



## Tatsfield Primary School Computing Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Reception</b>	<p>Completes a simple program on a computer.</p> <p>Uses ICT hardware to interact with age appropriate computer software.</p> <p>Phonics and literacy online games</p> <p>Taking photos – linked to ourselves and our school</p> <p>Barefoot computing; Busy Bodies</p>	<p>Completes a simple program on a computer.</p> <p>Uses ICT hardware to interact with age appropriate computer software.</p> <p>Phonics and literacy online games</p> <p>Mouse skill – firework pictures in paint. Shapes to create a fire engine</p> <p>Barefoot computing; Awesome Autumn</p>	<p>Internet Safety PSHE</p> <p>Tablet – phonics activities</p> <p>Barefoot computing; boats ahoy</p>	<p>Tablet – phonics activities</p> <p>Tiger research (linked to Tiger who came for tea text)</p> <p>Barefoot computing; Springtime</p>	<p>The Foos Codespark Academy</p> <p>Coding: coderpillar/beebots</p> <p>Barefoot computing; Super Space</p>	<p>Keyboard recognition – writing their name on Word</p> <p>Barefoot computing; Summer fun</p>
<b>Year 1</b>	Teach Computing: Unit 1. Computing systems and networks – Technology around us	Teach Computing: Unit 2 creating media – Digital painting	Teach Computing: Unit 3 Programming A	Teach Computing: Unit 4 Data and information – Grouping data	Teach Computing: Unit 5 Digital writing	Teach Computing: Unit 6 Programming B – Programming animations
<b>Year 2</b>	<p>Mighty Heroes: eSafety commissioner (Australian government)</p> <p><a href="#">Classroom resources   eSafety Commissioner</a></p> <p>Internet Safety PSHE</p>	Teach Computing: Unit 2. Creating media – Digital photography	Dinosaur PowerPoints: Researching dinosaurs	<p>Google Earth</p> <p>Teach Computing: Unit 1 Computing systems and networks – IT around us</p>	Teach Computing: Unit 4 Data and information – Pictograms	Teach Computing: Unit 3 Robot algorithms and Unit 6 Programming B – Programming quizzes

	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Year 3</b>	Teach Computing: Unit 1 Computing systems and networks – Connecting computers	Teach Computing: Unit 5 Creating media – Desktop publishing	Email	Teach Computing: Unit 4. Data and information – Data logging (Y4)  Micro:Bits Scheme of work	Teach Computing: Unit 2 Creating media Stopframe animation	Teach Computing: Unit 3 Programming A – Sequencing Sounds  and  Teach Computing: Unit 6 Programming B – Events and actions in programs
<b>Year 4</b>	Teach Computing: Unit 1 – The internet	Teach Computing: Unit 5 – Photo editing	Internet Legends: online safety (from Google)	Teach Computing: Unit 2 – Audio production	Teach Computing: Unit 4 (Y3) Data and information – Branching databases	Teach Computing: Unit 3 – Programming A – Repetition in Shapes
<b>Year 5</b>	Teach Computing: Unit 1 Computing systems and networks – Systems and searching	Teach Computing: Unit 2 Creating media – video production	Teach Computing: Unit 3 Programming A – Selection in physical computing	Teach Computing: Unit 4 Data and information – Flatfile databases	Teach Computing: Unit 5 – Creating media – introduction to vector graphics	Teach Computing: Unit 6 Programming B – Selection in quizzes
<b>Year 6</b>	Teach Computing: Unit 4 Data and information – introduction to Spreadsheets	Teach Computing: Unit 1 Computing systems and networks – Communication and collaboration	Teach Computing: Unit 2 Creating media – Web page creation	Teach Computing: Unit 3 Programming A – variables in games	Teach Computing: Unit 5 Creating media – 3D modelling	Teach Computing: Unit 6 Programming B – Sensing movement



## Tatsfield Primary School

### Computing Curriculum Progression Map

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	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Algorithms</b>	Completes a simple program on electronic devices	To explain what a given command will do To act out a given word To plan a simple program To find more than one solution to a problem To use my algorithm to create a program	To describe a series of instructions as a sequence To explain what happens when we change the order of instructions To use logical reasoning to predict the outcome of a program To explain that programming projects can have code and artwork To design an algorithm To create and debug a program that I have written	To create a project from a task description	To identify that accuracy in programming is important To explain what 'repeat' means To decompose a task into small steps	To explain how selection is used in computer programs To relate that a conditional statement connects a condition to an outcome To explain how selection directs the flow of a program	

