

Skills progression Computing updated

Year group	Skills (<i>group into categories, if appropriate</i>)	Example - matched to topic
Reception	<p>Learning about technology starts from birth because it's the way the world works today. Technology is an integral part of all young children's environment and world. They are surrounded by technology just as they are surrounded by language, print and numbers. In the home, technology includes remote controls for television, DVDs and sound systems, toys that have buttons and buzzers, mobile phones, washing machines, microwave ovens and other machines that require programming, and of course, computers and mobile devices such as iPads. Outside the home, children are also immersed in the technological world: they see automatic doors, cash machines, bar code scanners, digital tills and weighing machines, and security cameras. Technology is something children are going to grow up with, learn about and master, and use as a tool to increase their understanding in all areas of learning.</p> <p>Many activities in the early years revolve around children developing an understanding of their environment. Settings encourage children to explore, observe, solve problems, predict, discuss and consider. ICT resources can provide tools for using these skills as well as being examined in their own right, with computers not the only resources. ICT equipment added to role-play reflects the real world, builds on children's experiences and allows them opportunities to understand how, why, when and where different forms of technology are used in everyday life.</p> <p>Early experiences form a foundation upon which KS1 and KS2 can build and the current early learning goals have specific objectives relating to ICT.</p> <p>By the end of the Foundation Stage most children will:</p> <ul style="list-style-type: none"> Show an interest in ICT Know how to operate simple equipment Complete a simple program on the computer and / or perform simple functions on ICT equipment Find out about and identify the uses of everyday technology and use information and communication toys to support their learning 	<p>Talking tins Bee-Bots Blue-Bots Code a caterpillar Interactive whiteboard Top Marks EYFS Headphones listening to stories Pressing buttons Taking pictures with camera</p> <p>Aut 1- settling in- use the code a caterpillar, drawing on paint program of family</p> <p>Aut2- Dragons- create their own dragon on a paint program</p> <p>Spr1- Monsters, there is a monster shape sorting program on Topmarks,</p> <p>Spr2- Pirates and mermaids, Bee-Bots could be pirates moving from one place to another</p> <p>Sum1- Growth and change, watching a clip of how they have changed from a baby to child take photos of different stages in life</p> <p>Sum2- transport- bee-bot giving instructions to get A-B</p> <p>Junior Scratch</p>

1	<p>Information Technology</p> <p>Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content.</p>	<p>Aut 1- Paws, claws and whiskers painters use a paint program to draw a picture of an animal. You could link to your English and the story they retell could retell on a paint program</p> <p>Sum2 Rio de Vida/We are celebrating linked to the carnival they could create an invitation for their guests to come and view create it on carva app</p>
	<p>Digital Literacy</p> <p>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. Recognise common uses of information technology beyond school.</p>	<p>Spr 2- Moon Zoom/ We are collectors chn use the technology safely and appropriately. Chn could write an email asking for help to discover where the alien spacecraft may have come from.</p> <p>Sum1 Dinosaur Planet/We are Storytellers record a report on a dinosaur talking book on dinosaurs</p>
	<p>Computer Science</p> <p>Understand what algorithms are. Understand how algorithms are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p>	<p>Aut 2 Super Heroes We are TV Chefs- chn could act out as their super heroes and film each other. They could explain how to use their super hero powers to their friends.</p> <p>Spr 1 Splendid Skies/ Treasure hunt Chn use the Blue Bot on a 15cm by 15cm square grid to sequence to identify seasonal patterns linked to geo part of topic</p> <p>Spr 2- Moon Zoom/ We are collectors Chn dress the Blue Bot up as the Alien and give him a sequence of instructions to get around the planets or across the playground to the moon and back</p>

<p>2</p>	<p>Information Technology</p> <p>Use technology purposefully to organise, store and retrieve digital content. Use technology purposefully to create and manipulate digital content</p>	<p>Spr1 The scented Garden/ We are photographers linked well from rising stars. Take photos of plants may grow linked to science or trip to London Zoo with Rainforest. Create a PowerPoint or picture story to show the plants journey.</p> <p>Sum1 Wriggle & Crawl/We are Zoologists Could buy a couple of microscopes to look at the mini beast in more detail. Then chn collect data from their hunt/ trip on the mini beast and create a table/chart. Could also use mindmap as a starting point for the beginning of the topic then again at the end to see how much they have learnt.</p>
	<p>Digital Literacy</p> <p>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. Recognise common uses of information technology beyond school.</p>	<p>Spr2 Towers, Tunnels and Turrets/ We are Researchers chn research about the topic and create a powerpoint to share with another year group. Skills, insert picture, change size, font and colour</p> <p>Aut2 Street Detectives We are Detectives Take photos of the area linked to their topic and show how it has changed. Create a digital story with their pictures to tell the story. They could send emails to the local mayor to ask how the area has changed over time.</p>
	<p>Computer Science</p> <p>Understand what algorithms are. The child can understand how algorithms 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.</p>	<p>Aut1 Land Ahoy!/ We are Astronauts chn use Blue Bots to navigate around a large scale map 15cm by 15 cm. Can they prevent their 'ship' from crashing and wrecking on the rocks. If time could translate this to scratch.</p> <p>Sum 2 Muck, mess & mixture/ We are game testers Use the Blue Bots to create algorithms and debug. The Blue-Bot could be the bug stuck in their mixture and they have to try and get it from one mixture to the other?</p>

