

# The Craylands School KS1 Long term subject: Computing

<p><b>Aims</b>          can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation</p> <ul style="list-style-type: none"> <li>▪ can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems</li> <li>▪ can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems             <ul style="list-style-type: none"> <li>○ ▪ are responsible, competent, confident and creative users of information and communication technology.</li> </ul> </li> </ul>	
<p><b>Skills</b></p> <ul style="list-style-type: none"> <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             <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> </li> </ul>	<p><b>Skills</b></p> <ul style="list-style-type: none"> <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             <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> </li> </ul>
	<p>Term 1</p>
<p>Early Years</p>	<p>Work will be planned around the following 7 areas of learning: Personal Social and Emotional Development, Physical Development, Communication and Language, Literacy, Mathematics, Understanding of the World and Expressive Arts and Design.</p>

Year 1 Term 3	Algorithm	Instruction	Program Code	Beebot	Directions	Forwards/backwards	Left/right	Private
Link to prior learning	EYFS term 6							
Learning objectives	Context			Skills		Knowledge		
To know what information to keep safe online	What information is personal and should be kept private? <a href="https://www.bbc.co.uk/bitesize/topics/zymyqqt/articles/zwbq7ty">https://www.bbc.co.uk/bitesize/topics/zymyqqt/articles/zwbq7ty</a>			To write simple instructions. To follow simple instructions. To use left, right, forward, backwards. To combine instructions to move a programmable toy.		Can they recognise the information to keep private?		
To understand an algorithm is a set of instructions	What do we use to help us know what to do when making something? <a href="https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4">https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4</a>			To write simple instructions. To follow simple instructions.		Can they understand an algorithm is a set of instructions?		
To create and follow an algorithm	What instructions do we need to use to get someone or something to move? <a href="https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4">https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4</a>			To write simple instructions. To follow simple instructions. To use left, right, forward, backwards.		Can they understand an algorithm is a set of instructions?		
To solve a problem with an algorithm	What instructions do I need to give to get someone through this obstacle course?			To write simple instructions. To follow simple instructions. To use left, right, forward, backwards.		Can they understand an algorithm is a set of instructions?		

To know what information to keep private	How can we move the Beebot to the information that we need to keep private? <a href="https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/zqnc4wx">https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/zqnc4wx</a>	To write simple instructions. To follow simple instructions. To use left, right, forward, backwards. To combine instructions to move a programmable toy.	Can they instruct a programmable toy? Can they recall what should be kept private online?
<b>Year 1 Term 4</b>	Bug debug algorithm instruction directions Forwards/backwards	Left/right internet	
Links to prior learning	Year 1 term 4		
Learning objectives	Context	Learning objectives	Context
To explain how to search the internet safely	What rules should we create for searching the internet? <a href="https://www.bbc.co.uk/bitesize/topics/zymyqqt/articles/zym3b9g">https://www.bbc.co.uk/bitesize/topics/zymyqqt/articles/zym3b9g</a>		Can they explain what we can use the internet for? Can they explain how to stay safe when using the internet?
To know what an algorithm is To create an algorithm	What did we use an algorithm for last time? What else could we create an algorithm for? <a href="https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4">https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/z3whpv4</a>	To plan an algorithm.	Can they plan a set of instructions for a task?
To program a Beebot	What instructions would we use if we wanted to make this Beebot move? <a href="https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/zykx6sg">https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/zykx6sg</a>	To test an algorithm.	Can they recognise what symbols mean when programming a Beebot?
To run a program	What do you think this sequence of instructions will make the Beebot do?	To test an algorithm.	Can they recognise what symbols mean when programming a Beebot?
To debug an algorithm	What happens if there is a mistake in an algorithm? <a href="https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/ztgig6f">https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/ztgig6f</a>	To find mistakes in an algorithm (bug).	Can they find mistakes in a set of instructions?

