

# The Journey of Computing



# Curriculum Overview Year 1

Prior Year's Curriculum Content	Year 1 Curriculum Content	Subsequent Year's Curriculum Content
<ul style="list-style-type: none"> <li>• Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>• Explore how things work.</li> <li>• Draw information from a simple map.</li> <li>• Understand position through words alone.</li> <li>• Describe a familiar route</li> <li>• Discuss routes and locations</li> <li>• Extend and create ABAB patterns</li> <li>• Select, rotate and manipulate shapes to develop spatial reasoning skills.</li> <li>• Use one handed tools and equipment.</li> <li>• Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</li> </ul>	<p><b>Computer Science</b></p> <p><b>Moving a Robot:</b></p> <ul style="list-style-type: none"> <li>✓ To explain and predict what a command will do and act it out</li> <li>✓ To choose a command for a given purpose and explain what would happen if this was changed</li> <li>✓ To combine forwards and backwards commands and predict the outcome</li> <li>✓ To combine four direction commands to make a sequence</li> <li>✓ To explore the order of commands and predict the outcome</li> <li>✓ To plan and debug a simple program</li> <li>✓ To find more than one solution to a problem</li> </ul> <p><b>Programming Animations:</b></p> <ul style="list-style-type: none"> <li>✓ To identify the effect of changing a value within a command</li> <li>✓ To design the parts of a program</li> <li>✓ To use my algorithm to create a program and test the outcome</li> </ul>	<p><b>Computer Science</b></p> <p><b>Robot Algorithms:</b></p> <ul style="list-style-type: none"> <li>✓ To describe a series of instructions as a sequence</li> <li>✓ To follow and give clear instructions</li> <li>✓ To understand and explain what happens if the order of instructions changes</li> <li>✓ To design and create a simple program (series of commands)</li> <li>✓ To use the same instructions with different algorithms and compare the outcomes</li> <li>✓ To debug a simple program that I have written</li> <li>✓ To use logical reasoning to predict the outcome of a program (series of commands)</li> </ul> <p><b>Programming Quizzes:</b></p> <ul style="list-style-type: none"> <li>✓ To predict the outcome of a sequence and compare to the actual outcome</li> <li>✓ To explain that a sequence of commands has an outcome</li> <li>✓ To create a program using a given design</li> <li>✓ To change a given design</li> <li>✓ To create a program using my own design and decide how it can be improved</li> </ul>
<p>Vocabulary</p> <ul style="list-style-type: none"> <li>• In</li> <li>• On</li> <li>• Under</li> <li>• Up</li> <li>• Down</li> <li>• Beside</li> <li>• Between</li> <li>• Map</li> <li>• Direction</li> <li>• Position</li> <li>• Repeat</li> <li>• Pattern</li> <li>• Program</li> <li>• Sequence</li> <li>• First</li> <li>• Then</li> <li>• next</li> </ul>	<p style="text-align: center;">Vocabulary</p> <ul style="list-style-type: none"> <li>✓ computer</li> <li>✓ command</li> <li>✓ direction</li> <li>✓ sequence</li> <li>✓ program</li> <li>✓ debugging</li> <li>✓ solution</li> <li>✓ instruction</li> </ul>	<p style="text-align: center;">Vocabulary</p> <ul style="list-style-type: none"> <li>✓ Pattern</li> <li>✓ Algorithm</li> </ul> <p>Code</p>
	<p><b>Information Technology</b></p> <p><b>Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To identify a computer and its main parts</li> <li>✓ To identify the main components/input devices of a computer and their uses.</li> <li>✓ To use a computer and its input devices to add text and change its appearance.</li> </ul> <p><b>Digital Painting:</b></p> <ul style="list-style-type: none"> <li>✓ To begin to use a range of tools e.g. freehand, shape and line tools, to create digital media (a digital picture).</li> </ul>	<p><b>Information Technology</b></p> <p><b>Information Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how information technology helps us</li> <li>✓ To recognise that choices are made when using information technology</li> </ul> <p><b>Digital Photography:</b></p> <ul style="list-style-type: none"> <li>✓ To use a digital device to take a photo</li> <li>✓ To use the correct application/ program to create digital media e.g. photos, music, pictures etc.</li> </ul>

	<ul style="list-style-type: none"> <li>✓ To begin to make careful choices when creating digital media and explain why those choices were made e.g. painting a digital picture.</li> <li>✓ To explain and compare the use of using a computer and traditional methods.</li> <li>✓ To use a computer independently to paint a picture</li> </ul> <p><b>Grouping Data:</b></p> <ul style="list-style-type: none"> <li>✓ To describe objects and their properties</li> <li>✓ To organise objects/data in different ways</li> <li>✓ To count and group different objects</li> <li>✓ To answer questions about different groups of data</li> </ul> <p><b>Digital Writing:</b></p> <ul style="list-style-type: none"> <li>✓ To use a word processor including specific keys and toolbars to add, remove and edit the look of text on a computer</li> <li>✓ To begin to use a range of tools e.g. specific keys, toolbars, to create digital media (word processing).</li> <li>✓ To begin to make careful choices when creating digital media and explain why those choices were made e.g. word processing.</li> <li>✓ To explain and compare the use of using a computer and traditional methods.</li> </ul>	<ul style="list-style-type: none"> <li>✓ To make careful choices when creating digital media for a specific purpose e.g. represent data/present information.</li> <li>✓ To recognise and use a range of tools and devices to create and change digital media.</li> </ul> <p><b>Pictograms:</b></p> <ul style="list-style-type: none"> <li>✓ To make careful choices when creating digital media for a specific purpose e.g. represent data/present information.</li> <li>✓ To use information technology to present information and data in different ways</li> <li>✓ To count and compare data in different representations e.g. tally chart/ pictogram</li> <li>✓ To recognise objects can be represented as pictures</li> <li>✓ Present and organise data in different ways e.g. pictograms/ tally charts</li> <li>✓ To understand different attributes/ common attributes and organise and compare data accordingly</li> </ul> <p><b>Digital Music:</b></p> <ul style="list-style-type: none"> <li>✓ To begin to review and refine computer work.</li> <li>✓ To use the correct application/ program to create digital media e.g. photos, music, pictures etc.</li> <li>✓ To recognise and use a range of tools and devices to create and change digital media.</li> </ul>
<ul style="list-style-type: none"> <li>• App</li> <li>• QR code</li> <li>• Click</li> </ul>	<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ italic</li> <li>✓ bold</li> <li>✓ underline</li> <li>✓ font</li> <li>✓ mouse</li> <li>✓ keyboard</li> <li>✓ double-click</li> <li>✓ type</li> <li>✓ edit</li> <li>✓ text</li> <li>✓ tool</li> <li>✓ freehand</li> <li>✓ object</li> <li>✓ undo</li> <li>✓ delete</li> <li>✓ word processor</li> <li>✓ space bar</li> <li>✓ file</li> <li>✓ toolbar</li> <li>✓ property</li> </ul>	<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Information technology</li> <li>✓ Digital device</li> <li>✓ Format</li> <li>✓ Portrait</li> <li>✓ Landscape</li> <li>✓ Attribute</li> <li>✓ Data</li> <li>✓ Sort</li> <li>✓ Information</li> </ul>
	<p><b>Digital Literacy</b></p> <p><b>Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To identify and give examples of technology and explain how it helps us</li> <li>✓ To create rules for using technology responsibly</li> <li>✓ To understand the benefit of rules</li> </ul> <p><b>Digital Painting:</b></p>	<p><b>Digital Literacy</b></p> <p><b>Information Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To identify information technology in and beyond school and give examples.</li> <li>✓ To recognise the uses and features of information technology and how it can help us.</li> <li>✓ To use and explain how to use information technology safely and recognise how it can be used to change digital media.</li> <li>✓ To identify who can help and support with concerns about online technology.</li> </ul>

