

Woodside Primary School
Computing – Long Term Planning – Cycle B

Early Years

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas.

This long term plan demonstrates which statements from the 2020 Development Matters are prerequisite skills for computing within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for computing.

The most relevant statements for computing are taken from the following areas of learning:

- Personal, Social and Emotional Development
 - Physical Development
 - Understanding the World
- Expressive Arts and Design

	Areas of Learning		Objective
Three and Four-Year-Olds	Personal, Social and Emotional Development		• Remember rules without needing an adult to remind them.
	Physical Development		• Match their developing physical skills to tasks and activities in the setting.
	Understanding the World		• Explore how things work.
Reception	Personal, Social and Emotional Development		• Show resilience and perseverance in the face of a challenge. • Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of 'screen time'.
	Physical Development		• Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
	Expressive Arts and Design		• Explore, use and refine a variety of artistic effects to express their ideas and feelings
ELG	Personal, Social and Emotional Development	Managing Self	• Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly.
	Expressive Arts and Design	Creating with Materials	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function

KS1 Subject Content

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

	Autumn		Spring		Summer	
Year 1 / 2	<p>Preparing for Turtle Logo</p> <ul style="list-style-type: none"> • Understand what algorithms are, and that programs execute by following precise and ambiguous instructions. • Create and debug simple programs. <ul style="list-style-type: none"> • I can give and follow an algorithm to turn right or left. • I can give and follow an algorithm to make half and quarter turns. • I can give and follow an algorithm using the commands right 90 and left 90. • I can give, follow and complete an algorithm. • I can use recognised language in an algorithm • I can create, test and debug an algorithm 	<p>Online Safety</p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies <ul style="list-style-type: none"> • I can understand that the information I put online leaves a digital footprint. • I can use keywords in an online search to find out about a topic. • I can recognise whether a website is appropriate for children. • I can rate and review informative websites. • I can identify kind and unkind behaviour online. • I can apply my knowledge of safe and sensible online activities to different situations. 	<p>Presentation Skills</p> <ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. <ul style="list-style-type: none"> • I can use basic computer skills and folders. • I can organise ideas for a presentation. • I can create a simple presentation with text. • I can add and format an image. • I can reorder slides and present a presentation. • I can search and print. 	<p>Using the Internet</p> <ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. <ul style="list-style-type: none"> • I can search the Internet using one word. • I can search the Internet to find results suitable for children. • I can follow links to another web page • I can create content for an online blog. • I can use a camera to take safe photos to use online. • I can post positive comments and responses on a blog. 	<p>Computer Art</p> <ul style="list-style-type: none"> • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. <ul style="list-style-type: none"> • I can create computer art. • I can use a range of tools in a computer program to reproduce a style of art. • I can make and edit shapes to create a piece of art. • I can change the shade of a colour for effect • I can retrieve a file to edit in a computer program. • I can use a range of skills to create a piece of art. 	<p>Programming Turtle Logo and Scratch</p> <ul style="list-style-type: none"> • Understand what algorithms are; and that programs execute by following precise and ambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs <ul style="list-style-type: none"> • I can create an algorithm to move or rotate the turtle. • I can create an algorithm and use the repeat command. • I can create an algorithm and add sound. • I can create an algorithm and use the repeat and say command. • I can create an algorithm and use the green flag to start. • I can create an algorithm and use the commands to change the backdrop and add sprites.

KS2 Subject Content

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

	Autumn		Spring		Summer
Year 3/ 4	<p>Scratch</p> <ul style="list-style-type: none"> • Create content that accomplish given goals. Solve problems by decomposing them into smaller parts • Write and debug programs that accomplish specific goals • use sequence, selection, and repetition in programs • Work with variables <ul style="list-style-type: none"> • I can compare quizzes and decompose a problem into smaller parts. • I can write and debug a program. • I can use sequence and selection. • I can write and debug a program which uses sequence and repetition. • I can work with variables. • I can write a program. • I can design, write and debug my own program by selecting appropriate visual block commands to create a sequence. 	<p>Online Safety</p> <ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content <ul style="list-style-type: none"> • I can identify how a message can hurt someone's feelings. • I can say how I should respond to a hurtful message online. • I can use a search engine accurately. • I can understand the term 'plagiarism' and how to avoid it. • I can create a safe online profile. • I can explain how to be a responsible digital citizen. • I can create an online safety superhero character. 	<p>Word Processing</p> <ul style="list-style-type: none"> • Select, use and combine a variety of software on a range of digital devices to design a range of programs, systems and content that accomplish specific goals. <ul style="list-style-type: none"> • I can format images for a purpose. • I can use formatting tools to create an effective layout. • I can use the spellcheck tool. • I can insert and format a table in a word processing document. • I can change a page layout for a purpose. • I can create hyperlinks within a word document 	<p>Programming Turtle</p> <ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs <ul style="list-style-type: none"> • I can create and debug an algorithm to create a procedure. • I can create and debug an algorithm that uses set positions to draw shapes. • I can create and debug an algorithm with different colours. • I can create and debug an algorithm to fill areas with colour. • I can create and debug an algorithm to produce text. • I can create and debug an algorithm to draw arcs. 	<p>Animation</p> <ul style="list-style-type: none"> • Analyse, evaluate and present data and information • Use a variety of software, on a range of digital devices, to design and create content that accomplish given goals • Select, use and combine a variety of software including analysing, evaluating and presenting data and information <ul style="list-style-type: none"> • I can describe early forms of animation before computers and how computers have made a difference. • I can create a short computer animation using one or more moving stick figures. • I can create a recorded animation involving a number of moving characters on a background. • I can structure specific timing of animations using a time slider. • I can use a camera to create a short stop motion animation film. I can analyse and evaluate software.

