

Key Vocabulary	E-Safety and technology in our lives	Programming	Multimedia	Data Handling
Years 1&2	Rules, Online, Private information, Appropriate/inappropriate sites, Cyber-bullying, Digital footprint, Keyword searching.	Instructions, Buttons, Robots, Patterns, program, Forward, Backward, Right-angle turn, Algorithm, Sequence, Debug, Predict	Photographs, Video, Sound, Data, Pictogram, Digitally, capturing moments, Magnified images, Questions, Data collection, Graphs, Charts, Save, Retrieve	Videos, Camera stills, Sounds, Image bank, Word bank, Space bar, Paint effects, Templates, Animation, Documents, Index finger typing, Enter/return, Caps lock, Backspace
Year 3	E-safety rules, Secure passwords, Report abuse button, Gaming, Blogs School network, Devices, Computer parts,	Sequence instructions, Sequence debugging, Test + improve, Logo commands, Sequence programming, Type + edit logo commands,	Multimedia, Presentations, Alignment, Brush size, Repeats, Reflections, Green screening, Amend, Copy, Paste	Questioning, Database, Construct, Contribute, Recording data, Data logger, Present data
Year 4	Collaborate, Appropriate online communication, Search tools, Appropriate websites, Owner, Different networks, Information collection, Reliability, Owners	Sensors, Open-ended problems, Bugs in programs, Complex programming	Creating + modifying, Specific purpose, Photo modifying, Keyboard shortcuts, Bullet points, Spell check, Constructive feedback	Database creation, Database searches, Inaccurate data

Subject knowledge support: [What is an algorithm? | TheSchoolRun](#)-also includes BBC snippets to support recap and revisits for children.

[What's the difference between the internet and the world wide web? - CBBC Newsround](#)
[A Packet's Tale. How Does the Internet Work? - YouTube](#)

Year group	Year 3	Year 4
<p>E-safety-</p> <p>Curriculum statement: use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p>Acceptable use policy and internet legends: Talk about what makes a secure password and why they are important. Protect my personal information when I do different things online. Use the safety features of websites as well as reporting concerns to an adult. Recognise websites and games appropriate for my age. Make good choices about how long I spend online. Ask an adult before downloading files and games from the Internet. Post positive comments online.</p> <p>Taught explicitly through half termly assemblies, half termly thinking Thursday, Internet Safety sessions, weekly flyers sent to parents, ground rules and acceptable use policy.</p>	<p>Acceptable use policy and internet legends: Choose a secure password when I am using a website. Talk about the ways I can protect myself and my friends from harm online. Use the safety features of websites as well as reporting concerns to an adult. Know that anything I post online can be seen by others. Choose websites and games that are appropriate for my age. Help my friends make good choices about the time they spend online. Talk about why I need to ask a trusted adult before downloading files and games from the Internet. Comment positively and respectfully online.</p> <p>Managing online information</p> <ul style="list-style-type: none"> I can analyse information to make a judgement about probable accuracy, and I understand why it is important to make my own decisions regarding content and that my

		<p>decisions are respected by others.</p> <ul style="list-style-type: none"> • I can explain what is meant by fake news, e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't. • I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, or influencers). • I can describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful. <p><i>Taught explicitly through half termly assemblies, half termly thinking Thursday, Internet Safety sessions, weekly flyers sent to parents (#WakeUpWednesday), ground rules and acceptable use policy.</i></p>
<p>Computing networks/technology- Curriculum statement:</p> <p>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</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be</p>	<p>Suggested unit: Connecting Computers Software: internet explore/chrome, discreet use of word processing skills via word, immersive reader, forms</p> <p>Unit Objectives: <i>To explain how digital devices function</i> <i>To identify input and output devices</i> <i>To recognise how digital devices can change the way we work</i> <i>To explain how a computer network can be used to share information</i> <i>To explore how digital devices can be connected</i> <i>To recognise the physical components of a network</i></p> <p>Possible cross-curricular links: RSHE <u>online relationships</u> 1. How to critically consider their online friendships and sources of information including awareness of the risks associated with people they have never met. 2. How information and data is shared and used online.</p>	<p>Suggested unit: The Internet Suggested software: internet explore/chrome, discreet use of word processing skills via word, immersive reader, forms</p> <p>Unit Objectives: <i>To describe how networks physically connect to other networks</i> <i>To recognise how networked devices make up the internet</i> <i>To outline how websites can be shared via the World Wide Web (WWW)</i> <i>To describe how content can be added and accessed on the World Wide Web (WWW)</i> <i>To recognise how the content of the WWW is created by people</i> <i>To evaluate the consequences of unreliable content</i></p> <p>Possible cross-curricular links: PSHE (Lesson 6) <ul style="list-style-type: none"> • Evaluating content for honesty and accuracy </p> <p><u>Online relationships</u> 1. To understand that bullying can happen online (cyber-bullying).</p>

