

Year 1- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Safety		
<p>To understand the importance of keeping information, such as their usernames and passwords, private.</p> <p>To know that games and software have age restrictions.</p>	<p>Children will demonstrate their knowledge of keeping their information safe in lessons.</p> <p>Children will save their work in their own areas.</p> <p>Children will talk about how they keep safe on line and how to report anything that makes them feel uncomfortable.</p>	<p>Children will not save passwords on shared computers.</p> <p>My work folder on Purple Mash.</p>
Using technology		

<ul style="list-style-type: none"> · To become skilful in using different tools to control technology. · To understand what is meant by technology and identify a variety of examples in and outside of school. <p>To understand the purpose of, and begin to use a range of technology.</p> <ul style="list-style-type: none"> · To begin to develop typing speed and accuracy to enable independent access to a computer 	<ul style="list-style-type: none"> · Continue to develop their familiarity with a computer and keyboards · Continue to develop their skills in using a mouse and/or trackpad to control a computer/laptop · Begin to develop their typing speed, using a range of games and programs in school. Children should also be encouraged to play these games at home. · Continue exposure to a range of technology, including cameras, tablets, microphones/recording devices and computers 	<p>See 'tools for teaching typing' document for software and websites to use.</p> <p>2 type</p> <p>BBC - dance mat typing</p>
<p>Using the Internet</p>		

<ul style="list-style-type: none"> · To understand that information comes from different sources e.g. books, web sites, TV etc. · To understand that ICT can give access quickly to a wide variety of resources · To talk about their use of ICT and the Internet and other methods to find information · To be able to explore a variety of electronic information as part of a given topic · To know buttons/icons can represent different functions e.g. record, pause, play 	<ul style="list-style-type: none"> · Select appropriate buttons to navigate web sites or stored information · Begin to understand that computers use icons, menus, hyperlinks to provide information and instructions e.g. Select a specific part of the CBeebies site to find an activity · Access different types of information from different sources e.g. using CD players, web sites, TV, video, DVD etc. <p><i>These skills rely on the teacher directing children to specific content. It is not expected for children to do open searching at this stage.</i></p>	
<p>Communicating and collaborating online</p>		
<ul style="list-style-type: none"> · To start to understand that messages can be sent electronically over distances 	<ul style="list-style-type: none"> · Contribute ideas to a class email and together respond to messages- this can be to real life of 'fictitious' characters 	

These skills rely on the teacher composing and sending an email. It is not expected for children to compose or send emails at this stage.

Creating and Publishing

- To use technology to combine text with photographs, graphics and drawings
- To create their own text based content, including adding basic effects to sections of text

- Add text to photographs, graphics, drawings and sound using a computer
- Use simple authoring tools to create their own content and begin to add basic effects to sections of text, changing the font size and colour

2create a story

2Publish has picture and text activities, story books.....

Children can also be directed to word documents and practise basic skills of changing the font.

Digital Media

<ul style="list-style-type: none"> · To know they can explore sound and music using technology and that they can create sound using computer programs · To know they can record sound using ICT that can be stored and played back · To take photographs for a range of different purpose · To understand that video can be recorded using technology and to begin to record video · To understand that a range of different technology can be used to record sounds 	<ul style="list-style-type: none"> · Use a computer to compose and record basic rhythms · Continue to take photographs for a range of different purposes · Begin to record video · Begin to record sounds using a range of different tools 	<p>Audio- use 2simple software- 2explore and 2beat.</p>
<p>Using Data</p>		
<ul style="list-style-type: none"> · To use ICT to begin to organise items.. · To begin to use technology to create graphs and pictograms, recognising there is a link between 	<ul style="list-style-type: none"> · Use ICT to sort objects into groups according to a give criteria, or criteria which the child identifies themselves · Begin to use technology to create graphs and pictograms 	<p>Pictogram software such as 2count 2Quiz example (sorting shapes)</p>

