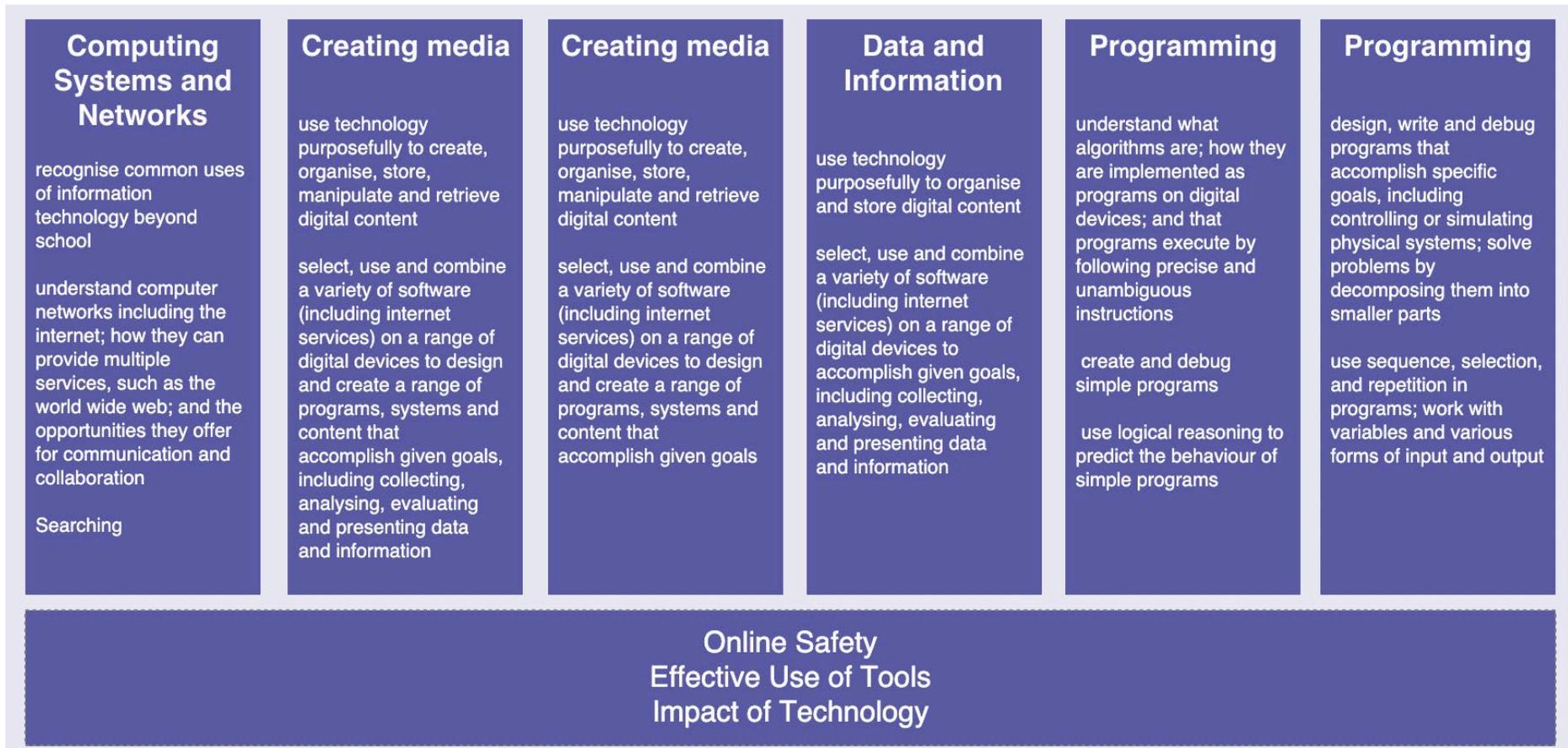




## Computing Statement of Intent

Advances in technology impacts on all our lives. Through teaching computing, we aim to equip our children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. It is our intention to enable children to find, explore, analyse, exchange and present information. With the knowledge that Computing will undoubtedly continue to form a major part of the children’s lives at home, in further education and places of work, we ensure that the experiences and abilities that the children develop at Whinstone are effective and transferrable life skills. We ensure that online safety learning outcomes are interpreted within contexts that are relevant to the learner’s experience and are achieved through learning that is matched to the readiness of the learner. We help our children to become creative at computing through the development of the Key Concepts in computing:







## **Computing KS1 National Curriculum**

Pupils should be taught:

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



# Whinstone Primary School Year 1 Computing



## Computing Implementation

Computing is taught as an area of learning, as well as integrated with other curriculum areas where appropriate. There is also flexibility to seize opportunities to celebrate and acknowledge significant events.

<b>Year 1 Computing Implementation – Key Concepts</b>
<p><b>The Key Concepts of Computing at Whinstone are:</b></p> <ul style="list-style-type: none"> <li>- Computer Systems and Networks</li> <li>- Creating Media</li> <li>- Data and Information</li> <li>- Programming</li> <li>- Safety and Security (Whilst all strands are present at all phases, they are not always taught explicitly.)</li> </ul>

In Year 1 Computing is taught in discrete lessons under the following broad topic headings:					
<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>Computer Systems and Networks</b> Technology Around Us	<b>Creating Media</b> Digital Painting	<b>Programming A</b> Moving a Robot	<b>Programming B</b> Introduction to Animation	<b>Creating Media</b> Digital Writing	<b>Data and Information</b> Grouping Data



# Whinstone Primary School Year 1 Computing



Topic Specific Vocabulary					
Computer Systems and Networks Technology Around Us	Creating Media Digital Painting	Programming A Moving a Robot	Programming B Introduction to Animation	Creating Media Digital Writing	Data and Information Grouping Data
Technology, Computer, mouse/trackpad, keyboard, screen, click, drag, double click, draw Click and drag, Input device, Shift, space bar, capital letter, full stop, Safely, responsibly	paint program, tool, paintbrush, erase, fill, undo, Piet Mondrian, primary colours, shape tools, line tool, Henri Matisse, Wassily Kandinsky, tools, feelings, colour, brush style, Georges Seurat, Pointillism, brush size Pictures, painting, computers, like, prefer, dislike	Forwards, backwards, turn, clear, go, commands, Instructions, directions Forwards, backwards, commands, Left, right, turn, Plan, algorithm, program, Route	ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area Block, joining, command, Start block, run, program, background, delete, reset, algorithm, predict, Effect, change, value, block, Instructions, sprite, delete, background, appropriate, design	Word processor, keyboard, keys, letters, Microsoft Word, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, font, undo,	Object, label, group, search, image, property, colour, size, shape, group, value, data set, more, less, most, fewest, the same

## Key Concepts

These key concepts, knowledge and vocabulary will be taught and reinforced through the development of these specific skills. These Key Concepts and vocabulary will be revisited and repeated throughout a child's journey of Computing at Whinstone.

*\*Safety and Security links to lessons are in RED. Online Safety Strands are taken from the UKCCIS document 'Education for a Connected World' (June, 2020)*

Computer Systems and Networks Technology Around Us	Creating Media Digital Painting	Programming A Moving a Robot	Programming B Introduction to Animation	Creating Media Digital Writing	Data and Information Grouping Data
To identify technology  Copyright and ownership	To describe what different freehand tools do	To explain what a given command will do	To choose a command for a given purpose	To use a computer to write  Privacy and security	To label objects  Copyright and ownership