<p>discerning in evaluating digital content</p>	<p>Internet safety and harms</p> <ol style="list-style-type: none"> 1. How to stay safe online. (E-safety) 2. To explore and critique how the media presents information. 3. Why social media, some computer games and online gaming for example are age restricted games. <p>Maths (Lesson 1)</p> <ul style="list-style-type: none"> • Number and place value: solve number problems and practical problems involving these ideas. <p>Art (Lesson 3)</p> <ul style="list-style-type: none"> • to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] <p>E-safety key question: <i>Always, sometimes, never. Cyberbullying isn't as bad as bullying in real life.</i></p> <p>Accessibility: Immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets</p>	<ol style="list-style-type: none"> 2. That people sometimes behave differently online, including by pretending to be someone they are not. 3. The rules and principles for keeping safe online, how to recognise risks, harmful content and contact, and how to report them. 4. How to critically consider their online friendships and sources of information including awareness of the risks associated with people they have never met. <p>Internet safety and harms</p> <ol style="list-style-type: none"> 1. To recognise how images in the media (and online) do not always reflect reality and can affect how people feel about themselves. (Unit on editing photos) 2. How to stay safe online. (E-safety) <p>E-safety Key question: <i>Always, sometimes, never? You should block messages from an unknown source.</i></p> <p>Accessibility: Immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets</p>
<p>Programming</p> <p>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>use sequence, selection, and repetition in programs; work with variables and various</p>	<p>Suggested unit: <i>Programming A-Sequencing in Music</i></p> <p>Suggested software: Scratch</p> <p>Objectives</p> <ul style="list-style-type: none"> To explore a new programming environment To identify that commands have an outcome To explain that a program has a start To recognise that a sequence of commands can have an order To change the appearance of my project To create a project from a task description <p>Possible cross-curricular links:</p> <p>E-safety key question:</p> <p>Accessibility: Immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets, espresso coding units</p> <p>Suggested Unit: <i>Programming B-Events and Actions</i></p> <p>Suggested software: turtle</p>	<p>Suggested unit: <i>Programming A-Repetition in Shapes</i></p> <p>Suggested software: turtle</p> <p>Objectives:</p> <ul style="list-style-type: none"> To identify that accuracy in programming is important To create a program in a text-based language To explain what 'repeat' means To modify a count-controlled loop to produce a given outcome To decompose a task into small steps To create a program that uses count-controlled loops to produce a given outcome <p>Possible cross-curricular links:</p> <p>E-safety key question:</p> <p>Accessibility: Immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets, espresso coding units</p> <p>Suggested Unit: <i>Programming B-Repetition in Games</i></p>

<p>forms of input and output</p> <p>use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>(CC: Creating media) 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</p>	<p>Objectives:</p> <p>To explain how a sprite moves in an existing project</p> <p>To create a program to move a sprite in four directions</p> <p>To adapt a program to a new context</p> <p>To develop my program by adding features</p> <p>To identify and fix bugs in a program</p> <p>To design and create a maze-based challenge</p> <p>Possible cross-curricular links:</p> <p>E-safety key question:</p> <p>Accessibility: Immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets, espresso coding units</p> <p>Additional suggestions:</p> <p>Use Scratch to:</p> <p>Break an open-ended problem up into smaller parts.</p> <p>Put programming commands into a sequence to achieve a specific outcome.</p> <p>Keep testing my program and can recognise when I need to debug it.</p> <p>Use repeat commands.</p> <p>Describe the algorithm I will need for a simple task.</p> <p>Detect a problem in an algorithm which could result in unsuccessful programming.</p> <p><u>Project 1 Rock band</u></p> <p><u>Project 2 Lost in Space</u></p> <p><u>Project 3 Ghost Busters</u></p> <p><u>Project 4 Chat bot</u></p>	<p>Suggested software: Scratch</p> <p>Objectives:</p> <p>To develop the use of count-controlled loops in a different programming environment</p> <p>To explain that in programming there are infinite loops and count controlled loops</p> <p>To develop a design that includes two or more loops which run at the same time</p> <p>To modify an infinite loop in a given program</p> <p>To design a project that includes repetition</p> <p>To create a project that includes repetition</p> <p>Possible cross-curricular links:</p> <p>E-safety key question:</p> <p>Accessibility: Immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets, espresso coding units</p> <p>Additional suggestions:</p> <p>Use Scratch to:</p> <p>Use logical thinking to solve an open-ended problem by breaking it up into smaller parts.</p> <p>Use an efficient procedure to simplify a program.</p> <p>Use a sensor to detect a change which can select an action within my program.</p> <p>Know that I need to keep testing my program while I am putting it together.</p> <p>Use a variety of tools to create a program.</p> <p>Recognise an error in a program and debug it.</p> <p>Recognise that an algorithm will help me to sequence more complex programs.</p> <p>Recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.</p> <p><u>Project 1 Memory</u></p> <p><u>Project 2 Dodgeball</u></p> <p><u>Project 3 Brain game</u></p> <p><u>Project 4 Catch the dots</u></p>
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<p>Data handling</p> <p>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>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</p>	<p>Suggested unit: Data and information-branching databases</p> <p>Suggested software: j2data Pictogram, Branch, and Database tools (see https://www.j2e.com/jit5#branch or similar</p> <p>Objectives:</p> <ul style="list-style-type: none"> To create questions with yes/no answers To identify the object attributes needed to collect relevant data To create a branching database To explain why it is helpful for a database to be well structured To identify objects using a branching database To compare the information shown in a pictogram with a branching database <p>Possible cross-curricular links:</p> <p>E-safety key question: What data should we keep private about ourselves and others?</p> <p>Accessibility: Immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets</p> <p>Additional suggestions:</p> <p>Use Flexi-tree to:</p> <ul style="list-style-type: none"> Talk about the different ways data can be organised. Search a ready-made database to answer questions. Collect data help me answer a question. Add to a database. Use a data logger to monitor changes and can talk about the information collected. 	<p>Suggested unit:</p> <p>Suggested software: Data Loggers linked to SensorLab, App on Ipads. Discreet word processing through typing onto Sensor Lab, transferring skills of saving, editing and opening documents, printing. Discreet skills through exploring excel, intergris in real life.</p> <p>Objectives: Data and information-data logging</p> <ul style="list-style-type: none"> To explain that data gathered over time can be used to answer questions To use a digital device to collect data automatically To explain that a data logger collects 'data points' from sensors over time To use data collected over a long duration to find information To identify the data needed to answer questions To use collected data to answer questions <p>Possible cross-curricular links: Climate change/Comparing climates- Geography, Questions-SPaG, Statistics/data-Maths and Scientific Skills</p> <p>E-safety coverage: What data would you not want to share? What would you do if somebody asked you to share your date of birth? When is this ok? When is it not ok? Government Census.</p> <p>Alternative suggestions:</p> <ul style="list-style-type: none"> Use excel to Organise data in different ways. Collect data and identify where it could be inaccurate. Plan, create and search a database to answer questions. Choose the best way to present data to my friends. Use a data logger to record and share my readings with my friends.
<p>Creating media</p> <p>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</p>	<p>Suggested unit: Desktop Publishing</p> <p>Software: Adobe Spark, discreet use of word, save and insert tools e.g. save image to draft and transfer written word and images</p> <p>Objectives:</p> <ul style="list-style-type: none"> To recognise how text and images convey information To recognise that text and layout can be edited To choose appropriate page settings To add content to a desktop publishing publication 	<p>Suggested unit: Audio Editing</p> <p>Software: Audacity</p> <p>Objectives:</p> <ul style="list-style-type: none"> To identify that sound can be digitally recorded To use a digital device to record sound To explain that a digital recording is stored as a file To explain that audio can be changed through editing To show that different types of audio can be combined and played together To evaluate editing choices made

