.
• To combine four direction commands to make sequences.
• To plan a simple program.
• To find more than one solution to a problem</td>
<td>Programming
• To describe a series of instructions as a sequence.
• To explain what happens when we change the order of instructions.
• To use logical reasoning to predict the outcome of a program.
• To explain that programming projects can have code and artwork.
• To design an algorithm.
• To create and debug a program that I have written.</td>
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<tr>
<td>Coding
• To understand what instructions are and predict what might happen when they are followed.
• To use code to make a computer program.
• To understand what object and actions are.
• To understand what an event is.
• To use an event to control an object.
• To begin to understand how code executes when a program is run.
• To understand what backgrounds and objects are.
• To plan and make a computer program.</td>
<td>Coding
• To understand what an algorithm is.
• To create a computer program using an algorithm.
• To create a program using a given design.
• To understand the collision detection event.
• To understand that algorithms follow a sequence.
• To design an algorithm that follows a timed sequence.
• To understand that different objects have different properties.
• To understand what different events do in code.
• To understand the function of buttons in a program.
• To understand and debug simple programs.</td>
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Information Technology	
EYFS EYFS incorporate technology into lessons and every day experiences to provide a foundation for Computing at Key Stage 1. The children will begin to engage in Computational thinking. 'Computational Thinking' is a set of problem-solving skills that we can use in everyday life.	National Curriculum Use technology purposefully to create, organise, store, manipulate and retrieve digital content

Communication / Multimedia			
Nursery	**Reception**	**Year 1**	**Year 2**
The children will use computers and large screens to develop mouse control • I am beginning to develop mouse control I can use a paint program to make marks, using simple tools, to communicate my ideas. *The children will begin to understand how technology allows them to capture and listen to sound. They will also the large screen and computers to access paint packages* • I can use a paint program to make marks, using simple tools, to communicate their ideas. • I can use talking tins to record sound	*The children will use computers and large screens to develop mouse control* • I am beginning to develop mouse control • I can use a paint program to make marks, using simple tools, to communicate my ideas (use colour, size and fill tools) • I can use different forms of electronic communication in free play (play phones and working walkie talkies) • I am beginning to use a keyboard to type my name on screen, and developing familiarity with letters, numbers, backspace, arrow keys and space bar *The children will use iPads and webcams to capture images of themselves and others. They will understand how technology allows them to capture and listen to sound. They will also the large screen and computers to access paint packages.* • I can use multimedia equipment, e.g. tablets, webcams and visualisers, to capture still and moving images • I can explore ways of making and listening to sounds using simple programs and devices • I can use a paint program to make marks, using simple tools, to communicate my ideas	• To describe what different freehand tools do. • To use the shape tool and the line tools. • To make careful choices when painting a digital picture. • To explain why I chose the tools I used. • To use a computer on my own to paint a picture. • To compare painting a picture on a computer and on paper. • To use a computer to write. • To add and remove text on a computer. • To identify that the look of text can be changed on a computer. • To make careful choices when changing text. • To compare typing on a computer to writing on paper. • To introduce e-books and the 2Create a Story tool. • To add animation and sound to a story. • To work on a more complex story, including adding backgrounds and copying and pasting pages. • To share e-books on a class display board.	• To use a digital device to take a photograph. • To describe what makes a good photograph. • To decide how photographs can be improved. • To use tools to change an image. • To recognise that photos can be changed. • To explore how a story can be presented in different ways. • To make a quiz about a story or class topic. • To make a fact file on a non-fiction topic. • To make a presentation to the class. • To make music digitally. • To explore, edit and combine sounds using 2Sequence. • To edit and refine composed music. • To think about how music can be used to express feelings and create tunes which depict feelings. • To upload a sound from a bank of sounds into the Sounds section. • To record and upload environmental sounds into Purple Mash and use these sounds in 2Sequence.

Data			
Nursery	**Reception**	**Year 1**	**Year 2**
The children will sort objects using ICT and practical objects • I am beginning to develop simple classification skills by carrying out simple sorting activities away from the computer	*The children will sort objects using ICT and practical objects. They will also have opportunities to add to class pictograms. (Cross curricular links to Maths)* • I am developing simple classification skills by carrying out simple sorting activities away from the computer • I am continuing to develop simple classification skills by carrying out simple sorting activities using ICT	• To understand that data can be represented in picture format. • To contribute to a class pictogram. • To use a pictogram to record the results of an experiment.	• To learn about data handling tools that can give more information than pictograms. • To use yes/no questions to separate information. • To construct a binary tree to identify items. • To use 2Question (a binary tree database) to answer questions. • To use a database to answer more complex search questions. • To use the Search tool to find information.

Digital Literacy			
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Nursery	**Reception**	**Year 1**	**Year 2**
The children will use computers and other devices to navigate. • I can use a shortcut to navigate to a program I want to use **E-safety:** I know who I can tell if I'm not sure about something	*The children will use shortcuts to navigate to selected websites and allow them to locate information.* • I can use a shortcut to navigate to a specific website • I can use appropriate buttons, menus and hyperlinks to navigate a teacher selected website, or stored information **E-safety:** • I know what to do if I see something online that makes me uncomfortable	• To walk around the local community and find examples of where technology is used. • To record examples of technology outside school. **E-safety:** • I know what to do if I see something online that makes me uncomfortable • I know what things count as personal information and who I can share it with	• To understand the terminology associated with searching. • To gain a better understanding of searching on the Internet. • To create a leaflet to help someone search for information on the Internet. **E-safety** • I know what to do if I find something inappropriate online, & where to go for help • I know how to stay safe by going to age-appropriate websites • I know how to behave safely and respectfully online • I know that not everyone online is who they say they are