

Computing Progression Grid Document 2021/2022

EYFS	Three & Four year olds	Reception	ELG
Personal, Social and Emotional Development	Increasingly follow rules, understanding why they are important. (Understand why we have rules when using technological equipment and obey these to stay safe).	Show resilience and perseverance in the face of a challenge when using technology that they may find difficult.	Be confident to try new activities and show independence and perseverance in the face of challenge.
Physical Development	Matching their developing physical skills to tasks and activities in the setting.	Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Know and talk about different factors that support their overall health and wellbeing: sensible amounts of screen time.	
Understanding the World	Explore how things work (e.g. use a remote control car, make basic movements on a whiteboard, turn on and off different devices).		
Expressive Arts and Design		Explore, use and refine a variety of artistic effects to express their ideas and feelings (e.g. using technology to record their work such as photos).	Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. (e.g. drawing digital pictures using interactive whiteboards and I pads)

Computing PROGRESSION OF SKILLS					
AREA OF STUDY: Computer Science					
YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<p>Create step by step instructions using pictures</p> <p>Program a sequence to make a programmable toy move. (e.g. A Bee-Bot)</p> <p>Debug a programmable toy</p> <p>Add and edit a character and a background in age appropriate coding software (e.g. ScratchJr)</p> <p>Program a character to grow and shrink</p> <p>Make a character move at different speeds and distances</p> <p>Use the repeat instruction</p> <p>Add a recorded sound</p> <p>Create a sequence of linked instructions</p>	<p>Give and follow algorithms to turn left and right</p> <p>Give and follow algorithms to make half and quarter turns</p> <p>Create an algorithm to move and rotate an object.</p> <p>Use the repeat and green flag commands to control algorithms</p> <p>Add sound</p> <p>Test and debug an algorithm</p>	<p>Use move, rotate and repeat commands to create an algorithm to draw a shape</p> <p>Use pen up/ pen down commands to debug algorithms (Turtle Logo)</p> <p>Change and alter pen settings in Scratch.</p>	<p>Write procedures using simple algorithms</p> <p>Use a range of variables in an algorithm</p> <p>Begin to create more complex algorithms and procedures</p> <p>Debug algorithms using a range of variables</p> <p>Write a program that achieves a specific goal</p> <p>Create a program that includes a logical sequence</p> <p>Adjust variables depending on the effect they want to create</p> <p>Understand and use the duplicate function</p>	<p>Draw a simple flowchart</p> <p>Insert symbols into a flowchart</p> <p>Add inputs into a flowchart</p> <p>Create a program to control a simple sequence</p> <p>Modify symbols in a flowchart for effect</p> <p>Create flowcharts for multiple inputs and outputs</p> <p>Use decisions and subroutines</p> <p>Program inputs and outputs</p> <p>Move and edit blocks are part of an algorithm</p> <p>Program an algorithm as a sequence of game instructions with actions and consequences</p>	<p>Open and navigate a more complex coding software (e.g. Kodu)</p> <p>Follow instructions given in a programming environment</p> <p>Use 'when' and 'do' instructions</p> <p>Describe the actions of a sequence</p> <p>Decompose code into smaller parts to work out its purpose</p> <p>Program a character to follow a path to reach a goal.</p> <p>Animate characters with movement and speech</p> <p>Use broadcast and receive blocks correctly in code</p> <p>Use show and hide blocks correctly in code</p> <p>Make a character visible and invisible at the correct times</p>
VOCABULARY					
Repeat Debug	Rotate Command Algorithm	Sprite	Procedure Variables Duplicate	Flowchart Subroutines	Decompose Broadcast Receive

PROGRESSION OF SKILLS					
AREA OF STUDY: Information Technology					
YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<p>Move the cursor and click using a trackpad</p> <p>Save and open files in their folder</p> <p>Drag objects in a file from one location to another</p> <p>Use a simple paint program (use different colours and brushes, create shapes and fill areas with colour)</p>	<p>Open and use an age appropriate paint program.</p> <p>Switch between different tools to produce different techniques.</p> <p>Change the shade of a colour for effect.</p>	<p>Draw in an appropriate program using lines and shapes</p> <p>Order and group objects</p> <p>Move, resize and arrange textboxes, shapes and images</p> <p>Manipulate shapes and lines</p> <p>Lay out objects (text boxes, images, shapes, lines) on their page effectively</p>	<p>Use a search engine effectively</p> <p>Create a short computer animation using a series of linked frames</p> <p>Create a recorded animation involving moving characters on a background</p> <p>Control and adjust a time slider to locate a different point in a film clip to insert or edit an object</p>	<p>Draw 2D shapes</p> <p>Draw simple 3D models</p> <p>Manipulate 2D shapes into 3D shapes</p> <p>Use a range of tools in a more complex drawing program (SketchUp) such as: shape, push, pull, orbit, pan, zoom, erase and fill</p>	<p>Search for relevant information using appropriate websites</p> <p>Use a digital video camera (or other device) to record</p> <p>Import video files into video editing software</p> <p>Frame an appropriate filming shot</p>

