

Computing Intent

Computing at Beaminster St Mary's

At St Mary's, we provide a high-quality computing curriculum we intend to equip children to participate in a rapidly-changing world where work and leisure activities are increasingly transformed by technology. It is our intention that pupils become digitally literate to enable children to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a safe and responsible way. Computing skills are a major factor in enabling children to be confident, creative and independent learners and it is our intention that children have every opportunity available to allow them to achieve this.

In addition, pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing has deep links with mathematics, science, and design and technology and we have found links to other areas of our curriculum to make learning fun and engaging for our pupils.

Compass Curriculum Drivers

	In all subjects...	In computing, this looks like...
Curiosity	We aspire for pupils to embrace challenge with a growth mind set and show curiosity, independence and resilience in all that they do.	<ul style="list-style-type: none"> Our Computing curriculum enables children to become life-long learners through teaching them how to access the learning opportunities that technology has to offer. We teach children to access the internet and how to use it to explore their curiosity in a manner that is safe. Our engagement opportunities inspire children to continue to develop their computing skills outside of school.
Communication	We aspire for pupils to become emotionally mature with a depth of language that enables them to share ideas effectively.	<ul style="list-style-type: none"> Our computing curriculum provides opportunities for children to be expressive communicators by exploring how the internet can provide opportunities to communicate such as email and video conferencing. As well, children are taught how to encrypt and decrypt messages, and understand the algorithms set to instruct computers. Online safety lessons will also educate children in how to express themselves and communicate safely through the internet, exploring the do's and don'ts of social media. Additionally, computing offers opportunities for children to work collaboratively with peers sharing devices and working in groups or pairs to complete a project.
Admiration	We aspire for pupils to become wise, respectful learners	<ul style="list-style-type: none"> The teaching of computing at St Mary's allows children to explore all aspects of computer science and technology to equip them with the computing skills they may need in an ever-changing digital age and society.
Worldly	We aspire for pupils to become emotionally literate, tolerant and appreciative of an ever changing global environment.	<ul style="list-style-type: none"> Using applications such as Google expedition allows children to digitally explore places around the world, enabling them to learn beyond the classroom.

Learning knowledge is not an end point in itself, it is a springboard to learning more knowledge. Each unit in our overview is underpinned by rich, substantive knowledge and ambitious vocabulary, whilst also ensuring children are developing their disciplinary knowledge (historical skills). Each unit of work is planned carefully to ensure concepts are taught in optimal order to

support children's understanding. As well as developing a breadth of subject knowledge, we want our children to develop subject specific skills. In addition to substantive and disciplinary knowledge, children will develop their experiential knowledge through carefully planned enrichment activities.

	EYFS	Year 1 and Year 2	Year 3 and Year 4	Year 5 and Year 6
Cycle 1		Online Safety & Exploring Purple Mash Effective Searching Lego Builders Technology outside school Grouping & Sorting Creating Pictures Spreadsheets Coding	Coding Online Safety Spreadsheets Touch Typing Email Branching Databases Simulations Graphing	Coding Online Safety Spreadsheets Databases Game Creator 3D Modelling Concept Maps
Cycle 2		Online Safety & Exploring Purple Mash Maze Explorers Questioning Online Safety Animated Story Books Making Music Spreadsheets Pictograms Presenting ideas	Coding Online Safety Spreadsheets Writing for different audiences Logo Animation Effective search Hardware Investigators	Coding Online Safety Spreadsheets Blogging Text Adventures Networks Quizzing

Substantive Concepts – these are the concepts that give a subject substance or content.

Our curriculum is refined yearly, but it maintains a consistent knowledge base to ensure conceptual progression. We have identified a set of key substantive concepts that children will repeatedly revisit throughout their time at St Mary’s. Our substantive concepts are:

