



Woodside Primary Academy Progression Map



Subject: Computing

At Woodside Primary Academy we recognise that pupils are living in a rapidly changing world, in which computing is playing an ever-increasing role. We aim, therefore, to equip children with the skills to adapt to new technology and to give them confidence to use computing to further their learning and assist them in everyday life. In doing so, all pupils will have access to computing equipment and resources, according to their ability and age range. At Woodside Primary Academy we believe that increased computing skills promote independent learning and gives greater access to a wide range of ideas and experiences. It enhances the quality of children's work across the curriculum and should enhance and enrich the learning process.

Autumn	EYFS	Key Stage 1		Key Stage 2			
	Nursery 2-3 Nursery 3-4 Year R Taught across the term	Year 1 Autumn	Year 2 Autumn	Year 3 Autumn	Year 4 Autumn	Year 5 Autumn	Year 6 Autumn
Knowledge	<p><u>Nursery 2-3</u></p> <p>Know that some toys move when they are pushed/pulled</p> <p><u>Nursery 3-4</u></p> <p>I can investigate independently how toys move in different ways i.e., rolling, spinning.</p> <p><u>Year R</u></p> <p>I can listen to and follow recorded instructions (direction explicit language) to manoeuvre a bee bot.</p>	<p><u>I Safe</u></p> <p>I know that some information is personal (Name and address) I Can tell you why I do or do not trust someone but sometimes get it wrong.</p> <p>I understand that personal information should only be given to trusted people but sometimes trust the wrong people.</p> <p>I can give a few examples of information that is personal (hobbies).</p> <p>I can usually point out what it is about someone that makes me not trust them.</p> <p>I know that personal information should only be given to people I trust.</p>	<p><u>I Safe</u></p> <p>I know that personal information should only be given to trusted people.</p> <p>I can talk about the importance of staying safe online.</p> <p>I can explain why I should not use email without permission.</p> <p>I can give lots of examples of what information is private.</p> <p>I can talk about some of the ways to use computers safely</p> <p>I ask permission before using emails or apps.</p> <p>I can use computers and devices responsibly.</p>	<p><u>I Safe</u></p> <p>I can talk about some ways I can keep myself safe when using ICT.</p> <p>I can use ICT to communicate, talk about some of the risks and try to keep safe.</p> <p>I understand that there are adverts online.</p> <p>I can tell you why we need passwords and that they should be kept safe.</p> <p>I can follow some e-safety rules.</p> <p>I can point out an online advert.</p> <p>I can give examples of right and wrong things to do using computers and online.</p> <p>I can tell you why information I find online</p>	<p><u>I Safe</u></p> <p>I can talk about different ways I can keep myself safe when using ICT.</p> <p>I know that not all information provided on the world wide web is correct.</p> <p>I understand that I should get permission for sharing some things online.</p> <p>I can tell you about why I should secure passwords and why I need to keep them private.</p> <p>I can use ICT to communicate, talk about some of the risks and act to avoid them.</p> <p>I can tell you why information found online needs to be checked.</p> <p>I can give examples</p>	<p><u>I Safe</u></p> <p>I can use some safety measures when using technology and working online.</p> <p>I can use searches to find information I'm looking for and check if it's useful and believable.</p> <p>I check if the information I find online is right.</p> <p>I know that people can be mean and nasty online.</p> <p>I can tell you why personal information should only be given to trusted sources.</p> <p>I know that some information on the internet may be misleading or inaccurate and I check</p>	<p><u>I Safe</u></p> <p>I can Identify a range of ways they can keep themselves safe using technology and online services and know how to report any concerns.</p> <p>I can communicate and work safely online.</p> <p>I can use search criteria efficiently to find information online and check it for accuracy and reliability.</p> <p>I can use passwords I know that people can be bullied online.</p> <p>I can use digital tools to communicate and collaborate effectively online.</p> <p>I can identify some of the risks associated with</p>