		To de-bug an algorithm.	
To give advice on keeping safe online	What advice can we give people who use the internet?		Can they explain how to stay safe when using the internet?
<b>Year 1 Term 5</b>	Images Open Close Save Share online font search		
Links to prior learning			
Learning objectives	Context	Skills	Knowledge
To search online using the alphabet	What letter would we click on if we wanted to search information on dogs?	To open images. To change images.	Can they recognise how we can use the internet?
To search images online To save images	How can we find an image of a dog online? How can we save this image so we can use it later? <a href="https://www.bbc.co.uk/bitesize/topics/zbhgjxs/articles/zgtgr82">https://www.bbc.co.uk/bitesize/topics/zbhgjxs/articles/zgtgr82</a>	To search for images online. To save images.	Can the recognise how to choose safe images?
To insert an image	How can we use the image that we saved last week? Can we change the image in any way?	To open images. To save images. To change images.	
To add text	Can we give the image we inserted a label?	To word process captions.	
<b>Year 1 Term 6</b>	<b>Input Output Process Devices Computer Private public</b>		
Link to prior learning			
Learning objectives	Context	Skills	Knowledge
To recognise unkind comments online	How do you feel when someone says something unkind to you? Are these comments online kind or unkind?		Can they recognise hurtful comments online? Can they recognise the different between public and private?

To know what a computer is	Which of these images are computers? What is a computer? <a href="https://www.bbc.co.uk/bitesize/topics/zmykqt/articles/zc4x6sg">https://www.bbc.co.uk/bitesize/topics/zmykqt/articles/zc4x6sg</a> <a href="https://www.bbc.co.uk/bitesize/topics/zmykqt/articles/zcmyvcw">https://www.bbc.co.uk/bitesize/topics/zmykqt/articles/zcmyvcw</a>		Can they recognise what a computer is? Can children understand what we use a computer for?
To identify software and hardware	Which of these make up parts of a computer and which of these can we use through a computer? <a href="https://www.bbc.co.uk/bitesize/topics/zbhgxs/articles/z9myvcw">https://www.bbc.co.uk/bitesize/topics/zbhgxs/articles/z9myvcw</a>		Can they recognise software and hardware?
To understand how digital devices work	Which of these parts of computer are inputs and which are outputs? <a href="https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/zx8hvp4">https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/zx8hvp4</a>		Can children recognise input, output and processes?
To recognise the process involved in a digital device	What is the process that happens in these devices?		Can children explain the process involved in a digital device?
<b>Year 2 Terms 1 &amp; 2</b>	Algorithm instructions Right angles Repeat Sequence Turns Bugs debug programmable device		
Links to prior learning	Year 1 term 5		
Learning objectives	Context	Learning objectives	Context
To know how to stay safe online	When playing online games, is everyone who they say they are? Should we trust everyone we speak to online?		Can children recognise ways of staying safe online?
To program a device	How are the controls of Beebot different to those of a ProBot?	To use repeat commands. To use right angles turns.	
To predict an algorithm outcome	What shapes do we think the Probot will make if we use these algorithms? <a href="https://www.transum.org/software/Logo/">https://www.transum.org/software/Logo/</a>	To predict the outcome of an algorithm.	

To create an algorithm	How can we make the Probot do the same thing over and over again? <a href="https://www.transum.org/software/Logo/">https://www.transum.org/software/Logo/</a>	To sequence an algorithm correctly. To repeat instructions.	
To debug an algorithm	What happens if there is a mistake in the algorithm? How can we correct it?	To de-bug algorithms.	Can they recognise mistakes in an algorithm are known as bugs?
To understand what cyberbullying is	What do we call it when someone is repeatedly mean to us? What is it called if it happens online?		Can children recognise what cyberbullying is? Can children recognise ways of staying safe online?
<b>Year 2 Term 3 &amp; 4</b>	Font    Space    Delete    Enter    Insert    Image    Save	open    close	
Links to prior learning	Year 1 term 4		
Learning objectives	Context	Skills	Knowledge
To understand the importance of key words when searching	What would I type into a search engine to find out information on Guinea pigs?	To use key words in searches.	Can they recognise the importance of using key words in searches?
To format a word document	How do we make text stand out? How can we change the font of the writing in a document? <a href="https://www.bbc.co.uk/bitesize/topics/zbhgixs/articles/z2s49j6">https://www.bbc.co.uk/bitesize/topics/zbhgixs/articles/z2s49j6</a>	To use word processing software. To type. To change font type and colour.	Can they understand the purpose of word processing?
To edit a word document	How can we change what is on a word document? How can we delete text?	To use the delete key. To save a file.	
To insert images	How can we insert images to accompany text?	To open a file. To insert an image. To save a file.	