# Whinstone Primary School Year 1 Computing



Health, well-being and lifestyle					
To identify a computer and its main parts	To use the shape tool and the line tools	To act out a given word	To show that a series of commands can be joined together	To add and remove text on a computer	To identify those objects can be counted
To use a mouse in different ways	To make careful choices when painting a digital picture	To combine forwards and backwards commands to make a sequence	To identify the effect of changing a value	To identify that the look of text can be changed on a computer	To describe objects in different ways
To use a keyboard to type	To explain why I chose the tools I used	To combine four direction commands to make sequences	To explain that each sprite has its own instructions	To make careful choices when changing text	To count objects with the same properties
To use the keyboard to edit text	To use a computer on my own to paint a picture	To plan a simple program	To design the parts of a project	To explain why I used the tools that I chose	To compare groups of objects
To create rules for using technology responsibly	To compare painting a picture on a computer and on paper	To find more than one solution to a problem	To use my algorithm to create a program	To compare writing on a computer with writing on paper	To answer questions about groups of objects

## Computing Impact

At the end of each topic teachers will evaluate what knowledge and skills pupils have gained within the Key Concepts. **Please see the grid below this one for the 'Education for a Connected World' specific 'I can' statements for meeting expectations. Links are shown here but all aspects of the 'Safety and Security' strand will be covered over the school year within assemblies, extra sessions and PHSE lessons.**

SKILLS	Learning Objective	Meeting expectations	Education for a Connected World links
Computer Systems and Networks Technology Around Us	To identify technology	-I can explain technology as something that helps us -I can locate examples of technology in the classroom -I can explain how these technology examples help us	- Copyright and ownership - Health, well-being and lifestyle



# Whinstone Primary School Year 1 Computing



	To identify a computer and its main parts	<ul style="list-style-type: none"> <li>- I can name the main parts of a computer</li> <li>- I can switch on and log into a computer</li> <li>- I can use a mouse to click and drag</li> </ul>	
	To use a mouse in different ways	<ul style="list-style-type: none"> <li>- I can click and drag to make objects on a screen</li> <li>- I can use a mouse to create a picture</li> <li>- I can use a mouse to open a program</li> </ul>	
	To use a keyboard to type	<ul style="list-style-type: none"> <li>- I can save my work to a file</li> <li>- I can tell you that writing on a computer is called typing</li> <li>- I can type my name on a computer</li> </ul>	
	To use the keyboard to edit text	<ul style="list-style-type: none"> <li>- I can delete letters</li> <li>- I can open my work from a file</li> <li>- I can use the arrow keys to move the cursor</li> </ul>	
	To create rules for using technology responsibly	<ul style="list-style-type: none"> <li>- I can discuss how we benefit from these rules</li> <li>- I can give examples of some of these rules</li> <li>- I can identify rules to keep us safe and healthy when we are using technology in and beyond the home</li> </ul>	
<b>Creating Media</b> Digital Painting	To describe what different freehand tools do	<ul style="list-style-type: none"> <li>- I can draw lines on a screen and explain which tools I used</li> <li>- I can make marks on a screen and explain which tools I used</li> <li>- I can use the paint tools to draw a picture</li> </ul>	
	To use the shape tool and the line tools	<ul style="list-style-type: none"> <li>- I can make marks with the square and line tools</li> <li>- I can use the shape and line tools effectively</li> <li>- I can use the shape and line tools to recreate the work of an artist</li> </ul>	
	To make careful choices when painting a digital picture	<ul style="list-style-type: none"> <li>- I can choose appropriate shapes</li> <li>- I can create a picture in the style of an artist</li> <li>- I can make appropriate colour choices</li> </ul>	
	To explain why I chose the tools I used	<ul style="list-style-type: none"> <li>- I can choose appropriate paint tools and colours to recreate the work of an artist</li> <li>- I can say which tools were helpful and why</li> <li>- I know that different paint tools do different jobs</li> </ul>	
	To use a computer on my own to paint a picture	<ul style="list-style-type: none"> <li>- I can change the colour and brush sizes</li> <li>- I can make dots of colour on the page</li> <li>- I can use dots of colour to create a picture in the style of an artist on my own</li> </ul>	
	To compare painting a picture on a computer and on paper	<ul style="list-style-type: none"> <li>- I can explain that pictures can be made in lots of different ways</li> <li>- I can say whether I prefer painting using a computer or using paper</li> <li>- I can spot the differences between painting on a computer and on paper</li> </ul>	



