

## Woodlands Park Primary – Computing Curriculum Map

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Foundation Stage</b>		<p><b>Online Safety</b></p> <ul style="list-style-type: none"> <li>Key themes from 'Safer Internet Day' using EYFS resources</li> <li>Lesson discussing themes from the assigned book: Smartie the penguin</li> </ul>	<p><b>Unit – instructions making a jam sandwich</b></p> <ul style="list-style-type: none"> <li>Introductions to algorithms</li> </ul>		<p><b>Unplugged activities looking at Algorithms</b></p> <ul style="list-style-type: none"> <li>Crazy character algorithms</li> <li>Lego building algorithm activity</li> <li>Dance move algorithms</li> </ul>	<p><b>Early Years introduction to computers</b></p> <ul style="list-style-type: none"> <li>Parts of a computer</li> <li>Computer repair shop</li> <li>Control a computer</li> </ul> <p><a href="http://www.iLearn2.co.uk/computerdiscoveryfree.html">www.iLearn2.co.uk/computerdiscoveryfree.html</a></p>
<b>Year 1</b>		<p><b>1.1 Technology around us</b> Recognising technology in school and using it responsibly.</p> <ul style="list-style-type: none"> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>Recognise common uses of information technology beyond school</li> </ul> <p>Software/hardware: paintz.app</p> <p><b>Online Safety</b></p> <p><b>A unit focusing on online safety including privacy of personal data, respect when online, the key theme from 'Safer Internet day' and any year group specific themes that need to be addressed.</b></p> <p><b>Also a lesson discussing themes from the assigned book: DigiDuck</b></p> <p><b>Resources sourced from: Safer Internet day website, <a href="https://beinternetlegends.withgoogle.com">https://beinternetlegends.withgoogle.com</a>, Gooseberry Planet, Barefootcomputing.org</b></p> <ul style="list-style-type: none"> <li>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</li> </ul>	<p><b>1.2 Digital painting</b> <b>Outcome could be based on topic</b></p> <p>Choosing appropriate tools in a program to create art, and making comparisons with working non-digitially.</p> <ul style="list-style-type: none"> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p>Software/hardware:Paint</p>	<p><b>1.3 Moving a robot</b></p> <p>Writing short algorithms and programs for floor robots, and predicting program outcomes.</p> <ul style="list-style-type: none"> <li>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</li> <li>Create and debug simple programs</li> <li>Use logical reasoning to predict the behaviour of simple programs</li> <li>Recognise common uses of information technology beyond school</li> </ul> <p>Software/hardware: Bee-bot or something similar</p>	<p><b>1.5 Digital writing</b> <b>Outcome could be based on topic</b></p> <p>Using a computer to create and format text, before comparing to writing non-digitially.</p> <ul style="list-style-type: none"> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>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</li> </ul> <p>Software/hardware: Microsoft Word</p>	<p><b>1.6 Programming animation</b></p> <p>Designing and programming the movement of a character on screen to tell stories.</p> <ul style="list-style-type: none"> <li>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</li> <li>Create and debug simple programs</li> <li>Use logical reasoning to predict the behaviour of simple programs</li> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>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</li> </ul> <p>Software/hardware: Scratch</p>
<b>Year 2</b>	<p><b>2.1 Information Technology around us</b></p> <p>Identifying IT and how its responsible use improves our world in school and beyond.</p> <ul style="list-style-type: none"> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>Recognise common uses of information technology beyond school</li> <li>Use technology safely and respectfully, keeping personal</li> </ul>	<p><b>Online Safety</b></p> <p>A unit focusing on online safety including privacy of personal data, respect when online, the key theme from 'Safer Internet day' and any year group specific themes that need to be addressed.</p> <p>Also a lesson discussing themes from the assigned book: Hello</p> <p>Resources sourced from: Safer Internet day website,</p>	<p><b>2.2 Digital Photography</b> <b>Outcome could be based on topic</b></p> <p>Capturing and changing digital photographs for different purposes.</p> <ul style="list-style-type: none"> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>Recognise common uses of information technology beyond school</li> </ul> <p>Software/hardware: Digital camera</p>	<p><b>2.3 Robot Algorithms</b></p> <p>Creating and debugging programs, and using logical reasoning to make predictions.</p> <ul style="list-style-type: none"> <li>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</li> <li>Create and debug simple programs</li> </ul>	<p><b>2.5 Making Music - Taught by Sara Foley with Audacity</b> <b>Outcome could be based on topic</b></p> <p>Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.</p> <ul style="list-style-type: none"> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p>Software/hardware: Chrome Music Lab change to Garage Band</p>	<p><b>2.6 An Introduction to Quizzes</b></p> <p>Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.</p> <ul style="list-style-type: none"> <li>Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions</li> <li>Create and debug simple programs</li> </ul>

