

COMPUTING SUBJECT LEARNING EXPECTATIONS



Programme of Study

Key Stage 1	Ourselves	Patterns The Seasons	Toys and Games	Places	Growth	The Seaside
<p>Pupils should be taught to:</p> <p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Recognise common uses of information technology beyond school</p> <p>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.</p>	<p>Word processing:</p> <p>I can use letters, basic punctuation, space-bar and enter key to type words and sentences quickly</p> <p>I can use backspace to make corrections</p> <p>I can use shift key for punctuation</p>	<p>Research:</p> <p>I can read words, look at pictures and watch videos on a website</p> <p>I can explore a website using hyperlinks</p>	<p>Programming:</p> <p>I can move a programmable toy in different directions</p> <p>I can combine commands to follow a route</p> <p>I can explain what an algorithm is</p> <p>I can describe and write algorithms to complete specific tasks</p>	<p>Graphs:</p> <p>I can sort items into sets</p> <p>I can draw a simple graph, e.g. pictogram / block graph</p> <p>I can explain what the graph shows</p>	<p>Creating images:</p> <p>I can use different paint and drawing packages</p> <p>I can paint with different colours</p> <p>I can paint neatly using undo or eraser tool to correct mistakes</p> <p>I can change the brush size or style for effect</p> <p>Photography: I can use a digital still camera to take a picture</p> <p>Audio: I can record an audio recording</p> <p>I can play back an audio recording</p>	<p>Internet, networks, web:</p> <p>I understand that computers are networked and linked</p> <p>E-safety: I can communicate safely & respectfully online</p> <p>I know who to tell and what to do if I find upsetting material online</p> <p>I understand why I should not share my personal details online</p> <p>I understand it can be difficult to tell if someone is who they say they are online</p>

Programme of Study

Key Stage 1	Superheroes	Pirates	Castles	Nocturnal Animals	Space	Families
<p>Pupils should be taught to:</p> <p>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>Create and debug simple programs</p> <p>Use logical reasoning to predict the behaviour of simple programs</p> <p>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Recognise common uses of information technology beyond school</p> <p>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.</p>	<p>Programming:</p> <p>I can enter a sequence of commands before running them</p> <p>I can program an algorithm on a digital device</p> <p>I can debug (correct errors) in a simple program</p> <p>I can predict what a simple program is going to do</p> <p>Simulations: I can explore a computer simulation that copies real life</p>	<p>Databases:</p> <p>I can read and use a simple database to find information</p> <p>I can add information to a database</p> <p>Video: I can record a video recording</p> <p>I understand the need to frame the image and move the camera carefully</p> <p>I can play back a video recording</p>	<p>Programming:</p> <p>I can move a programmable toy in different directions</p> <p>I can combine commands to follow a route</p> <p>I can explain what an algorithm is</p> <p>I can describe and write algorithms to complete specific tasks</p>	<p>Graphs:</p> <p>I can sort items into sets</p> <p>I can draw a simple graph, e.g. pictogram / block graph</p> <p>I can explain what the graph shows</p>	<p>Creating images:</p> <p>I can use different paint and drawing packages</p> <p>I can paint with different colours</p> <p>I can paint neatly using undo or eraser tool to correct mistakes</p> <p>I can change the brush size or style for effect</p> <p>Photography: I can use a digital still camera to take a picture</p> <p>Audio: I can record an audio recording</p> <p>I can play back an audio recording</p>	<p>Internet, networks, web:</p> <p>I understand that computers are networked and linked</p> <p>E-safety: I can communicate safely & respectfully online</p> <p>I know who to tell and what to do if I find upsetting material online</p> <p>I understand why I should not share my personal details online</p> <p>I understand it can be difficult to tell if someone is who they say they are online</p>

