

Computing

Communicating Computer technologists use ICT to communicate with a range of audiences, and to research information.	Publishing Computer technologists use a range of software to present and record information.	Coding Computer technologists create and debug programmes.	Safety Computer technologists know how to use ICT equipment, communication devices and the internet safely.	Vocabulary Computer technologists use appropriate subject-specific vocabulary.
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	Communicating	Publishing	Coding	Safety	Vocabulary
N	→To know that information can be retrieved from computers.	→To know how to operate simple equipment. →To show an interest in technological toys with knobs or pulleys, or real objects. →To show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images. →	→	→	→
Rec	→To interact with age-appropriate computer software.	→To recognise that a range of technology is used in places such as homes and schools. To select and use technology for particular purposes.	→To complete a simple program on a computer.	→	→
Year 1	→ Label objects. → Identify that objects can be counted. → Describe objects in different ways. →Count objects with the same properties. →Compare groups of objects. →Answer questions about groups of objects.	→ Describe what different freehand tools do. →Use the shape tool and the line tools. →Make careful choices when painting a digital picture. →Explain why I chose the tools I used. →Use a computer on my own to paint picture. →Compare painting a picture on a computer and on paper. → Use a computer to write. → Add and remove text on a computer. →Identify that the look of text can be changed on a computer. →Make careful choices when changing text. →Compare writing on paper and writing on computer.	→ Explain what a given command will do. →Act out a given word. →Combine forwards and backwards commands to make a sequence. →Combine four direction commands to make a sequence. →. Plan a simple program. →Find more than one solution to a problem. →Choose a command for a given purpose. →Show that series of commands can be joined together. →identify the effect of changing a value. →Explain that each sprite has its own instructions. →Design the parts of a project. →Use an algorithm to create a program.	→ Identify computer technology. → Identify a computer and its main parts. →Use a mouse in different ways. → Use a keyboard to type →Use a keyboard to edit text. →create rules for using technology responsibly. →To organise, store and retrieve digital content. →Learn the importance of keeping information private. →Identify where to go for help and support.	→algorithm, instructions, left, right, program, debugging, forwards, backwards, direction, keys, block code, stop →tools, drawing, e-book, animation, sound, recording, paste, copy, spreadsheet, image, cells, sheet, count, →Avatar, log in, save, my work, folder, print, open, new, icon, log out
Year 2	→Create music for a purpose. →Review and refine our computer work. →Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	→ Know what devices can be used to take photographs. →Use a digital device to take a photograph. →Describe what makes a good photograph. →Decide how photographs can be improved →Use tools to change an image. →Recognise that images can be changed. →Recognise that we can count and compare objects using tally charts. →Recognise that objects can be represented as pictures. →Create a pictogram →Select object by attribute and make comparisons. →Recognise that people can be described by attributes. →Explain that we can present information using a computer.	→ Describe a series of instructions as a sequence. →Describe what happens when we change the order of instructions. →Use logical reasoning to predict the outcome of a program. →Explain that programming projects can have code and artwork. →Design an algorithm. →Create and debug a program that I have written. →Explain that a sequence of commands has a start. →Explain that a sequence of commands has an outcome. →Create a program using a given design. →Change a design. →Create a program using my own design. →Decide how my project can be improved.	→. Recognise the uses and features of information technology. →Identify information technology in the home. → Identify information technology beyond school. →Explain how information technology benefits us. →Show how to use information technology safely. →Recognise that choices are made when using information technology.	→Algorithm, debug, command, repeat, input, output, event, collision detection, timer, actions →Spreadsheet, database, block graph, clip art, edit, search, data, volume, upload, digital content →Search, webpage, search engine. email
Year 3	To recognise how text and images convey information. To choose appropriately page settings. To consider how different layouts can suit different purposes. To identify the object attributes needed to collect relevant data. →To explain why it is helpful for a database to be well structured.	→ Explain that animation is a sequence of drawings or photographs. →Relate animated movement with a sequence of images. →Plan an animation. →Identify the need to work consistently and carefully. →Review and improve an animation. →Evaluate the impact of adding other media to an animation.	→ 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 sequences of commands can have an order. →To change the appearance of my project. →To create a project from a task description. →To explain how a sprite moves in an existing project. →To create a program to move a sprite in four directions.	→ Explain how digital devices function. →Identify input and output devices. →Recognise how digital devices can change the way we work. →Explain how a computer network can be used to share information. →Explore how digital devices can be connected. →Recognise the physical components of a network.	→Object, action, output, control, event, commands, if statements, variables, timer →More than, less than, solutions, sums, spin tool, row, column, typing, database, branching database, simulation, graph, typing, address book, attachment, cc, files, simulations, fields →Passwords, safe, spoof, web page, concept map