	<ul style="list-style-type: none"> <li>✓ To begin to recognise the difference between a computer-generated outcome and traditional methods.</li> </ul> <p><b>Digital Writing:</b></p> <ul style="list-style-type: none"> <li>✓ To begin to recognise the difference between a computer-generated outcome and traditional methods.</li> </ul>	<p><b>Digital Photography:</b></p> <ul style="list-style-type: none"> <li>✓ To understand how to use technology safely and respectfully</li> <li>✓ To identify which photos are real and which have been changed</li> </ul> <p><b>Pictograms:</b></p> <ul style="list-style-type: none"> <li>✓ To give simple examples of why information should not be shared</li> <li>✓</li> </ul>
	<ul style="list-style-type: none"> <li>✓ technology</li> </ul> <p style="text-align: center;"><b>Vocabulary</b></p>	<ul style="list-style-type: none"> <li>✓ Refine</li> </ul> <p style="text-align: center;"><b>Vocabulary</b></p>
		<ul style="list-style-type: none"> <li>✓</li> </ul>

# Curriculum Overview Year 2

Curriculum Overview Year 2		
Prior Year's Curriculum Content	Year 2 Curriculum Content	Subsequent Year's Curriculum Content
<p><b>Computer Science</b></p> <p><b>Moving a Robot:</b></p> <ul style="list-style-type: none"> <li>✓ To explain and predict what a command will do and act it out</li> <li>✓ To choose a command for a given purpose and explain what would happen if this was changed</li> <li>✓ To combine forwards and backwards commands and predict the outcome</li> <li>✓ To combine four direction commands to make a sequence</li> <li>✓ To explore the order of commands and predict the outcome</li> <li>✓ To plan and debug a simple program</li> <li>✓ To find more than one solution to a problem</li> </ul> <p><b>Programming Animations:</b></p> <ul style="list-style-type: none"> <li>✓ To identify the effect of changing a value within a command</li> <li>✓ To design the parts of a program</li> <li>✓ To use my algorithm to create a program and test the outcome</li> </ul>	<p><b>Computer Science</b></p> <p><b>Robot Algorithms:</b></p> <ul style="list-style-type: none"> <li>✓ To describe a series of instructions as a sequence</li> <li>✓ To follow and give clear instructions</li> <li>✓ To understand and explain what happens if the order of instructions changes</li> <li>✓ To design and create a simple program (series of commands)</li> <li>✓ To use the same instructions with different algorithms and compare the outcomes</li> <li>✓ To debug a simple program that I have written</li> <li>✓ To use logical reasoning to predict the outcome of a program (series of commands)</li> </ul> <p><b>Programming Quizzes:</b></p> <ul style="list-style-type: none"> <li>✓ To predict the outcome of a sequence and compare to the actual outcome</li> <li>✓ To explain that a sequence of commands has an outcome</li> <li>✓ To create a program using a given design</li> <li>✓ To change a given design</li> <li>✓ To create a program using my own design and decide how it can be improved</li> </ul>	<p><b>Computer Science</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To explore how digital devices can be connected (network)</li> <li>✓ To recognise the physical components of a network</li> <li>✓ To explain how a computer network can be used to share information</li> <li>✓ To identify input and output devices</li> <li>✓ To describe a simple process</li> <li>✓ To design a digital device</li> </ul> <p><b>Sequencing Sounds:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that a program has a start</li> <li>✓ To recognise a sequence of commands can have an order</li> <li>✓ To identify that commands have an outcome</li> <li>✓ To change the appearance of a project</li> <li>✓ To create a project from a task descriptor</li> </ul> <p><b>Events and Actions in Programs:</b></p> <ul style="list-style-type: none"> <li>✓ To describe and explain the movement of an object</li> <li>✓ To create a program to move an object in four directions</li> <li>✓ To adapt and develop a program by adding features</li> <li>✓ To identify and fix bugs in a program</li> <li>✓ To design and create a specific program (maze-based challenge)</li> </ul>
<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ computer</li> <li>✓ command</li> <li>✓ direction</li> <li>✓ sequence</li> <li>✓ program</li> <li>✓ debugging</li> <li>✓ solution</li> <li>✓ instruction</li> </ul>	<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Pattern</li> <li>✓ Algorithm</li> <li>✓ Code</li> </ul>	<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ computer network</li> <li>✓ evaluate</li> <li>✓ function</li> <li>✓ programming</li> <li>✓ programming extension</li> </ul>
<p><b>Information Technology</b></p> <p><b>Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To identify a computer and its main parts</li> <li>✓ To identify the main components/input devices of a computer and their uses.</li> <li>✓ To use a computer and its input devices to add text and change its appearance.</li> </ul> <p><b>Digital Painting:</b></p> <ul style="list-style-type: none"> <li>✓ To begin to use a range of tools e.g. freehand, shape and line tools, to create digital media (a digital picture).</li> <li>✓ To begin to make careful choices when creating digital media and explain why those choices were made e.g. painting a digital picture.</li> <li>✓ To explain and compare the use of using a computer and traditional methods.</li> <li>✓ To use a computer independently to paint a picture</li> </ul>	<p><b>Information Technology</b></p> <p><b>Information Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how information technology helps us</li> <li>✓ To recognise that choices are made when using information technology</li> </ul> <p><b>Digital Photography:</b></p> <ul style="list-style-type: none"> <li>✓ To use a digital device to take a photo</li> <li>✓ To use the correct application/ program to create digital media e.g. photos, music, pictures etc.</li> <li>✓ To make careful choices when creating digital media for a specific purpose e.g. represent data/present information.</li> <li>✓ To recognise and use a range of tools and devices to create and change digital media.</li> </ul> <p><b>Pictograms:</b></p>	<p><b>Information Technology</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how digital devices function using inputs and outputs</li> </ul> <p><b>Stop-Frame Animation:</b></p> <ul style="list-style-type: none"> <li>✓ To explain and relate sequences to different media (e.g. animation)</li> <li>✓ To plan digital media (animation)</li> <li>✓ To identify the need to work consistently and carefully</li> <li>✓ To review, improve and evaluate digital media that is created (animation)</li> </ul> <p><b>Branching Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To identify attributes and create and investigate yes/no questions for a data set</li> <li>✓ To create, plan and test a branching database and use it to identify objects</li> <li>✓ To create an identification tool</li> </ul>