Programme of Study

Key stage 2 Pupils should be taught to:	London Now and Then	Protecting our Environment	Dragonology	Ancient Egyptians	The Caribbean	Fairy Tales Twists
<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 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>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 discerning in evaluating digital content</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>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Programming:</p> <p>I can reorder a sequence of instructions to perform a given task</p> <p>I can refine a program by using the repeat command</p> <p>Simulations:</p> <p>I can explain how to control a simulation</p> <p>I can explain how a simulation is and isn't realistic</p>	<p>Databases:</p> <p>I can create a branching database to sort and organise items</p> <p>I can filter and sort records in a database to answer questions</p>	<p>Word processing:</p> <p>I can use cut, copy and paste to reorder content</p> <p>I can use and resize graphics within my work</p> <p>I can use spell check to aid my writing</p> <p>Presentations:</p> <p>I can type text and insert images onto pages</p> <p>I can add text effects and move items around to find the best layout</p>	<p>Research:</p> <p>I can search online for images and information</p>	<p>Creating images:</p> <p>I can zoom in to help paint a realistic picture</p> <p>Video:</p> <p>I can zoom in and out on subjects appropriately</p> <p>I can download the video files from the video camera</p> <p>I can combine video clips to create a video</p> <p>Audio:</p> <p>I can re-record an audio recording to improve clarity</p> <p>I can download and save a recording</p>	<p>Online collaboration:</p> <p>I can send and reply to online messages such as email</p> <p>I can add and open attachments</p> <p>I know not to open messages and attachments from strangers</p> <p>Internet, networks, web:</p> <p>I understand that computers are networked and linked</p> <p>I understand that the internet can be used for communications such as email, video conferencing, blogs, and social networks</p> <p>E-safety:</p> <p>I can communicate safely & respectfully online</p> <p>I know who to tell and what to do if I find upsetting material online</p> <p>I understand why I should not share my personal details online</p> <p>I understand it can be difficult to tell if someone is who they say they are online</p>

Programme of Study

Key stage 2	The Victorians	Wilderness and Survival	Inventions	Romans	Journeys	Volcanoes
<p>Pupils should be taught to:</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 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>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 discerning in evaluating digital content</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>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Programming:</p> <p>I can test existing programs to see how they could be improved</p> <p>I can create a procedure (group of commands) to do a specific task</p> <p>I can sequence commands to create a program with a purpose using inputs</p>	<p>Graphs:</p> <p>I can present data in a graph, selecting the most appropriate layout</p> <p>I understand the difference between discrete and continuous data</p> <p>I can answer questions relating to graphs, and pose my own questions</p> <p>I can use my graph in a document / presentation to share findings with others</p> <p>Spreadsheets:</p> <p>I can add text and numbers to spreadsheet cells</p> <p>I can add simple formulae: +-/</p> <p>I can change the appearance of cells, e.g. size, borders and colours</p> <p>I can copy and paste formulae within a spreadsheet</p>	<p>Word processing:</p> <p>I can different layouts and effects (such as text box, columns, tables, justification, borders, background colour) to refine and improve my work</p> <p>Presentations:</p> <p>I can add a background colour to improve my work</p> <p>I can add slide transitions and animation effects</p>	<p>Research:</p> <p>I can use more complex search criteria to narrow down my search</p> <p>I can describe how search results are ranked</p> <p>I know that not all websites are accurate and can check information using a different site</p> <p>I can make notes from information found on websites to present my findings</p> <p>Online collaboration:</p> <p>I know what spam is, and how to deal with it</p>	<p>Creating images:</p> <p>I can group, copy and move shapes within a picture</p> <p>I can order shapes / images by sending them to the back / front</p> <p>Photography:</p> <p>I can crop and / or rotate an image where needed</p> <p>I can adjust the colours on a photo</p> <p>Animation:</p> <p>I can plan an animation using a storyboard</p> <p>I can shoot frames to combine into an animation</p> <p>I can edit an animation to improve it / make it more realistic</p> <p>I can put sounds over an animation</p> <p>I can add titles and photos into an animation</p> <p>I can plan and create an animation for a given purpose</p> <p>I can combine an animation with other software</p>	<p>Internet, networks, web:</p> <p>I understand that computers are networked and linked</p> <p>I understand that the internet can be used for communications such as email, video conferencing, blogs, and social networks</p> <p>E- safety</p> <p>I know who to tell and where to report hurtful or harmful material on the internet</p> <p>I understand how to create a positive digital footprint</p> <p>I understand how to protect personal information with passwords</p> <p>I understand how to prevent and respond to cyber bullying</p>