<p>data collected and the information presented on screen.</p>		
<p>Programming and Control</p>		
<ul style="list-style-type: none"> · To understand that devices respond to commands To understand that an algorithm is a set of instructions used to solve a problem or achieve an objective · To begin to understand how a computer processes instructions and commands (computational thinking) · To understand that they can programme a simple sequence of commands into a programmable robot or toy to send it on a route 	<ul style="list-style-type: none"> · Explore a range of control toys and devices · Begin to develop computational thinking by following instructions to move around a course and creating a series of instructions to move their peers around a course Read code one line at a time · Explore outcomes when individual buttons are pressed on robots, such as floor turtles and combine these together to draw simple shapes or follow a route Talk about algorithm being instructions Talk about algorithms written for computers (programs) 	<p>Beebots</p> <p>2Go - interrupt where the turtle will go</p>
<p>Modelling and Simulations</p>		

<ul style="list-style-type: none">· To understand computers can represent real or fantasy situations· To understand computer representations allows the user to make choices and that different decisions produce different outcomes	<ul style="list-style-type: none">· Understand that computers and technology can be used to represent and model situations· Use an art package or drag and drop software to create a representation of a real or a fantasy situation· Explore a simulation to support a given topic and talk about what happens and why	<p>2simulate</p>
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Year 2- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Safety		
<p>To understand the importance of keeping information, such as their usernames and passwords, private.</p> <p>To know that games and software have age restrictions.</p> <p>To know ways of reporting inappropriate online behaviours and content.</p> <p>To know the implications of inappropriate online searches.</p>	<p>Children will demonstrate their knowledge of keeping their information safe in lessons.</p> <p>Children will save their work in their own areas.</p> <p>Children will understand how things are shared electronically</p> <p>Children will talk about how they keep safe on line and how to report anything that makes them feel uncomfortable.</p> <p>Children can discuss the risks of inappropriate online searches and the consequences that could follow</p>	<p>Children will not save passwords on shared computers.</p> <p>My work folder on Purple Mash.</p> <p>Posting to the Purple Mash display board</p>
Using the Internet		

<ul style="list-style-type: none"> · To talk about the different forms of information (text, images, sound, multimodal) and understand some are more useful than others · To understand and talk about how the information can be used to answer specific questions · To begin to develop key questions and find information to answer them · To recognise the layout of a web page, recognise web addresses, menu buttons and links · To understand that the internet contains a large amount of information and recognise the need to use search tools and search engines to begin to find information <p>To effectively retrieve, purposeful digital content using a search engine</p>	<ul style="list-style-type: none"> · Recognise that not all information is useful some information is more useful · Use web based resources to find answers to questions · Develop questions about a specific topic and use information to answer those questions · Begin to navigate within a website using hyperlinks and menu buttons to locate information · Begin to manipulate information using copy and paste for a specific purpose · Enter <u>given</u> text into a search engine to find specific given web sites · Understand that web sites have a specific address e.g. www.bbc.co.uk/ · Locate links to web sites from Favourites or saved hyperlinks, intranet or from the Learning Platform 	
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	<ul style="list-style-type: none"> · Use basic information from the internet 	
<p>Communicating and collaborating online</p>		
<ul style="list-style-type: none"> · To start to understand that messages can be sent electronically over distances · To understand that email can be used to send messages electronically and people can reply to emails 	<ul style="list-style-type: none"> · Look at the different ways that messages can be sent, letters, telephone, email, text, instant messaging etc. · Continue to contribute ideas to a class or group email and together respond to messages- this can be to real life of 'fictitious' characters 	
<p>Creating and Publishing</p>		

<ul style="list-style-type: none"> · To use technology to word process work, making a wide range of edits and using common features of word processing tools. · To use technology to create basic presentations giving consideration to the layout of slides and combining images and sound · To use the skills and techniques learnt to organise, reorganise and communicate ideas for a specific purpose in different contexts 	<ul style="list-style-type: none"> · Word process work, changing the font, font size, colour and adding images and using text boxes, word art, and cut, copy and paste ensuring they can save and load their work · Create basic presentations (for example using Microsoft PowerPoint) changing the layout of slides and adding images and sound 	<p>2publish template</p>
<p>Digital Media</p>		

