

Rishton Methodist Primary School

Computing Curriculum

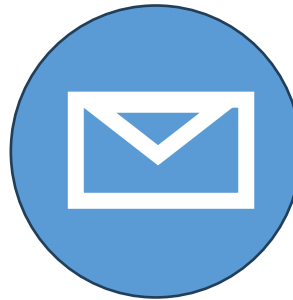
The early learning goals at EYFS aim to guide children to recognise that a range of technology is used in places such as homes and schools. Children will have opportunities to select appropriate technology for a particular purpose.

Computing Golden Threads



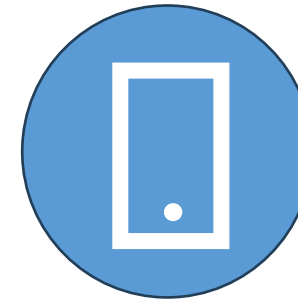
Digital Literacy

The skill to find, evaluate, utilise, share and create content.









Information Technology







The study and use of systems for storing, retrieving, and sending information.















Computer Science






Focuses on methods involved in design, programming, verification, implementation, and testing.






	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year One	<p>Focus 1 : Online Safety (Digital Literacy)</p>  <p>Focus 2 : Grouping and Sorting (Computer Science)</p> <p>Vocabulary – login, password, avatar, icon, saving, less than, more than and search.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Log in to Purple Mash safely to create an avatar. <input type="checkbox"/> Find saved work in an online area and how to search for resources. <input type="checkbox"/> Practise adding pictures and text to work. <input type="checkbox"/> Explore how to log out of Purple Mash. <input type="checkbox"/> Look at sorting items on a computer. <input type="checkbox"/> Using grouping activities, sort items on a computer. 	<p>Within this section carryout a day with both Year One and Year Two to summarise e-safety points.</p> <p>Reiterate the use of the ChildLine number and NSPCC</p>	<p>Focus 1: Pictograms (Information Technology)</p>  <p>Focus 2 : Lego Builders (Computer Science)</p> <p>Vocabulary – data, pictogram, title, compare, totals, algorithm, programme and sequence.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Children collate data to create a simple pictogram. <input type="checkbox"/> Discuss what different pictograms shows, interpreting their data. <input type="checkbox"/> Create a pictogram to represent results in a game. <input type="checkbox"/> Practise following instructions. <input type="checkbox"/> Follow and create instructions on a computer. <input type="checkbox"/> Consider how the order of instructions affects the results. 	<p>Focus: Maze Explorers (Computer Science)</p>  <p>Vocabulary – direction, left, right, route and debug.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explore the different direct keys, using them to complete a challenge. <input type="checkbox"/> Create and debug a set of instructions. <input type="checkbox"/> Zoozm in to look at how to create longer algorithms. 	<p>Focus: Coding (Computer Science)</p>  <p>Vocabulary – code, software, command, run and execute.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Zoom in and explore what instructions are. <input type="checkbox"/> Use code to make a computer program. <input type="checkbox"/> Explore using an event to control an object. <input type="checkbox"/> To research how code executes when a program is run. <input type="checkbox"/> Explore what backgrounds and objects are in code. <input type="checkbox"/> Plan and make a computer program. 	<p>Focus 1: Spreadsheets (Information Technology)</p>  <p>Focus 2 : Technology Outside School (Digital Literacy)</p>  <p>Vocabulary – spreadsheet, row, column and image.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Zoom in and explore what spreadsheets are. <input type="checkbox"/> Add clipart images to a spreadsheet. <input type="checkbox"/> Explore using the ‘speak’ and ‘count’ tools. <input type="checkbox"/> Research examples of where technology is in our local area.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year Two	<p>Focus: Coding (Computer Science)</p>  <p>Vocabulary – scene, properties, interaction, collision, interval and test.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap what algorithms are by creating a simple computer program. <input type="checkbox"/> Explore what collision detection events are when coding. <input type="checkbox"/> Design an algorithm that follows a timed sequence. <input type="checkbox"/> Research different events in code. <input type="checkbox"/> Research and use the function buttons in a program. <input type="checkbox"/> Test and debug simple programs. 	<p>Within this section carryout a day with both Year One and Year Two to summarise e-safety points.</p> <p>Reiterate the use of the ChildLine number and NSPCC</p>	<p>Focus : Online Safety (Digital Literacy)</p>  <p>Vocabulary – filter, internet, sharing, email, attachment, protection and digital footprint.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Zoom into refined searches using search tools. <input type="checkbox"/> Explore how we can share work online. <input type="checkbox"/> Look at emails and how they are used to communicate. <input type="checkbox"/> Practise sending and receiving emails. <input type="checkbox"/> Discuss what the term digital footprint means and what steps can be taken to keep personal data secure. 	<p>Focus: Spreadsheets (Information Technology)</p>  <p>Vocabulary – cell, cut, copy, paste, block graph and label.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap work completed in Year 1 spreadsheets. <input type="checkbox"/> Zoom in to the different spreadsheet tools available: cutting, totalling, pasting and copying. <input type="checkbox"/> Explore adding and editing data in a table layout, creating a block graph. 	<p>Focus: Questioning (Information Technology)</p>  <p>Vocabulary – information, sort, binary tree, database and field.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap interpreting pictograms for Year 1. <input type="checkbox"/> Use yes/no questions to separate information. <input type="checkbox"/> Construct a binary tree to separate different items. <input type="checkbox"/> Use a binary tree to answer questions. <input type="checkbox"/> Explore how databases can be used to answer more complex questions. 	<p>Focus 1: Effective Searching (Digital Literacy)</p>  <p>Focus 2: Making Music (Information Technology)</p>  <p>Vocabulary – world wide web, network, device, web page, domain, URL, tune, note, volume and tempo.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Explore the vocabulary for Focus 1. <input type="checkbox"/> Research how best to search the internet. <input type="checkbox"/> To form an inform piece to help others search effectively on the internet. <input type="checkbox"/> Edit and combine sounds digitally. <input type="checkbox"/> Add sounds to a tune to change it. <input type="checkbox"/> Record and upload sounds.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year Three	<p>Focus 1 : Coding (Computer Science)</p>  <p>Vocabulary – implement, predict, timer, nested, command and alert.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap previous coding knowledge from Year 2. <input type="checkbox"/> Selecting the correct type of timer for a purpose. <input type="checkbox"/> Explore how to repeat command is used. <input type="checkbox"/> Understand the importance of nesting. <input type="checkbox"/> Design and create an interactive scene. 	<p>Focus 1 : Online Safety (Digital Literacy)</p>  <p>Focus 2 : Spreadsheets (Information Technology)</p>  <p>Vocabulary – blog, vlogs, appropriate, spoof, verify, permission, advanced mode and cell address.