		<p>I understand that a wider range of information is personal.</p> <p>I can give examples of a variety of characteristics of trustworthy people and tell you why I think the way I do.</p> <p>I know that personal information should only be given to trusted people.</p>	<p>I can tell you some of the ways to report things I see or hear online that makes me uncomfortable, worried or upset.</p> <p>I can talk about some of the dangers of sending and receiving emails.</p>	<p>needs to be checked.</p> <p>I can check information I find online.</p> <p>I can choose information from a different website carefully.</p> <p>I can explain how to avoid adverts tricking me.</p>	<p>about what types of things online I might need permission to use.</p> <p>I can use safety measures when using technology and working online.</p> <p>I can use searches to find information I'm looking for and check if it's useful and believable.</p> <p>I check if the information I find online is right and I can tell you what copyright means.</p>	<p>the information I find.</p> <p>I can use technology and online services to communicate and collaborate and identify some of the risks and act to minimise them.</p> <p>I can give examples about what is good and bad behaviour online.</p> <p>I can talk about the different ways people can be bullied online.</p> <p>I can give lots of examples about how I can stay safe using technology and online and how to report anything I'm worried about.</p> <p>I can communicate and work effectively and safely online.</p> <p>I can use search criteria efficiently and find information online and check if it's accurate and reliable.</p> <p>I know what to do if I come across cyberbullying</p>	<p>work and leisure in a digital society and act to minimise them.</p> <p>I can find information online and check it for accuracy and reliability</p> <p>I can talk about the importance of screen locks that protect devices.</p> <p>I can create passwords that might be difficult to guess.</p> <p>I can make decisions about information sharing on sites and services I use.</p> <p>I can identify situations of harassment or bullying online.</p> <p>I can identify situations when it's better to communicate face to face rather than to message.</p> <p>I know that there are tools available to report online abuse.</p> <p>I can use a variety of technologies and online tools to communicate and collaborate safely and effectively.</p> <p>I can demonstrate responsible use of technology and online tools.</p> <p>I know a number of risks associated with work and leisure in a digital society and act to minimise them.</p> <p>I know how to</p>
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Skills	<p><u>Nursery 2-3</u></p> <p>To use cause and effect toys to help develop language skills and develop gross motor skills.</p> <p><u>Nursery 3-4</u></p> <p>To begin to investigate a range of toys independently that have mechanisms for move</p> <p><u>Year R</u></p> <p>To begin to understand how to follow instructions.</p>	<p><u>I Safe</u></p> <p>Know that some information is personal.</p> <p>I can identify some characteristics of trustworthy/untrustworthy people but give inappropriate justification.</p> <p>Understand that personal information should only be given to trusted people, but the trust can be misplaced.</p> <p>Understand that various information is personal.</p> <p>know that personal information should only be given to trusted people</p>	<p><u>I Safe</u></p> <p>Identify some ways they can keep themselves safe when using ICT.</p> <p>Use ICT to communicate, identify some of the risks and act to minimise them.</p> <p>Understand that a wider range of information is personal.</p>	<p><u>I Safe</u></p> <p>Cross check information found on one website against another source.</p> <p>Carefully select information from a range of websites.</p> <p>Recognise what is acceptable/unacceptable behaviour when using technology and online.</p>	<p><u>I Safe</u></p> <p>Cross-check information provided on one website against that provided on another.</p> <p>Demonstrate the use of basic safety measures when using technology and working online.</p> <p>Know the need to use secure passwords and keep them private.</p> <p>Use ICT to communicate and collaborate, identify some of the risks and act to minimise them</p>	<p><u>I Safe</u></p> <p>Cross-check information provided on one website against that provided on another.</p> <p>Create digital content for specific purposes.</p> <p>Demonstrate the use of basic safety measures when using technology and working online.</p> <p>Check information provided on the world wide web for accuracy.</p> <p>Know that personal information should only be given to trusted sources</p>	<p><u>I Safe</u></p> <p>Identify a range of ways they can keep themselves safe using technology and online services and know how to report any concerns.</p> <p>Communicate effectively and safely online.</p> <p>Use search criteria efficiently to find information online and check it for accuracy and reliability.</p>

Vocabulary	<u>Nursery 2-3</u> Push Pull My turn Your turn <u>Nursery 3-4</u> Rolling Spinning Moving <u>Year R</u> Internet Online Website Safe	Personal Information Trusted adult Permission Cyber Bullying	Personal Information Trustworthy Untrustworthy Trusted Adult Internet Online	Privacy Settings Online Sharing Content Strong Password Manipulation	Privacy settings Keywords Copyright Strong Password Spam Virus Cyber Bullying	Personal Information Reliable Cyber Bullying SMART	Personal Information Reliable Cyber Bullying Strong Password Privacy settings