<b>Computing Systems</b>	<p>Can use the internet with adult supervision to find and retrieve information of interest to them</p>	<p>To identify technology To identify a computer and its main parts To use a mouse in different ways To use a keyboard to type on a computer To use the keyboard to edit text To create rules for using technology responsibly</p>	<p>To recognise the uses and features of information technology To identify the uses of information technology in the school To identify information technology beyond school To explain how information technology helps us To explain how to use information technology safely To recognise that choices are made when using information technology To use a digital device to take a photograph To make choices when taking a photograph</p>	<p>To explain how digital devices function To identify input and output devices To recognise how digital devices can change the way we work To explain how a computer network can be used to share information To explore how digital devices can be connected To recognise the physical components of a network To use a digital device to collect data automatically To explain that a data logger collects 'data points' from sensors over time To identify the data needed to answer questions To use data from sensors to answer questions</p>	<p>To identify that sound can be recorded To explain that audio recordings can be edited</p>	<p>To explain that computers can be connected together to form systems To recognise the role of computer systems in our lives To identify digital devices that can record video To control a simple circuit connected to a computer To write a program that includes countcontrolled loops To explain that a loop can stop when a condition is met To design a physical project that includes selection To create a program that controls a physical computing project</p>	<p>To create a program to run on a controllable device To explain that selection can control the flow of a program To update a variable with a user input To use a conditional statement to compare a variable to a value To design a project that uses inputs and outputs on a controllable device To develop a program to use inputs and outputs on a controllable device</p>
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<p><b>Creating Media</b></p>	<p>Can create content such as a video recording, stories, and/or draw a picture on screen</p>	<p>To describe what different freehand tools do          To use the shape tool and the line tools          To make careful choices when painting a digital picture          To explain why I chose the tools I used          To use a computer on my own to paint a picture          To compare painting a picture on a computer and on paper          To use a computer to write          To add and remove text on a computer          To identify that the look of text can be changed on a computer          To make careful choices when changing text          To explain why I used the tools that I chose          To compare typing on a computer to writing on paper</p>	<p>To use a digital device to take a photograph          To make choices when taking a photograph          To describe what makes a good photograph          To decide how photographs can be improved          To use tools to change an image          To recognise that photos can be changed</p>	<p>To explain that animation is a sequence of drawings or photographs          To relate animated movement with a sequence of images          To plan an animation          To identify the need to work consistently and carefully          To review and improve an animation          To evaluate the impact of adding other media to an animation          To create a project from a task description          To recognise how text and images convey information          To recognise that text and layout can be edited          To choose appropriate page settings          To add content to a desktop publishing publication          To consider how different layouts can suit different purposes          To consider the benefits of desktop publishing</p>	<p>To describe how content can be added and accessed on the World Wide Web (WWW)          To explain that audio recordings can be edited          To recognise the different parts of creating a podcast project          To apply audio editing skills independently          To combine audio to enhance my podcast project          To evaluate the effective use of audio          To explain that the composition of digital images can be changed          To explain that colours can be changed in digital images          To explain how cloning can be used in photo editing          To explain that images can be combined          To combine images for a purpose          To evaluate how changes can improve an image</p>	<p>To explain what makes a video effective          To identify digital devices that can record video          To capture video using a range of techniques          To create a storyboard          To identify that video can be improved through reshooting and editing          To consider the impact of the choices made when making and sharing a video          To identify that drawing tools can be used to produce different outcomes          To create a vector drawing by combining shapes          To use tools to achieve a desired effect          To recognise that vector drawings consist of layers          To group objects to make them easier to work with          To apply what I have learned about vector drawings</p>	<p>To review an existing website and consider its structure          To plan the features of a web page          To consider the ownership and use of images (copyright)          To recognise the need to preview pages          To outline the need for a navigation path          To recognise the implications of linking to content owned by other people          To choose suitable ways to present data          To recognise that you can work in three dimensions on a computer          To identify that digital 3D objects can be modified          To recognise that objects can be combined in a 3D model          To create a 3D model for a given purpose          To plan my own 3D model          To create my own digital 3D model</p>