	Logic	Algorithms	Decomposition	Patterns	Abstraction	Evaluation
	Predicting and analysing	Making steps and rules	Breaking down into parts	Spotting and using similarities	Removing unnecessary detail	Making judgements
EYFS	Make a floor robot move	Use simple software to make something happen.	Operate simple equipment.	Create shapes and text on a screen.		Use a safe part of the Internet to play and learn. Talk about different kinds of information such as pictures, video, text and sound.
KS1	Press the buttons in the correct order to make their robot do what they want.	Tell others the order they need to do things to make something happen and talk about this as an algorithm.	Use programming software to make objects move.	Begin to use software/apps to create movement and patterns on a screen.	Watch a program execute and spot where it goes wrong so that they can debug it.	Look at their friend’s program and talk about what will happen.
LKS2	Organise data in different ways. Collect data and identify where it could be inaccurate.	Recognise that an algorithm will help them to sequence more complex programs.	Use logical thinking to solve an open-ended problem by breaking it up into smaller parts. Use an efficient procedure to simplify a program.	Recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.	Create, modify and present documents for a particular purpose.	Talk about the ways they can protect themselves and their friends from harm online. Recognise an error in a program and debug it.
UKS2	Combine a range of media, recognising the contribution of each to achieve a particular outcome.	Explain and program each of the steps in their algorithm.	Use a variable and operators to stop a program.	Check the data they collect for accuracy and plausibility.	Deconstruct a problem into smaller steps, recognising similarities to solutions used before	Support their friends to protect themselves and make good choices online, including reporting concerns to an adult. Talk about audience, atmosphere and structure when planning a particular outcome.

Second order concepts – Shape the enquiry

Tinkering <ul style="list-style-type: none">• design, write and debug programs that accomplish specific goals• Use logical reasoning to explain how some simple algorithms work and to find and correct errors in algorithms and programs.• use technology safely, respectfully and responsibly	Creating <ul style="list-style-type: none">• including abstraction, sequence, selection and repetition, logic, algorithms and data representation• select, use and combine software on a range of digital devices to create a programs, that accomplish given goals, including collecting, analysing, evaluating and presenting data• use search technologies effectively, be discerning in evaluating digital content	
Debugging <ul style="list-style-type: none">• apply the fundamental principles and concepts of computer science	Persevering <ul style="list-style-type: none">• Solve problems by breaking them down into smaller parts.• evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems	Collaborating <ul style="list-style-type: none">• Working together to solve problems

Progression in Computing

EYFS & Key Stage 1

Programming

Key Stage 1 National Curriculum Expectations

Pupils should be taught to:

- *understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions*
- *create and debug simple programs*
- *use logical reasoning to predict the behaviour of simple programs*

EYFS	Year 1	Year 2
<p>Make a floor robot move.</p> <p>Use simple software to make something happen.</p> <p>Make choices about the buttons and icons they press, touch or click on.</p> <p>Talk about different kinds of information such as pictures, video, text and sound.</p>	<p>Give instructions to their friend and follow their instructions to move around.</p> <p>Describe what happens when they press buttons on a robot.</p> <p>Press the buttons in the correct order to make their robot do what they want.</p> <p>Describe what actions they will need to do to make something happen and begin to use the word algorithm.</p> <p>Begin to predict what will happen for a short sequence of instructions.</p> <p>Begin to use software/apps to create movement and patterns on a screen.</p> <p>Use the word debug when they correct mistakes when they program.</p>	<p>Give instructions to a friend (using forward, backward and turn) and physically follow their instructions.</p> <p>Tell others the order they need to do things to make something happen and talk about this as an algorithm.</p> <p>Program a robot or software to do a particular task.</p> <p>Look at their friend's program and talk about what will happen.</p> <p>Use programming software to make objects move.</p> <p>Watch a program execute and spot where it goes wrong so that they can debug it.</p>

Multi Media and Handling Data

Key Stage 1 National Curriculum Expectations

Pupils should be taught to:

- *use technology purposefully to create, organise, store, manipulate and retrieve digital content*

EYFS	Year 1	Year 2
<p>Move objects on a screen.</p> <p>Create shapes and text on a screen.</p> <p>Use technology to show my learning.</p>	<p>Be creative with different technology tools.</p> <p>Use technology to create and present my ideas.</p> <p>Use the keyboard or a word bank on their device to enter text.</p> <p>Name and save information in a special place and retrieve it again.</p> <p>Talk about the different ways in which information can be shown.</p> <p>Use technology to collect information, including photos, video and sound.</p> <p>Sort different kinds of information and present it to others.</p> <p>Add information to a pictograph and talk about what they have found out.</p>	<p>Use technology to organise and present their ideas in different ways.</p> <p>Use the keyboard on their device to add, delete and space text for others to read.</p> <p>Tell you about an online tool that will help them to share their ideas with other people.</p> <p>Name, save and open files on the device they use.</p> <p>Talk about the different ways they use technology to collect information, including a camera, microscope or sound recorder.</p> <p>Make and save a chart or graph using the data they collect.</p> <p>Talk about the data that is shown in their chart or graph.</p> <p>Start to understand a branching database.</p> <p>Tell you what kind of information they could use to help them investigate a question.</p>