<p><b>Grouping Data:</b></p> <ul style="list-style-type: none"> <li>✓ To describe objects and their properties</li> <li>✓ To organise objects/data in different ways</li> <li>✓ To count and group different objects</li> <li>✓ To answer questions about different groups of data</li> </ul> <p><b>Digital Writing:</b></p> <ul style="list-style-type: none"> <li>✓ To use a word processor including specific keys and toolbars to add, remove and edit the look of text on a computer</li> <li>✓ To begin to use a range of tools e.g. specific keys, toolbars, to create digital media (word processing).</li> <li>✓ To begin to make careful choices when creating digital media and explain why those choices were made e.g. word processing.</li> <li>✓ To explain and compare the use of using a computer and traditional methods.</li> </ul>	<ul style="list-style-type: none"> <li>✓ To make careful choices when creating digital media for a specific purpose e.g. represent data/present information.</li> <li>✓ To use information technology to present information and data in different ways</li> <li>✓ To count and compare data in different representations e.g. tally chart/pictogram</li> <li>✓ To recognise objects can be represented as pictures</li> <li>✓ Present and organise data in different ways e.g. pictograms/ tally charts</li> <li>✓ To understand different attributes/ common attributes and organise and compare data accordingly</li> </ul> <p><b>Digital Music:</b></p> <ul style="list-style-type: none"> <li>✓ To begin to review and refine computer work.</li> <li>✓ To use the correct application/ program to create digital media e.g. photos, music, pictures etc.</li> <li>✓ To recognise and use a range of tools and devices to create and change digital media.</li> </ul>	<ul style="list-style-type: none"> <li>✓ To understand, explain and compare structures in branching databases</li> </ul> <p><b>Desktop Publishing:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise and compare how text, images and page layout convey different messages</li> <li>✓ To add and edit content to a desktop publishing publication recognising text, page settings and layout can be edited to be fit for purpose and review its effectiveness</li> <li>✓ To make choices which suit the audience and purpose of a publication</li> </ul>
<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ italic</li> <li>✓ bold</li> <li>✓ underline</li> <li>✓ font</li> <li>✓ mouse</li> <li>✓ keyboard</li> <li>✓ double-click</li> <li>✓ type</li> <li>✓ edit</li> <li>✓ text</li> <li>✓ tool</li> <li>✓ freehand</li> <li>✓ object</li> <li>✓ undo</li> <li>✓ delete</li> <li>✓ word processor</li> <li>✓ space bar</li> <li>✓ file</li> <li>✓ toolbar</li> <li>✓ property</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Information technology</li> <li>✓ Digital device</li> <li>✓ Format</li> <li>✓ Portrait</li> <li>✓ Landscape</li> <li>✓ Attribute</li> <li>✓ Data</li> <li>✓ Sort</li> <li>✓ Information</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Input</li> <li>✓ Output</li> <li>✓ Page orientation</li> <li>✓ Branching database</li> <li>✓ Input devices</li> <li>✓ Output devices</li> <li>✓ Desktop publishing</li> </ul>
<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To identify and give examples of technology and explain how it helps us</li> <li>✓ To create rules for using technology responsibly</li> <li>✓ To understand the benefit of rules</li> </ul> <p><b>Digital Painting:</b></p> <ul style="list-style-type: none"> <li>✓ To begin to recognise the difference between a computer-generated outcome and traditional methods.</li> </ul> <p><b>Digital Writing:</b></p> <ul style="list-style-type: none"> <li>✓ To begin to recognise the difference between a computer-generated outcome and traditional methods.</li> </ul>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Information Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To identify information technology in and beyond school and give examples.</li> <li>✓ To recognise the uses and features of information technology and how it can help us.</li> <li>✓ To use and explain how to use information technology safely and recognise how it can be used to change digital media.</li> <li>✓ To identify who can help and support with concerns about online technology.</li> </ul> <p><b>Digital Photography:</b></p> <ul style="list-style-type: none"> <li>✓ To understand how to use technology safely and respectfully</li> <li>✓ To identify which photos are real and which have been changed</li> </ul> <p><b>Pictograms:</b></p>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise how digital devices can change the way we work</li> <li>✓ To explain how a computer network can be used to share information</li> </ul> <p><b>Branching Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the benefits of desktop publishing</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> <li>✓ To consider the real-world when making design choices</li> </ul> <p><b>Desktop Publishing:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the benefits of desktop publishing</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> </ul>

	<ul style="list-style-type: none"> <li>✓ To give simple examples of why information should not be shared</li> </ul>	<ul style="list-style-type: none"> <li>✓ To identify who can help and support with concerns about online technology</li> <li>✓ To consider the real-world when making design choices</li> </ul> <p><b>Events and Actions in Programs:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the real-world when making design choices</li> </ul>
technology	Vocabulary	Vocabulary
	<ul style="list-style-type: none"> <li>✓ Refine</li> </ul>	Vocabulary
		<ul style="list-style-type: none"> <li>✓</li> </ul>