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<b>Data and Information</b>		<p>To label objects</p> <p>To identify that objects can be counted</p> <p>To describe objects in different ways</p> <p>To count objects with the same properties</p> <p>To compare groups of objects</p> <p>To answer questions about groups of objects</p>	<p>To recognise that we can count and compare objects using tally charts</p> <p>To recognise that objects can be represented as pictures</p> <p>To create a pictogram</p> <p>To select objects by attribute and make comparisons</p> <p>To recognise that people can be described by attributes</p> <p>To explain that we can present information using a computer</p>	<p>To explain that data gathered over time can be used to answer questions</p> <p>To use a digital device to collect data automatically</p> <p>To explain that a data logger collects 'data points' from sensors over time</p> <p>To recognise how a computer can help us analyse data</p> <p>To identify the data needed to answer questions</p> <p>To use data from sensors to answer questions</p>	<p>To create questions with yes/no answers</p> <p>To identify the attributes needed to collect data about an object</p> <p>To create a branching database</p> <p>To explain why it is helpful for a database to be well structured</p> <p>To plan the structure of a branching database</p> <p>To independently create an identification tool</p> <p>To identify that sound can be recorded</p> <p>To recognise the different parts of creating a podcast project</p>	<p>To use a form to record information</p> <p>To compare paper and computer-based databases</p> <p>To outline how you can answer questions by grouping and then sorting data</p> <p>To explain that tools can be used to select specific data</p> <p>To explain that computer programs can be used to compare data visually</p> <p>To use a real-world database to answer questions</p> <p>To identify that drawing tools can be used to produce different outcomes</p>	<p>To create a data set in a spreadsheet</p> <p>To build a data set in a spreadsheet</p> <p>To explain that formulas can be used to produce calculated data</p> <p>To apply formulas to data</p> <p>To create a spreadsheet to plan an event</p> <p>To choose suitable ways to present data</p>
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<b>Design and Development</b>		<p>To explain why I chose the tools I used</p> <p>To compare painting a picture on a computer and on paper</p> <p>To plan a simple program</p> <p>To explain why I used the tools that I chose</p> <p>To design the parts of a project</p> <p>To use my algorithm to create a program</p>	<p>To describe what makes a good photograph</p> <p>To decide how photographs can be improved</p> <p>To explain that programming projects can have code and artwork</p> <p>To design an algorithm</p> <p>To create and debug a program that I have written</p> <p>To create a program using a given design</p> <p>To change a given design</p> <p>To create a program using my own design</p> <p>To decide how my project can be improved</p>	<p>To plan an animation</p> <p>To identify the need to work consistently and carefully</p> <p>To review and improve an animation</p> <p>To evaluate the impact of adding other media to an animation</p> <p>To change the appearance of my project</p> <p>To create a project from a task description</p> <p>To consider how different layouts can suit different purposes</p> <p>To consider the benefits of desktop publishing</p> <p>To identify and fix bugs in a program</p> <p>To design and create a maze-based challenge</p>	<p>To explain why it is helpful for a database to be well structured</p> <p>To independently create an identification tool</p> <p>To explain that audio recordings can be edited</p> <p>To recognise the different parts of creating a podcast project</p> <p>To evaluate the effective use of audio</p> <p>To explain how cloning can be used in photo editing</p> <p>To evaluate how changes can improve an image</p>	<p>To recognise why the order of results is important, and to whom</p> <p>To explain what makes a video effective</p> <p>To create a storyboard</p> <p>To consider the impact of the choices made when making and sharing a video</p> <p>To design a physical project that includes selection</p> <p>To create a program that controls a physical computing project</p> <p>To compare paper and computer-based databases</p> <p>To apply what I have learned about vector drawings</p> <p>To design a program which uses selection</p> <p>To create a program which uses selection</p> <p>To evaluate my program</p>	<p>To evaluate different methods of online communication</p> <p>To review an existing website and consider its structure</p> <p>To plan the features of a web page</p> <p>To consider the ownership and use of images (copyright)</p> <p>To recognise the need to preview pages</p> <p>To outline the need for a navigation path</p> <p>To recognise the implications of linking to content owned by other people</p> <p>To choose how to improve a game by using variables</p> <p>To design a project that builds on a given example</p> <p>To use my design to create a project</p> <p>To evaluate my project</p> <p>To plan my own 3D model</p> <p>To create my own digital 3D model</p> <p>To design a project that uses inputs and outputs on a controllable device</p> <p>To develop a program to use inputs and outputs on a</p>
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[illegible]