Technology in our Lives

Key Stage 1 National Curriculum Expectations: Pupils should be taught to:

- *recognise common uses of information technology beyond school*

EYFS	Year 1	Year 2
<p>Talk about technology that is used at home and in school.</p> <p>Operate simple equipment.</p> <p>Use a safe part of the Internet to play and learn.</p>	<p>Recognise the ways that technology is used in the classroom.</p> <p>Recognise ways that technology is used at home and in the community.</p> <p>Use links to websites to find information.</p> <p>Begin to identify some of the benefits of using technology.</p>	<p>Talk about how and why technology is used in the classroom.</p> <p>Talk about how and why technology is used in the home and community.</p> <p>Start to understand that other people have created the information they use.</p> <p>Identify benefits of using technology including finding information, creating and communicating.</p> <p>Talk about the differences between the Internet and things in the physical world.</p>

E-safety

Key Stage 1 National Curriculum Expectations: Pupils should be taught to:

- *use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.*

EYFS	Year 1	Year 2
<p>Ask an adult when they want to use the Internet.</p> <p>Tell an adult when something is worrying them or unexpected happens while they are using the Internet.</p> <p>Be kind to their friends.</p> <p>Talk about the amount of time they spend using a computer / tablet / game device.</p> <p>Be careful with technology devices.</p>	<p>Keep their password private.</p> <p>Tell you what personal information is.</p> <p>Tell an adult when they see something unexpected or worrying online.</p> <p>Talk about why it's important to be kind and polite.</p> <p>Recognise an age-appropriate website.</p> <p>Agree and follow sensible e-Safety rules.</p>	<p>Explain why they need to keep their password and personal information private.</p> <p>Describe the things that happen online that they must tell an adult about.</p> <p>Talk about why they should go online for a short amount of time.</p> <p>Talk about why it is important to be kind and polite online and in real life.</p> <p>Know that not everyone is who they say they are on the Internet.</p>

Progression in Computing

Lower Key Stage 2

Programming

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

- *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*

Year 3

Break an open-ended problem up into smaller parts.

Put programming commands into a sequence to achieve a specific outcome.

Keep testing their program and can recognise when they need to debug it.

Use repeat commands.

Describe the algorithm they will need for a simple task.

Detect a problem in an algorithm which could result in unsuccessful programming.

Year 4

Use logical thinking to solve an open-ended problem by breaking it up into smaller parts.

Use an efficient procedure to simplify a program.

Use a sensor to detect a change which can select an action within my program.

Know that they need to keep testing their program while they are putting it together.

Use a variety of tools to create a program.

Recognise an error in a program and debug it.

Recognise that an algorithm will help them to sequence more complex programs.

Recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.

Multi Media & Handling Data

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

- *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content*
- *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.*

Year 3

Create different effects with different technology tools.

Combine a mixture of text, graphics and sound to share their ideas and learning.

Use appropriate keyboard commands to amend text on their device, including making use of a spellchecker.

Evaluate their work and improve its effectiveness.

Use an appropriate tool to share their work online.

Talk about the different ways data can be organised.

Search a ready-made database to answer questions.

Collect data to help them answer a question.

Add to a database.

Make a branching database.

Use a data logger to monitor changes and talk about the information collected.

Year 4

Use photos, video and sound to create an atmosphere when presenting to different audiences.

They are confident to explore new media to extend what they can achieve.

Change the appearance of text to increase its effectiveness.

Create, modify and present documents for a particular purpose.

Use a keyboard confidently and make use of a spellchecker to write and review their work.

Use an appropriate tool to share their work and collaborate online.

Give constructive feedback to their friends to help them improve their work and refine their own work.

Organise data in different ways.

Collect data and identify where it could be inaccurate.

Technology in our Lives

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

- *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*

Year 3

Save and retrieve work on the Internet, the school network or their own device.

Talk about the parts of a computer.

Tell you ways to communicate with others online.

