



Computing, IT and Business Learning Map



Year	Autumn	Spring	Summer
	Aims	Children to practice basic skills for computing through each term. Children learn how to log in and access different websites or apps using computers, iPads and laptops. Children should be aware of the careers availed through technology. Children should produce a final outcome that demonstrates skills learnt at the end of each half term. Children should have the opportunities to display, present or demonstrate their outcomes.	
Nursery	<u>Understanding The World Technology (30-50 months) Continuous Prevision</u> To know how to operate simple equipment. To show an interest in technological toys with knobs or pulleys, or real objects. To show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. To know that information can be retrieved from computer.	<u>Understanding The World Technology (40-60 months) Continuous Prevision</u> To complete a simple program on a computer. To interact with age-appropriate computer software.	<u>Understanding The World Technology (ELG) Continuous Prevision</u> To recognise that a range of technology is used in places such as homes and schools. To select and use technology for particular purposes.
Reception	<u>Learning to be E-Safe</u> Not talking to strangers, If something is wrong tell an adult you trust, Hector's World, Smartie the Penguin, Penguin Pig, Sharing messages online, Sharing Photos and Videos, <u>Learning to be Computer Literate</u> Parts of a Computer, Computer Repair Shop (Role Play), Control a Computer (Mouse and Touch),	<u>Learning to create Digital Photos and Videos</u> Knows how to operate simple equipment (30-50 months), Choose particular colours for a purpose (40-60 months), Communication and Language (Speaking) Writing (Early Learning Goals), <u>Learning to Program and Code</u> (Beebots) Knows how to operate simple equipment (30-50 months), Give explanations (Speaking 30-50 months), Mathematics (sequencing),	<u>Learning to create Digital Art</u> Chooses particularly colours to use for a purpose (40-60 months), Create simple representations of events, people and objects. (Early Learning Goals), They select technology for a particular purpose (Early Learning Goals) <u>Learning to create Digital Sounds and Music</u> Knows how to operate simple equipment (CD player) (30-50 months), Children recognise that a range of technology is used in places such as homes and school,
https://www.ilearn2.co.uk/early-years-curriculum.html			
Year 1	<u>Learning to be E-Safe</u> llearn2 – E-Safety Use technology safely and respectfully, keeping personal information private, <ul style="list-style-type: none"> • Personal information I need to keep safe, • use email to safely communicate, • Apply my online safety knowledge to help others make • good choices online, 	<u>Learning to Program and Code</u> (Beebots) Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Write and debug simple programs and use logical reasoning to predict simple program <u>Learning to create Digital Music</u>	<u>Learning to add Text and Images</u> Add and resize images. Add text to label and describe images. <u>Learning to add Text and Images</u> Add and resize images. Add text to label and describe images. <u>Learning to create Digital Art</u>

	<ul style="list-style-type: none"> • Create, name and date my digital creative work, • Safely search for images online, <p><u>Learning to use Mouse and Keyboard Skills</u></p> <p>Mouse and keyboard skills; move mouse, left/right click, drag and drop.</p> <p>Typing; Find letters on keyboard and begin touch typing with home row keys.</p>	Create scales, chords, arpeggios, melodies and rhythm to build a song and experiment with tempo.	Use lines and fill tools to make interesting patterns. (Mondrian project)
	https://www.ilearn2.co.uk/planningks1.html		