# Curriculum Overview Year 3

Curriculum Overview Year 3		
Prior Year's Curriculum Content	Year 3 Curriculum Content	Subsequent Year's Curriculum Content
<p style="text-align: center;"><b>Computer Science</b></p> <p><b>Robot Algorithms:</b></p> <ul style="list-style-type: none"> <li>✓ To describe a series of instructions as a sequence</li> <li>✓ To follow and give clear instructions</li> <li>✓ To understand and explain what happens if the order of instructions changes</li> <li>✓ To design and create a simple program (series of commands)</li> <li>✓ To use the same instructions with different algorithms and compare the outcomes</li> <li>✓ To debug a simple program that I have written</li> <li>✓ To use logical reasoning to predict the outcome of a program (series of commands)</li> </ul> <p><b>Programming Quizzes:</b></p> <ul style="list-style-type: none"> <li>✓ To predict the outcome of a sequence and compare to the actual outcome</li> <li>✓ To explain that a sequence of commands has an outcome</li> <li>✓ To create a program using a given design</li> <li>✓ To change a given design</li> <li>✓ To create a program using my own design and decide how it can be improved</li> </ul>	<p style="text-align: center;"><b>Computer Science</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To explore how digital devices can be connected (network)</li> <li>✓ To recognise the physical components of a network</li> <li>✓ To explain how a computer network can be used to share information</li> <li>✓ To identify input and output devices</li> <li>✓ To describe a simple process</li> <li>✓ To design a digital device</li> </ul> <p><b>Sequencing Sounds:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that a program has a start</li> <li>✓ To recognise a sequence of commands can have an order</li> <li>✓ To identify that commands have an outcome</li> <li>✓ To change the appearance of a project</li> <li>✓ To create a project from a task descriptor</li> </ul> <p><b>Events and Actions in Programs:</b></p> <ul style="list-style-type: none"> <li>✓ To describe and explain the movement of an object</li> <li>✓ To create a program to move an object in four directions</li> <li>✓ To adapt and develop a program by adding features</li> <li>✓ To identify and fix bugs in a program</li> <li>✓ To design and create a specific program (maze-based challenge)</li> </ul>	<p style="text-align: center;"><b>Computer Science</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To describe how networks physically connect to other networks</li> <li>✓ To recognise how networked devices make up the internet</li> <li>✓ To outline how websites can be shared via the World Wide Web (WWW)</li> </ul> <p><b>Repetition in Shapes:</b></p> <ul style="list-style-type: none"> <li>✓ To identify that accuracy in programming is important</li> <li>✓ To create a program in a text-based language</li> <li>✓ To understand and explain repetition and modify a count-controlled loop to produce a given outcome</li> <li>✓ To decompose a task into small steps</li> <li>✓ To create and develop a program that uses count-controlled loops to produce a given outcome</li> </ul> <p><b>Repetition in Games:</b></p> <ul style="list-style-type: none"> <li>✓ To use two or more count-controlled loops in a program</li> <li>✓ To explain that in programming there are infinite loops and count-controlled loops</li> <li>✓ To modify an infinite loop in a given program</li> <li>✓ To design and create a project that includes repetition</li> <li>✓ To develop the use of count-controlled loops in different programming environments</li> </ul> <p>✓</p>
<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Pattern</li> <li>✓ Algorithm</li> <li>✓ Code</li> </ul>	<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ computer network</li> <li>✓ evaluate</li> <li>✓ function</li> <li>✓ programming</li> <li>✓ programming extension</li> </ul>	<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Programming language</li> <li>✓ Decompose</li> <li>✓ Repetition</li> <li>✓ Procedure</li> <li>✓ Count-controlled loop</li> <li>✓ Loop</li> <li>✓ Code snippet</li> <li>✓ World Wide Web</li> </ul> <p>Sensors</p>
<p style="text-align: center;"><b>Information Technology</b></p> <p><b>Information Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how information technology helps us</li> <li>✓ To recognise that choices are made when using information technology</li> </ul> <p><b>Digital Photography:</b></p> <ul style="list-style-type: none"> <li>✓ To use a digital device to take a photo</li> <li>✓ To use the correct application/ program to create digital media e.g. photos, music, pictures etc.</li> <li>✓ To make careful choices when creating digital media for a specific purpose e.g. represent data/present information.</li> </ul>	<p style="text-align: center;"><b>Information Technology</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how digital devices function using inputs and outputs</li> </ul> <p><b>Stop-Frame Animation:</b></p> <ul style="list-style-type: none"> <li>✓ To explain and relate sequences to different media (e.g. animation)</li> <li>✓ To plan digital media (animation)</li> <li>✓ To identify the need to work consistently and carefully</li> <li>✓ To review, improve and evaluate digital media that is created (animation)</li> </ul> <p><b>Branching Databases:</b></p>	<p style="text-align: center;"><b>Information Technology</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To describe how content can be added and accessed on the World Wide Web (WWW)</li> <li>✓ To recognise how the content of WWW is created by people</li> </ul> <p><b>Audio Production:</b></p> <ul style="list-style-type: none"> <li>✓ To use digital devices to record sound and store it as a file</li> <li>✓ To explain that audio can be changed through editing and can be combined and played together</li> <li>✓ To evaluate editing choices made</li> </ul>



<ul style="list-style-type: none"> <li>✓ To recognise and use a range of tools and devices to create and change digital media.</li> </ul> <p><b>Pictograms:</b></p> <ul style="list-style-type: none"> <li>✓ To make careful choices when creating digital media for a specific purpose e.g. represent data/present information.</li> <li>✓ To use information technology to present information and data in different ways</li> <li>✓ To count and compare data in different representations e.g. tally chart/ pictogram</li> <li>✓ To recognise objects can be represented as pictures</li> <li>✓ Present and organise data in different ways e.g. pictograms/ tally charts</li> <li>✓ To understand different attributes/ common attributes and organise and compare data accordingly</li> </ul> <p><b>Digital Music:</b></p> <ul style="list-style-type: none"> <li>✓ To begin to review and refine computer work.</li> <li>✓ To use the correct application/ program to create digital media e.g. photos, music, pictures etc.</li> <li>✓ To recognise and use a range of tools and devices to create and change digital media.</li> </ul>	<ul style="list-style-type: none"> <li>✓ To identify attributes and create and investigate yes/no questions for a data set</li> <li>✓ To create, plan and test a branching database and use it to identify objects</li> <li>✓ To create an identification tool</li> <li>✓ To understand, explain and compare structures in branching databases</li> </ul> <p><b>Desktop Publishing:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise and compare how text, images and page layout convey different messages</li> <li>✓ To add and edit content to a desktop publishing publication recognising text, page settings and layout can be edited to be fit for purpose and review its effectiveness</li> <li>✓ To make choices which suit the audience and purpose of a publication</li> </ul>	<p><b>Data Logging:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that data gathered over time can be used to answer questions</li> <li>✓ To use a digital device to collect data automatically (e.g. data logger)</li> <li>✓ To use data collected over a long duration to find information</li> <li>✓ To identify the data needed to answer questions and use this to propose and answer questions</li> <li>✓ To understand that data loggers collect data points from sensors over time</li> <li>✓ To compare and analyse data</li> </ul> <p><b>Photo Editing:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that digital images can be changed e.g. composition, different uses</li> <li>✓ To improve digital images using different tools and effects</li> <li>✓ To explain how cloning can be used in digital image editing</li> <li>✓ To explore combining images, evaluating how these are fit for purpose</li> <li>✓ To evaluate changes to an image and their effectiveness.</li> </ul>
<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Information technology</li> <li>✓ Digital device</li> <li>✓ Format</li> <li>✓ Portrait</li> <li>✓ Landscape</li> <li>✓ Attribute</li> <li>✓ Data</li> <li>✓ Sort</li> <li>✓ Information</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Input</li> <li>✓ Output</li> <li>✓ Page orientation</li> <li>✓ Branching database</li> <li>✓ Input devices</li> <li>✓ Output devices</li> <li>✓ Desktop publishing</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Data logger</li> <li>✓ Storage device</li> <li>✓ Template</li> <li>✓ Chunks</li> <li>✓ Digital recording</li> <li>✓ Web page</li> <li>✓ Web browser</li> <li>✓ Content</li> <li>✓ Website</li> <li>✓ Intervals</li> <li>URL</li> </ul>
<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Information Technology Around Us:</b></p> <ul style="list-style-type: none"> <li>✓ To identify information technology in and beyond school and give examples.</li> <li>✓ To recognise the uses and features of information technology and how it can help us.</li> <li>✓ To use and explain how to use information technology safely and recognise how it can be used to change digital media.</li> <li>✓ To identify who can help and support with concerns about online technology.</li> </ul> <p><b>Digital Photography:</b></p> <ul style="list-style-type: none"> <li>✓ To understand how to use technology safely and respectfully</li> <li>✓ To identify which photos are real and which have been changed</li> </ul> <p><b>Pictograms:</b></p> <ul style="list-style-type: none"> <li>✓ To give simple examples of why information should not be shared</li> </ul>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise how digital devices can change the way we work</li> <li>✓ To explain how a computer network can be used to share information</li> </ul> <p><b>Branching Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the benefits of desktop publishing</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> <li>✓ To consider the real-world when making design choices</li> </ul> <p><b>Desktop Publishing:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the benefits of desktop publishing</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> <li>✓ To consider the real-world when making design choices</li> </ul> <p><b>Events and Actions in Programs:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the real-world when making design choices</li> </ul>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To evaluate the consequences of unreliable content</li> </ul> <p><b>Data Logging:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the responsibilities of data handling and storing</li> </ul> <p><b>Photo Editing:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise that not all images and content online is true, accurate, honest and legal</li> <li>✓ To evaluate how changes can improve and alter an image</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology.</li> </ul>