Describe the World Wide Web as the part of the Internet that contains websites.

Use search tools to find and use an appropriate website.

Make decisions about whether I can use images that I find online in my own work.

Year 4

Tell you whether a resource they are using is on the Internet, the school network or their own device.

Identify key words to use when searching safely on the World Wide Web.

Think about the reliability of information they read on the World Wide Web.

Tell you how to check who owns photos, text and other information.

Create a hyperlink to a resource on the World Wide Web.

E-safety

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

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

Year 3

Talk about what makes a secure password and why they are important.

Protect their personal information when they do different things online.

Use the safety features of websites as well as reporting concerns to an adult.

Recognise websites and games appropriate for their age.

Make good choices about how long they spend online.

Ask an adult before downloading files and games from the Internet.

Post positive comments online.

Year 4

Choose a secure password when they are using a website.

Talk about the ways they can protect themselves and their friends from harm online.

Use the safety features of websites as well as reporting concerns to an adult.

Know that anything they post online can be seen by others.

Choose websites and games that are appropriate for their age.

Help their friends make good choices about the time they spend online.

Talk about why they need to ask a trusted adult before downloading files and games from the Internet.

Comment positively and respectfully online.

Progression in Computing

Upper Key Stage 2

Programming

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

- *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*

Year 5

Decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program.

Refine a procedure using repeat commands to improve a program.

Use a variable to increase programming possibilities.

Change an input to a program to achieve a different output.

Use 'if' and 'then' commands to select an action.

Talk about how a computer model can provide information about a physical system.

Use logical reasoning to detect and debug mistakes in a program.

Use logical thinking, imagination and creativity to extend a program.

Year 6

Deconstruct a problem into smaller steps, recognising similarities to solutions used before.

Explain and program each of the steps in their algorithm.

Evaluate the effectiveness and efficiency of their algorithm while continually testing the programming of that algorithm.

Recognise when they need to use a variable to achieve a required output.

Use a variable and operators to stop a program.

Use different inputs (including sensors) to control a device or onscreen action and predict what will happen.

Use logical reasoning to detect and correct errors in a algorithms and programs.

Multi Media and Handling Data

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

- *use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content*
- *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.*

Year 5

Use text, photo, sound and video editing tools to refine their work.

Use the skills they have already developed to create content using unfamiliar technology.

Select, use and combine the appropriate technology tools to create effects that will have an impact on others.

Select an appropriate online or offline tool to create and share ideas.

Review and improve their own work and support others to improve their work.

Use a spreadsheet and database to collect and record data.

Choose an appropriate tool to help them collect data.

Present data in an appropriate way.

Search a database using different operators to refine my search.

Year 6

Talk about audience, atmosphere and structure when planning a particular outcome.

Confidently identify the potential of unfamiliar technology to increase their creativity.

Combine a range of media, recognising the contribution of each to achieve a particular outcome.

Tell you why they select a particular online tool for a specific purpose.

Be digitally discerning when evaluating the effectiveness of their own work and the work of others.

Plan the process needed to investigate the world around them.

Select the most effective tool to collect data for their investigation.

Check the data they collect for accuracy and plausibility.

Interpret the data they collect.

Technology in our Lives

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

- *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*

Year 5

Describe different parts of the Internet.

Use different online communication tools for different purposes.

Use a search engine to find appropriate information and check its reliability.

Recognise and evaluate different types of information they find on the World Wide Web.

Describe the different parts of a webpage.

Find out who the information on a webpage belongs to.

Year 6

Identify the different Internet services they need to use for different purposes.

Describe how information is transported on the Internet.

Select an appropriate tool to communicate and collaborate online.

Talk about the way search results are selected and ranked.

Check the reliability of a website.

Explain about copyright and acknowledging the sources of information that I find online.

E-safety

Key Stage 2 National Curriculum Expectations

Pupils should be taught to:

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

Year 5

Create and protect a strong password and other personal information.

Explain why they need to protect themselves and their friends and the best ways to do this, including reporting concerns to an adult.

Know that anything they post online can be seen, used and may affect others.

Talk about the dangers of spending too long online or playing a game.

Explain the importance of communicating kindly and respectfully.

Discuss the importance of choosing an age-appropriate website or game.

Explain why they need to protect their computer or device from harm.

Know which resources on the Internet they can download and use.