Year 2	<p><u>Learning to be E-Safe</u></p> <p>Ilearn2 – E-Safety Use technology safely and respectfully, keeping personal information private,</p> <ul style="list-style-type: none"> • A digital footprint, • Use keywords in an online search, • Recognise whether a website is appropriate, • Rate and review informative websites, • Identify kind and unkind behaviour online, <p>Apply our knowledge of safe and sensible online activities to create a safety poster.</p> <p><u>Learning uses for Technology</u></p> <p>Recognise common uses of information technology beyond school,</p> <p>Spot digital technology in school,</p> <p>Find a piece of computer equipment amongst day to day objects and choose the correct definition.</p>	<p><u>Learning to create a Digital Book</u></p> <p>Add a book cover with title, author, colour and image.</p> <p>Add multiple pages based on a theme. Add text on different pages.</p> <p>Add images on different pages to match the theme/text,</p> <p>Add voice recordings to match the text and theme</p> <p><u>Learning to Program and Code</u></p> <p>(Scratch JR I pads)</p> <p>Program movements Program Inputs (touch or clicking),</p> <p>Program outputs for audio or text Find errors in a program (debug),</p> <p>Program conditions (if one sprite hits another)</p> <p>(Sphero coding robots – blocks coding – design and build a robot)</p>	<p><u>Learning to create an Animation</u></p> <p>(use technology purposefully to create, organise, store, manipulate and retrieve digital content),</p> <p>Add a background and objects to a frame.</p> <p>Copy/clone a frame and move objects to create an animation.</p> <p>Create an animation with multiple objects moving simultaneously.</p> <p><u>Learning to use Data Handling</u></p> <p>Label a pictogram and add data to each column.</p> <p>Edit a table with correct titles and numbers to create a bar chart and pie chart.</p> <p>Explain what a pictogram and bar chart shows.</p>
	https://www.ilearn2.co.uk/planningks1.html		
Year 3	<p><u>Learning to be E-Safe</u></p> <p>Ilearn2 – E-safety Identify online dangers, including people are not who they say they are and the dangers they pose.</p> <p>How do we communicate and share content online safely, responsibly and respectfully.</p> <ul style="list-style-type: none"> • Cyberbullying, • Websites advertisements, • Privacy and passwords, • Safely send and receive emails, • Communicate online, <p>Use knowledge about online safety to plan a party.</p> <p><u>Learning to create a Digital Comic</u> Add, resize and organise colour or picture backgrounds.</p> <p>Add, resize, organise characters/object to different panels.</p> <p>Add narration using text and direct speech using speech bubbles</p>	<p><u>Learning to Program and Code</u></p> <p>Scratch Chat (Scratch JR) Write a simple program with text outputs, wait commands and movement.</p> <p>Scratch Shapes Write a program with movement and repetition.</p> <p>Scratch Maps Write programs using different inputs; keyboard, mouse and touch screen.</p> <p>(Sphero coding robots – blocks coding – build a bridge and code the robots to cross it)</p> <p><u>Learning to create Digital Art</u></p> <p>Use stamps to build graphics and copy and paste to speed up process.</p> <p>Use different shapes (outlines and fill) and label them with text.</p> <p>Use select, copy and paste to duplicate elements.</p> <p>Transform elements to create symmetry and patterns. Zoom in to add detail.</p>	<p><u>Learning to Edit a Document</u></p> <p>Copy and Paste text and images.</p> <p>Find and replace words.</p> <p>Format text for a purpose.</p> <p>Add an image and edit it inside a document</p> <p><u>Learning to create a Video Game</u></p> <p>Design, add and animate backgrounds.</p> <p>Design and add characters/objects. Design and add platforms.</p> <p>Demonstrate effective creation of different types of games (platform, flying, puzzle).</p> <p>Create an app store listing with icon, effective description and screenshots.</p>
	https://www.ilearn2.co.uk/year3.html		
Year 4	<p><u>Learning to be E-Safe</u></p> <p>Ilearn2 – E-safety Identify online dangers, including people are not who they say they are and the dangers they pose.</p>	<p><u>Learning to use Internet Research</u></p> <p>Appreciate how search results are selected and ranked and show awareness of different struggles for finding specific information.</p> <p>Use search technologies (different websites) to find specific pieces of information.</p>	<p><u>Learning to create a 3D Design</u></p> <p>Understand 3D spacial awareness,</p> <p>Add 3D shapes, resize, adjust height, duplicate and use the different perspective.</p>