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Spring	EYFS	Key Stage 1		Key Stage 2			
	Nursery 2-3 Nursery 3-4 Year R Taught across the term	Year 1 Spring	Year 2 Spring	Year 3 Spring	Year 4 Spring	Year 5 Spring	Year 6 Spring
Knowledge	<p><u>Nursery 2-3</u></p> <p>I know that some toys move or turn on if certain buttons are pressed.</p> <p><u>Nursery 3-4</u></p> <p>I know that objects (bee bots) can move if I press the directional buttons.</p> <p><u>Year R</u></p> <p>I know how to interact with a variety of different computing equipment such as microphones for singing that are available in the classroom.</p>	<p><u>I Write</u></p> <p>Look at how you can write different prints.</p> <p>Create a simple sentence using software.</p> <p>Open a document to construct a simple story using a word processor.</p> <p>Children suggest situations and advantages for using a word processor</p> <p><u>I Draw</u></p> <p>To make shapes and fill them in.</p> <p>Create a self portrait</p> <p>Use appropriate shapes and colours to recreate the work of an artist</p> <p>Create an eBook based on a nursery rhyme</p> <p><u>I Model</u></p> <p>Children use a mouse to dress a virtual child</p> <p>Children investigate alternative ways to programme.</p> <p>Children can use a simple adventure game and make choices on</p>	<p><u>I Search</u></p> <p>Children to navigate around a website to find out about a planet</p> <p>Ask/ answer a question relating to planets</p> <p>Children collect information from a section of a website</p> <p>Children present their findings in a book</p> <p><u>I Do Mail</u></p> <p>Understand that messages can be sent electronically over distances</p> <p>Understand that people can reply to them</p> <p>Understand that communication can be images, sound and texts</p> <p><u>I Program</u></p> <p>Children can sequence a set of instructions for making a sandwich</p> <p>Children create a sequence of instructions for a dance routine adding repeat instructions</p> <p>Children to draw their own monster sprite using scratch software</p>	<p><u>I Connect</u></p> <p>Children navigate a website using hyperlinks</p> <p>Children navigate a website using links, buttons and scroll bars</p> <p>Children enter URLs into the web browser.</p> <p>Visit and explore different websites</p> <p>Children simulate a search engine and find things out online (link to e safety)</p> <p>Children evaluate a website according to different criteria</p> <p>Children to learn and talk about copyright</p> <p>Children to produce their own cyber hunt involving websites</p> <p><u>I Network</u></p> <p>Children explain that a network are things that are connected</p> <p>Children can identify key parts of a network</p> <p>Children can talk about how information can be</p>	<p><u>I Mail</u></p> <p>Simulate sending messages over distances using different methods (flags, Morse code & bonfires)</p> <p>Children read an email</p> <p>Children compose and send emails and respond (style of email-formal/informal)</p> <p>Children to understand how messages bounce back</p> <p>Children to attach a photo to their email</p> <p>Children to use email to collaborate ideas discussing a project</p> <p><u>I Program</u></p> <p>Children can draw simple shapes using programming blocks containing directional language and repetition</p> <p>The children can create and test a sequence of statements that make letters of the alphabets</p> <p>The children create programmes that alter the size of the shape</p> <p>The children programme a robot to draw letters of the alphabet</p>	<p><u>I Draw</u></p> <p>Children use software to create an image using different tools.</p> <p>Look at resizing and rotating</p> <p>Children to recognise the components of a vector image</p> <p>Children to use tools to create a vector image</p> <p>Children to use tools to create a vector image</p> <p>Children can explain which tools create which affect and make changes for effect</p> <p>Children to add and create layers</p> <p>Children to design a vector drawing using digital tools according to a design</p> <p>Children evaluate their work</p> <p><u>I Program Unit 1</u></p> <p>To understand that computer programs containing graphics use x y coordinates and turns are measured in degrees.</p> <p>To create a game that senses events on screen.</p> <p>To program statements that make something happen in response to events on screen.</p> <p>To be able to understand what a variable is and</p>	<p><u>I Draw</u></p> <p>Children use software to create an image using different tools. Look at resizing and rotating</p> <p>Children to recognise the components of a vector image</p> <p>Children to use tools to create a vector image</p> <p>Children can explain which tools create which affect and make changes for effect</p> <p>Children to add and create layers</p> <p>Children to design a vector drawing using digital tools according to a design</p> <p>Children evaluate their work</p> <p><u>I Program Unit 1</u></p> <p>To understand that computer programs containing graphics use x y coordinates and turns are measured in degrees.</p> <p>To create a game that senses events on screen.</p> <p>To program statements that make something happen in response to events on screen.</p> <p>To be able to understand what a variable is and</p>