Explain how identity online can be copied, modified or altered.

Recognise when someone is upset, hurt or angry online.

Explain how using technology can distract them from other things they might do or should be doing.

Year 6

Protect their password and other personal information.

Explain the consequences of sharing too much about themselves online.

Support their friends to protect themselves and make good choices online, including reporting concerns to an adult.

Explain the consequences of spending too much time online or on a game.

Explain the consequences to themselves and others of not communicating kindly and respectfully.

Protect their computer or device from harm on the Internet.

Describe ways in which media can shape ideas about gender.

Explain how they are developing an online reputation which will allow other people to form an opinion of them.

Describe how to capture bullying content as evidence (e.g. screengrab, URL, profile) to share with others who can help them.

Describe common systems that regulate age-related content (e.g., PEGI, BBFC, parental warnings) and describe their purpose.

Explain how many free apps or services may read and share their private information with others.

Cycle 1

EYFS					
on sound camera bee-bot	off moving photograph laptop	switch buttons Internet computer	backwards keyboard website	forwards mouse information	instruction screen I-pad

Key Stage 1								
Online Safety	Effective Searching	Lego Builders	Technology Outside School	Grouping & Sorting	Creating Pictures	Spreadsheets	Coding	Coding
<ul style="list-style-type: none"> • log in • username • log out • password • avatar • notification • topics • tools save 	<ul style="list-style-type: none"> • internet • search • search engine 	<ul style="list-style-type: none"> • Instruction • Algorithm • Computer • Program • debug 	<ul style="list-style-type: none"> • technology 	<ul style="list-style-type: none"> • Sort • criteria 	<ul style="list-style-type: none"> • impressionism • palette • pointillism • share • surrealism • template 	<ul style="list-style-type: none"> • Arrow keys • Backspace key • Cursor • Columns • Cells • Clipart • Count tool • Delete key • Image toolbox • Move cell tool • Rows • Lock tool • Speak tool • spreadsheet 	<ul style="list-style-type: none"> • Action • Algorithm • Background • Code • Command • Debugging • Event • Execute • Input • instructions • object • properties • output • scale • run • sound • when clicked • scene 	<ul style="list-style-type: none"> • Collision detection • Design mode • Key pressed • Nesting • Swiped • Sequence • timer

Lower Key Stage 2							
Coding	Online Safety	Spreadsheets	Touch Typing	Email	Branching databases	Simulations	Graphing
<ul style="list-style-type: none"> • action • algorithm • background • alert • blocks of command • button • collision detection • debugging • command • develop • execute • event • nesting • object • flowchart • plan • predict • output • procedure • repeat • properties • timer • sequence • sound • scene • test • values 	<ul style="list-style-type: none"> • password • internet • blog • concept map • username • website • webpage • spoof website • PEGI rating 	<ul style="list-style-type: none"> • < > = • Advance mode • Copy and paste • Columns • Cells • Delete key • Equals tool • Spin tool • Move cell tool • Rows • spreadsheet 	<ul style="list-style-type: none"> • posture • top row keys • home row keys • bottom row keys • space bar 	<ul style="list-style-type: none"> • communication • email • compose • send • CC • Attachment • Formatting • Report to teacher • Password • Address book • Save to draft 	<ul style="list-style-type: none"> • Branching database • Data • Database • question 	<ul style="list-style-type: none"> • simulation 	<ul style="list-style-type: none"> • graph • field • data • bar chart • block graph • line graph

Upper Key Stage 2

Coding	Online Safety	Spreadsheets	Databases	Game Creator	3D Modelling	Concept Maps
<ul style="list-style-type: none"> • action • abstraction • algorithm • button • called • coordinates • decomposition • event • function • If • nesting • object • physical system • properties • run • score • sequence • simplify • simulation • tab • timer • variable 	<ul style="list-style-type: none"> • online safety • smart rules • password • reputable • encryption • identity theft • shared image • plagiarism • citations • reference • bibliography 	<ul style="list-style-type: none"> • average • advance mode • copy and paste • columns • cells • charts • equal tools • formula • formula wizard • move cell tool • random tool • rows • spin tool • spreadsheet • timer 	<ul style="list-style-type: none"> • avatar • binary tree • charts • collaborative • data • database • find • record • sort • group • arrange • statistics • reports • table 	<ul style="list-style-type: none"> • animation • computer game • customise • evaluation • image • instructions • interactive • screenshot • texture • perspective • playability 	<ul style="list-style-type: none"> • CAD modelling • 3D • Viewpoint • Polygon • 2D • Net • 3D Printing • Points • template 	<ul style="list-style-type: none"> • audience • collaboratively • concept • concept map • connection • idea • node • thought • visual