<ul style="list-style-type: none"> · To know they can explore sound and music in ICT using keyboards, and onscreen music software · To know they can record sound using ICT that can be stored and played back and independently using a range of tools to record sound · To independently record video and sound using a range of tools · To use the computer to create basic images. · To choose to take photographs for a range of different purposes. 	<ul style="list-style-type: none"> · <i>Use a computer to compose and record basic rhythms. (only if not covered in Y1)</i> · Record video for a range of purposes. · Use a computer to create basic images. · Continue to take photographs for a range of different purposes, developing independence · Independently record sounds using a range of different tools <p>Edit more complex digital data (music compositions)</p>	<p>Images- paint and http://canvastic.net, and http://pencilmadness.com/pencil_madness.</p> <p>Within 2Sequence</p>
<p>Using Data</p>		
<ul style="list-style-type: none"> · To use technology to create graphs and amend created graphs · To begin to create their own branching databases using ICT, 	<ul style="list-style-type: none"> · Use technology to create graphs and pictograms, adding labels and amending the charts as appropriate 	

<p>identifying objects and questions to classify data</p> <p>To organise and retrieve data</p>	<ul style="list-style-type: none"> · Begin to create their own branching database using ICT, identifying objects using yes or no questions <p>Organise data</p> <p>Retrieve specific data</p>	<p>2investigate - retrieve specific data and conduct simple searches</p>
<p>Programming and Control</p>		
<ul style="list-style-type: none"> · To continue to develop their understanding of how a computer processes instructions and commands · To understand that devices or on screen turtles are controlled by sequences of instructions or actions, and that these can be inputted using icons or by text. · To create, edit and refine sequences of instructions for a variety of programmable devices <p>To explain how algorithms are precise sets of instructions</p>	<ul style="list-style-type: none"> · Further develop their understanding of computational thinking · Continue to explore floor turtles, combining sequences of instructions to follow a pattern or create a shape · Explore an on screen turtle, navigate it around a course or grid and/or draw shapes by inputting a sequence of instructions. · Begin to understand that the on screen turtle can be directed through the use of text <p>Show an awareness of the need to be precise with their algorithms, so that they can be successfully</p>	<p><i>(e.g. Beebot iPad app, Turtle in TextEase, various on-line apps)</i></p> <p><i>2CodeChimp</i></p>

	converted to code. Display a growing awareness of logical, programmable steps.	
Modelling and Simulations		
<ul style="list-style-type: none"> To use a range of basic simulations to represent real life situations and explore the effects of changing variable and the benefits of using the simulations. 	<ul style="list-style-type: none"> Enter information into a basic computer simulation and explore the effects of changing the variables in simulations and discuss the benefits of using these simulations Discuss their use of simulations and compare with reality 	2simulate Ipad applications

Year 3- ICT Curriculum.

Learning Objectives	Key Skills	Notes
Safety		
<p>To understand the importance of keeping information, such as their usernames and passwords, private.</p> <p>To know that games and software have age restrictions.</p> <p>To know ways of reporting inappropriate online behaviours and content.</p>	<p>Demonstrate the importance of having a secure password and not sharing it with anyone else.</p> <p>Talk about the implications of failing to keep passwords safe and secure.</p> <p>Understand the importance of staying safe and the importance of how their conduct when using familiar games, software and communication tools.</p> <p>Talk about how they keep safe online and will know more than one way to report unacceptable content and contact.</p> <p>Discuss the risks of inappropriate online searches and the consequences that could follow</p>	<p>Children will not save passwords on shared computers.</p> <p>My work folder on Purple Mash.</p> <p>Posting to the Purple Mash display board</p> <p>Discussions should be held about chatting online, within games.</p>

To know the implications of inappropriate online searches.

Save and retrieve work from their own areas.