		<p>screen.</p> <p>Children to recognise what is real/not real in the game</p> <p>Children build on drawing skills to create a storyboard</p> <p><u>I Data</u></p> <p>Children use a table to create a pictogram</p> <p>Children use them to answer questions</p> <p>Children use digital tools to create a graph</p>	<p>Children create an animation where their sprite moves on the stage</p> <p>Children programme 2 sprites to talk to each other using say blocks</p> <p>Children make a simple animation which has a simple background with sprites moving and talking</p>	<p>passed between devices</p> <p>Children describe how networks connect to the internet using routers</p> <p>Children talk about how networks connect to each other and model data transfer</p> <p>Children identify the IP address of their favourite website</p> <p><u>I Data</u></p> <p>Children understand the words record, field and data when talking about databases</p> <p>Children can search and sort records in an electronic database</p> <p>Children will enter multiple records to an existing database</p>	<p>The children programme a robot to pick up a beacon using an if statement or else move in another direction</p> <p>The children program a virtual robot to follow makers on a map and retrieve an object</p>	<p>senses events on screen.</p> <p>To program statements that make something happen in response to events on screen</p> <p>To be able to understand what a variable is and why they are useful</p> <p>To understand that variables can be used in programming to keep track of values</p> <p>To program statements that make something happen in response to the value of a variable.</p> <p>To identify an appropriately scoped project</p> <p>To develop an outline of tasks and activities required to develop a project.</p> <p>To use computational concepts of sequence, selection, repetition and variables to program a computer game.</p> <p>To develop an outline of tasks and activities required to develop a project.</p> <p>To use computational concepts of sequence, selection, repetition and variables to program a computer game.</p>	<p>why they are useful.</p> <p>To understand that variables can be used in programming to keep track of values.</p> <p>To program statements that make something happen in response to the value of a variable.</p> <p>To identify an appropriately scoped project</p> <p>To develop an outline of tasks and activities required to develop a project.</p> <p>To use computational concepts of sequence, selection, repetition and variables to program a computer game.</p>
Skills	<p><u>Nursery 2-3</u></p> <p>To operate on/off toys</p> <p><u>Nursery 3-4</u></p> <p>To be able to input basic code in order for an object to move.</p> <p><u>Year R</u></p>	<p><u>I Write and I Draw</u></p> <p>Use digital drawing tools to express something</p> <p>Use IT to create sentences that communicate meaning</p> <p>Find answers to simple questions using a website</p> <p>Use drawing and text told to impart</p>	<p><u>I Search and I Do Mail</u></p> <p>Navigate a document using arrow keys and a mouse</p> <p>Use the backspace button and delete button to remove text</p> <p>Use tools to create simple presentations that communicate meaning</p> <p>Navigate around a website using hyperlinks and the back button</p>	<p><u>I Connect</u></p> <p>Know that people can communicate and collaborate online</p> <p>Use a search technology to find things out</p> <p>Use a range of tools to communicate and express ideas</p>	<p><u>I Mail</u></p> <p>Use more advance features of applications to help them match their work to their audience</p> <p>Send an email</p> <p>Reply to an email</p> <p>Use the search facility in a database to find the answer to questions</p>	<p><u>I Draw</u></p> <p>Create digital content that incorporates text and image</p> <p>Understand that digital content needs to be planned to take account of the intended audience, the content and the layout of information</p> <p>Discuss the rationale</p>	<p><u>I Draw</u></p> <p>Create digital content that incorporates text and image</p> <p>Understand that digital content needs to be planned to take account of the intended audience, the content and the layout of information</p> <p>Discuss the rationale</p>

	Children will develop their fine motor skills to be able to use a range of tools for computing safely, competently and confidently.	information Use a combination of text and drawing to make simple presentations	Type web address into a web browser Create internet favourites			behind their digital creations including content, media used and layout.	behind their digital creations including content, media used and layout.