Cycle 2

EYFS					
on sound camera bee-bot	off moving photograph laptop	switch buttons Internet computer	backwards keyboard website	forwards mouse information	instruction screen I-pad

Key Stage 1								
Online Safety	Maze Explorers	Questioning	Online Safety	Animated Story Books	Making Music	Spreadsheets	Pictograms	Presenting Ideas
<ul style="list-style-type: none"> • Search • Display board • Internet • Sharing • Email • Attachment • Digital footprint 	<ul style="list-style-type: none"> • Direction • Challenge • Arrow • Undo • Rewind • Forward • Backwards • Right turn • Left turn • Debug • Instruction • algorithm 	<ul style="list-style-type: none"> • pictogram • question • data • collate • binary tree • avatar • database 	<ul style="list-style-type: none"> • Search • Display board • Internet • Sharing • Email • Attachment • Digital footprint 	<ul style="list-style-type: none"> • Animation • E-book • Font • File sound effect • Display board 	<ul style="list-style-type: none"> • Bpm • Composition • Digitally • Music • Sound effects (Sfx) • Soundtrack • Tempo • volume 	<ul style="list-style-type: none"> • Backspace key • Copy and paste • Columns • Cells • Count tool • Delete key • Equals tool • Image toolbox • Lock tool • Move cell tool • Rows • Speak tool • Spreadsheet 	<ul style="list-style-type: none"> • Pictogram • Data • collate 	<ul style="list-style-type: none"> • concept map • quiz • presentation • node • animated • non-fiction • narrative • audience

Lower Key Stage 2							
Coding	Online Safety	Spreadsheets	Writing for different audiences	Logo	Animation	Effective Search	Hardware Investigators
<ul style="list-style-type: none"> • action • background • alert • button • command • coordinates • debugging • develop • execute • flowchart • if • if/else • nesting • prompt • predict • objects type • procedure • repeat until • properties • sequence • variable • variable value 	<ul style="list-style-type: none"> • computer virus • cookies • copyright • digital footprint • email • identity theft • malware • phishing • plagiarism • spam 	<ul style="list-style-type: none"> • average • advance mode • copy and paste • columns • cells • charts • equal tools • formula • formula wizard • move cell tool • random tool • rows • spin tool • spreadsheet • timer • 	<ul style="list-style-type: none"> • Font • Bold • Italic • underline 	<ul style="list-style-type: none"> • LOGO • BK • FD • RT • LT • REPEAT • SETPC • SETPS • PU • PD 	<ul style="list-style-type: none"> • Animation • Background • Frame • Flipbook • Onion skinning • Stop motion • Play • Sound • Video clip 	<ul style="list-style-type: none"> • Easter egg • Internet • Internet browser • Search • Search engine • Spoof website • website 	<ul style="list-style-type: none"> • motherboard • CPU • RAM • Graphics Card • Network card • Monitor • Speakers • Keyboard and mouse

Upper Key Stage 2

Coding	Online Safety	Spreadsheets	Blogging	Text Adventures	Networks	Quizzing
<ul style="list-style-type: none"> Action Alert Algorithm Background Button Called Command Coordinates Debugging Decomposition Developer Event Flowchart Function Get input If / else Launch command Number variable nesting object predict procedure prompt properties repeat run scene selection simulation string tab timer user input variable 	<ul style="list-style-type: none"> digital footprint password PEGI rating Phishing Screen time Spoof website 	<ul style="list-style-type: none"> Average function Advance mode Copy and paste Columns Cells Charts Count Dice Equals tool Formula Formula wizard Move cell tool Random tool Rows Spreadsheet Timer Spin tool 	<ul style="list-style-type: none"> Audience Blog Blog page Blog post Collaboration icon 	<ul style="list-style-type: none"> text based adventure concept map debug sprite function 	<ul style="list-style-type: none"> internet world wide web network router network cables local area network wide area network wireless 	<ul style="list-style-type: none"> audience collaboration concept map database quiz