

# Computing and Information Technology

## Becoming Future Ready

<p style="text-align: center;">Key Objectives EYFS</p> <p style="text-align: center;">In Foundation the past is taught through the curriculum area 'understanding the world'. The Early Learning Goal for this area is:</p>	<p style="text-align: center;">Key Objectives Year One</p> <p style="text-align: center;">Children will learn:</p>	<p style="text-align: center;">Key Objectives Year Two</p> <p style="text-align: center;">Children will learn:</p>
<p><b>RED - Extra/Cross Curricular Skills</b></p> <p><b>E-Safety</b></p> <ul style="list-style-type: none"> <li>• Screen time</li> <li>• correct posture</li> <li>• beginning to understand who to go to for help if feeling uncomfortable</li> <li>• passwords and not sharing them</li> <li>• Adults in EYFS to ensure children are safe from the online environment</li> <li>• Computers - games/websites/programs to be loaded by adults; free choice games on favourites - children taught how to access.</li> <li>• Children taught how to access iPads</li> <li>• Guided Access on iPad ?</li> </ul> <p><b>Taken from the Early Education's Development Matters Document (2012)</b></p> <p><b>Literacy: Reading</b> Encourage children to add to their first-hand experience of the world through the use of books, other texts and information, and information and communication technology (ICT).</p> <p><b>Understanding The World: Technology</b></p> <p><b>30-50 months</b></p> <ul style="list-style-type: none"> <li>• Knows how to operate simple equipment, e.g. turns on CD player and uses remote control.</li> <li>• Shows an interest in technological toys with knobs or pulleys, or real objects such as cameras or mobile phones.</li> <li>• Shows skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.</li> <li>• Knows that information can be retrieved from computers</li> </ul> <p><b>Understanding The World: Technology</b></p> <p><b>40-60 months</b></p> <ul style="list-style-type: none"> <li>• Completes a simple program on a computer and perform simple functions on ICT equipment (Beebots, iPad apps)</li> <li>• Uses ICT hardware to interact with age-appropriate computer software - (iPad, computer mouse, keyboards, bee-bots, sound tins etc.)</li> </ul> <p><b>Understanding The World: Technology</b></p> <p><b>Early Learning Goal</b> Children recognize that a range of technology is used in places such as homes and schools. <b>(Technology In our Lives)</b> They select and use technology for particular purposes.</p> <ul style="list-style-type: none"> <li>• Begin to use keyboards and the mouse to navigate computers and iPads</li> </ul>	<p><b>Computing - Algorithms, Coding and Programming</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> </ul> <p><b>Computing &amp; Information Technology - Using Multimedia</b></p> <ul style="list-style-type: none"> <li>• Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p><b>Computing &amp; Information Technology - Technology In Our Lives</b></p> <ul style="list-style-type: none"> <li>• Recognise common uses of information technology beyond school</li> </ul> <p><b>E-Safety</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>	



## E-Safety

*E-safety will be taught in each half term prior to the main focus of teaching. It will be in reference to what they will be learning. This will include:*

***How the internet is used and how it affects us***

***Internet safety – advertisements and inappropriate content***

***Who to speak to if worried about something they have seen on the internet***

***Safe Screen Time***

***Posture and physical care when using technology***

## Continuous Provision throughout infants

*Whenever children have access to the internet in schools for continuous provision or free play, iPads will already have apps and programs downloaded specifically by staff. Computers will have programs and already available on screen for children's use – but other games will be available via the staff created favourites list of websites for the children to access only. These will be games children have prior experience with. Children will be taught how to access this favourites list and will be able to access this, and not searching for their own online games – contributing to a safer online environment.*