	<p>How do we communicate and share content online safely, responsibly and respectfully.</p> <ul style="list-style-type: none"> Identify how a message can hurt someone's feelings, use a search engine accurately, 'Plagiarism' and how to avoid it, Create a safe online profile, Be a responsible digital citizen, <p>Create an online safety superhero character <u>Learning to create an Ebook</u></p> <p>Add page colour and style Add, position and format text on different pages, Add and position images from camera/web,</p> <p>Add audio, including hiding it behind an object. Add hyperlinks to text and images, Add and format shapes,</p> <p>Use hyperlinks for navigation,</p> <p>Add audio to pages Embed content such as maps/Youtube videos (Youtube videos only possible if your school allows)</p>	<p>Reference the correct source of information.</p> <p>Be discerning in evaluating digital content.</p> <p>Check the internet for fake news by cross-referencing facts. <u>Learning to Program and Code</u></p> <p>Scratch Racing Program inputs with loops. Use conditions and sensing for interactions.</p> <p>Scratch Debug Debug a variety of programs.</p> <p>Scratch Quiz Program conditions with data variables and operators.</p> <p>(Sphero coding robots – blocks coding – build a maze and map the robots through it)</p>	<p>Re-create different types of buildings using 3D shapes.</p> <p>Create roads/paths by adjusting the height of 3D shapes.</p> <p>Add windows and door shapes <u>Learning to design an App</u></p> <p>Adjust slide size to mimic a phone/tablet size.</p> <p>Add text and images to a slide.</p> <p>Add icons and text to use as navigation</p> <p>Duplicate slides to create multiple pages of the app.</p> <p>Create hyperlinks to create navigation.</p>
https://www.ilearn2.co.uk/year4.html			
Year 5	<p><u>Learning to be E-Safe</u></p> <p><u>Ilearn2 – E-safety</u> Communicate and share content online safely, responsibly and respectfully.</p> <ul style="list-style-type: none"> identify spam emails, write citations for the websites I use, Create strong passwords, How photographs we see online may have been edited. <p>Apply online safety rules to create a PowerPoint presentation in groups. <u>Learning to create an Ebook</u></p> <p>Add page colour and style then position and format text.</p> <p>Add and position images from camera/internet.</p> <p>Add audio, including hiding it behind an object.</p> <p>Add hyperlinks to text and images.</p> <p>Add and format shapes.</p> <p>Use hyperlinks for navigation. Add audio to page</p>	<p><u>Learning to use Data Handling</u></p> <p>(Tour De France)</p> <p>Find data from internet (Google maps)</p> <p>Find and present data as a table and suitable chart.</p> <p>Give chart a suitable title and label axis correctly.</p> <p>Use formulae to find totals, averages and maximum/minimum numbers. <u>Learning to create a 3D Design</u></p> <p>Understand 3D spacial awareness.</p> <p>Add 3D shapes, resize, adjust height, duplicate and use the different perspective.</p> <p>Re-create different types of buildings using 3D shapes.</p> <p>Create roads/paths by adjusting the height of 3D shapes.</p> <p>Add windows and door shapes.</p>	<p><u>Learning to Program and Code</u></p> <p>Scratch Sentences Program list variables that chooses randomly.</p> <p>Scratch Maze Program inputs, conditions and sensing for interaction, data variables for scoring and a game timer.</p> <p>Scratch Football Program Inputs, outputs, loops, conditions, sensing and variables.</p> <p>(Sphero coding robot – java script – program a light show) <u>Learning to use Internet Research</u></p> <p>Be discerning in evaluating digital content.</p> <p>Check the internet for fake news by cross-referencing facts.</p>
https://www.ilearn2.co.uk/year5preview.html			
Year 6	<p><u>Learning to be E-Safe</u></p> <p><u>Ilearn2 – E-safety</u> Communicate and share content online safely, responsibly and respectfully.</p> <ul style="list-style-type: none"> identify good strategies to deal with cyberbullying, Identify secure websites, Identify information that I should never share, identify how the media play a powerful role in shaping ideas about girls and boys, 	<p><u>Learning the History of computing</u></p> <p>Design and create digital content to accomplish goals.</p> <p>Use search technologies effectively and be discerning in evaluating digital content</p> <p>Understand how technology has changed over time. Combine text and images to present ideas.</p>	<p><u>Learning to design a Website</u></p> <p>Add and format text within a website.</p> <p>Organise sections of web-pages and multiple page with relevant titles.</p> <p>Add and edit images,</p> <p>Include other features such as hyperlinks, buttons and files.</p> <p>Evaluate other websites and provide constructive feedback.</p>