To give advice on keeping safe online	What advice can we give people who use the internet?	To use word processing skills to create a poster	Can they explain how to stay safe when using the internet?
<b>Year 2 Term 5 &amp; 6</b>	Data Graph Chart Open Save private personal reliable avatar		
Links to prior learning			
Learning objectives	Context	Skills	Knowledge
To know how to respond when asked for private details	What details are considered as private? What should you do if you are asked for these details by someone online?		Can they recognise when something does not feel right online?
To make an avatar	Should we put photos of ourselves online? What can we use instead?	To create an avatar	Can they understand the risks involved of uploading images?
To collect data	How can we use computers to collect data? <a href="https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z83wjxs">https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z83wjxs</a>	To collect data	
To present data	How can we use computers to present data? <a href="https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z83wjxs">https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z83wjxs</a>	To enter data to create a graph using a computer	
To interpret data	What does this data on the computer show us?	To interpret data	
To understand the internet is not always reliable	Can we trust everything that we read and see online?		Can they understand that the internet is not always reliable?

# The Craylands School KS2 Long term subject: Computing

<p><b>Aims</b></p> <p>can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation</p> <ul style="list-style-type: none"> <li>▪ can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems</li> <li>▪ can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems             <ul style="list-style-type: none"> <li>○ ▪ are responsible, competent, confident and creative users of information and communication technology.</li> </ul> </li> </ul>	
<p><b>Skills</b></p> <p>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</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>▪ use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</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             <ul style="list-style-type: none"> <li>▪ use technology safely, respectfully and responsibly;</li> </ul> </li> </ul>	<p><b>Knowledge</b></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> </ul> <p>recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>
<p><b>Year 3 Term 1</b></p>	<p>Algorithm instructions Right angles shapes Repeat Sequence Turns Bug debug</p>

Links to prior learning	Year 1 term 5    Year 2 term 6		
Learning objectives	Context	Learning objectives	Context
To understand what a digital footprint is	What happens with what I put online? Is it gone when I delete it?	Can they understand the importance of sequencing in an algorithm? Can they relate real communities to how to create a friendly online community?	Can they explain what a digital footprint is? Can they explain why it is important to consider what we put online and what sites we visit?
To program a device	How can we get the Probot turn at different angles to make different shapes? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z23q7ty">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z23q7ty</a>  <a href="https://www.transum.org/software/Logo/">https://www.transum.org/software/Logo/</a>	To program a Probot. To sequence a set of instructions. To create algorithms to make shapes.	Can they link numbers with the degrees that a device turns?
To predict and create an algorithm	Is programming a device any different to programming something on the computer screen? <a href="https://www.transum.org/software/Logo/">https://www.transum.org/software/Logo/</a>	To create an algorithm To use algorithm language when typing an algorithm	
To repeat a sequence	How can we make what we are programming repeat a movement? <a href="https://www.transum.org/software/Logo/">https://www.transum.org/software/Logo/</a>	To use repeat in an algorithm	
To test and evaluate an algorithm	How accurate do we need to be when writing an algorithm? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/zqrq7ty">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/zqrq7ty</a>	To create an algorithm To type an algorithm To evaluate the effectiveness of an algorithm	
To understand how to create a positive digital footprint	How can we make our digital footprint positive? <a href="https://www.schoolsofkingedwardvi.co.uk/ks2-computing-digital-literacy-4-digital-footprints/">https://www.schoolsofkingedwardvi.co.uk/ks2-computing-digital-literacy-4-digital-footprints/</a>		Can they explain what a digital footprint is?