✓ Refine Vocabulary	Vocabulary	Vocabulary ✓ Legal ✓ Ownership ✓ Accurate ✓ Copyright
		✓

# Curriculum Overview Year 4

Curriculum Overview Year 4		
Prior Year's Curriculum Content	Year 4 Curriculum Content	Subsequent Year's Curriculum Content
<p style="text-align: center;"><b>Computer Science</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To explore how digital devices can be connected (network)</li> <li>✓ To recognise the physical components of a network</li> <li>✓ To explain how a computer network can be used to share information</li> <li>✓ To identify input and output devices</li> <li>✓ To describe a simple process</li> <li>✓ To design a digital device</li> </ul> <p><b>Sequencing Sounds:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that a program has a start</li> <li>✓ To recognise a sequence of commands can have an order</li> <li>✓ To identify that commands have an outcome</li> <li>✓ To change the appearance of a project</li> <li>✓ To create a project from a task descriptor</li> </ul> <p><b>Events and Actions in Programs:</b></p> <ul style="list-style-type: none"> <li>✓ To describe and explain the movement of an object</li> <li>✓ To create a program to move an object in four directions</li> <li>✓ To adapt and develop a program by adding features</li> <li>✓ To identify and fix bugs in a program</li> <li>✓ To design and create a specific program (maze-based challenge)</li> </ul>	<p style="text-align: center;"><b>Computer Science</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To describe how networks physically connect to other networks</li> <li>✓ To recognise how networked devices make up the internet</li> <li>✓ To outline how websites can be shared via the World Wide Web (WWW)</li> </ul> <p><b>Repetition in Shapes:</b></p> <ul style="list-style-type: none"> <li>✓ To identify that accuracy in programming is important</li> <li>✓ To create a program in a text-based language</li> <li>✓ To understand and explain repetition and modify a count-controlled loop to produce a given outcome</li> <li>✓ To decompose a task into small steps</li> <li>✓ To create and develop a program that uses count-controlled loops to produce a given outcome</li> </ul> <p><b>Repetition in Games:</b></p> <ul style="list-style-type: none"> <li>✓ To use two or more count-controlled loops in a program</li> <li>✓ To explain that in programming there are infinite loops and count-controlled loops</li> <li>✓ To modify an infinite loop in a given program</li> <li>✓ To design and create a project that includes repetition</li> <li>✓ To develop the use of count-controlled loops in different programming environments</li> </ul>	<p style="text-align: center;"><b>Computer Science</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To explain computers can be connected together to form systems</li> <li>✓ To describe how search engines select and rank results</li> <li>✓ To recognise why the order is important and to whom</li> </ul> <p><b>Selection in Physical Computing:</b></p> <ul style="list-style-type: none"> <li>✓ To control a simple circuit connected to a computer</li> <li>✓ To write a program that includes count-controlled loops</li> <li>✓ To explain that a loop can stop when a condition is met</li> <li>✓ To explain that a loop can be used to repeatedly check is a condition has been met</li> <li>✓ To design and create a program that controls a physical computing project that includes selection</li> </ul> <p><b>Selection in Quizzes:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how selection is used in computer programs</li> <li>✓ To relate that a conditional statement connects a conditional outcome</li> <li>✓ To explain how selection directs the flow of a program</li> <li>✓ To design, create and evaluate a program which uses selection</li> </ul>
<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ computer network</li> <li>✓ evaluate</li> <li>✓ function</li> <li>✓ programming</li> <li>✓ programming extension</li> </ul>	<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Programming language</li> <li>✓ Decompose</li> <li>✓ Repetition</li> <li>✓ Procedure</li> <li>✓ Count-controlled loop</li> <li>✓ Loop</li> <li>✓ Code snippet</li> <li>✓ World Wide Web</li> <li>✓ Sensors</li> </ul>	<p><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Internet</li> <li>✓ Microcontroller</li> <li>✓ Flow</li> <li>✓ Vector</li> <li>✓ Circuit</li> <li>✓ Selection</li> <li>Physical computing project</li> </ul>
<p style="text-align: center;"><b>Information Technology</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how digital devices function using inputs and outputs</li> </ul> <p><b>Stop-Frame Animation:</b></p> <ul style="list-style-type: none"> <li>✓ To explain and relate sequences to different media (e.g. animation)</li> <li>✓ To plan digital media (animation)</li> <li>✓ To identify the need to work consistently and carefully</li> <li>✓ To review, improve and evaluate digital media that is created (animation)</li> </ul> <p><b>Branching Databases:</b></p>	<p style="text-align: center;"><b>Information Technology</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To describe how content can be added and accessed on the World Wide Web (WWW)</li> <li>✓ To recognise how the content of WWW is created by people</li> </ul> <p><b>Audio Production:</b></p> <ul style="list-style-type: none"> <li>✓ To use digital devices to record sound and store it as a file</li> <li>✓ To explain that audio can be changed through editing and can be combined and played together</li> <li>✓ To evaluate editing choices made</li> </ul>	<p style="text-align: center;"><b>Information Technology</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To identify how to use a search engine</li> </ul> <p><b>Video Production:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the audience and purpose of digital media (e.g. video) and the effect this has on its content</li> <li>✓ To identify digital devices that can record videos and use these to record video</li> <li>✓ To capture videos exploring a range of techniques</li> <li>✓ To plan the content and techniques of a video for a given purpose</li> <li>✓ To identify that video can be improved through reshooting and editing</li> </ul>