# Whinstone Primary School Year 1 Computing



<b>Programming A</b> Moving a Robot	To explain what a given command will do	<ul style="list-style-type: none"> <li>- I can match a command to an outcome</li> <li>- I can predict the outcome of a command on a device</li> <li>- I can run a command on a device</li> </ul>	
	To act out a given word	<ul style="list-style-type: none"> <li>- I can follow an instruction</li> <li>- I can give directions</li> <li>- I can recall words that can be acted out</li> </ul>	
	To combine forwards and backwards commands to make a sequence	<ul style="list-style-type: none"> <li>- I can compare forwards and backwards movements</li> <li>- I can predict the outcome of a sequence involving forwards and backwards commands</li> <li>- I can start a sequence from the same place</li> </ul>	
	To combine four direction commands to make sequences	<ul style="list-style-type: none"> <li>- I can compare left and right turns</li> <li>- I can experiment with turn and move commands to move a robot</li> <li>- I can predict the outcome of a sequence involving up to four commands</li> </ul>	
	To plan a simple program	<ul style="list-style-type: none"> <li>- I can choose the order of commands in a sequence</li> <li>- I can debug my program</li> <li>- I can explain what my program should do</li> </ul>	
	To find more than one solution to a problem	<ul style="list-style-type: none"> <li>- I can identify several possible solutions</li> <li>- I can plan two programs</li> <li>- I can use two different programs to get to the same place</li> </ul>	
<b>Programming B</b> Introduction to Animation	To choose a command for a given purpose	<ul style="list-style-type: none"> <li>- I can compare different programming tools</li> <li>- I can find which commands move a sprite</li> <li>- I can use commands to move a sprite</li> </ul>	
	To show that a series of commands can be joined together	<ul style="list-style-type: none"> <li>- I can run my program</li> <li>- I can use a start block in a program</li> <li>- I can use more than one block by joining them together</li> </ul>	
	To identify the effect of changing a value	<ul style="list-style-type: none"> <li>- I can change the value</li> <li>- I can find blocks which have numbers</li> <li>- I can say what happens when I change a value</li> </ul>	
	To explain that each sprite has its own instructions	<ul style="list-style-type: none"> <li>- I can add blocks to each of my sprites</li> <li>- I can delete a sprite</li> <li>- I can show that a project can include more than one sprite</li> </ul>	
	To design the parts of a project	<ul style="list-style-type: none"> <li>- I can choose appropriate artwork for my project</li> <li>- I can create an algorithm for each sprite</li> <li>- I can decide how each sprite will move</li> </ul>	