			Can they explain why it is important to consider what we put online and what sites we visit?
<b>Year 3 Term 2</b>	<b>Search engine</b>	<b>Algorithm</b>	<b>Repeat</b>
Link to prior learning	Year 1 term 5	Year 2 term 6	Year 3 term 3
Learning objectives	Context	Skills	Knowledge
To understand how to use key words in searches	What would I need to type into a search engine if I wanted to find out how many teeth an adult dog has? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/ztbjq6f">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/ztbjq6f</a>	To use accurate key words in searches.	Can they recognise the importance of accurate key words in searches?
To use the vocabulary of Scratch	What have we programmed so far? What is Scratch and what can we do in it? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z23q7ty">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z23q7ty</a> <a href="https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/zchc4wx">https://www.bbc.co.uk/bitesize/topics/z3tbwmn/articles/zchc4wx</a>		Can they explain the functions of different blocks in 'Scratch'?
To combine blocks in Scratch	What do the different blocks do? What will happen if I put them together? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To combine blocks in 'Scratch'.	
To sequence correctly	Can you make a sequence of your own using the different blocks? What will the journey look like? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>		
To plan and create a script	What can we make the Sprite do in Scratch? Can we get it moving? Can we get it to talk? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To change the background and sprite in 'Scratch'. To program a sprite to interact	
To compare algorithms	What is the same and different in these algorithms?		Can they explain the functions of different blocks in 'Scratch'?

<b>Year 3 Terms 3 &amp; 4</b>	Cyberbullying				Algorithm		Repeat		Sequence		Blocks		forever		Sprite		script		Bugs		debug	
Links to prior learning	-																					
Learning objectives	Context						Skills						Knowledge									
To understand what cyberbullying is	What would you do if you received an unkind email or text message?												Can they explain what cyberbullying is and how to deal with it?									
To sequence blocks in Scratch	What did we do in the previous term? Can we remember how to make a sprite move and interact? What happens if it doesn't do what we want it to do? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/ztkx6sg">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/ztkx6sg</a>						To sequence blocks in Scratch. To debug an algorithm.															
To repeat a sequence	How can we repeat a set of instruction in Scratch? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>						To repeat a sequence.															
To use the 'forever' block in an algorithm	What do we do if we always want something to happen in our sequence? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>						To use the 'forever' block in Scratch.															
To create a sprite	How can we create our own sprite to program? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>						To create a new sprite.															
To know who to accept online	What could happen if we accept something online and we don't know where it's come from? <a href="https://www.bbc.co.uk/bitesize/topics/zv63d2p/articles/zt9thyc">https://www.bbc.co.uk/bitesize/topics/zv63d2p/articles/zt9thyc</a>												Can they explain what the risks are by accepting something online if you don't know where or who it has come from?									
<b>Year 3 Terms 5 &amp; 6</b>	Font		Space		Delete		Enter		Insert		Image		Save		Open		close		wordart		edit	
Link to prior learning	Year 1 term 4						Year 2 term 1															
Learning objectives	Context						Skills						Knowledge									
To understand how communities are formed online	What can we do online?												Can they explain what people can do online?									

			Can they explain what to do when they see something online that upsets them?
To format a document	How has word processing been used to create these documents?	To type. To change font size, type, colour.	Can they recognise how word processors are used to make documents?
To insert images	How can a word document be improved?	To insert 'wordart'. To insert an image.	
To edit a document	How can I improve a document?	To use 'find' and 'replace' To delete text To use 'thesaurus' tool.	
To use features of a comic	How can we combine images and text to create a comic?	To combine images and text	
<b>Year 4 Terms 1 &amp; 2</b>	Password	Algorithm	Repeat
Links to prior learning	Sequence	Blocks	Sprite
Learning objectives	Context	Skills	Knowledge
To understand what makes a strong password	Why do we need passwords? What makes a password weak or strong?		Can they understand the purpose of a password? Can they understand what makes a strong password?
To recreate and edit scripts	How have these quizzes been created in Scratch? What blocks have been used in the algorithms? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/zw3dwmn">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/zw3dwmn</a>	To recognise the role of blocks in 'Scratch'.	Can they explain that role of each block in 'Scratch'?
To create an algorithm for a quiz	What blocks will we need if we want to create a quiz in Scratch?	To create a simple game. To add a score variable.	Can they decide what makes a 'good' game?