Vocabulary	<u>Nursery 2-3</u> on/off Switch <u>Nursery 3-4</u> Bee bot Button Forward backward <u>Year R</u> Record Pause Play	Digital Art Canvas Brush Fill Line Shape tool Undo Edit Save Open Print Text Processor Word Keyboard Backspace Key Return enter Data Tally Pictogram Model Algorithm Instruction Choice	Email Address Attachment World wide web Network Internet Hyperlink Search URL Algorithm Sequence Program Repeat Test Debug	World wide web Network Internet Hyperlink Search URL IP address Web browser Copyright database, record, question, field, data database, record, enter, Network; connected; network switch; server; wireless access point (WAP) WIFI; router; LAN (local area network)	Email Email address To From forward Attachment Turtle; forward; back; left; right; repeat; angle; degrees; repeat Turtle; sequence; angle; forward; back; left; right; degrees Robot; forward; backward; right; left; paint; remote control condition; if; then; else; true; false; execute; statement; left; right; forward; back; repeat Condition; repeat; if; else; left; right; forward; back	Vector Canvas Resize Rotate Fill Stamp Group Layer Zoom Send to front Send to back Bring Forward Send Backward Sequence Selection conditions Condition Repeat Boolean Variable Coordinates x-y axis	Vector Canvas Resize Rotate Fill Stamp Group Layer Zoom Send to front Send to back Bring Forward Send Backward Sequence Selection conditions Condition Repeat Boolean Variable Coordinates x-y axis



Summer	EYFS	Key Stage 1		Key Stage 2			
	Nursery 2-3 Nursery 3-4 Year R Taught across the term	Year1 Summer	Year 2 Summer	Year 3 Summer	Year 4 Summer	Year 5 Summer	Year 6 Summer
Knowledge	<p><u>Nursery 2-3</u></p> <p>To know what buttons can cause a camera to take a picture in the classroom.</p> <p><u>Nursery 3-4</u></p> <p>To be able to use programmable toys to move forwards or backwards and left and right</p> <p><u>Year R</u></p> <p>I can use simple software applications to make something happen on an IPAD</p>	<p><u>I Algorithm</u></p> <p>The children can give examples of everyday algorithms</p> <p>The children can follow a set of instructions</p> <p>The children produce a set of instructions</p> <p>The children give instructions to a human robot to complete.</p> <p>The children write/draw an algorithm for robot to follow</p> <p>The children plan a sequence of instructions to direct a partner to an object</p> <p>The children can change the instructions if they are incorrect</p> <p>The children make predictions about what a leo model will look like based on a simple algorithm.</p> <p>They test their predictions by following an</p>	<p><u>I Animate</u></p> <p>The children create a flipping book animation</p> <p>The children create character descriptions for a fairy tale</p> <p>The children create a storyboard for a short stop-frame animated sequence</p> <p>The children create a script to retell a short, animated scene of a fairytale</p> <p>The children create the backgrounds and characters for their animation</p> <p>The children use a storyboard and script to support the creation of a stop frame animation</p> <p><u>I Program Unit 2</u></p> <p>The children program a character to move</p> <p>The children program an animal sprite to animate animal-like movement and actions</p> <p>The children create an animation exploring the solar system</p>	<p><u>I Program Unit 1</u></p> <p>To understand that a program is a sequence of statements written in a programming language (Scratch)</p> <p>To program an animation that executes a sequence of statements</p> <p>To understand that computer programs containing graphics use x y coordinates and turns are measured in degrees</p> <p>To program a sequence of instructions that create visual effects</p> <p>To import, create and record sounds. -To understand that algorithms and programs can involve repetition</p> <p>To predict the outcomes of a simple algorithm</p> <p>To use a repeat function to draw a 2D shape</p>	<p><u>I Program Unit 3</u></p> <p>Plan small groups of commands and test each before developing programs</p> <p>The children create a procedure that is used by more than one sprite</p> <p>The children use two different programming constructs to synchronise action (timing and broadcasts)</p> <p>The children create a project with changing backdrops</p> <p>The children investigate and fix bugs in a number of computer programs</p> <p>The children develop a collaborative storytelling project.</p> <p><u>I Data</u></p> <p>The children create a binary string that represents their own initials.</p> <p>The children sort database records and use the information on them to answer questions</p> <p>The children add records to a database</p> <p>The children use terms to search a database and</p>	<p><u>I Model</u></p> <p>The children use the basic building tools of graphical modelling software to build a simple 3D model.