	<ul style="list-style-type: none"> Apply my online safety knowledge to my online, <p>Use my knowledge of online safety to create a multiple choice quiz Learning to Program and Code</p> <p>Program movements using Python Turtle.</p> <p>Use the PRINT command for text.</p> <p>Program a simple calculator in Python.</p> <p>Program loops to repeat text.</p> <p>Program interactive inputs.</p> <p>(Sphero coding robots – java script – create an algorithm for the bots to tour the school)</p>	<p>Understand the impact (positive/negative) technological changes have on society.</p> <p>Predict how technology will change in the future. Learning to create using VR</p> <p>Understand what virtual reality is and how it can be used to help people.</p> <p>Add, move and resize objects in a virtual reality environment</p> <p>Animate objects for realism.</p> <p>Use code blocks to add movement (with grouping) and interactions (conditions).</p> <p>Create multiple scenes of VR environments.</p>	<p>Make necessary changes to the website based on feedback. Learning to Edit an Image</p> <p>Take and crop a screenshot and understand ratios.</p> <p>Adjust the colours, brightness, contrast and filters.</p> <p>Add drawing and text layers.</p> <p>Import new images as layers and resize/add effects.</p> <p>Save finished image to use in other projects.</p>
	https://www.ilearn2.co.uk/year6preview.html		
Year 7	<p>E- Safety & Multi Media. Students will develop their understanding of staying safe online and in the digital world. They will produce a multimedia presentation to consolidate their learning.</p> <p>Spreadsheet Modelling Students will develop their modelling skills using Microsoft Excel. The students will create a variety of spreadsheets that incorporate formulas, functions and IF Statements. Students will use charts to display their findings and will develop an understanding of how spread sheets can be used.</p>	<p>Coding An introduction to basic programming software where students use sequence and programming logic to complete coding tasks.</p>	<p>Web Design Using web design software produce a web site that Adventure Quest require, make sure that you give close consideration to:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Layout <input type="checkbox"/> Content <input type="checkbox"/> Graphics <input type="checkbox"/> Colour Scheme or background theme <input type="checkbox"/> The Audience who will be viewing the web-site
Year 8	<p>E Safety. Students will build upon their learning from year 7, covering topics including Cyber bullying, social media and the ways in which apps / devices should be used sensibly. They will complete a paper based assessment at the end of the unit to show their understanding of the topic.</p> <p>Representation of Data. Students will build their knowledge and understanding of Binary. Students will begin to look at data and how binary is converted to denary and vice versa. Simple binary addition will be covered along with some basic logic gates.</p>	<p>Database Students will have an introduction to data handling software (MS Access). Students will learn to sort, search and present findings from a large data set and understand how this may be used in a real life setting.</p> <p>Coding An introduction to basic programming software where students use sequence and programming logic to complete coding tasks.</p>	<p>Web Design Using web design software produce a web site that Adventure Quest require, make sure that you give close consideration to:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Layout <input type="checkbox"/> Content <input type="checkbox"/> Graphics <input type="checkbox"/> Colour Scheme or background theme <input type="checkbox"/> The Audience who will be viewing the web-site