	<a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>		
To predict an algorithms outcome	What does the 'if' block do in Scratch? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To predict outcomes of algorithms.	Can they explain the function of blocks in 'Scratch'?
To create an algorithm with the 'if' block	What games can we create that includes the 'if' block in it? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To use the 'if' block in 'Scratch'. To edit and amend scripts in 'Scratch' to create own games.	Can they decide what makes a 'good' game?
To know how to protect yourself online	How can we protect ourselves online? What are the risks of someone knowing our passwords?		Can they understand the purpose of a password? Can they understand the risks involved with identify theft?
<b>Year 4 Terms 3 &amp; 4</b>	Powerpoint Presentation Slide Transition Images	hyperlink	
Links to prior learning	Year 1 term 4 Year 2 term 1 Year 3 term 1		
Learning objectives	Context	Skills	Knowledge
To recognise how to stay safe online	What is the safer internet day theme this year? What are the risks of being online? How can we stay safe? <a href="https://www.saferinternetday.org/">https://www.saferinternetday.org/</a>		Can they recall the SMART rules for online safety?
To create slides in a power point	How can we use software to present our research?	To type To change font To create slides To add images	Can the search for information safely online?
To create hyperlinks	How can we allow the reader of our presentation to visit websites that we have used quickly? Is there a way of linking the contents to a page?	To combine text, images, hyperlinks to relate to the audience.	Can they consider who their audience is for their slide show and adapt information?
To add slide transitions	How can we make the presentation more effective when moving from slide to slide?	To create a slideshow that moves from slide to slide.	

To present slideshows	How can we best present our slideshows?	To present using powerpoint	
<b>Year 4 Terms 5 &amp; 6</b>	<b>Safe Meet Accept Reliable Tell Spreadsheet Row Cell Column formula</b>		
Link to prior learning			
Learning objectives	Context	Skills	Knowledge
To know how to be respectful online	What does being respectful mean?		Can they recognise how to be respectful online?
To understand what a spreadsheet is	Have you ever seen a spreadsheet? Do you know what it can be used for? <a href="https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z8yk87h">https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z8yk87h</a>	To enter data into cells in a spreadsheet.	Can they explain what we can use a spreadsheet for? Can they recognise cells, rows and columns in a spreadsheet?
To order and sort data in a spreadsheet	How can we make data in spreadsheets easier to interpret?	To order and sort data	Can they recognise cells, rows and columns in a spreadsheet?
To use a spreadsheet to budget amounts	How can we use a spreadsheet to help us keep to a budget?	To total amounts in a spreadsheet.	Can they recognise cells, rows and columns in a spreadsheet?
To create a spreadsheet to track costs	If you are given a budget to spend can you create a spreadsheet to track spending?	To enter data into cells in a spreadsheet. To order and sort data To total amounts in a spreadsheet.	
To know how to be respectful online	Which of these situations shows respect online?		Can they recognise how to be respectful online?
<b>Year 5 Terms 1 &amp; 2</b>	<b>Flow charts Input Output Problem solving Decomposition Process Decision Bug Debug algorithm</b>		
Links to prior learning	Year 1 term 5 Year 2 term 6 Year 3 term 3 year 3 term 5 Year 3 term 6 Year 4 terms 5/6 Year 1 term 6		