</p> <p>The children can make changes to graphical models</p> <p>The children develop their projects according to a design</p> <p>They combine shapes by grouping, connecting, repositioning and resizing to create a 3D model</p> <p>The children can identify improvements that could be made to a model</p> <p>The children amend their models to improve them.</p> <p><u>I Web</u></p> <p>To understand the World Wide Web is one of the services offered on the internet.</p> <p>To know that the world wide web consists of many websites and webpages that can be accessed using the internet.</p> <p>To understand that many people remix content to work on the world wide</p>	<p><u>I Model</u></p> <p>The children use the basic building tools of graphical modelling software to build a simple 3D model.</p> <p>The children can make changes to graphical models</p> <p>The children develop their projects according to a design</p> <p>They combine shapes by grouping, connecting, repositioning and resizing to create a 3D model</p> <p>The children can identify improvements that could be made to a model</p> <p>The children amend their models to improve them.</p> <p><u>I Web</u></p> <p>To understand the World Wide Web is one of the services offered on the internet.</p> <p>To know that the world wide web consists of many websites and webpages that can be accessed using the internet.</p> <p>To understand that many people remix content to work on the world wide</p>

		<p>algorithm</p> <p>The children know whether a simple condition is true or not. The children can follow instructions to do something in response to a condition being true or false</p> <p><u>I Program Unit 1</u> The children can identify everyday devices that perform an action in response to an instruction.</p> <p>The children can guide a programmable to where they want it to go.</p> <p>The children can plan, test and amend a sequence of instructions that moves a programmable toy. The children make predictions about where an object will be after executing an algorithm.</p> <p>The children produce a clear set of instructions for others to follow.</p> <p>The children can follow a set of instructions provided by others.</p> <p>The children combine physical Scratch jr</p>	<p>The children program a plant to grow or shrink according to a condition The children use the trigger blocks and go to the page block to convey two possible outcomes to a story.</p> <p>The children play, design and program an animated story</p>	<p>To import pictures from a computer and/or the internet To combine images, sounds and movement to create a personal animation.</p> <p><u>I Simulate</u> The children understand that computer simulations allow users to try things that would be difficult or impossible to do in real life</p> <p>The children use a simulation to identify patterns and rules</p> <p>The children use and explore an adventure game based on an imaginary world</p> <p>The children use an electrical circuit Simulation to try out combinations of circuits</p> <p>The children make a computer simulation</p>	<p>answer questions</p> <p>The children create simple charts using a database They use the information on the chart to answer questions</p> <p><u>I Animate</u> The children create a flipping book animation The children draw a series of images on frames</p> <p>Each frame shows a figure on a different pose</p> <p>The children animate a sequence of digital images</p> <p>The children design and add backgrounds to their animated scenes</p> <p>The children plan and make an animation</p>	<p>To understand that many people remix content to work on the world wide web. To know that websites are written in HTML. To know that a HTML gives a web page structure To change a picture on a web page. To read basic HTML code. To understand how HTML provides structure for web content To use research for the creation of a website. To upload an image for insertion into a website.</p> <p><u>I Crypto</u> The children encode a message using a variety of methods</p> <p>The children decode semaphore message</p> <p>The children encode and decode message using morse code</p> <p>The children encode/decode messages using Caesar Shift</p> <p>The children use frequency analysis to try to crack code</p>	<p>web.</p> <p>To know that websites are written in HTML. To know that a HTML gives a web page structure To change a picture on a web page. To read basic HTML code. To understand how HTML provides structure for web content To use research for the creation of a website. To upload an image for insertion into a website.</p>