<ul style="list-style-type: none"> <li>✓ To identify attributes and create and investigate yes/no questions for a data set</li> <li>✓ To create, plan and test a branching database and use it to identify objects</li> <li>✓ To create an identification tool</li> <li>✓ To understand, explain and compare structures in branching databases</li> </ul> <p><b>Desktop Publishing:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise and compare how text, images and page layout convey different messages</li> <li>✓ To add and edit content to a desktop publishing publication recognising text, page settings and layout can be edited to be fit for purpose and review its effectiveness</li> <li>✓ To make choices which suit the audience and purpose of a publication</li> </ul>	<p><b>Data Logging:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that data gathered over time can be used to answer questions</li> <li>✓ To use a digital device to collect data automatically (e.g. data logger)</li> <li>✓ To use data collected over a long duration to find information</li> <li>✓ To identify the data needed to answer questions and use this to propose and answer questions</li> <li>✓ To understand that data loggers collect data points from sensors over time</li> <li>✓ To compare and analyse data</li> </ul> <p><b>Photo Editing:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that digital images can be changed e.g. composition, different uses</li> <li>✓ To improve digital images using different tools and effects</li> <li>✓ To explain how cloning can be used in digital image editing</li> <li>✓ To explore combining images, evaluating how these are fit for purpose</li> <li>✓ To evaluate changes to an image and their effectiveness.</li> </ul>	<p><b>Flat-file Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To use a form to record information</li> <li>✓ To outline how grouping and sorting data allows us to answer questions</li> <li>✓ To explain that tools can be used to select specific data</li> <li>✓ To explain that computer programs can be used to compare data visually</li> </ul> <p><b>Introduction to Vector Graphics:</b></p> <ul style="list-style-type: none"> <li>✓ To identify that drawing tools can be used to produce different outcomes and to use these to achieve a desired effect</li> <li>✓ To create a vector drawing by combining shapes</li> <li>✓ To recognise that vector drawings consist of layers</li> <li>✓ To group objects to make them easier to work with</li> <li>✓ To apply what I have learned about vector drawings for a specific purpose</li> </ul>
<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Input</li> <li>✓ Output</li> <li>✓ Page orientation</li> <li>✓ Branching database</li> <li>✓ Input devices</li> <li>✓ Output devices</li> <li>✓ Desktop publishing</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Data logger</li> <li>✓ Storage device</li> <li>✓ Template</li> <li>✓ Chunks</li> <li>✓ Digital recording</li> <li>✓ Web page</li> <li>✓ Web browser</li> <li>✓ Content</li> <li>✓ Website</li> <li>✓ Intervals</li> <li>✓ URL</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Computer system</li> <li>✓ Export</li> <li>✓ Condition</li> <li>✓ AND/OR/NOT</li> <li>✓ Conditional statement</li> <li>✓ Duplicate</li> <li>✓ Process</li> <li>✓ Task</li> <li>✓ Transfer (data)</li> <li>✓ Visual media</li> <li>✓ Retrieve</li> <li>✓ Component</li> </ul>
<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Connecting Computers:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise how digital devices can change the way we work</li> <li>✓ To explain how a computer network can be used to share information</li> </ul> <p><b>Branching Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the benefits of desktop publishing</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> <li>✓ To consider the real-world when making design choices</li> </ul> <p><b>Desktop Publishing:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the benefits of desktop publishing</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> <li>✓ To consider the real-world when making design choices</li> </ul> <p><b>Events and Actions in Programs:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the real-world when making design choices</li> </ul>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To evaluate the consequences of unreliable content</li> </ul> <p><b>Data Logging:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the responsibilities of data handling and storing</li> </ul> <p><b>Photo Editing:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise that not all images and content online is true, accurate, honest and legal</li> <li>✓ To evaluate how changes can improve and alter an image</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology.</li> </ul>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise the role of computer systems in our lives</li> <li>✓ To describe how search results can be influenced</li> <li>✓ To recognise some of the limitations of search engines</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p><b>Video Production:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the impact of the choices made when making, editing and sharing a video</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p><b>Flat-file Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the uses of database to answer real-world questions</li> <li>✓ To understand and explain the responsibilities of using data and databases in real-world contexts</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> <li>✓ To compare paper and computer databases and their usability.</li> </ul>

Vocabulary	Vocabulary ✓ Legal ✓ Ownership ✓ Accurate ✓ Copyright	✓ Vocabulary
		✓

# Curriculum Overview Year 5

Curriculum Overview Year 5		
Prior Year's Curriculum Content	Year 5 Curriculum Content	Subsequent Year's Curriculum Content
<p style="text-align: center;"><b>Computer Science</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To describe how networks physically connect to other networks</li> <li>✓ To recognise how networked devices make up the internet</li> <li>✓ To outline how websites can be shared via the World Wide Web (WWW)</li> </ul> <p><b>Repetition in Shapes:</b></p> <ul style="list-style-type: none"> <li>✓ To identify that accuracy in programming is important</li> <li>✓ To create a program in a text-based language</li> <li>✓ To understand and explain repetition and modify a count-controlled loop to produce a given outcome</li> <li>✓ To decompose a task into small steps</li> <li>✓ To create and develop a program that uses count-controlled loops to produce a given outcome</li> </ul> <p><b>Repetition in Games:</b></p> <ul style="list-style-type: none"> <li>✓ To use two or more count-controlled loops in a program</li> <li>✓ To explain that in programming there are infinite loops and count-controlled loops</li> <li>✓ To modify an infinite loop in a given program</li> <li>✓ To design and create a project that includes repetition</li> <li>✓ To develop the use of count-controlled loops in different programming environments</li> </ul>	<p style="text-align: center;"><b>Computer Science</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To explain computers can be connected together to form systems</li> <li>✓ To describe how search engines select and rank results</li> <li>✓ To recognise why the order is important and to whom</li> </ul> <p><b>Selection in Physical Computing:</b></p> <ul style="list-style-type: none"> <li>✓ To control a simple circuit connected to a computer</li> <li>✓ To write a program that includes count-controlled loops</li> <li>✓ To explain that a loop can stop when a condition is met</li> <li>✓ To explain that a loop can be used to repeatedly check is a condition has been met</li> <li>✓ To design and create a program that controls a physical computing project that includes selection</li> </ul> <p><b>Selection in Quizzes:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how selection is used in computer programs</li> <li>✓ To relate that a conditional statement connects a conditional outcome</li> <li>✓ To explain how selection directs the flow of a program</li> <li>✓ To design, create and evaluate a program which uses selection</li> </ul>	<p style="text-align: center;"><b>Computer Science</b></p> <p><b>Communication and Collaboration:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise how data is transferred across the internet</li> </ul> <p><b>Variables in Games:</b></p> <ul style="list-style-type: none"> <li>✓ To define a variable and explain why they are used in a program</li> <li>✓ To improve a program (e.g. game) by using variables</li> <li>✓ To design, create and evaluate a project that builds on an example</li> </ul> <p><b>Sensing Movement:</b></p> <ul style="list-style-type: none"> <li>✓ To create a program to run on a controllable device</li> <li>✓ To update a variable with a user input</li> <li>✓ To use a conditional statement to compare a variable to a value</li> <li>✓ To explain and give examples of how selection can control the flow of a program</li> <li>✓ To design and develop a project that uses inputs and outputs on a controllable device</li> </ul> <p style="text-align: center;">✓</p>
<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Programming language</li> <li>✓ Decompose</li> <li>✓ Repetition</li> <li>✓ Procedure</li> <li>✓ Count-controlled loop</li> <li>✓ Loop</li> <li>✓ Code snippet</li> <li>✓ World Wide Web</li> <li>✓ Sensors</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Internet</li> <li>✓ Microcontroller</li> <li>✓ Flow</li> <li>✓ Vector</li> <li>✓ Circuit</li> <li>✓ Selection</li> <li>✓ Physical computing project</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <p>HTML</p>
<p style="text-align: center;"><b>Information Technology</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To describe how content can be added and accessed on the World Wide Web (WWW)</li> <li>✓ To recognise how the content of WWW is created by people</li> </ul> <p><b>Audio Production:</b></p> <ul style="list-style-type: none"> <li>✓ To use digital devices to record sound and store it as a file</li> <li>✓ To explain that audio can be changed through editing and can be combined and played together</li> <li>✓ To evaluate editing choices made</li> </ul>	<p style="text-align: center;"><b>Information Technology</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To identify how to use a search engine</li> </ul> <p><b>Video Production:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the audience and purpose of digital media (e.g. video) and the effect this has on its content</li> <li>✓ To identify digital devices that can record videos and use these to record video</li> <li>✓ To capture videos exploring a range of techniques</li> <li>✓ To plan the content and techniques of a video for a given purpose</li> <li>✓ To identify that video can be improved through reshooting and editing</li> </ul>	<p style="text-align: center;"><b>Information Technology</b></p> <p><b>Communication and Collaboration:</b></p> <ul style="list-style-type: none"> <li>✓ To evaluate different ways of working together online</li> <li>✓ To recognise how data is transferred across the internet</li> <li>✓ To explain the importance of internet addresses</li> <li>✓ To explain how sharing information online can help people work together</li> </ul> <p><b>Web Page Creation:</b></p> <ul style="list-style-type: none"> <li>✓ To review an existing media (website) and consider its structure</li> <li>✓ To plan the features of a media (website)</li> <li>✓ To recognise the need to preview digital media (pages)</li> </ul>

