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Progression of Computing Skills

Nursery			Reception		
Autumn	**Spring**	**Summer**	**Autumn**	**Spring**	**Summer**
Digital Literacy	**Information Technology**	**Computer science**	**Digital Literacy**	**Information Technology**	**Computer science**
Children should be taught that if they are using technology they need to use it with an adult.	Children should experience typing on a keyboard and understand these create letters to make words.	Children should experience moving a Beebot using forward/backwards/turn.	Children should participate in Digital Literacy week as part of the whole school. Children should be taught that: • Everything that goes on the internet can be seen by anyone • Children should never be online unsupervised • Some Apps are for older children	Children should have access to A computer as part of play. Children should be taught to: • Find the letters to spell their name • Find the enter/space bar/ backspace • Experience typing into a Word or Paint document with a purpose.	Children to have access to Beebots as part of play. Children should be taught to: • Move the Beebot forward/backwards/turn • Wipe the BeeBot's memory. • Turn the Beebot and off • Attempt to move the Beebot from point A to point B

Driver	Respect	Determination	Creativity	Confidence	Enthusiasm	Ambition

Progression of Computing Skills

Year 1			Year 2		
Autumn	**Spring**	**Summer**	**Autumn**	**Spring**	**Summer**
Computer science-BeeBots	**Information Technology**	**Computer science-Scratch Junior**	**Scratch (and logo)**	**Information Technology (art)**	**Digital Literacy**
- say what an algorithm is - say why it is important to be precise when writing an algorithm; - check their work for mistakes (debug); - program a Bee-Bot using the arrow buttons; - start their programming sequence again if they need to - check their work for mistakes to debug a program; - plan and check an algorithm	With support from an adult: children are able to - Login to the computer - Find an app on the Ipad - Input commands into a Beebot - Type with two hands. - Use shift, space and enter correctly. - Use undo and redo. - Make text bold, italic or underline. Save their work in their folder. - Edit text using backspace, delete and the arrow keys. - Format the font. - Select single words	- Add new characters and backgrounds; - Use blocks for movement in different directions; - Create short sets of sequenced instructions. - Use different end blocks, including repeat forever; • change the size of characters to grow or shrink - Hide and show characters with an instruction block; - Program two or more characters with instructions at the same time.	- Create simple algorithms using a number of different blocks. - Use the repeat and green flag blocks to control algorithms. - Write an algorithm for a shape - Use the repeat command. - Combine a range of blocks to achieve a purpose. - Use more than one sprite and combine algorithms.	- Access an appropriate program for achieving a specific task; - Switch between program tools to produce different techniques; - Alter the formatting of a tool to adjust the colour or size., recreate a piece of art using a computer program; - Manipulate shapes and objects to recreate an art style.	- Know how people can use the information they put online - Know that a digital footprint contains information about a person; - Know how to use keywords to give better search results; - Use a website to search for information; - Identify possible dangers online; - Explain how to identify websites suitable for their age; - Know when and how to ask an adult for advice about accessing a website; - Explain what to do if a website

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					makes them uncomfortable;
					• Know what people might want to know about a website in order to determine its usefulness;
					• Explain their likes and dislikes about a website;
					• Identify who a website could be aimed at;
					• Identify unkind online behaviour;
					• Know the course of action to take if they think someone is being unkind to them online;

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Progression of Computing Skills

