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|  | Computing systems and networksDigital literacy | Creating mediaInformation technology | Data and informationInformation technology | ProgrammingComputer science |
| EYFS | * There are people who help us and keep us safe.
* These people will be different in different environments.
* Playing and working cooperatively.
 | * Tinkering by trying out using different materials/object etc for different roles.
* Creating making things, checking things and fixing things.
 | * Ask questions and understand how the answer was arrived at.
 | * Within learning able to ignore what is not important, and being able to focus on what is important.
* Following and giving specific instructions to accomplish a task.
* Breaking down problems into steps.
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| Year 1 | * Recognise and name a range of digital devices, e.g. laptop, phone, games console.
* Log on to the school computer / unlock the school tablet with support.
* Identify the basic parts of a computer, e.g. mouse, keyboard, screen.
* Use a suitable access device (mouse, keyboard, touchscreen, switch).
* Explain why we use passwords and recognise examples of personal information
* Know who to tell if concerned about content
 | * Select basic tools/options to change the appearance of digital content, e.g. filter on an image / font / size of paintbrush.
* Combine media with support to present information, e.g. text and images.
* Type text using a keyboard
 | * Describe objects using labels
* Find objects with similar properties
* Answer questions about groups of objects
* Decide how to group objects to answer a question
* Record and share what they have found
 | * Create a simple program e.g. to control a floor robot.
* Predict the outcome of a simple algorithm or program.
* Explain what an algorithm is and create one
* Debug an error in a simple algorithm or program e.g. for a floor robot.
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| Year 2 | * Explain how IT is used at home
* Explain how IT is used in different places
* Use a simple password to log onto the computer or a website.
* Identify rules for acceptable use of technology in school.
* Know what personal information is and the need to keep it private.
* Recognise that some information found online may not be true.
 | * Create simple digital content for a purpose, e.g. digital art.
* Capture, edit and improve my photos
* Present ideas and information by combining media, e.g. text and images.
* Identify which photos are real and which have been changed
 | * Recognise charts and pictograms and explain why we use them.
* Explain information shown in a simple chart or pictogram.
* Modify simple charts/pictograms, e.g. add title, item or labels.
* Identify the key features of a chart or pictogram.
* Collect and present data on a topic
 | * Predict the outcome of an algorithm or program with multiple steps.
* Identify and correct errors in a given algorithm or program, and recognise the term debugging.
* Explain what an algorithm and program are
* Plan out a program by creating an algorithm, and evaluate its success.
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| Year 3 | * Describe what a computer is (input > process > output).
* Recognise that school computers are connected.
* Keeping password safe
* When not to share personal info
* Games/films have age ratings
 | * Present ideas and information by combining media independently, e.g. text and images.
* Design and create simple digital content for a purpose/audience, e.g. poster.
* Edit digital content to improve it, e.g. resize text.
 | * Use a branching database
* Create a branching database
* Identify the features of a good question in a branching database.
* Evaluate a given branching database and suggest improvements
 | * Modify an existing program,
* Create examples of algorithms containing count-controlled loops.
* Use a forever loop in a program to keep something happening.
* Identify errors in a block or text-based program and correct them.
* Recognise that different inputs can be used to control a program
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| Year 4 | * Remember and use an individual password.
* Recognise what kinds of websites are trustworthy sources of information.
* Recognise the benefits and risks of different apps and websites.
* Recognise that the media can portray groups of people differently.
* Can rate a game or film they have made and explain their rating
 | * Collect, organise and present information using a range of media.
* Design, create and edit digital content for a specific purpose
* Identify the features of a good piece of digital content and apply these in own design.
* Know where to find copyrightfree content, e.g. creative images.
* Collaborate with peers using online tools
 | * Draw conclusions from information stored in a database, chart or table.
* Design a questionnaire and collect a range of data on a theme.
* Choose appropriate formats to present data to convey information
 | * Create a program using a range of

events/inputs to control what happens.* Explain when to use forever loops and count-controlled loops, and use them in programs.
* Recognise selection in a program or algorithm.
* Use selection in algorithms in programs e.g. if…then…
* Design a program for a purpose.
* Recognise common mistakes in programs and how to correct them.
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| Year 5 | * Explain the difference between the internet and the World Wide Web; and between a search engine and a web browser
* Perform a complex search for information
* Know where to find copyright free images and audio, and why this is important. –
* Critically evaluate websites for reliability of information and authenticity.
 | * Use different drawing tools to create images
* Create images by layering and duplicating images to create more complex pieces of work
* Evaluate and improve their own designs
 | * Know the difference between data and information
* Perform a search to answer questions about data
* Create graphs and charts from data
 | * Name a range of sensors in physical systems
* Predict what will happen in a program or algorithm when the input changes
* Use two-way selection i.e. if… then…else…
* Recognise variables in a program
* Create programs including ‘repeat until’ loops.
* Create and use simple variables, e.g. to keep score.
* Create an algorithm for a physical system (with sensor)
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| Year 6 | * Explain what makes a strong password and why this is important at school and in the wider world.
* Explain how algorithms are used to track online activities with a view to targeting advertising and information.
* Know that there are laws around the purchase of games; the production, sending and storage of images; what is written online; and around online gambling
 | * Select, combine and remix a range of media to create original content.
* Consider all steps of the design process when creating content (e.g. identify problem, plan, create, evaluate, share.)
* Identify the most effective tools to present information for a specific purpose.
 | * Recognise what a spreadsheet is and what it is used for.
* Use simple formulae in a spreadsheet to find out information from a set of data.
* Collect data for a purpose and plan out a spreadsheet to present it effectively, using relevant formulae.
* Produce graphs from data in a spreadsheet to answer a question.
* Analyse and evaluate data and information in a spreadsheet, chart or database.
 | * Design and program a system that uses sensors.
* Recognise and use procedures (sub-routines) in programs.
* Plan out a program in detail, including task, algorithm, code and execution level.
* Use nested selection statements in a program
* Combine a variable with relational operators (< = >) to determine when a program changes
* Recognise key concepts (sequence, selection, repetition and variables)
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