<p><b>Data Logging:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that data gathered over time can be used to answer questions</li> <li>✓ To use a digital device to collect data automatically (e.g. data logger)</li> <li>✓ To use data collected over a long duration to find information</li> <li>✓ To identify the data needed to answer questions and use this to propose and answer questions</li> <li>✓ To understand that data loggers collect data points from sensors over time</li> <li>✓ To compare and analyse data</li> </ul> <p><b>Photo Editing:</b></p> <ul style="list-style-type: none"> <li>✓ To explain that digital images can be changed e.g. composition, different uses</li> <li>✓ To improve digital images using different tools and effects</li> <li>✓ To explain how cloning can be used in digital image editing</li> <li>✓ To explore combining images, evaluating how these are fit for purpose</li> </ul> <p>To evaluate changes to an image and their effectiveness.</p>	<p><b>Flat-file Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To use a form to record information</li> <li>✓ To outline how grouping and sorting data allows us to answer questions</li> <li>✓ To explain that tools can be used to select specific data</li> <li>✓ To explain that computer programs can be used to compare data visually</li> </ul> <p><b>Introduction to Vector Graphics:</b></p> <ul style="list-style-type: none"> <li>✓ To identify that drawing tools can be used to produce different outcomes and to use these to achieve a desired effect</li> <li>✓ To create a vector drawing by combining shapes</li> <li>✓ To recognise that vector drawings consist of layers</li> <li>✓ To group objects to make them easier to work with</li> <li>✓ To apply what I have learned about vector drawings for a specific purpose</li> </ul>	<ul style="list-style-type: none"> <li>✓ To outline the need for a navigation path</li> </ul> <p><b>3D Modelling:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise that you can work in three dimensions on a computer</li> <li>✓ To identify that digital 3D objects can be modified</li> <li>✓ To use a computer to create and manipulate media (3D digital objects)</li> <li>✓ To construct, identify, design, develop and improve digital modelling of 3D shapes and objects</li> </ul> <p><b>Spreadsheets:</b></p> <ul style="list-style-type: none"> <li>✓ To create and build a data set in a spreadsheet</li> <li>✓ To explain that formulas can be used to produce calculated data</li> <li>✓ To apply formulas to data, including duplicating</li> <li>✓ To create a spreadsheet for a given purpose</li> <li>✓ To choose suitable ways to present data</li> </ul>
<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Data logger</li> <li>✓ Storage device</li> <li>✓ Template</li> <li>✓ Chunks</li> <li>✓ Digital recording</li> <li>✓ Web page</li> <li>✓ Web browser</li> <li>✓ Content</li> <li>✓ Website</li> <li>✓ Intervals</li> <li>✓ URL</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Computer system</li> <li>✓ Export</li> <li>✓ Condition</li> <li>✓ AND/OR/NOT</li> <li>✓ Conditional statement</li> <li>✓ Duplicate</li> <li>✓ Process</li> <li>✓ Task</li> <li>✓ Transfer (data)</li> <li>✓ Visual media</li> <li>✓ Retrieve</li> <li>✓ Component</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Search engine</li> <li>✓ Search engine index</li> <li>✓ Spreadsheet</li> <li>✓ Formula</li> <li>✓ Cell</li> <li>✓ Graphical objects</li> <li>✓ Emulator</li> <li>✓ Web crawlers</li> <li>✓ Navigation path</li> <li>✓ Variable</li> </ul>
<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>The Internet:</b></p> <ul style="list-style-type: none"> <li>✓ To evaluate the consequences of unreliable content</li> </ul> <p><b>Data Logging:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the responsibilities of data handling and storing</li> </ul> <p><b>Photo Editing:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise that not all images and content online is true, accurate, honest and legal</li> <li>✓ To evaluate how changes can improve and alter an image</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> </ul> <p>To identify who can help and support with concerns about online technology.</p>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise the role of computer systems in our lives</li> <li>✓ To describe how search results can be influenced</li> <li>✓ To recognise some of the limitations of search engines</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p><b>Video Production:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the impact of the choices made when making, editing and sharing a video</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p><b>Flat-file Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the uses of database to answer real-world questions</li> <li>✓ To understand and explain the responsibilities of using data and databases in real-world contexts</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> <li>✓ To compare paper and computer databases and their usability.</li> </ul>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Communication and Collaboration:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise how we communicate using technology</li> <li>✓ To evaluate the different methods of online communication considering privacy and security</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p><b>Web Page Creation:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise the implications of linking to content owned by other people</li> <li>✓ To consider the ownership and use of images (copyright)</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul>

Vocabulary	Vocabulary	Vocabulary
<ul style="list-style-type: none"><li>✓ Legal</li><li>✓ Ownership</li><li>✓ Accurate</li><li>✓ Copyright</li></ul>		✓ Fair use