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Zoom in to what makes a safe password and the consequences to giving your password out. <input type="checkbox"/> Question information seen on the internet. <input type="checkbox"/> Explore age restriction symbols and the PEGI restrictions. <input type="checkbox"/> Explore how spreadsheets can automatically create graphs. <input type="checkbox"/> Introduce the ‘more than’, ‘less than’ and ‘equals’ tools. <input type="checkbox"/> Describe cells using their address. 	<p>Focus 1: Touch Typing (Information Technology)</p>  <p>Vocabulary – posture, typing, keys and spacebar.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Introduce the focus vocabulary. <input type="checkbox"/> Practice typing with the left hand. <input type="checkbox"/> Practice typing with the right hand. 	<p>Within this section carryout a day with both Year Three and Year Four to summarise e-safety points.</p> <p>Reiterate the use of the ChildLine number and NSPCC</p>	<p>Focus: Email (Digital Literacy)</p>  <p>Vocabulary – mode, link, compose, inbox, trusted contact, CC and BCC</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap how we can communicate electronically. <input type="checkbox"/> Open an email and respond to it. <input type="checkbox"/> Explore how to stay safe using emails. <input type="checkbox"/> Add attachments to an email. <input type="checkbox"/> Attach files to an email and use emails to communicate ideas. 	<p>Focus 1: Branching Databases (Information Technology)</p>  <p>Focus 2: Graphing (Information Technology)</p>  <p>Vocabulary – branching database, axis< survey and tally chart.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap sorting objects using yes/no questions form Year 2. <input type="checkbox"/> Form a branching database. <input type="checkbox"/> Enter data into a graph. <input type="checkbox"/> Solve an investigation and present the results in graphic form.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year Four	<p>Focus 1 : Coding (Computer Science)</p>  <p>Vocabulary – code block, if statement, coordinate, flowchart and execute.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Review the focus vocabulary. <input type="checkbox"/> Use an IF statements in a computer program. <input type="checkbox"/> Explore how coordinates are used in computer programming. <input type="checkbox"/> Explore how the IF/ELSE statement works. <input type="checkbox"/> Research what is meant by the term variable in programming. <input type="checkbox"/> Create a playable game. 	<p>Focus 1 : Online Safety (Digital Literacy)</p>  <p>Focus 2 : Hardware Investigators (Information Technology)</p> <p>Vocabulary – SMART rules, spam, phishing, malware, virus, AdFly, ransomware, watermark and plagiarism.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Understand the word ‘phishing’ and the meaning of the padlock symbol when using the internet. <input type="checkbox"/> Identify the risks of installing free and paid software. <input type="checkbox"/> Explore what is meant by copyright. <input type="checkbox"/> Discuss citing sources used. <input type="checkbox"/> Understand the balance between digital and active activities. 	<p>Focus 1: Spreadsheets (Information Technology)</p>  <p>Vocabulary – formula wizard, percentages, decimal place, average, budget, random number tool and calculations.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap adding a formula in a cell to automatically make a calculation. <input type="checkbox"/> Use the timer, spinner and random number tools. <input type="checkbox"/> Use data to form a line graph. <input type="checkbox"/> Explore allocating values to images. 	<p>Within this section carryout a day with both Year Three and Year Four to summarise e-safety points.</p> <p>Reiterate the use of the ChildLine number and NSPCC</p>	<p>Focus: Logo (Computer Science)</p>  <p>Vocabulary – grid, run speed, procedure, SETPC and SETPS.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Input simple instructions into Logo. <input type="checkbox"/> Create letter shapes with Logo. <input type="checkbox"/> Use repeated commands with Logo. <input type="checkbox"/> Use a build procedure with Logo. 	<p>Focus 1: Animation (Information Technology)</p>  <p>Focus 2: Effective Searching (Information Technology)</p> <p>Vocabulary – frame, fps, onion skinning, stop motion, result page and balanced view.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Discuss what makes a good animated film and how they are created. <input type="checkbox"/> Explore onion skinning in animation. <input type="checkbox"/> Add backgrounds and sounds to animations. <input type="checkbox"/> Introduce stop motion animation. <input type="checkbox"/> Locate information on a search result page. <input type="checkbox"/> Use search effectively to find out information.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year Five	<p>Focus 1 : Coding (Computer Science)</p>  <p>Vocabulary – simplify, efficient, simulation, function, values tabs.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap prior year group taught knowledge. <input type="checkbox"/> Programme a simulation. <input type="checkbox"/> Explore what decomposition and abstraction are in Computer Science. <input type="checkbox"/> Explore how to use friction in code. <input type="checkbox"/> Understand what the different variable types are and how they are used differently – creating a string. <input type="checkbox"/> Explore text variables when coding. 	<p>Focus 1 : Online Safety (Digital Literacy)</p>  <p>Vocabulary – responsibility, encrypt, citation, validity and bibliography.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Zoom into the impact that sharing digital content can have. <input type="checkbox"/> Discuss the advantages, disadvantages, permissions, and purposes of altering an image digitally. <input type="checkbox"/> Explore how to reference sources in their work. 	<p>Focus 1: Spreadsheets (Information Technology)</p>  <p>Vocabulary – conversion, perimeter, area and budget.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use formulae in spreadsheets to convert measurements of length and distance. <input type="checkbox"/> Explore the count tool in text formats. <input type="checkbox"/> Use a spreadsheet to model a real-life problem. <input type="checkbox"/> Create a formulae that se text variables. 	<p>Focus 1: Game Creator (Computer Science)</p>  <p>Vocabulary – scene, screenshot, quest, instructions and promotion.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Design a game environment. <input type="checkbox"/> To design a game quest to make it a playable game. <input type="checkbox"/> Finish and share your game. <input type="checkbox"/> Self-evaluate their game. 	<p>Focus: Word Processing (Information Technology)</p>  <p>Vocabulary – font, attributing, caption, cropping, merge, WordArt and template.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap what a word processing tool is. <input type="checkbox"/> Add and edit images. <input type="checkbox"/> Change the look of text within a document. <input type="checkbox"/> Add features to a document to enhance its look and usability. <input type="checkbox"/> Use tables within MS Word. <input type="checkbox"/> To alter a pages layout including heading and columns. 	<p>Within this section carryout a day with both Year Five and Year Six to summarise e-safety points.</p> <p>Reiterate the use of the ChildLine number and NSPCC</p>