# Early Years Foundation Stage

*Our vision statement states that our Federation is striving to ensure children are future ready. Therefore, throughout Foundation, opportunities for children to develop their computing and Information Technology skills are created throughout the curriculum to begin their journey towards this. Children are taught and given opportunity to develop skills such as simple programming and coding, iPad and Computer skills such as keyboard work, mouse work, camera and video usage. As part of ongoing dialogue, teachers question children to consider success of their work and to develop children's ability to evaluate what they have done. Skills in Foundation are to be taught explicitly and through continuous provision. Teachers skilfully build upon skills observed and increased the complexity of tasks set.*

***The new Development Matters Document (Sept 2020) has no specific Technology section as the previous document does – this means Technology and computing curriculum will need to be embedded into other curricular areas.***

*Key skills to be developed in Foundation:*

***Basic E-Safety knowledge and skills (E-Safety)***

***Navigating iPads (Multimedia)***

***Simple operations of computers (Programming)***

***Developing Mouse work (Multimedia)***

***Beginning keyboard skills (Multimedia)***

***Interactions with a wide range of technologies (Beebots, iPads, Talk tins, CD player, torches etc.) (Technology In Our Lives)***

***Performing simple functions on these technologies (programming and coding) (Programming)***

# Key Stage One

*Both the Federation's vision statement and the purpose of study for computing in the National Curriculum for KS1 state getting children future ready. In Key stage one, good Computing and Information Technology follows a progression of teaching within the termly unit:*

**1.**

***E-Safety (based upon Terms main focus strand of teaching)***

**2.**

***Discussing Technology in our lives. (based upon Terms main focus strand of teaching)***

**3.**

***Use of Multimedia's – or – Programming and Coding skills***

**4.**

***Application in writing – Children will word process one piece of written work (cross curricular link with Literacy teaching)***

**5.**

***Application in other subject areas, and children's own self-initiated independent learning***

*In Key Stage One, Computing and Information Technology is taught as a sequence of lessons, each term. Each Block focusses on either Programming and algorithms or using multimedia according to the National Curriculum. E-Safety and Technology in Our lives are taught each Term with reference to the main teaching focus.*