KS2 Subject Content

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

	Autumn		Spring		Summer
Year 4/5	<p>Scratch</p> <ul style="list-style-type: none"> • Create content that accomplish given goals. Solve problems by decomposing them into smaller parts • Write and debug programs that accomplish specific goals • use sequence, selection, and repetition in programs • Work with variables <ul style="list-style-type: none"> • I can compare quizzes and decompose a problem into smaller parts. • I can write and debug a program. • I can use sequence and selection. • I can write and debug a program which uses sequence and repetition. • I can work with variables. • I can write a program. • I can design, write and debug my own program by selecting appropriate visual block commands to create a sequence. 	<p>Online Safety</p> <ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content <ul style="list-style-type: none"> • I can identify how a message can hurt someone's feelings. • I can say how I should respond to a hurtful message online. • I can use a search engine accurately. • I can understand the term 'plagiarism' and how to avoid it. • I can create a safe online profile. • I can explain how to be a responsible digital citizen. • I can create an online safety superhero character. 	<p>Word Processing</p> <ul style="list-style-type: none"> • Select, use and combine a variety of software on a range of digital devices to design a range of programs, systems and content that accomplish specific goals. <ul style="list-style-type: none"> • I can format images for a purpose. • I can use formatting tools to create an effective layout. • I can use the spellcheck tool. • I can insert and format a table in a word processing document. • I can change a page layout for a purpose. • I can create hyperlinks within a word document 	<p>Programming Turtle</p> <ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs <ul style="list-style-type: none"> • I can create and debug an algorithm to create a procedure. • I can create and debug an algorithm that uses set positions to draw shapes. • I can create and debug an algorithm with different colours. • I can create and debug an algorithm to fill areas with colour. • I can create and debug an algorithm to produce text. • I can create and debug an algorithm to draw arcs. 	<p>Animation</p> <ul style="list-style-type: none"> • Analyse, evaluate and present data and information • Use a variety of software, on a range of digital devices, to design and create content that accomplish given goals • Select, use and combine a variety of software including analysing, evaluating and presenting data and information <ul style="list-style-type: none"> • I can describe early forms of animation before computers and how computers have made a difference. • I can create a short computer animation using one or more moving stick figures. • I can create a recorded animation involving a number of moving characters on a background. • I can structure specific timing of animations using a time slider. • I can use a camera to create a short stop motion animation film. • I can analyse and evaluate software.

KS2 Subject Content

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

	Autumn		Spring	Summer	
Year 6	<p>Scratch</p> <ul style="list-style-type: none"> • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. • I can create appropriate animations for a story scene. • I can structure and control the timing of events. • I can control when objects need to be visible. • I can sequence events to create a story narrative. • I can add voice sounds to enhance an animated story. • I can add interactive user features to a scene or story. 	<p>Online Safety</p> <ul style="list-style-type: none"> • Use technology safely, respectfully and responsibly; recognise acceptable /unacceptable behaviour; identify a range of ways to report concerns about content and contact. • Be discerning in evaluating digital content. • I can find similarities and differences between in person and cyberbullying. • I can identify good strategies to deal with cyberbullying • I can identify secure websites by identifying privacy seals of approval. • I understand the benefits and pitfalls of online relationships. • I can identify information that I should never share. • I can identify how the media play a powerful role in shaping ideas about girls and boys. • I can apply my online safety knowledge to my online activities. • I can use my knowledge of online safety to create a multiple choice quiz 	<p>Spreadsheets</p> <ul style="list-style-type: none"> • Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information • I can enter data and formulae into a spreadsheet. • I can order and present data based on calculations. • I can add, edit and calculate data. • I can use a spreadsheet to solve problems. • I can plan and calculate a spending budget. • I can design a spreadsheet for a specific purpose. 	<p>Kodu</p> <ul style="list-style-type: none"> • Select, use and combine a variety of software, including evaluating and presenting data and information. use logical reasoning to explain how some simple algorithms work. • Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. • Solve problems by decomposing them into smaller parts. • I can investigate and evaluate the features of programming software. • I can program Kodu using 'When' and 'Do' instructions. • I can use tools and add features to create an original landscape in Kodu. • I can analyse and deconstruct code to work out its purpose. • I can program a character to be controlled around a custom track to reach a goal. • I can program a character to follow an automatic path 	<p>Film Making</p> <ul style="list-style-type: none"> • Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • Understand computer networks including the internet and the opportunities they offer for communication and collaboration • Use a variety of software on a range of digital devices to design and create a range of content that accomplish given goals. • I can use appropriate software and other tools effectively to write a film script. • I can locate and check appropriate digital content, and provide accurate crediting of sources. • I can use digital recording devices to film and import into video editing software. • I can plan, conduct and import video interviews as part of a short film. • I can use video editing software to create a short film. I can use video editing software to turn a film project into a finished movie and present it.