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year Six	<p>Focus 1 : Coding (Computer Science)</p>  <p>Vocabulary – Output, x and y properties and text adventure.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap prior coding knowledge by designing a playable game with a timer and a score. <input type="checkbox"/> Explore how functions are created. <input type="checkbox"/> Use flowcharts to debug and test a program. <input type="checkbox"/> Explore user input in a program and how it can be used. <input type="checkbox"/> Create a text based adventure game. 	<p>Focus 1 : Spreadsheets (Information Technology)</p>  <p>Vocabulary – computational model.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use a spreadsheet to investigate the probability of the results of throwing many dice. <input type="checkbox"/> Use a spreadsheet to calculate the discount and final prices in a sale. Create a formula to help work out the prices of items in the sale. <input type="checkbox"/> Use a spreadsheet to plan how to spend pocket money and the effect of saving money. <input type="checkbox"/> Explore using a spreadsheet to plan a school charity day to maximise the money donated to charity. 	<p>Focus 1: Online safety (Digital Literacy)</p>  <p>Vocabulary – location sharing, inappropriate and screen time.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g., apps accessing location. <input type="checkbox"/> Review the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of themselves as a user. <input type="checkbox"/> To understand the importance of balancing game and screen time with other parts of their lives, e.g., explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has on their health. 	<p>Focus 1: Networks (Computer Science)</p>  <p>Vocabulary – web server, hosting, ip address, LAN, WAN and WLAN</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap and discover what the children know about the Internet. <input type="checkbox"/> Find out what a LAN and WAN are. <input type="checkbox"/> Research and find out about the age of the internet. 	<p>Focus: Quizzing (Information Technology)</p>  <p>Vocabulary – quiz, selfie, case-sensitive, clone, cloze and statistics.</p> <p>Knowledge Development:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Create a picture-based quiz for young children. <input type="checkbox"/> Explore different question types in computing. <input type="checkbox"/> Make a quiz that requires the player to search a database. <input type="checkbox"/> Make a quiz to test your teachers or parents. 	<p>Within this section carryout a day with both Year Five and Year Six to summarise e-safety points.</p> <p>Reiterate the use of the ChildLine number and NSPCC</p>