Learning objectives	Context	Skills	Knowledge
To understand what spam is	Should we believe everything that someone tells us or that we read?		Can they recognise what 'spam' is?
To understand the parts of a flowchart	What is a flowchart? How are they used? What is the purpose of the different shapes? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z8ngr82">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z8ngr82</a>	To use flow charts.	Can they explain what the different shapes stand for in a flow chart?
To recognise inputs and outputs in an algorithm	What is the input in this set of instructions? What is the output? How do we show this in a flow chart?	To create a set of instructions for tasks. To recognise inputs and outputs in an algorithm.	
To understand the 'if' within a flow chart	What is the 'if' element of a flow chart?	To sequence parts of a flowchart To recognise inputs and outputs in an algorithm. To use the 'if' shape in a flow chart	
To follow a flow chart To debug a flow chart	Are the flow charts for the different games correct? How can we debug any bugs that exist in them?	To follow a flow chart To debug a flow chart	
<b>Year 5 Terms 3 &amp; 4</b>	Algorithm Repeat Sequence Blocks Sprite script sensing forever Variable Score Function		
Links to prior learning	Year 1 term 5 Year 2 term 6 Year 3 term 3	year 3 term 5 Year 3 term 6	Year 4 terms 5/6
Learning objectives	Context	Skills	Knowledge
To understand how to stay safe online	What is the theme of this year's safer internet day? <a href="https://www.saferinternetday.org/">https://www.saferinternetday.org/</a>		Can they recognise what they should and shouldn't post online?

To create a maze in Scratch	What blocks will we need to create a maze game in Scratch? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To create a life variable in 'Scratch'. To de-bug algorithms. Can they recognise when something does not work in a game? To use variables. To predict an algorithm's purpose.  To create a password algorithm in 'Scratch'. Can they explain the purpose of passwords and the risks of having a weak password?	
To use the 'sensing' block in Scratch	What does the 'sensing' block do in an algorithm? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To use the 'sensing' blocks in a 'Scratch' maze game. To predict an algorithm's purpose.	
To introduce a variable in a game	What will happen if the sprite touches the side of the maze? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To edit an algorithm. To use variables To create a life variable in 'Scratch'. To de-bug algorithms.	Can they recognise when something does not work in a game?
To create own ideas (2 lessons)	How can you make your game more unique? What extra algorithms can you create for your maze game? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To create algorithms To debug when it does not work To use variables	

To create a platform game (2 lessons)	How can we use what we have learnt to create a simple platform game? <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	To create algorithms To debug when it does not work To use variables To use appropriate blocks correctly in an algorithm	Can they understand the purpose of the different blocks?
<b>Year 5 Terms 5 &amp; 6</b>	Search Key words Blogs podcast vlog Prezi presentation audience		
Links to prior learning	Year 1 term 4 Year 2 term 1 Year 3 term 5 Year 4 term 1		
Learning objectives	Context	Skills	Knowledge
To know how to be a good digital citizen	What rules can be create as a class to ensure we are good digital citizens?		Can children consider how they can use the internet safely and allow others to do the same?
To understand what the internet is	What is the difference between the internet and the world wide web? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z3tbgk7">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z3tbgk7</a> <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z2nbgk7">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z2nbgk7</a>		Can they explain what the internet is and what the world wide web is?
To know how to search effectively	How can we get the information that we need on a search engine? What is Boolean logic and how can we use it? Which is the best search engine to use? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/ztbjq6f">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/ztbjq6f</a>	To search the internet effectively. To select appropriate information. To select most appropriate search engines to use	Can they use key words to search the internet? Can they explain and use Boolean logic? Can they choose appropriate information from the internet?
To consider how we can present information digitally (4 lessons)	What are the different ways we can present information digitally e.g. powerpoint, prezzi, vblog, blog, podcast <a href="https://www.bbc.co.uk/bitesize/topics/zv63d2p/articles/z9r72hv">https://www.bbc.co.uk/bitesize/topics/zv63d2p/articles/z9r72hv</a>	To select an appropriate method of presenting work digitally	