	<u>1 Term</u>	<u>1 Term</u>	<u>1 Term</u>
<h1><u>Year</u></h1> <h1><u>1</u></h1>	<p><b>E-Safety</b></p> <ul style="list-style-type: none"> <li>• Create Computing e-safety charter</li> <li>• Children taught how to log on to computers and how to access favourite bar websites for continuous provision</li> <li>• Children taught how to access iPad</li> <li>• Describe the people I can trust and share information with.</li> <li>• Identify when inappropriate content is accessed and act appropriately.</li> <li>• Identify who to tell when inappropriate content is accessed or feel unsafe online</li> <li>• App and Internet safety - adverts/inappropriate content</li> </ul> <p><b>Technology In Our Lives</b></p> <ul style="list-style-type: none"> <li>• Know the difference between technology and not</li> <li>• Use ICT to generate ideas for their work.</li> <li>• Name simple creative technology</li> </ul> <p><b>Multimedia Use</b></p> <ul style="list-style-type: none"> <li>• Begin to use programs, apps, iPad cameras and videos, app games, information collecting programs e.g. picollage,</li> <li>• Navigate an iPad</li> </ul> <p><b>Information Technology: Application of Skills - Cross Curricular within English lessons</b></p> <p>Word process short texts:</p> <ul style="list-style-type: none"> <li>• Save, retrieve and print work.</li> <li>• Use spacebar, backspace, and delete, arrow keys, return.</li> <li>• Start to use one hand when typing.</li> </ul>	<p><b>E-Safety</b></p> <ul style="list-style-type: none"> <li>• Know that some information can be seen by others.</li> <li>• App and Internet safety - screen-time/good posture</li> </ul> <p><b>Technology In Our Lives</b></p> <ul style="list-style-type: none"> <li>• Talk about websites and games they have been on.</li> <li>• Name ICT games and apps</li> </ul> <p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• Give commands including straight forwards / backwards / turn one at a time.</li> <li>• Explore what happens when a sequence of instructions is given.</li> <li>• Give a set of simple instructions to follow out a task.</li> <li>• Begin to use simple technological programming apps.</li> <li>• Improve/change their sequence of commands.</li> </ul> <p><b>Information Technology: Application of Skills - Cross Curricular within English lessons</b></p> <p>Word process short texts:</p> <ul style="list-style-type: none"> <li>• Save, retrieve and print work.</li> <li>• Use spacebar, backspace, and delete, arrow keys, return.</li> <li>• Start to use one hand when typing.</li> </ul>	<p><b>E-Safety</b></p> <ul style="list-style-type: none"> <li>• Identify devices that can be used to search the Internet.</li> <li>• Identify what things count as personal information. (Logging in with a password and these are to keep you safe).</li> </ul> <p><b>Technology In Our Lives</b></p> <ul style="list-style-type: none"> <li>• Use ICT to generate ideas for their work.</li> <li>• Capture video.</li> </ul> <p><b>Multimedia Use</b></p> <ul style="list-style-type: none"> <li>• Continue to use programs, apps, iPad cameras and videos, app games, information collecting programs e.g. Picollage,</li> <li>• Explore a website by clicking on the arrows, menus and hyperlinks.</li> </ul> <p><b>Information Technology: Application of Skills - Cross Curricular within English lessons</b></p> <p>Word process short texts:</p> <ul style="list-style-type: none"> <li>• Save, retrieve and print work.</li> <li>• Use spacebar, backspace, and delete, arrow keys, return.</li> <li>• Start to use one hand when typing.</li> </ul>
	<p><b>APPS AND PROGRAMS USED</b></p> <p><b>Computer:</b> 2 Create / Purple Mash</p> <p>SUBJECT RELATED APPS AND PROGRAMS - INCLUDING MATHS AND LITERACY</p>	<p><b>APPS AND PROGRAMS USED</b></p> <p>Beebots <b>iPad:</b> Beebot App Lego Fix the Factory App Scratch Jnr <b>Computer:</b> 2Create / PurpleMash</p> <p>SUBJECT RELATED APPS AND PROGRAMS - INCLUDING MATHS AND LITERACY</p>	<p><b>APPS AND PROGRAMS USED</b></p> <p><b>Computer:</b> Publisher 2Create / PurpleMash <b>iPad:</b> PiCollage</p> <p>SUBJECT RELATED APPS AND PROGRAMS - INCLUDING MATHS AND LITERACY</p>