Use undo and redo buttons	Retrieve a file to edit in a computer program	Know and understand how word order affects search results	Insert images to create a simple stop motion animation	Use inference points to draw lines and shapes	Arrange video files to form a complete film
Add text to a piece of work	Create folders	Bookmark or favourite a page	Make slight changes to an image using onion skinning	Record and play their own sounds in recording software	Enter text and numbers into a spreadsheet
Type on a keyboard with two hands	Print files	Name different types of online communication	Edit and refine images in their animation	Import an existing sound file into recording software	Identify and refer to cells by row and column
Use shift, space and enter correctly	Add images to a piece of work	Create a simple presentation	Select, edit and manipulate text in different ways	Choose appropriate software for sound recording	Begin to enter formulae with the SUM function
Save work in their folder	Insert slides/pages	Create a hyperlink to another slide	Format an image	Listen to and improve on their own recordings by re-recording	Be able to enter formulae into cells
Edit text using backspace, delete and arrow keys	Add and type in a text box	Use slide transitions	Use formatting tools to improve page layout	Locate and download existing sound files to be imported into recording software	Edit data and discuss the effect on results
Select single words	Format text and text boxes (size, font, colour etc.)	Insert audio and video files into a presentation	Use the spellcheck tool	Combine two or more tracks to make a new, original recording	Use further functions including AVERAGE, MIN and MAX
Format text (bold, italics and underline)	Search the internet using one word	Create a simple slide template	Insert a simple table		Create a graph using Spreadsheets
Format font (change the size and colour)	Follow links to another web page	Copy and organise slides	Change the size of the page		Design a spreadsheet for a specific purpose
Open a web browser	Create content for an online blog	Write an email with an address and subject	Change the orientation of the page		
		Select text in different ways	Add a spelling to the dictionary		
		Change case (lower and upper)	Add and delete rows or columns in a table		
		Align text	Type at an appropriate speed		
		Cut, copy and paste text			
		Take a screenshot			
		Use <ctrl> keyboard shortcuts (undo/redo/save/cut /copy/paste)			

VOCABULARY

File Undo Redo Delete Cursor Trackpad	Internet Links Blog Tools Folder Font	Align Manipulate Search results Bookmark Hyperlink Subject Screenshot	Format Frames Animation Onion Skinning	Import Inference points Orbit Pan	Spreadsheet Cells Formulae
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PROGRESSION OF SKILLS

AREA OF STUDY: Digital Literacy

YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Turn on and shut down computing equipment safely	Understand what a digital footprint is	Know what to do if they feel uncomfortable when communicating online	Define cyberbullying	Identify spam emails and know what to do with them	Identify warning signs that a website might not be secure
Recall SMART rules for internet safety	Recognise if a website is appropriate for children	Identify how they should behave online	Know how to respond to a hurtful message or comment online	Understand why they should cite a source	Look in the address bar of a website to check for security
Know who to tell if someone online asks for personal information	Begin to identify possible dangers online	Recognise cyberbullying and know who to tell if they encounter it	Access a trusted search engine	Create multiple strong passwords for use	Identify the lock symbol in an address bar and what it means
		Know that cyberbullying can happen via a range of devices			

<p>Understand why email is a good way to communicate</p> <p>Choose a Safe Search filter when using a search engine</p> <p>Make links between the online and offline world</p> <p>Recognise which personal information they should keep safe from strangers</p>	<p>Identify kind and unkind behaviour online and know what to do about it</p> <p>Know what to do if a website makes them uncomfortable</p> <p>Safely search for information online</p> <p>Use an online blog safely and responsibly</p>	<p>Identify adverts</p> <p>Create a strong password and explain why this is important</p> <p>Explain what privacy settings are</p> <p>Know how to safely send and receive an email</p> <p>Identify different forms of online communication</p> <p>Discuss the positive and negative aspects of online communities</p> <p>Know the differences between real life and online communications</p>	<p>Understand that different search terms give different results</p> <p>Know why it may be dangerous to share private information</p> <p>Know how to be a responsible digital citizen</p> <p>Understand 'plagiarism' and know how to avoid it</p>	<p>across different platforms</p> <p>Know that not everything they see online is true</p> <p>Identify unsafe online behaviour</p> <p>Spot citations online</p>	<p>Explain what to do if I am asked or told something online which makes me uncomfortable</p> <p>Explain some of the dangers of revealing personal information to an online friend</p> <p>Choose an appropriate action online to stay safe</p>
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VOCABULARY

Safe Online	Digital footprint	Cyberbullying	Plagiarism Digital citizen	Spam Citations	Secure
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