To evaluate work being a good digital citizen	How can we comment on each other's work remembering to be good digital citizens?	To comment on other's work respectfully.	Can children consider how they can use the internet safely and allow others to do the same?
<b>Year 6 Terms 1 &amp; 2</b>	<b>Communication Internet Hubs Router Wi-fi Cables Server websites</b>		
Link to prior learning	Year 5 terms 1/2		
Learning objectives	Context	Skills	Knowledge
To understand how to use social media sensibly	What different social media are you aware of? How old should you be to use them? What should we think about when using them?		Can they explain how we can communicate effectively through social media?
To understand what a local network is	How are the computers in the school connected? How are devices in your home connected to each other? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z3tbgk7">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z3tbgk7</a>		Can they explain what a network is and how it works?
To understand the global network of the internet	How are computers across the world connected? What happens when we click on a website online? <a href="https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z3tbgk7">https://www.bbc.co.uk/bitesize/topics/zs7s4wx/articles/z3tbgk7</a>		Can they explain what a network is and how it works? Can they explain network devices such as routers and hubs?
To understand how emails are sent	When I write an email and send it to someone else what happens? How is it sent? <a href="https://www.bbc.co.uk/bitesize/clips/zgqtn39">https://www.bbc.co.uk/bitesize/clips/zgqtn39</a>		Can they explain that information is sent online through packets? Can they explain the purpose of routers?
To understand how a filtering system works	Should we be allowed to access all websites that exist online when in school and at home? What stops us from being allowed to access them?		Can they explain how a filtering system works and how it keeps us safe?
To understand what censorship is and debate the topic	How are some parts of technology censored to children e.g. computer games, websites etc Is it a good idea that they are censored?		Can they explain the purpose of censorship related to modern technology including computer games?
<b>Year 6 Terms 3 &amp; 4</b>	<b>Story board Animation Camera Images Audio Stop-motion stereotypes</b>		

Links to prior learning			
Learning objectives	Context	Skills	Knowledge
To understand what stereotypes are	What role does online media have in conveying stereotypes of boys and girls?		Can they understand that not everything that they see online should be believed as the truth and/or represent reality?
To plan a storyboard for an animation	How are animations such as Wallace and Gromit created? What story will you tell in a short animation? <a href="https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/zyb72hv">https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/zyb72hv</a>	To map out a storyboard.	Can children explain how stop-motion animation works?
To use an animation software	How do you combined images together to make an animation? How much should the models be moved for each image?	To take images To move a model to be animated small amounts To combine images to create an animation.	
To combine sounds to an animation	How can we add to the animation created?	To add sound to an animation	
To consider the appropriateness of apps	What are the risks involved in online apps?		Can children understand the risks involved in using apps?
<b>Year 6 Terms 5 &amp; 6</b>	Spreadsheet Data Cells Rows Columns Formulae Total		
Links to prior learning	Year 4 term 3		
Learning objectives	Context	Learning objectives	Context
To understand how to deal with cyberbullying	What would you do if you were receiving messages from someone and they were unkind? <a href="https://www.bbc.co.uk/teach/class-clips-video/pshe-ks2-text-bullying/zvgdt39">https://www.bbc.co.uk/teach/class-clips-video/pshe-ks2-text-bullying/zvgdt39</a>		Can they offer advice to others on what to do if someone is abusive online?
To create simple formulae	What can you remember about the use of Excel? What can it be used for? What else can it do for us?	To input data into cells on a spreadsheet.	Can they explain how we can use spreadsheets?

		To create formulae.	
To create simple formulae	How can use Excel to total a set of data and find averages	To create formulae.	Can they explain how we can use spreadsheets?
To format cells	How can we highlight cells to make them stand out for us?	To format cells.	
To create a spreadsheet	How can we use a spreadsheet to collate data and convert?	To input data into cells on a spreadsheet. To create formulae. To format cells.	
To understand the effects of changing images online	How can images be changed online? What are the pros and cons of this? What images should we be careful of uploading online?		Can they share the risks involved of using software such as photoshop?