Understand how things are shared electronically

Using the Internet

- To follow a simple search to find specific information from a web site
- To find and use appropriate information
- To identify how different web pages are organised e.g. graphics, hyperlinks, text
- To navigate a web page to locate specific information
- To know that ICT enables access to a wider range of information and tools to help find specific information quickly
- To understand a website has a unique address

- Understand that they are using a search engine.
- Develop key questions to search for specific information with purpose to answer a problem e.g. to find out about different Roman Gods
- Understand how a search engine works and begin to create and enter appropriate search strings
 - Save and retrieve accessed information through the use of Favourites, History, and Save As
 - Understand that some information found through searching is more relevant than others
 - Use the information purposefully to complete specific tasks e.g. copy, paste and edit relevant information (ref. creating and publishing unit)
 - Talk about and describe the process of finding specific information

Communicating and collaborating online

<ul style="list-style-type: none"> · To list different methods of communicating To open and respond to emails. To attach files to emails To send emails 	<p>List different communication methods that use the internet.</p> <p>Open and respond appropriately to an email within an internal system</p> <p>Attach files and send emails within an internal system.</p> <p>Describe appropriate email conventions when communicating this way.</p>	<p>2email</p> <p>2Respond</p>
<p>Creating and Publishing</p>		
<ul style="list-style-type: none"> · To continue to produce work using a computer, using more advanced features of programs and tools · To work collaboratively together to create documents, including presentations · To use desk top publishing tools effectively and understand the differences between a word processor and desk top publisher 	<ul style="list-style-type: none"> · Continue to word process a range of work in other curriculum areas, using more advanced word processing features such as columns and borders · Work together to collaboratively produce a presentation using cloud based tools · Understand the differences between a word processor and desktop publishing tools and use desk top publishing tools to create posters, leaflets and other 	

	documents which require specific formatting	
Digital Media		
<ul style="list-style-type: none"> · To understand they can compose music using icons to represent musical phrases · To understand ICT allows easy creation, manipulation and change · To know they can record sound using ICT that can be stored and played back and independently using a range of tools to record sound. · To independently record video using a range of devices and for a range of purposes. · To independently take photographs taking into account the audience and/or purpose for the image. · To create digital artefacts using photographs which they have taken or found. 	<ul style="list-style-type: none"> · Use a computer to sequence short pieces of music using a small selection of pre-record sounds · Independently record video for a range of purpose, paying attention to the quality of the video capture · Take photographs for a specific reason or project and/or find appropriate images on-line · Create a video out of still images · Use the computer to preform photo edits and create a range of digital creations using photos 	<p>Audio- use 2simple 2sequence.</p>

To edit photographs using a range of basic tools.		
Using Data		
<ul style="list-style-type: none"> · To understand the basic structure of a database. · To be able to add data to a pre-made database. · To use the data in a pre-made database to generate graphs and charts. · To use technology to create graphs and charts. 	<ul style="list-style-type: none"> · Continue to use technology to create graphs and charts · Understand which a database is, and the basic structure of a database · Create graphs from pre-made databases, and enter their own data into a database and generate graphs using these. Use other software to present these findings as appropriate <p>Collect, analyse, evaluate and present data.</p> <p>Consider which software is most appropriate for a given task.</p>	<p><i>Branching databases</i></p> <p><i>2 Question</i></p> <p><i>2graph.</i></p>
Programming and Control		

- To continue to develop their understanding of how computer and technology works and how computers process instructions and commands.
- To create, edit and refine more complex sequences of instructions for a variety of programmable devices.
- To use a computer to create basic applications, investigating how different variables can be changed and the effect this has.

To debug

- Continue to develop understanding of how a computer and technology works, focusing on computational thinking
- Begin to plan more complex sequences of instructions for on-screen and floor turtles test and amend these instructions. (e.g. using RoboMind)

Use coding blocks to introduce timers and repetition

- Use software to make basic puzzles and quizzes, changing parameters (e.g. time allowed, points, number of pieces etc.) to customise the puzzle or quiz (e.g. 2DIY

Identify an error within a program and fix it

2Code

Freecode chimp

Espresso coding

Modelling and Simulations

<ul style="list-style-type: none">· To use a range of simulations to represent real life situations.· Use simulations to make and test predictions.	<ul style="list-style-type: none">· Continue to explore simulations as appropriate and as link with other curriculum areas and discuss the benefits of using these simulations· Use simulations to make and test predictions <p>Turn simple real life situations into an algorithm.(computational thinking)</p>	<p><i>2simulate</i></p>
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