	<u>1 Term</u>	<u>1 Term</u>	<u>1 Term</u>
<h1><u>Year</u></h1> <h1><u>2</u></h1>	<p><b>E-Safety</b></p> <ul style="list-style-type: none"> <li>Create Computing e-safety charter</li> <li>Recap: Children taught how to log on to computers and how to access favourite bar websites for continuous provision</li> <li>Recap: Children taught how to access iPad</li> <li>Make decisions about whether or not statements found on the internet are true or not</li> <li>Identify who to tell when inappropriate content is accessed or feel unsafe online</li> <li>Identify when inappropriate content is accessed and act appropriately.</li> </ul> <p><b>Technology In Our Lives</b></p> <ul style="list-style-type: none"> <li>Explain the types of Multimedia technology used outside of the classroom and why/how we use them.</li> <li>Discuss which videos and pictures to keep and which to delete.</li> </ul> <p><b>Multimedia</b></p> <p><b>Build upon skills from Year 1:</b></p> <ul style="list-style-type: none"> <li>Continue to use programs, apps, iPad cameras and videos, app games, information collecting programs e.g. picollage, Microsoft publisher,</li> <li>Navigate a computer</li> <li>Explore a website by clicking on the arrows, menus and hyperlinks.</li> </ul> <p><b>Information Technology: Application of Skills - Cross Curricular within English lessons</b></p> <p>Word process short texts to present. Build upon Yr 1 Skills:</p> <ul style="list-style-type: none"> <li>Begin to use caps lock, symbols and punctuation.</li> <li>Start to use two hands when typing.</li> </ul> <p><b>Information Technology: Application of Skills - Cross Curricular within Maths and Foundation Lessons</b></p> <ul style="list-style-type: none"> <li>Statistics - apps/programs/websites for graph making</li> <li>Maths games on Favourites List</li> <li>Foundation games on Favourite List</li> <li>PurpleMash/Art Revelation/Espresso for Foundation exploration and outcomes</li> </ul>	<p><b>E-Safety</b></p> <ul style="list-style-type: none"> <li>App/website safety - screen-time/good posture/in-app purchases</li> </ul> <p><b>Technology In Our Lives</b></p> <ul style="list-style-type: none"> <li>Explain the types of programmed technology used outside of the classroom and why/how we use them.</li> </ul> <p><b>Programming</b></p> <p>Build upon Yr 1 Skills: Use a variety of programs to improve and broaden programming skills - focussing on debugging incorrect algorithms or own mistakes.</p> <p><b>Information Technology: Application of Skills - Cross Curricular within English lessons</b></p> <p>Word process short texts to present. Build upon Yr 1 Skills:</p> <ul style="list-style-type: none"> <li>Begin to use caps lock, symbols and punctuation.</li> <li>Start to use two hands when typing.</li> </ul>	<p><b>E-Safety</b></p> <ul style="list-style-type: none"> <li>Recognise an email address. (related to safety)</li> <li>Find the @ key on the keyboard.</li> <li>Contribute to a class email. (related to safety)</li> <li>Open and select to reply to an email as a class. (related to safety) - someone I know (a hero?) (Cross Curricular?)</li> </ul> <p><b>Technology In Our Lives</b></p> <ul style="list-style-type: none"> <li>Discuss which videos and pictures to keep and which to delete.</li> <li>Simply evaluate apps/programs used</li> </ul> <p><b>Multimedia</b></p> <p><b>Build upon skills from Year 1:</b></p> <ul style="list-style-type: none"> <li>continue to use programs, apps, iPad cameras and videos, app games, information collecting programs e.g. picollage, Microsoft publisher,</li> <li>Continue to navigate an computer</li> <li>Explore a website by clicking on the arrows, menus and hyperlinks.</li> </ul> <p><b>Information Technology: Application of Skills - Cross Curricular within English lessons</b></p> <p>Word process short texts to present. Build upon Yr. 1 Skills:</p> <ul style="list-style-type: none"> <li>Begin to use caps lock, symbols and punctuation.</li> <li>Start to use two hands when typing.</li> </ul> <p><b>Information Technology: Application of Skills - Cross Curricular within Maths and Foundation Lessons</b></p> <ul style="list-style-type: none"> <li>Statistics - apps/programs/websites for graph making</li> <li>Maths games on Favourites List</li> <li>Foundation games on Favourite List</li> <li>PurpleMash/Art Revelation/Espresso for Foundation exploration and outcomes</li> </ul>
	<p><b>APPS/PROGRAMS TO USE</b></p> <p><b>Apps:</b> Painting Apps Picollage</p> <p><b>Computers:</b> Zcreate / Purple Mash Word, PPT, Publisher</p> <p>SUBJECT RELATED APPS AND PROGRAMS - INCLUDING MATHS AND LITERACY</p>	<p><b>APPS/PROGRAMS TO USE</b></p> <p><b>Beebots</b> <b>iPad:</b> Lego Fix the Factory Beebot Scratch Jnr</p> <p><b>Computers:</b> hourofcode.com - Star Wars, Minecraft, frozen, Moana</p> <p>SUBJECT RELATED APPS AND PROGRAMS - INCLUDING MATHS AND LITERACY</p>	<p><b>APPS/PROGRAMS TO USE</b></p> <p><b>Apps:</b> Painting Apps Picollage</p> <p><b>Computers:</b> Zcreate / Purple Mash Word PPT Publisher</p> <p>SUBJECT RELATED APPS AND PROGRAMS - INCLUDING MATHS AND LITERACY</p>