<b>Effective Use of Tools</b>	<p>Uses ICT hardware to interact with age appropriate computer software</p>	<p>To use a mouse in different ways  To use a keyboard to type on a computer  To use the keyboard to edit text  To create rules for using technology responsibly  To describe what different freehand tools do  To use the shape tool and the line tools  To make careful choices when painting a digital picture  To explain why I chose the tools I used  To use a computer on my own to paint a picture  To compare painting a picture on a computer and on paper  To use a computer to write  To add and remove text on a computer  To identify that the look of text can be changed on a computer  To make careful choices when changing text  To explain why I used the tools that I chose  To compare typing on a computer to writing on paper</p>	<p>To make choices when taking a photograph  To decide how photographs can be improved  To use tools to change an image  To recognise that photos can be changed  To recognise that objects can be represented as pictures  To create a pictogram  To select objects by attribute and make comparisons  To recognise that people can be described by attributes  To explain that we can present information using a computer</p>	<p>To explain that animation is a sequence of drawings or photographs  To relate animated movement with a sequence of images  To identify the need to work consistently and carefully  To review and improve an animation  To evaluate the impact of adding other media to an animation  To explore a new programming environment  To recognise that text and layout can be edited  To choose appropriate page settings  To add content to a desktop publishing publication  To consider how different layouts can suit different purposes  To consider the benefits of desktop publishing  To explain how a sprite moves in an existing project  To create a program to move a sprite in four directions  To use a digital device to collect data automatically  To explain that a data logger collects 'data'</p>	<p>To create a branching database  To explain why it is helpful for a database to be well structured  To plan the structure of a branching database  To explain that audio recordings can be edited  To recognise the different parts of creating a podcast project  To apply audio editing skills independently  To combine audio to enhance my podcast project  To create a program in a text-based language  To explain that the composition of digital images can be changed  To explain that colours can be changed in digital images  To explain how cloning can be used in photo editing  To explain that images can be combined  To combine images for a purpose  To evaluate how changes can improve an image</p>	<p>To explain how search results are ranked  To recognise why the order of results is important, and to whom  To create a storyboard  To identify that video can be improved through reshooting and editing  To consider the impact of the choices made when making and sharing a video  To use a form to record information  To explain that tools can be used to select specific data  To explain that computer programs can be used to compare data visually  To use a real-world database to answer questions  To identify that drawing tools can be used to produce different outcomes  To create a vector</p>	<p>To explain the importance of internet addresses  To recognise how data is transferred across the internet  To explain how sharing information online can help people to work together  To evaluate different ways of working together online  To recognise how we communicate using technology  To evaluate different methods of online communication  To recognise the need to preview pages  To outline the need for a navigation path  To recognise the implications of linking to content owned by other people  To explain that formulas can be used to produce calculated data  To apply formulas to data  To create a spreadsheet to plan an event</p>
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				points' from sensors over time To recognise how a computer can help us analyse data To identify the data needed to answer questions		drawing by combining shapes To use tools to achieve a desired effect To recognise that vector drawings consist of layers To group objects to make them easier to work with	To choose suitable ways to present data To recognise that you can work in three dimensions on a computer To identify that digital 3D objects can be modified To recognise that objects can be combined in a 3D model To create a 3D model for a given purpose To plan my own 3D model To create my own digital 3D model
<b>Impact of Technology</b>	Shows an interest in technological toys with knobs or pulleys, real objects such as cameras, and touchscreen devices such as mobile phones and tablets	To identify technology To act out a given word	To identify the uses of information technology in the school To identify information technology beyond school To explain how information technology helps us To recognise that choices are made when using information technology	To recognise how digital devices can change the way we work To consider the benefits of desktop publishing	To evaluate the consequences of unreliable content To explain that colours can be changed in digital images	To recognise the role of computer systems in our lives To describe how search engines select results	To evaluate different ways of working together online To recognise the implications of linking to content owned by other people
<b>Networks</b>			To recognise the uses and features of information technology To identify the uses of information technology in the school To identify information technology beyond school To explain how information	To explain how a computer network can be used to share information To explore how digital devices can be connected To recognise the physical components of a network	To describe how networks physically connect to other networks To recognise how networked devices make up the internet To outline how websites can be shared via the	To experiment with search engines To describe how search engines select results To explain how search results are ranked To recognise why	To explain the importance of internet addresses To recognise how data is transferred across the internet To explain how sharing information online can help