	<p>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</p> <p>Software/hardware: Microsoft Powerpoint</p>	<p><a href="https://beinternetlegends.withgoogle.com">https://beinternetlegends.withgoogle.com</a>, Gooseberry Planet, Barefootcomputing.org</p> <ul style="list-style-type: none"> <li>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</li> </ul>		<ul style="list-style-type: none"> <li>Use logical reasoning to predict the behaviour of simple programs</li> </ul> <p>Software/hardware: Bee-bot or similar</p>		<ul style="list-style-type: none"> <li>Use logical reasoning to predict the behaviour of simple programs</li> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> </ul> <p>Software/hardware: Scratch</p>
<b>Year 3</b>	<p><b>3.1 Connecting computers</b></p> <p>Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.</p> <ul style="list-style-type: none"> <li>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>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</li> <li>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</li> </ul> <p>Software/hardware: any painting program</p>	<p><b>Online Safety</b></p> <p>A unit focusing on online safety including privacy of personal data, respect when online, the key theme from 'Safer Internet day' and any year group specific themes that need to be addressed.</p> <p>Also a lesson discussing themes from the assigned book: Tek the Modern Cave Boy</p> <p>Resources sourced from: Safer Internet day website, <a href="https://beinternetlegends.withgoogle.com">https://beinternetlegends.withgoogle.com</a>, Gooseberry Planet, Barefootcomputing.org</p> <ul style="list-style-type: none"> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul>	<p><b>3.2 Stop-frame Animation</b> <b>Outcome could be based on topic</b></p> <p>Capturing and editing digital still images to produce a stop-frame animation that tells a story.</p> <ul style="list-style-type: none"> <li>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</li> </ul> <p>Software/hardware: iMotion app</p>	<p><b>3.3 Sequence in music - Taught by Sara Foley with Garage band</b></p> <p>Creating sequences in a block-based programming language to make</p> <ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>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</li> </ul> <p>Software/hardware: Scratch</p>	<p><b>3.5 Desktop publishing</b> <b>Outcome could be based on topic</b></p> <p>Creating documents by modifying text, images, and page layouts for a specified purpose.</p> <ul style="list-style-type: none"> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>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</li> </ul> <p>Software/hardware: Adobe Spark – change to publisher</p>	<p><b>3.6 Events and actions</b> <b>Outcome could be based on topic</b></p> <p>Writing algorithms and programs that use a range of events to trigger sequences of actions.</p> <ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>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</li> </ul> <p>Software/hardware: Scratch</p>
<b>Year 4</b>	<p><b>4.1 The Internet</b></p> <p>Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.</p> <ul style="list-style-type: none"> <li>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</li> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> </ul>	<p><b>Online Safety</b></p> <p>A unit focusing on online safety including privacy of personal data, respect when online, the key theme from 'Safer Internet day' and any year group specific themes that need to be addressed.</p> <p>Also a lesson discussing themes from the assigned book: Webster's friend</p> <p>Resources sourced from: Safer Internet day website, <a href="https://beinternetlegends.withgoogle.com">https://beinternetlegends.withgoogle.com</a>, Gooseberry Planet, Barefootcomputing.org</p>	<p><b>4.2 Audio editing - Taught by Sara Foley with Garage band</b> <b>Outcome could be based on topic</b></p> <p>Capturing and editing audio to produce a podcast, ensuring that copyright is considered.</p> <ul style="list-style-type: none"> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range</li> </ul>	<p><b>4.4 Data logging</b></p> <p>Recognising how and why data is collected over time, before using data loggers to carry out an investigation.</p> <ul style="list-style-type: none"> <li>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>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,</li> </ul>	<p><b>4.5 Photo editing</b> <b>Outcome could be based on topic</b></p> <p>Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.</p> <ul style="list-style-type: none"> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>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</li> </ul>	<p><b>4.6 Repetition in games</b> <b>Outcome could be based on topic</b></p> <p>Using a block-based programming language to explore count-controlled and infinite loops when creating a game.</p> <ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>Use sequence, selection, and repetition in programs; work with</li> </ul>