Year 3			Year 4		
Autumn	Spring	Summer	Autumn	Spring	Summer
Digital Literacy	**Information Technology**	**Computer science**	**Computer science**	**Information Technology (animation)**	**Digital Literacy**
• Recognise and define cyberbullying; • Identify safe people to report cyberbullying to; • Know how cyberbullying can happen via a range of devices; • Identify a range of targeted online adverts; • Create a strong password, explaining why it is important; • Discuss the benefits and disadvantages of email as a form of communication; • Identify an email that may be unsafe to open. • Write a clear email, explaining why an address and subject is important; • Explain what an online community is, giving examples of ones they are a part of; • Identify and explain different forms of online communication; • Explain the positive and negative aspects of online communities; • Explain the differences between communication in real life and online; • Apply their learning to a planning activity.	• Create a hyperlink to another slide • Use slide transitions • Insert audio and video files • Plan a branching story • Create simple slide templates • Copy and organise slides • Use animations to introduce objects • Find out which audio and video formats work best • Set when audio or video plays • Evaluate the layout of the presentation	• Draw shapes with spaces between using penup and pendown (Turtle Logo) • Change and alter the pen settings (Scratch) • Draw regular polygons using Logo to calculate the angle (Turtle Logo) • Create and debug algorithms to draw patterns by repeating regular polygons (Scratch)	• Write a program which accomplishes a specific goal. • Create a program that includes a logical sequence. • Debug a program they have written. • Use repetition and selection. • Work with variables and adjust • Understand and use the duplicate function. • Demonstrate that they understand how to combine a range of different effects to create their own quiz.	• Explain what is meant by animation. • Create a series of linked frames that can be played as a short animation. • Control and adjust a time slider to locate a different point in a film clip. • Insert images to create a simple stop-motion animation short film clip. • Evaluate the good and bad points about some animation software. • Describe one or more traditional methods of animation. • Make slight changes to an image using onion skinning, understanding the term.	• Define cyberbullying; • know how to respond to a hurtful message or comment online; • Access a trusted search engine; • Understand that different search terms give different results; • Know what plagiarism is; • Identify which information to keep private online; • Explain what digital citizenship is; • Tell someone else at least one way to stay safe

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				• Use a time slider to find a specific point in a film clip to insert or edit an object. • Edit and refine images in a stop-motion animation short film clip.	online, identify comments or messages that may be hurtful to others; • Edit their own messages and comments to make sure they are kind; • Understand that search results are ranked; choose an appropriate number of words for a search term; • Explain how to use other people's work respectfully; • Explain why it may be dangerous to share private information; • Explain how to be a good digital citizen; • Tell someone else more than one way to stay safe online.

Progression of Computing Skills

	Year 5			Year 6		
	Autumn	**Spring**	**Summer**	**Autumn**	**Spring**	**Summer**
	Digital Literacy	**Computer science**	**Information Technology**	**Information Technology**	**Digital Literacy**	**Computer science**
	• Identify a spam email; explain the steps to take to avoid receiving spam; • Explain what to do with spam email; • Understand why they should cite a source; • Explain the rules for creating a strong password; • Explain why having a strong password is important; • Know that not everything they see online is true; • Explain how to stay safe online; identify unsafe online behaviour.	• Move and edit blocks as part of an algorithm. • Program an algorithm as a sequence of game instructions with actions and consequences • Add additional effects and features, such as sound or point scoring, to enhance the appeal of a game. • Use repetition and selection. • Work with variables and adjust these	• Draw and manipulate 2D shapes into 3D shapes. • Import 3D models from the 3D warehouse. • Use a range of SketchUp tools including; shape, push, pull, orbit, pan, zoom, erase and fill. • Use inference points to draw lines and shapes. • Use a wide range of SketchUp tools and concepts including: the	• Enter text and numbers and formulae into a spreadsheet. • Identify and refer to cells by row and column. • Use functions: SUM AVERAGE, MIN and MAX. • Edit data and discuss the effect on results. • Create graphs. • Design their own spreadsheet for a specific purpose.	• Say what bullying and cyberbullying are; • Say how people should deal with cyberbullying; • Understand why I should ask an adult if I am unsure; • Identify warning signs that a website might not be secure; • Identify personal information; • Explain what to do if I am asked or told something online which makes me uncomfortable; • Explain some of the dangers of revealing personal	• Select appropriate characters to match a scene. • Animate characters with movement and speech in a story scene. • Use broadcast and receive blocks correctly in code. • Use show and hide blocks correctly in code.

• Identify a dangerous spam email; • Alter a photograph. Understand how false photographs can make people feel bad about themselves.	• depending on the effect they wish to • create. • Understand and use the duplicate function. • Demonstrate that they understand how • to combine a range of different effects to • create their own quiz.	dimensions toolbar and guides, tape measure, zoom extents and the 3D warehouse.	• Understand the advantages of spreadsheets over comparative manual methods.	information to an online friend; • Choose an appropriate action online to stay safe; • Identify a situation I should be careful in online; • Look in the address bar of a website so check for security; • Identify the lock symbol in an address bar; • Explain why someone might have an online friendship; • Explain what the SMART acronym means; • Explain what a stereotype is; • Compare gender stereotypes.	• Create a sequence of story scenes with added audio. • Structure and sequence the animation of characters in each scene. • Use the repeat command to create animation effect. Make a character visible or invisible at the correct times.

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