			<p>technology helps us</p> <p>To explain how to use information technology safely</p> <p>To recognise that choices are made when using information technology</p>		<p>World Wide Web (WWW)</p> <p>To describe how content can be added and accessed on the World Wide Web (WWW)</p> <p>To recognise how the content of the WWW is created by people</p> <p>To evaluate the consequences of unreliable content</p>	<p>the order of results is important, and to whom</p>	<p>people to work together</p> <p>To evaluate different ways of working together online</p> <p>To recognise how we communicate using technology</p> <p>To evaluate different methods of online communication</p> <p>To review an existing website and consider its structure</p> <p>To outline the need for a navigation path</p> <p>To recognise the implications of linking to content owned by other people</p>
<b>Programming</b>	<p>Completes a simple program on electronic devices</p>	<p>To combine forwards and backwards commands to make a sequence</p> <p>To combine four direction commands to make sequences</p> <p>To choose a command for a given purpose</p> <p>To show that a series of commands can be joined together</p> <p>To identify the effect of changing a value</p> <p>To explain that each sprite has its own instructions</p> <p>To design the parts of a project</p> <p>To use my algorithm to</p>	<p>To use logical reasoning to predict the outcome of a program</p> <p>To explain that programming projects can have code and artwork</p> <p>To create and debug a program that I have written</p> <p>To explain that a sequence of commands has a start</p> <p>To explain that a sequence of commands has an outcome</p> <p>To create a program using a given design</p> <p>To change a given design</p> <p>To create a program using my own design</p> <p>To decide how my project can be improved</p>	<p>To explore a new programming environment</p> <p>To identify that commands have an outcome</p> <p>To explain that a program has a start</p> <p>To recognise that a sequence of commands can have an order</p> <p>To change the appearance of my project</p> <p>To create a project from a task description</p> <p>To explain how a sprite moves in an existing project</p> <p>To create a program to move a sprite in four directions</p> <p>To adapt a program to a</p>	<p>To identify that accuracy in programming is important</p> <p>To create a program in a text-based language</p> <p>To explain what 'repeat' means</p> <p>To modify a count-controlled loop to produce a given outcome</p> <p>To decompose a task into small steps</p> <p>To create a program that uses count-controlled loops to produce a given outcome</p>	<p>To control a simple circuit connected to a computer</p> <p>To write a program that includes count-controlled loops</p> <p>To explain that a loop can stop when a condition is met</p> <p>To explain that a loop can be used to repeatedly check whether a condition has been met</p> <p>To design a physical project that includes selection</p> <p>To create a program that</p>	<p>To define a 'variable' as something that is changeable</p> <p>To explain why a variable is used in a program</p> <p>To choose how to improve a game by using variables</p> <p>To design a project that builds on a given example</p> <p>To use my design to create a project</p> <p>To evaluate my project</p> <p>To explain that formulas can be used to produce calculated data</p>

		create a program		new context To develop my program by adding features To identify and fix bugs in a program To design and create a maze-based challenge		controls a physical computing project To explain how selection is used in computer programs To relate that a conditional statement connects a condition to an outcome To explain how selection directs the flow of a program To design a program which uses selection To create a program which uses selection To evaluate my program	To apply formulas to data To create a program to run on a controllable device To explain that selection can control the flow of a program To update a variable with a user input To use a conditional statement to compare a variable to a value To design a project that uses inputs and outputs on a controllable device To develop a program to use inputs and outputs on a controllable device
<b>Safety and Security</b>	???	To create rules for using technology responsibly	To recognise the uses and features of information technology To explain how to use information technology safely To recognise that choices are made when using information technology To explain that we can present information using a computer		To describe how networks physically connect to other networks To evaluate the consequences of unreliable content To combine images for a purpose	To capture video using a range of techniques	To consider the ownership and use of images (copyright)