

Year 3 Computing Medium Term Planning

Year 3	Information Technology	Digital Literacy/e-Safety	Computer Science
Autumn 1 Link to further resources: Computing systems and networks <i>Connecting computers</i> Unplugged Activities	- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. - 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.	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	
	Key Skills/Knowledge	Key Skills/Knowledge	Key Skills/Knowledge
	- I can explain that digital devices accept inputs. - I can explain that digital devices produce outputs. - I can follow a process. - I can classify input and output devices. - I can describe a simple process. - I can design a digital device. - I can explain how I use digital devices for different activities.	- I can use technology safely and respectfully. - I can keep my personal login information safe. - I can login to different programs, devices and applications using different login information. - I can ask for help. - I can report any suspicious activity or information that I see.	

- I can recognise similarities between using digital devices and using non-digital tools.
- I can suggest differences between using digital devices and using non-digital tools.
- I can recognise different connections.
- I can explain how messages are passed through multiple connections.
- I can discuss why we need a network switch.
- I can recognise that a computer network is made up of a number of devices.
- I can demonstrate how information can be passed between devices.
- I can explain the role of a switch, server, and wireless access point in a network.
- I can identify how devices in a network are connected together.
- I can identify networked devices around me.
- I can identify the benefits of computer networks.

Opportunities for the arts:
Digital artists share work through physical and digital networks.

	Artist: Ben O'Brien Task: Create artwork and discuss how it could be shared between devices/networks/physically shared. Sharing Digital Art • Learn that computers connect in networks. • Discuss how artists send work to clients or printers. • Question: <i>How does digital artwork travel?</i>		
Autumn 2 Link to further resources: Creating media <i>Animation</i> iMotion Stickbot	• 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.	• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	
	Key Skills/Knowledge	Key Skills/Knowledge	Key Skills/Knowledge

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| | <ul style="list-style-type: none"> • I can draw a sequence of pictures. • I can create an effective flip book—style animation. • I can explain how an animation/flip book works. • I can predict what an animation will look like. • I can explain why little changes are needed for each frame. • I can create an effective stop-frame animation. • I can break down a story into settings, characters and events. • I can describe an animation that is achievable on screen. • I can create a storyboard. • I can use onion skinning to make small changes between frames. • I can review a sequence of frames to check my work • I can evaluate the quality of my animation. • I can explain ways to make my animation better. • I can evaluate another learner's animation. • I can improve my animation based on feedback. • I can add other media to my animation. | <ul style="list-style-type: none"> • I can use technology safely and respectfully. • I can keep my personal login information safe. • I can login to different programs, devices and applications using different login information. • I can ask for help. • I can report any suspicious activity or information that I see. • I can plug an iPad in to charge. • I can locate the Stikbot or iMotion app on the iPad. | |
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	• I can explain why I added other media to my animation. • I can evaluate my final film. Opportunities for the arts: Telling stories through moving pictures Artist: Nick Park Task: Create a simple stop-motion story from a familiar book using models or drawings. Children: • create characters • plan scenes • photograph movement • tell visual stories Art question: <i>How can a sequence of pictures tell a story?</i>		
Spring 1 Link to further resources: Creating media <i>Desktop publishing</i> Google Docs Google Slides	• 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	• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	
	Key Skills/Knowledge	Key Skills/Knowledge	Key Skills/Knowledge

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| | <ul style="list-style-type: none"> • I can explain the difference between text and images. • I can recognise that text and images can communicate messages clearly. • I can identify the advantages and disadvantages of using text and images. • I can change font style, size, and colours for a given purpose. • I can edit text. • I can explain that text can be changed to communicate more clearly. • I can explain what 'page orientation' means. • I can recognise placeholders and say why they are important. • I can create a template for a particular purpose. • I can choose the best locations for my content. • I can paste text and images to create a magazine cover. • I can make changes to content after I've added it. • I can identify different layouts. • I can match a layout to a purpose. • I can choose a suitable layout for a given purpose. • I can identify the uses of desktop publishing in the real world. • I can say why desktop publishing might be helpful. | <ul style="list-style-type: none"> • I can use technology safely and respectfully. • I can keep my personal login information safe. • I can login to different programs, devices and applications using different login information. • I can ask for help. • I can report any suspicious activity or information that I see. • I can search for appropriate images using appropriate search terms. | |
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	I can compare work made on desktop publishing to work created by hand. Opportunities for the arts: Graphic Designers Artist: Saul Bass Task: Design a digital poster for an art gallery.		
Spring 2 Link to further resources: Data and information <i>Branching databases</i> J2E	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	Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	
	Key Skills/Knowledge	Key Skills/Knowledge	Key Skills/Knowledge
	- I can investigate questions with yes/no answers. - I can make up a yes/no question about a collection of objects. - I can create two groups of objects separated by one attribute. - I can select an attribute to separate objects into groups. - I can create a group of objects within an existing group. - I can arrange objects into a tree	- I can use technology safely and respectfully. - I can keep my personal login information safe. - I can login to different programs, devices and applications using different login information. - I can ask for help. - I can report any suspicious activity or information that I see.	