Year 9	<p>E Safety WP & Multi Media Use of online technology and office 365 and E Safety. Students will build upon their learning from year 7, covering topics including Cyber bullying, social media and the ways in which apps / devices should be used sensibly. They will complete a paper based assessment at the end of the unit to show their understanding of the topic. ail.</p> <p>Creating interactive multimedia products about E-Safety</p> <ul style="list-style-type: none"> • plan an interactive multimedia product • create an interactive multimedia product <p>Use of online technology and office 365</p>	<p>Spreadsheet Modelling Students will develop their modelling skills using Microsoft Excel. The students will create a variety of spreadsheets that incorporate formulas, functions and IF Statements. Students will use charts to display their findings and will develop an understanding of how spread sheets can be used.</p>	<p>Developing Multi Media. Understand the uses and properties of interactive multimedia product Be able to plan an interactive multimedia product</p> <p>Creating and AR model prototype Understand the uses and properties of AR product</p>
Year 10	<p>R060: TA1 - Planning and designing the spreadsheet solution (1.1 Design tools) TA1.2 HCI design conventions and principles (1.2.1Functionality, 1.2.2Types of outputs,1.2.3 HCI navigation) TA2 Creating the spreadsheet solution (2.1.1 Data handling & manipulation, 2.1.2 Techniques to generate the outputs, 2.1.3 User interface) R060: NEA Assessment (completion)</p>	<p>R060: TA1 - Planning and designing the spreadsheet solution (1.1 Design tools) TA1.2 HCI design conventions and principles (1.2.1Functionality, 1.2.2Types of outputs,1.2.3 HCI navigation) TA2 Creating the spreadsheet solution (2.1.1 Data handling & manipulation, 2.1.2 Techniques to generate the outputs, 2.1.3 User interface) R060: NEA Assessment (completion)</p>	<p>R050: Cyber-security and legislation (4.2 impact of attacks, 4.3 Prevention measures, 4.4 Legislation related to the use of IT systems) R050: TA5 - Digital communications (5.1 Types, 5.2 Software, 5.3 Digital devices, 5.4 Distribution channels, 5.5 Audience demographics) TA6 - Internet of Everything (IoE) (6.1 Use of IoE, 6.2 Application areas in everyday life)</p>

		<p>RO50: TA1 - Design tools (1.1 Types of design tools) TA2 - Human Computer Interface in everyday life (2.1 Purpose, importance and use of HCI in application areas, 2.2 Hardware considerations, 2.3 Software consideration, 2.4 User interaction methods) TA3 - Data & Testing (3.1 Information & data, 3.2 Data use) TA4 - Cyber-security and legislation (4.2 impact of attacks, 4.3 Prevention measures, 4.4 Legislation related to the use of IT systems) R050: TA5 - Digital communications (5.1 Types, 5.2 Software, 5.3 Digital devices, 5.4 Distribution channels, 5.5 Audience demographics)</p>	
Year 11	<p>R060: TA1 - Planning and designing the spreadsheet solution (1.1 Design tools) TA1.2 HCI design conventions and principles (1.2.1Functionality, 1.2.2Types of outputs,1.2.3 HCI navigation) TA2 Creating the spreadsheet solution (2.1.1 Data handling & manipulation, 2.1.2 Techniques to generate the outputs, 2.1.3 User interface) R060: NEA Assessment (completion)</p>	<p>R060: TA1 - Planning and designing the spreadsheet solution (1.1 Design tools) TA1.2 HCI design conventions and principles (1.2.1Functionality, 1.2.2Types of outputs,1.2.3 HCI navigation) TA2 Creating the spreadsheet solution (2.1.1 Data handling & manipulation, 2.1.2 Techniques to generate the outputs, 2.1.3 User interface) R060: NEA Assessment (completion)</p> <p>RO50: TA1 - Design tools (1.1 Types of design tools) TA2 - Human Computer Interface in everyday life (2.1 Purpose, importance and use of HCI in application areas, 2.2 Hardware considerations, 2.3 Software consideration, 2.4 User interaction methods) TA3 - Data & Testing (3.1 Information & data, 3.2 Data use) TA4 - Cyber-security and legislation (4.2 impact of attacks, 4.3 Prevention measures, 4.4 Legislation related to the use of IT systems) R050: TA5 - Digital communications (5.1 Types, 5.2 Software, 5.3 Digital devices, 5.4 Distribution channels, 5.5 Audience demographics)</p>	<p>R050: Cyber-security and legislation (4.2 impact of attacks, 4.3 Prevention measures, 4.4 Legislation related to the use of IT systems) R050: TA5 - Digital communications (5.1 Types, 5.2 Software, 5.3 Digital devices, 5.4 Distribution channels, 5.5 Audience demographics) TA6 - Internet of Everything (IoE) (6.1 Use of IoE, 6.2 Application areas in everyday life)</p>

Aspire for Excellence