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		<p>blocks to direct each other to move to obstacles in the story.</p> <p>The children import and/or edit/draw a background for the bear hunt story.</p> <p>The children program a sprite to move to objects on screen in a specific sequence.</p> <p>The children program something to happen when the main sprite bumps the obstacles in the bear hunt story.</p> <p>The children program a bear sprite to chase the main character sprite.</p> <p>The sprites move at different speeds</p> <p>The children plan and make an animated story.</p>				The children use an enigma simulator to crack code	
Skills	<p><u>Nursery 2-3</u></p> <p>To use equipment for a desired outcome.</p> <p><u>Nursery 3-4</u></p> <p>Listen to and follow recorded instructions</p> <p><u>Year R</u></p> <p>Use simple software applications to make something happen</p>	<p><u>Algorithm</u></p> <p>Read a set of instructions and sometimes predict the correct outcomes</p> <p>Produce instructions but sequence them incorrectly or make assumptions</p> <p>Understand that humans and computers follow instructions</p> <p>Produce a set of instructions</p> <p>Understand that</p>	<p><u>Animate</u></p> <p>Combine graphics with text</p> <p>Use appropriate effects and resize graphics</p> <p>Use software, computers and devices to make simple presentations and create things</p> <p>Know how to undo and redo</p>	<p><u>Program Unit 1</u></p> <p>Design and develop basic computer programs</p> <p>Combine sequences of commands into procedures that are repeated</p> <p>Test and correct simple programs</p> <p>Evaluate their own work and comment on improvements</p> <p>Combine graphics with text</p> <p>Use appropriate effects</p>	<p><u>Program Unit 3</u></p> <p>Write an algorithm to produce a given effect using repetition</p> <p>Accurately predict the outcome of a range of algorithms and programs</p> <p>Test, debug and refine algorithms and programs</p> <p>Use sequence and basic selection and repetition in computer programs</p> <p>Explain how a programmed effect has been achieved</p> <p>Talk about</p>	<p><u>Model</u></p> <p>To understand the difference between 2D and 3D shapes</p> <p>To become familiar with basic 3D modelling tools</p> <p>To understand that graphical models can be easily changed</p> <p>To use features of graphical modelling software to develop a 3D model</p>	<p><u>Model</u></p> <p>To understand the difference between 2D and 3D shapes</p> <p>To become familiar with basic 3D modelling tools</p> <p>To understand that graphical models can be easily changed</p> <p>To use features of graphical modelling software to develop a 3D model</p>

		<p>computers follow instructions given in a precise way</p> <p>Produce an accurate set of instructions using agreed language that others can follow</p> <p>Understand that computers have no intelligence</p>		<p>and resize graphics</p> <p>Use software, computers and devices to make simple presentations and create things</p> <p>Know how to undo and redo</p>	<p>improvements that could be made to progress</p> <p><u>I Data</u> Use the more advanced features of applications</p> <p>Send an email</p> <p>Reply to an email</p> <p><u>I Animate</u> To understand what I animation is</p> <p>To create a scene for an animation</p> <p>To understand that animations can be created using digital tools</p> <p>To create an animated scene</p> <p>To storyboard and create a short animation</p>	<p>To evaluate and improve 3D models</p> <p><u>I Web</u> To understand what the world wide web is one of the services offered on the internet</p> <p>To know that the world wide web consists of many websites and web pages that ca be accessed using the internet</p> <p>To know that websites are written in HTML code</p> <p>To read basic HTML code</p> <p>To understand how HTML provides structure for web content</p> <p><u>I Crypto</u> To understand that messages can be sent and received secretly</p> <p>To learn encrypt/decrypt simple messages</p> <p>To understand that messages can be sent electronically over distances</p> <p>To understand that data can be transmitted as binary</p> <p>Understand algorithm of a simple cipher</p> <p>To use frequency analysis to decipher encrypted text</p>	<p>To evaluate and improve 3D models</p> <p><u>I Web</u> To understand what the world wide web is one of the services offered on the internet</p> <p>To know that the world wide web consists of many websites and web pages that ca be accessed using the internet</p> <p>To know that websites are written in HTML code</p> <p>To read basic HTML code</p> <p>To understand how HTML provides structure for web content</p> <p><u>I Crypto</u> To understand that messages can be sent and received secretly</p> <p>To learn encrypt/decrypt simple messages</p> <p>To understand that messages can be sent electronically over distances</p> <p>To understand that data can be transmitted as binary</p> <p>Understand algorithm of a simple cipher</p> <p>To use frequency analysis to decipher encrypted text</p> <p>To understand the importance of</p>