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	To use my algorithm to create a program	<ul style="list-style-type: none"> <li>- I can add programming blocks based on my algorithm</li> <li>- I can test the programs I have created</li> <li>- I can use sprites which match my design</li> </ul>	
<b>Creating Media</b> Digital Writing	To use a computer to write	<ul style="list-style-type: none"> <li>- I can identify and find keys on a keyboard</li> <li>- I can open a word processor</li> <li>- I can recognise keys on a keyboard</li> </ul>	- Privacy and security
	To add and remove text on a computer	<ul style="list-style-type: none"> <li>- I can enter text into a computer</li> <li>- I can use backspace to remove text</li> <li>- I can use letter, number, and space keys</li> </ul>	
	To identify that the look of text can be changed on a computer	<ul style="list-style-type: none"> <li>- I can explain what the keys that I have learnt about already do</li> <li>- I can identify the toolbar and use bold, italic, and underline</li> <li>- I can type capital letters</li> </ul>	
	To make careful choices when changing text	<ul style="list-style-type: none"> <li>- I can change the font</li> <li>- I can select a word by double-clicking</li> <li>- I can select all of the text by clicking and dragging</li> </ul>	
	To explain why I used the tools that I chose	<ul style="list-style-type: none"> <li>- I can decide if my changes have improved my writing</li> <li>- I can say what tool I used to change the text</li> <li>- I can use 'undo' to remove changes</li> </ul>	
	To compare writing on a computer with writing on paper	<ul style="list-style-type: none"> <li>- I can compare using a computer with using a pencil and paper</li> <li>- I can say which method I like best</li> <li>- I can write a message on a computer and on paper</li> </ul>	
<b>Data and Information</b> Grouping Data	To label objects	<ul style="list-style-type: none"> <li>- I can describe objects using labels</li> <li>- I can identify the label for a group of objects</li> <li>- I can match objects to groups</li> </ul>	- Copyright and ownership
	To identify that objects can be counted	<ul style="list-style-type: none"> <li>- I can count a group of objects</li> <li>- I can count objects</li> <li>- I can group objects</li> </ul>	
	To describe objects in different ways	<ul style="list-style-type: none"> <li>- I can describe a property of an object</li> <li>- I can describe an object</li> <li>- I can find objects with similar properties</li> </ul>	
	To count objects with the same properties	<ul style="list-style-type: none"> <li>- I can count how many objects share a property</li> <li>- I can group objects in more than one way</li> <li>- I can group similar objects</li> </ul>	
	To compare groups of objects	<ul style="list-style-type: none"> <li>- I can choose how to group objects</li> <li>- I can describe groups of objects</li> <li>- I can record how many objects are in a group</li> </ul>	



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	To answer questions about groups of objects	<ul style="list-style-type: none"> <li>- I can compare groups of objects</li> <li>- I can decide how to group objects to answer a question</li> <li>- I can record and share what I have found</li> </ul>	
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## Online Safety and Security Strands are taken from the UKCCIS document 'Education for a Connected World' (June, 2020)

SKILLS	Learning Objective	Meeting expectations
<b>Online safety and security</b>	Self-image and identity	<ul style="list-style-type: none"> <li>-I can recognise that there may be people online who could make someone feel sad, embarrassed or upset.</li> <li>-If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust and how they can help.</li> </ul>
	Online Relationships	<ul style="list-style-type: none"> <li>-I can give examples of when I should ask permission to do something online and explain why this is important.</li> <li>-I can use the internet with adult support to communicate with people I know (e.g. video call apps or services).</li> <li>-I can explain why it is important to be considerate and kind to people online and to respect their choices.</li> <li>-I can explain why things one person finds funny or sad online may not always be seen in the same way by others.</li> </ul>
	Online Reputation	<ul style="list-style-type: none"> <li>-I can recognise that information can stay online and could be copied.</li> <li>-I can describe what information I should not put online without asking a trusted adult first.</li> </ul>
	Online bullying	<ul style="list-style-type: none"> <li>-I can describe how to behave online in ways that do not upset others and can give examples.</li> </ul>
	Managing online information	<ul style="list-style-type: none"> <li>-I can give simple examples of how to find information using digital technologies, e.g. <b>search engines, voice activated searching</b>).</li> <li>-I know / understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe / a joke.</li> <li>-I know how to get help from a <b>trusted adult</b> if we see content that makes us feel sad, uncomfortable worried or frightened.</li> </ul>
	Health, wellbeing and lifestyle	<ul style="list-style-type: none"> <li>-I can explain rules to keep myself safe when using technology both in and beyond the home.</li> </ul>
	Privacy and Security	<ul style="list-style-type: none"> <li>-I can explain that passwords are used to protect information, accounts and devices.</li> <li>-I can recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names).</li> <li>-I can explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.</li> </ul>
	Copyright and Ownership	<ul style="list-style-type: none"> <li>-I can explain why work I create using technology belongs to me.</li> <li>-I can say why it belongs to me (e.g. 'I designed it' or 'I filmed it').</li> <li>-I can save my work under a suitable title / name so that others know it belongs to me (e.g. filename, name on content).</li> <li>-I understand that work created by others does not belong to me even if I save a copy.</li> </ul>



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