<p>3</p>	<p>Information Technology</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices.</p> <p>Design and create a range of programs, systems and content that accomplish given goals.</p> <p>Collecting, analysing, evaluating and presenting data and information.</p> <p>Use search technologies effectively.</p> <p>Appreciate how search results are selected and ranked.</p>	<p>Spr 1 Ancient Greeks/We are Presenters children create opening scene from Olympics to present. Also PowerPoints/ research on topic with daily life</p> <p>Sum 2 Scrumdiddlyumptious/ We are pollsters carry out a survey on favourite foods/ sugary foods and add them to excel/ create graphs etc</p>
	<p>Digital Literacy</p> <p>Use technology safely, respectfully and responsibly.</p> <p>Recognise acceptable. Unacceptable behaviour.</p> <p>Know a range of ways to report concerns and inappropriate behaviour.</p> <p>Be discerning in evaluating digital content.</p> <p>Understand the opportunities networks offer for communication and collaboration.</p>	<p>Sum 1 Flow/ We are communicators communicate correctly on email/ linked to the topic email other schools doing the same project how important water is. What can we do as a class/school to save/ protect the water.</p>
	<p>Computer Science</p> <p>Design, write and debug programs that accomplish specific goals.</p> <p>Controlling or simulating physical systems.</p> <p>Solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection and repetition in programs; work with variables.</p> <p>Use logical reasoning to explain how some simple algorithms work.</p> <p>Use logical reasoning to detect and correct errors in algorithms and programs.</p> <p>Understand computer networks including the internet.</p> <p>Understand how networks can provide multiple services, such as the world wide web.</p>	<p>Aut 1 Tremors/ We are programmers link it to the pebble in my pocet book and create a scene from the book. The Blue Bot could be the pebble and going on a journey.</p> <p>Aut 2 Mighty Metals/We are bug fixers linked to topic chn could present findings from science investigation into a table.</p> <p>Spr2 Predators/ Hour of code Research for predators to write non-chorological report/ explanation Branching Data linked to an animal if they are a herbivore, carnivore or omnivore use https://www.i2e.com/jit5#branch</p>
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<p>Digital Literacy</p> <p>Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour. Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content. Understand the opportunities networks offer for communication and collaboration.</p>	<p>Sum 2 Misty Mountain Sierra/We are meteorologists become presenters on the weather where possible link to your geography for this topic. Present/ compare the weather conditions in the Misty Mountains if possible record data in a table to share as the chn present.</p>
<p>Computer Science</p> <p>Design, write and debug programs that accomplish specific goals. Controlling or simulating physical systems. Solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors in algorithms and programs. Understand computer networks including the internet. Understand how networks can provide multiple services, such as the world wide web.</p>	<p>Spr2 Blue Abyss/ We are game developers Chn could develop a game linked to the sea/oceans with fishes and trying to stop them from becoming extinct. Chn could use scratch for this.</p> <p>Sum 1 Burps, Bottoms and Bile/ Coding 'Hour of Code' They could make a new web page linked to teeth/dentist giving others information on how to look after teeth</p> <p>Spr 1 Potions/ We are toy Designers chn use the Blue-Bots to give it a set of algorithms/ debug it when it goes wrong. Linked to the topic the children could create online catalogues for potion supplies.</p>

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	<p>Digital Literacy Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour. Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content. Understand the opportunities networks offer for communication and collaboration.</p>	<p>Sp2 Allotment / We are architects Linked to their art work from this topic of observational sketches of fruits and veg from the allotment. The children can create an online art gallery to show/ share their artwork. Sum 1 Local History Study/ We are bloggers</p>
	<p>Computer Science Design, write and debug programs that accomplish specific goals. Controlling or simulating physical systems. Solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables, Work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors in algorithms and programs. Understand computer networks including the internet. Understand how networks can provide multiple services, such as the world wide web.</p>	<p>Aut 1 Stargazers/ We are Cryptographers linked to their topic in space give them a space code to crack. Chn could use Scratch for this. They could create their own for a friend to crack or use a readymade sratch code Sum 2 Scream Machine/ We are game developers Linked to the topic could the children create their own interactive roller coaster or another type of game that would be played at a funfair</p>
<p>6</p>	<p>Information Technology Select, use and combine a variety of software (including internet services) on a range of digital devices. Design and create a range of programs, systems and content that accomplish given goals. Collecting, analysing, evaluating and presenting data and information.</p>	<p>Spr 1 Frozen Kingdom Design and create/use a range of programs to accomplish given goals. Use images from the internet to create a fact file Spr 2 Blood Heart children visit the ‘Give Blood’ website and create a poster on publisher about the</p>

	<p>Use search technologies effectively. Appreciate how search results are selected and ranked</p>	<p>information they have read. Sum 2 Mayans Publishers Year Book</p>
	<p>Digital Literacy</p> <p>Use technology safely, respectfully and responsibly. Recognise acceptable/unacceptable behaviour. Know a range of ways to report concerns and inappropriate behaviour. Be discerning in evaluating digital content. Understand the opportunities networks offer for communication and collaboration.</p>	<p>Sum 1 Gallery Rebels Hour of Code use the internet to research different paintings take images and edit them and put them together to make a mini clip showing an art gallery. Could use filmago to put them together.</p> <p>Sp1 Frozen Kingom/ Blood Hearts Video on environmentalists runs for the whole of the SpringTerm</p>
	<p>Computer Science</p> <p>Design, write and debug programs that accomplish specific goals. Controlling or simulating physical systems. Solve problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables. Work with various forms of input and output. Use logical reasoning to explain how some simple algorithms work. Use logical reasoning to detect and correct errors algorithms and programs. Understand computer networks including the internet. Understand how networks can provide multiple services, such as the world wide web.</p>	<p>Aut 1 A child's war Blockly. Linked to topic could create a PowerPoint of the daily life of a war child to present to another class.</p> <p>Aut 2 Vikings could they use the Lego We Do sets/ We are gamers</p>