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						<p>To understand the importance of cryptography historically and today</p> <p><u>I Program Unit 2</u> To understand that computer programs containing graphics use X Y coordinates and turns are measured in degrees</p> <p>To use condition statements</p> <p>To understand that some variables can be true or false</p> <p>To understand that programs can do different things if the value of a Boolean variable is true or false</p> <p>To use variables in programs</p>	<p>cryptography historically and today</p> <p><u>I Program Unit 2</u> To understand that computer programs containing graphics use X Y coordinates and turns are measured in degrees</p> <p>To use condition statements</p> <p>To understand that some variables can be true or false</p> <p>To understand that programs can do different things if the value of a Boolean variable is true or false</p> <p>To use variables in programs</p>
Vocabulary	<p><u>Nursery 2-3</u> Camera Photo Button</p> <p><u>Nursery 3-4</u> Instruction Listen Left Right</p> <p><u>Year R</u> iPad Open Close Zoom</p>	<p>sequence; instructions; forward; back; turn; up; down up; down; left; right; debug; predict; debug; pattern; repeat algorithm program debug output sprite; interact; execute; test; save interact; bump; test; run; execute</p>	<p>Animation Scene Script Motion Storyboard Props Algorithm Instruction Sequence Program Repeat Test debug</p>	<p>Program Sequence Selection Repeat Co-ordinates x-y axis import test debug simulation rules choices variables</p>	<p>forward; left; right; sequence; command; jump; execute; procedure; abstraction; repeat; call; decomposition forward; left; right; sequence; command; jump; execute; function; abstraction; repeat; call animation frame frame rate frames per second CGI Data Database Record File Field Search Sort chart</p>	<p>2D 3D Model Resize Rotate Zoom in Zoom out Group World wide web HTML CSS (Cascading style sheets) Element Tags Cryptography Encrypt Decrypt Cipher Key Shift Binary Frequency analysis Object</p>	<p>2D 3D Model Resize Rotate Zoom in Zoom out Group World wide web HTML CSS (Cascading style sheets) Element Tags Cryptography Encrypt Decrypt Cipher Key Shift Binary Frequency analysis Object</p>

		<p>bump; fast; slow; speed; up; down; left; right; design; plan; animate; edit; setting; beginning; middle; end; scene; page; motion; speed;</p>				<p>program conditions (when. Do); iteration repetition loops input variable (score) statement sequence objective platform test debug condition input equal to statement</p>	<p>program conditions (when. Do); iteration repetition loops input variable (score) statement sequence objective platform test debug condition input equal to statement</p>
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Impact (End Points)						
EYFS	Key Stage 1		Key Stage 2			
Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Children are able to follow instructions with several ideas or actions. Children should work towards simple goals. Children should be able to play cooperatively taking turns. Children should be able to safely use and explore a variety of materials, tools and techniques.	Children should be able to confidently log in and use a range of technology/programs e.g., Beebots, computer, camera. They use different technology/programs appropriately to type, locate, identify and create.	Children create simple pictures increasing mouse skills. They know how to stay safe when working online. Children can understand how code moves a sprite and how to write an algorithm for movement.	Children demonstrate a safe use of the Internet, awareness of privacy. Develop competence use of Excel spreadsheets, word documents and editing. Accomplished at collecting, analysing, evaluating, presenting data and information. Understanding of Binary.	Children should be confident in using the internet safely (search engines) and who to report concerns too. Understand the meaning of algorithms and how they work, detecting and correcting simple errors.	Children will know how to use a variety of different programs to achieve a desired outcome. They will be able to identify and debug algorithms in order to create a game using Kodu. Children will be able to use spreadsheets to collect and calculate data and present it in a variety of ways. They know how to stay safe online and how to behave responsibly online.	Children are able to use logical reasoning to explain how simple algorithms work in different programs and be able to apply their knowledge and Understanding. Children should be able to use search technologies effectively and independently. Children should be able to understand computer networks, including the internet and be able to use them safely, respectfully and responsibly.