	<ul style="list-style-type: none"> <li>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</li> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> <p>Software/hardware: Google chrome</p>	<ul style="list-style-type: none"> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul>	<p>of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <ul style="list-style-type: none"> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> <p>Software/hardware: Audacity changed to Garage band</p>	<p>including collecting, analysing, evaluating and presenting data and information</p> <p>Software/hardware: Data logger</p>	<p>that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <ul style="list-style-type: none"> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> <p>Software/hardware: Paint.Net</p>	<p>variables and various forms of input and output</p> <ul style="list-style-type: none"> <li>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>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</li> </ul> <p>Software/hardware: Scratch</p>
<b>Year 5</b>	<p><b>5.1 Sharing information</b></p> <p>Identifying and exploring how information is shared between digital systems</p> <ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>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</li> <li>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</li> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> <p>Software/hardware: Google slides – change to powerpoint</p>	<p><b>Online Safety</b></p> <p>A unit focusing on online safety including privacy of personal data, respect when online, the key theme from ‘Safer Internet day’ and any year group specific themes that need to be addressed.</p> <p>Also a lesson discussing themes from the assigned book: When Charlie McButton Lost Power</p> <p>Resources sourced from: Safer Internet day website, <a href="https://beinternetlegends.withgoogle.com">https://beinternetlegends.withgoogle.com</a>, Gooseberry Planet, Barefootcomputing.org</p> <ul style="list-style-type: none"> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul>	<p><b>5.2 Video editing</b> <b>Outcome could be based on topic</b></p> <p>Planning, capturing, and editing video to produce a short film.</p> <ul style="list-style-type: none"> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>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</li> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> <p>Software/hardware: Microsoft photos</p>	<p><b>5.4 Flat-file databases</b></p> <p>Using a database to order data and create charts to answer questions.</p> <ul style="list-style-type: none"> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>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</li> </ul> <p>Software/hardware: j2data Database</p>	<p><b>5.5 Vector drawing</b></p> <p>Creating images in a drawing program by using layers and groups of objects.</p> <ul style="list-style-type: none"> <li>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</li> </ul> <p>Software/hardware: Google Drawings</p>	<p><b>5.6 Selection in quizzes</b> <b>Outcome could be based on topic</b></p> <p>Exploring selection in programming to design and code an interactive quiz.</p> <ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>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</li> </ul> <p>Software/hardware: Scratch</p>

<p><b>Year 6</b></p>	<p><b>6.1 Communication</b> <b>Outcome could be based on topic</b></p> <p>Recognising how the WWW can be used to communicate and be searched to find information.</p> <ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>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</li> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>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</li> </ul> <p>Software/hardware: none</p>	<p><b>Online Safety</b></p> <p>A unit focusing on online safety including privacy of personal data, respect when online, the key theme from 'Safer Internet day' and any year group specific themes that need to be addressed.</p> <p>Also a lesson discussing themes from the assigned book: But it's just a game</p> <p>Resources sourced from: Safer Internet day website, <a href="https://beinternetlegends.withgoogle.com">https://beinternetlegends.withgoogle.com</a>, Gooseberry Planet, Barefootcomputing.org</p> <ul style="list-style-type: none"> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul>	<p><b>6.2 Web page creation</b> <b>Outcome could be based on topic</b></p> <p>Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation.</p> <ul style="list-style-type: none"> <li>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</li> <li>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</li> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> <p>Software/hardware: Google site – may want to use a Microsoft alternative</p>	<p><b>6.3 Variables in games</b></p> <p>Exploring variables when designing and coding a game.</p> <ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>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</li> <li>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</li> </ul> <p>Software/hardware: Scratch</p>	<p><b>6.4 Introduction to spreadsheets</b> <b>Outcome could be based on topic</b></p> <p>Answering questions by using spreadsheets to organise and calculate data</p> <ul style="list-style-type: none"> <li>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</li> </ul> <p>Software/hardware: Microsoft Excel</p>	<p><b>6.6 Sensing</b></p> <p>Designing and coding a project that captures inputs from a physical device.</p> <ul style="list-style-type: none"> <li>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> <li>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</li> </ul> <p>Software/hardware: micro:bit and Microsoft MakeCode</p>
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