	structure. • I can select objects to arrange in a branching database. • I can group objects using my own yes/no questions. • I can test my branching database to see if it works. • I can create yes/no questions using given attributes. • I can compare two branching database structures. • I can explain that questions need to be ordered carefully to split objects into similarly sized groups. • I can independently create questions to use in a branching database. • I can create questions that will enable objects to be uniquely identified. • I can create a physical version of a branching database. Opportunities to link with the arts: Branching databases Classifying artwork Artist: Georgia O’Keeffe Task: Classify paintings by subject, colour or style using yes/no branching database questions.	• I can find J2E by using a search engine to search for it or by using the web page address.	
Summer 1 Link to further resources: Programming A		• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical

<i>Sequence in music</i> Scratch 3.0 Hour of Code Code for Life		behaviour; identify a range of ways to report concerns about content and contact.	systems; 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.
	Key Skills/Knowledge	Key Skills/Knowledge	Key Skills/Knowledge
		• I can use technology safely and respectfully. • I can keep my personal login information safe. • I can login to different programs, devices and applications using different login information. • I can ask for help. • I can report any suspicious activity or information that I see. • I can locate the Scratch 3.0 app on an Pad. • I can access Scratch 3.0 on a Chromebook by using a search	• I can identify the objects in a Scratch project (sprites, backdrops). • I can explain that objects in Scratch have attributes (linked to). • I can recognise that commands in Scratch are represented as blocks. • I can identify that each sprite is controlled by the commands I choose. • I can choose a word which describes an on-screen action for my plan. • I can create a program following a design.

		engine or typing the web page address into the search bar. • I can save my work and name it appropriately.	• I can start a program in different ways. • I can create a sequence of connected commands. • I can explain that the objects in my project will respond exactly to the code. • I can explain what a sequence is. • I can combine sound commands. • I can order notes into a sequence. • I can build a sequence of commands. • I can decide the actions for each sprite in a program, • I can make design choices for my artwork. • I can identify and name the objects I will need for a project. • I can relate a task description to a design. • I can implement my algorithm as code. Opportunities for the arts: Sound art and composition Artist: Wassily Kandinsky Task: Create sound sequences inspired by colours and shapes. OR
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			Play classical music and have children create digital art based on their reaction to it/reflection on it.
Summer 2 Link to further resources: Programming B <i>Events and actions</i> Scratch 3.0 Code for Life		• Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; 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.
	Key Skills/Knowledge	Key Skills/Knowledge	Key Skills/Knowledge
		• I can use technology safely and respectfully. • I can keep my personal login information safe. • I can login to different programs, devices and applications using different login information.	• I can explain the relationship between an event and an action. • I can choose which keys to use for actions and explain my choices.

		• I can ask for help. • I can report any suspicious activity or information that I see. • I can locate the Scratch 3.0 app on an Pad. • I can access Scratch 3.0 on a Chromebook by using a search engine or typing the web page address into the search bar. • I can save my work and name it appropriately.	• I can identify a way to improve a program. • I can choose a character for my project. • I can choose a suitable size for a character in a maze. • I can program movement. • I can use a programming extension. • I can consider the real world when making design choices. • I can choose blocks to set up my program. • I can identify additional features (from a given set of blocks). • I can choose suitable keys to turn on additional features. • I can build more sequences of commands to make my design work. • I can test a program against a given design. • I can match a piece of code to an outcome. • I can modify a program using a design. • I can make design choices and justify them. • I can implement my design. • I can evaluate my project. Opportunities for the arts:
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			Interactive digital illustrations Artist: Quentin Blake Task: Make a character respond to mouse clicks or key presses on Scratch 3.0/Scratch Jr.
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GDS Opportunities	• Children search by keyword using a child friendly search engine. • Children bookmark a page into their favourites. • Children begin to contribute to a class blog. • Children use the repeat command in Logo to create a pattern.
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