# Curriculum Overview Year 6

Prior Year's Curriculum Content	Year 6 Curriculum Content	Subsequent Year's Curriculum Content
<p style="text-align: center;"><b>Computer Science</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To explain computers can be connected together to form systems</li> <li>✓ To describe how search engines select and rank results</li> <li>✓ To recognise why the order is important and to whom</li> </ul> <p><b>Selection in Physical Computing:</b></p> <ul style="list-style-type: none"> <li>✓ To control a simple circuit connected to a computer</li> <li>✓ To write a program that includes count-controlled loops</li> <li>✓ To explain that a loop can stop when a condition is met</li> <li>✓ To explain that a loop can be used to repeatedly check is a condition has been met</li> <li>✓ To design and create a program that controls a physical computing project that includes selection</li> </ul> <p><b>Selection in Quizzes:</b></p> <ul style="list-style-type: none"> <li>✓ To explain how selection is used in computer programs</li> <li>✓ To relate that a conditional statement connects a conditional outcome</li> <li>✓ To explain how selection directs the flow of a program</li> <li>✓ To design, create and evaluate a program which uses selection</li> </ul>	<p style="text-align: center;"><b>Computer Science</b></p> <p><b>Communication and Collaboration:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise how data is transferred across the internet</li> </ul> <p><b>Variables in Games:</b></p> <ul style="list-style-type: none"> <li>✓ To define a variable and explain why they are used in a program</li> <li>✓ To improve a program (e.g. game) by using variables</li> <li>✓ To design, create and evaluate a project that builds on an example</li> </ul> <p><b>Sensing Movement:</b></p> <ul style="list-style-type: none"> <li>✓ To create a program to run on a controllable device</li> <li>✓ To update a variable with a user input</li> <li>✓ To use a conditional statement to compare a variable to a value</li> <li>✓ To explain and give examples of how selection can control the flow of a program</li> <li>✓ To design and develop a project that uses inputs and outputs on a controllable device</li> </ul>	<ul style="list-style-type: none"> <li>✓ Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems</li> <li>✓ Understand several key algorithms that reflect computational thinking [for example, ones for sorting and searching]; use logical reasoning to compare the utility of alternative algorithms for the same problem</li> <li>✓ Use 2 or more programming languages, at least one of which is textual, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions</li> <li>✓ Understand simple Boolean logic [for example, AND, OR and NOT] and some of its uses in circuits and programming; understand how numbers can be represented in binary, and be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal]</li> <li>✓ Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems</li> </ul>
<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Internet</li> <li>✓ Microcontroller</li> <li>✓ Flow</li> <li>✓ Vector</li> <li>✓ Circuit</li> <li>✓ Selection</li> <li>✓ Physical computing project</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ HTML</li> </ul>	
<p style="text-align: center;"><b>Information Technology</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To identify how to use a search engine</li> </ul> <p><b>Video Production:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the audience and purpose of digital media (e.g. video) and the effect this has on its content</li> <li>✓ To identify digital devices that can record videos and use these to record video</li> <li>✓ To capture videos exploring a range of techniques</li> <li>✓ To plan the content and techniques of a video for a given purpose</li> <li>✓ To identify that video can be improved through reshooting and editing</li> </ul> <p><b>Flat-file Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To use a form to record information</li> <li>✓ To outline how grouping and sorting data allows us to answer questions</li> <li>✓ To explain that tools can be used to select specific data</li> <li>✓ To explain that computer programs can be used to compare data visually</li> </ul>	<p style="text-align: center;"><b>Information Technology</b></p> <p><b>Communication and Collaboration:</b></p> <ul style="list-style-type: none"> <li>✓ To evaluate different ways of working together online</li> <li>✓ To recognise how data is transferred across the internet</li> <li>✓ To explain the importance of internet addresses</li> <li>✓ To explain how sharing information online can help people work together</li> </ul> <p><b>Web Page Creation:</b></p> <ul style="list-style-type: none"> <li>✓ To review an existing media (website) and consider its structure</li> <li>✓ To plan the features of a media (website)</li> <li>✓ To recognise the need to preview digital media (pages)</li> <li>✓ To outline the need for a navigation path</li> </ul> <p><b>3D Modelling:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise that you can work in three dimensions on a computer</li> <li>✓ To identify that digital 3D objects can be modified</li> <li>✓ To use a computer to create and manipulate media (3D digital objects)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits</li> <li>✓ Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users</li> <li>✓ Create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability</li> </ul>

<p><b>Introduction to Vector Graphics:</b></p> <ul style="list-style-type: none"> <li>✓ To identify that drawing tools can be used to produce different outcomes and to use these to achieve a desired effect</li> <li>✓ To create a vector drawing by combining shapes</li> <li>✓ To recognise that vector drawings consist of layers</li> <li>✓ To group objects to make them easier to work with</li> </ul> <p>To apply what I have learned about vector drawings for a specific purpose</p>	<ul style="list-style-type: none"> <li>✓ To construct, identify, design, develop and improve digital modelling of 3D shapes and objects</li> </ul> <p><b>Spreadsheets:</b></p> <ul style="list-style-type: none"> <li>✓ To create and build a data set in a spreadsheet</li> <li>✓ To explain that formulas can be used to produce calculated data</li> <li>✓ To apply formulas to data, including duplicating</li> <li>✓ To create a spreadsheet for a given purpose</li> <li>✓ To choose suitable ways to present data</li> </ul>	
<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Computer system</li> <li>✓ Export</li> <li>✓ Condition</li> <li>✓ AND/OR/NOT</li> <li>✓ Conditional statement</li> <li>✓ Duplicate</li> <li>✓ Process</li> <li>✓ Task</li> <li>✓ Transfer (data)</li> <li>✓ Visual media</li> <li>✓ Retrieve</li> <li>✓ Component</li> </ul>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Search engine</li> <li>✓ Search engine index</li> <li>✓ Spreadsheet</li> <li>✓ Formula</li> <li>✓ Cell</li> <li>✓ Graphical objects</li> <li>✓ Emulator</li> <li>✓ Web crawlers</li> <li>✓ Navigation path</li> <li>✓ Variable</li> </ul>	✓
<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Systems and Searching:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise the role of computer systems in our lives</li> <li>✓ To describe how search results can be influenced</li> <li>✓ To recognise some of the limitations of search engines</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p><b>Video Production:</b></p> <ul style="list-style-type: none"> <li>✓ To consider the impact of the choices made when making, editing and sharing a video</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p><b>Flat-file Databases:</b></p> <ul style="list-style-type: none"> <li>✓ To understand the uses of database to answer real-world questions</li> <li>✓ To understand and explain the responsibilities of using data and databases in real-world contexts</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p>To compare paper and computer databases and their usability.</p>	<p style="text-align: center;"><b>Digital Literacy</b></p> <p><b>Communication and Collaboration:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise how we communicate using technology</li> <li>✓ To evaluate the different methods of online communication considering privacy and security</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul> <p><b>Web Page Creation:</b></p> <ul style="list-style-type: none"> <li>✓ To recognise the implications of linking to content owned by other people</li> <li>✓ To consider the ownership and use of images (copyright)</li> <li>✓ To understand how to use technology safely, responsibly and respectfully</li> <li>✓ To identify who can help and support with concerns about online technology</li> </ul>	✓ Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct, and know how to report concerns
<p><b>Vocabulary</b></p>	<p style="text-align: center;"><b>Vocabulary</b></p> <ul style="list-style-type: none"> <li>✓ Fair use</li> </ul>	✓
		✓