Programme of Study

Key stage 2 Pupils should be taught to:	Ancient Greece	Climate Change	The Tudors	Brazil	Heroes and Villains	Local Landmarks
<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 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>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 discerning in evaluating digital content</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>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Programming:</p> <p>I can plan and test my algorithms and programs, detecting and correcting errors as needed</p> <p>I can explore the use of variables</p> <p>I can design and write a program that controls or simulates physical systems and sensors</p>	<p>Databases:</p> <p>I can interrogate a database using more complex searches</p> <p>I can design and create a database</p> <p>I can use information in a database to create a graph in order to answer questions</p> <p>Spreadsheets:</p> <p>I can use simple functions, e.g. SUM, AVERAGE, to solve problems</p> <p>I can use brackets to organise formulae</p> <p>I can change data in a formula to answer 'What if?' questions</p> <p>I can change the format of cells appropriately</p> <p>I can create a graph using spreadsheet data</p>	<p>Word processing:</p> <p>I can develop consistency across the document</p> <p>Presentations:</p> <p>I can add multimedia elements, e.g. sounds, animation</p> <p>I can trigger animations or link to other slides when objects are pressed</p> <p>I can display myself appropriately online, e.g. avatar, code name</p> <p>I can add comments / posts appropriately to online communication e.g. a blog</p>	<p>Research:</p> <p>I know the information found on some sites will be biased</p> <p>I know that images and text found on websites is subject to copyright</p> <p>I know how to credit the use of websites in my work, and why this should be done</p>	<p>Creating images:</p> <p>I can add and combine shapes to design a 3D model</p> <p>I can add detail to my 3D model</p> <p>Photography:</p> <p>I can improve a photo with editing tools e.g. blur, filters, add border</p> <p>Video:</p> <p>I can edit the video; trimming and re-ordering clips</p> <p>I can add a voice-over and / or background music to a video</p> <p>I can add titles to my video</p> <p>Audio:</p> <p>I can create an audio recording and add it to other software</p>	<p>Internet, web & networks:</p> <p>I understand that computers pass data around networks using radio or satellite signals, copper wires or fibre optic cables</p> <p>E- safety:</p> <p>I know who to tell and where to report hurtful or harmful material on the internet</p> <p>I understand how to create a positive digital footprint</p> <p>I understand how to protect personal information with passwords</p> <p>I understand how to prevent and respond to cyber bullying</p>

Programme of Study

Key stage 2	WW2	WW2	Immigration	No place like home	Achievement and Ambition	Shakespeare
<p>Pupils should be taught to:</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 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>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 discerning in evaluating digital content</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>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p>Programming:</p> <p>I can test, debug and modify a program to improve it I can design and create a game / app incorporating variables</p>	<p>Spreadsheets:</p> <p>I can design and create a spreadsheet for a specific purpose</p>	<p>Word processing:</p> <p>I can discuss and evaluate my documents, and make amendments as needed</p> <p>Presentations:</p> <p>I can create a consistent design for my presentation, and present to others</p>	<p>Research:</p> <p>I understand how computer networks work, including the internet</p> <p>I understand how networks can provide multiple services, such as the web</p> <p>I can search with key phrases as well as key words</p> <p>I can evaluate digital content</p> <p>I understand that search engines collect information</p> <p>I can use filters on websites</p> <p>I understand that copyright law means I must check it is ok to use other people's text, images, videos or sounds</p>	<p>Photography:</p> <p>I can take photos for a given purpose and use them in my work</p> <p>Animation:</p> <p>I can plan an animation using a storyboard</p> <p>I can shoot frames to combine into an animation</p> <p>I can edit an animation to improve it / make it more realistic</p> <p>I can add titles and photos into an animation</p> <p>I can plan and create an animation for a given purpose</p> <p>I can combine an animation with other software</p> <p>Multimedia overall:</p> <p>I can select and use appropriate multimedia tools, and combine these for a given purpose with confidence</p>	<p>Online collaboration:</p> <p>I know that some websites have age restrictions, and why these might be in place</p> <p>I can describe the opportunities computer networks and the internet offer for communication and collaboration</p> <p>E- safety:</p> <p>I know who to tell and where to report hurtful or harmful material on the internet</p> <p>I understand how to create a positive digital footprint</p> <p>I understand how to protect personal information with passwords</p> <p>I understand how to prevent and respond to cyber bullying</p>