<p>given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact</p>	<p>To consider how different layouts can suit different purposes</p> <p>To consider the benefits of desktop publishing</p> <p>Possible cross-curricular links: Magazine front cover or article linked to English or History topic</p> <p>E-safety key question: <i>True or False: It is ok to cut and paste an article written by someone else into my own article.</i></p> <p>Accessibility: immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets, ipad if preferred or vice versa</p> <p>Additional suggestions for cross curricular presentations:</p> <p><i>Use Microsoft to:</i></p> <p>Use photos, video and sound to create an atmosphere when presenting to different audiences.</p> <p><i>Use publisher or Adobe Spark to:</i></p> <p>Change the appearance of text to increase its effectiveness.</p> <p>Create, modify and present documents for a particular purpose.</p> <p>Use a keyboard confidently and make use of a spellchecker to write and review my work.</p> <p><i>Use PowerPoint or Adobe Spark to:</i></p> <p>Use an appropriate tool to share my work and collaborate online.</p> <p>Give constructive feedback to my friends to help them improve their work and refine my own work.</p>	<p>Possible cross-curricular links: Create a podcast for Romans based on written report/Climate Change persuasive podcast/performance poetry or any form of written work transferred and performed.</p> <p>E-safety key question: <i>How can we share appropriate comments and feedback on a podcast? How can we use chat function during a live or pre-recorded podcast?</i></p> <p>Accessibility: Dictate tool on word, Ipad voice notes, sound buttons, headphones, immersive reader, dictate, zoom/magnifier, enlarged keyboard, laminated keyboard sheets, ipad if preferred or vice versa</p> <p>Suggested unit: <i>Creating media-photo editing</i></p> <p>Software: Pixelbay, Adobe Spark,</p> <p>Objectives</p> <p>To explain that digital images can be changed</p> <p>To change the composition of an image</p> <p>To describe how images can be changed for different uses</p> <p>To make good choices when selecting different tools</p> <p>To recognise that not all images are real</p> <p>To evaluate how changes can improve an image</p> <p>Possible cross-curricular links: Digital Art? RSHE, explicit links to e-safety and images</p> <p>E-safety key question: <i>What are the pros and cons of editing images?</i></p> <p>Accessibility:</p> <p>Additional suggestions for cross curricular presentations:</p> <p><i>Use Microsoft to:</i></p> <p>Use photos, video and sound to create an atmosphere when presenting to different audiences.</p> <p><i>Use publisher or Adobe Spark to:</i></p> <p>Change the appearance of text to increase its effectiveness.</p> <p>Create, modify and present documents for a particular purpose.</p>
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