

NC Knowledge and Computational Skills	Pupils not securing learning	Pupils achieving depth
<p>Autumn 1 – Scratch/E-safety</p> <p>What different uses can I have for programming on scratch?</p> <p>What creative ways can I use my programming skills?</p> <p>How can I extend my learning so far to enable sprites to communicate with one another?</p> <p>NC objectives covered: <i>Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i></p> <p>E-safety - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>All children are able to:</p> <ol style="list-style-type: none"> 1. Program inputs, conditions, random variables for unpredictability, game timer. (Activity 1) 2. Program inputs, conditions, sensing, random variables, operators for direction and data variables for scoring. (Activity 2) 3. Use inputs, conditions, loops, sensing, costume changes and broadcasts. (Activity 3) 4. Work with multiple sprites to send broadcast messages between them. (Activity 4) 		

<p>Some children will: Work as pairs/groups to support one another.</p> <p>Extend their learning to include other aspects of ICT (developed past what is required).</p>		
<p>Autumn 2 Scratch/E-safety (continued from previous learning) – Also building on Computers past present and future iLearn2 topic.</p> <p>What different uses can I have for programming on scratch?</p> <p>What creative ways can I use my programming skills?</p> <p>How can I extend my learning so far to enable sprites to communicate with one another?</p> <p>NC objectives covered: <i>Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</i></p> <p>E-safety - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>All children are able to: 1. Program inputs, conditions, random variables for unpredictability, game timer. (Activity 1)</p>		

<p>2. Program inputs, conditions, sensing, random variables, operators for direction and data variables for scoring. (Activity 2)</p> <p>3. Use inputs, conditions, loops, sensing, costume changes and broadcasts. (Activity 3)</p> <p>4. Work with multiple sprites to send broadcast messages between them. (Activity 4)</p> <p>Some children will: Work as pairs/groups to support one another.</p> <p>Extend their learning to include other aspects of ICT (developed past what is required).</p> <p><u>See aspects for additional topics if covered.</u></p>		
<p>Spring 1 – ICT Skills/HTML/E-safety</p> <p>How do I create a central storage space?</p> <p>How can I tell others where to find my folders?</p> <p>What is HTML?</p> <p>How does HTML work and what can it be used for?</p> <p>NC objectives covered: <i>Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts. 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, presenting data and information. Use a textual programming language to solve a variety of computational problems. (Key Stage 3)</i></p>		

<p>E-safety - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>All children are able to: Save to a central folder Create a folder for work to be saved into Share to others where to locate shared folders 1. Add and align text and change colour. 2. Program background colour.</p> <p>3. Add and align images. 4. Add hyperlinks to other websites.</p> <p>5. Add an iframe (such as a Google Map) and adjust the height and width.</p> <p>Some children will: Support others in their learning Create a more complex end product due to familiarity with coding previously and programming skills from previous years.</p>		
<p>Spring 2 ICT Skills/HTML/E-safety – ALSO COVERED IS GRAPHIC DESIGN WITH USE OF TINKERCAD SOFTWARE – time dependant</p> <p>How do I create a central storage space?</p> <p>How can I tell others where to find my folders?</p> <p>What is HTML?</p> <p>How does HTML work and what can it be used for?</p>		

NC objectives covered: *Design, write and debug programs that accomplish specific goals; solve problems by decomposing them into smaller parts. 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, presenting data and information. Use a textual programming language to solve a variety of computational problems. (Key Stage 3)*

E-safety - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

All children are able to:

Save to a central folder

Create a folder for work to be saved into

Share to others where to locate shared folders

1. Add and align text and change colour.
2. Program background colour.

3. Add and align images.

4. Add hyperlinks to other websites.

5. Add an iframe (such as a Google Map) and adjust the height and width.

Some children will:

Support others in their learning

Crete a more complex end product due to familiarity with coding previously and programming skills from previous years.

PLEASE SEE ADDITIONAL UNITS IF EXTRA TINKERCAD WORK IS CARRIED OUT.

<p>Summer 1 – Binary Code/E-safety</p> <p>What is binary code?</p> <p>How is binary code used? What can I use it for?</p> <p>How do numbers get converted into a language that computers understand?</p> <p>NC objectives covered: <i>Understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits. (Key Stage 3)</i></p> <p>E-safety - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>All children are able to:</p> <ol style="list-style-type: none"> 1. Understand why computers/electronics use binary. 2. Match a sequence of binary code to create digital art. 3. To convert binary code to denary numbers (decimal numbers) and visa versa. <p>Some children will: Further their own learning if interested and create more complex solutions.</p>		
<p>Summer 2 – Image editing/E-safety</p> <p>How do you edit an image?</p> <p>How many ways can you edit an image?</p> <p>How can I share the photos I edit?</p>		

<p>What do brightness and contrast mean?</p> <p>How do I take and crop a screenshot?</p> <p>NC objectives covered: <i>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.</i></p> <p>E-safety - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>All children are able to: edit a photo/image using an online editor including: – Take and crop a screenshot and learn about ratios. – Adjust the colours, brightness, contrast and filters. – Add drawing and text layers.. – Import new images as layers and resize/add effects – Save finished image to use in other projects.</p> <p>Some children will: Develop these skills to edit several photos Edit further than the task requires.</p>		
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