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		<ul style="list-style-type: none"> →To recognise how text and layout can be edited. →To add content to a desktop publishing publication. →To consider the benefits of desktop publishing. →To create questions with yes/no answers. →To create a branching database. →To identify objects using a branching database. →To compare information shown in a pictogram and a branching database. 	<ul style="list-style-type: none"> →To adapt a program to new context. →To develop my program by adding features. →To identify and fix bugs in a program. →To design and create a maze-based challenge. →To use logical reasoning to explain how some simple algorithms work and to detect errors 		
Year 4	<ul style="list-style-type: none"> → To show that different types of audio can be combined and played together. →To describe how images can be changed for different uses. →To evaluate how changes can improve an image. →To use collected data to answer questions. 	<ul style="list-style-type: none"> →To evaluate editing choices made. →To identify that sound can be digitally recorded. →To use a digital device to record sound. →To explain that audio can be changed through editing. →To explain that digital images can be changed. →To change the composition of an image. →To make good choices when selecting different tools. →To recognise that not all images are real. →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. 	<ul style="list-style-type: none"> → To identify that accuracy in programming is important. →To create 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 program into parts. →To create a program that uses count-controlled loops. → To develop the use of count-controlled loops in a different programming environment →Explain that in programming there are infinite loops and count-controlled loops. →Develop a design that includes two or more loops which run at the same time. →To modify an infinite loop in a given program. →To design a project that includes repetition. 	<ul style="list-style-type: none"> → To describe how networks physically connect to other networks. →To recognise how networked devices make up the internet. →To outline how websites can be shared via the World Wide Web →To describe how content can be added and accessed on the World Wide Web. →To recognise how the content of the WWW is created by people. →To evaluate the consequences of unreliable content. → To explain that a digital recording is stored as a file. → To use technology safely, respectfully and responsibly. →To recognise acceptable/unacceptable behaviour. 	<ul style="list-style-type: none"> →If, else statements, variable, repetition, input, debug, character, timer, algorithm, Logo, instructions →Wizard, formula, cells, formatting, line graph, spreadsheet, budgeting, animation, spin button, actions, data, currency format, mind-map, audience, onion skinning, stop motion, flick book, backgrounds →Online safety, desktop, presentation, credibility
Year 5	<ul style="list-style-type: none"> → To recognise video as moving pictures, which can include audio and visual media. →To recognise the features of an effective video. →To capture video using a digital device → To consider the impact of the choices made when making and sharing video. →To identify that video can be improved through reshooting and editing. 	<ul style="list-style-type: none"> → To identify that drawing tools can be used to produce different outcomes. →To create a vector drawing by combining shapes. →To use tools to achieve a desired effect. →To recognise that vector drawings consist of layers. →To group objects to make them easier to work with. →To evaluate my vector drawing. →To identify digital devices that can record video. →To use a form to record information. →To compare paper and computer-based databases. →To outline how grouping and then sorting data allows us to answer questions. →To explain that tools can be used to select specific data. →To explain that computer programs can be used to compare data visually. →To apply my knowledge of a database to ask and answer real-world questions. 	<ul style="list-style-type: none"> → To control a simple circuit connected to a computer. →To write a program that includes count-controlled loops. →To explain that a loop can stop when a condition is met, e.g. number of times. →To conclude that a loop can be used to repeatedly check whether a condition has been met. →To design a physical project that includes selection. →To create a controllable system that includes selection. →To explain how selection is used in computer programs. → To relate that a conditional statement connects a condition to an outcome. →To explain how selection directs the flow of a program. →To design a program which uses selection. →To create a program which uses selection. →To evaluate my program. 	<ul style="list-style-type: none"> → To explain that computers can be connected together to form systems. →To recognise the role of computer systems in our lives. →To recognise how information is transferred over the internet →To explain how sharing information online lets people in different places work together. →To contribute to a shared project online. →To evaluate different ways of working together online. 	<ul style="list-style-type: none"> →Object, action, output, timer, score pad, variables, if statements, else statements, timer, score pad, loops, timer →How many, convert, measurements, formulae, advanced mode, perimeter, area, database, records, field, calculations, database, search, database field, →Concept maps, stage, nodes and connections, collaborate →Internet safety, Childnet, SMART CREW, personal information, comic strip
Year 6	<ul style="list-style-type: none"> → To recognise how we communicate using technology. →To evaluate different methods of online communication. →To identify questions which can be answered using data. 	<ul style="list-style-type: none"> → To use a computer to create and manipulate three-dimensional (3D) digital objects. →To compare working digitally with 2D and 3D graphics. →To construct a digital 3D model of a physical object. →To identify that physical objects can be broken down into a collection of 3D shapes. →To design a digital model by combining 3D objects. →To develop and improve a digital 3D model. To explain that objects can be described using data. 	<ul style="list-style-type: none"> → To define a variable as something that is changeable. →To explain why a variable is used in a program. →To choose how to improve a game by using variables. →To design a project that builds on a given example. →To use my design to create a project. →To evaluate my project. →To create a program to run on a controllable device. 	<ul style="list-style-type: none"> → To identify how to use a search engine →To describe how search engines select results. →To explain how search engines are ranked. →To recognise why the order of results is important, and to whom. →To review an existing website and consider its structure. →To plan the features of a web page. →To consider the ownership and use of images (copy write) →To recognise the need to preview pages. →To outline the need for a navigation path. 	<ul style="list-style-type: none"> →Tab, external websites, code, test, debug, two-way selection →Shortcuts, copy, paste, count tool, problem solve, formula wizard, formulae, actions, blog, quiz, audience →Internet, World Wide Web, cyberbullying, blogging, LAN, WAN

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		<ul style="list-style-type: none">→To explain that formulas can be used to produce calculated data.→To apply formulas to data, including duplicating.→ To create a spreadsheet to plan an event.→To choose suitable ways to present data.→ To select, use and combine a variety of software on a range for digital devices to design and create a range of programs, systems and content that accomplish given goals.	<ul style="list-style-type: none">→To explain that selection can control the flow of a program.→To update a variable with a user input.→To use a conditional statement to compare a variable to a value.→To design a project that uses inputs and outputs on a controllable device.→To develop a program to use inputs and outputs on a controllable device.	<ul style="list-style-type: none">→To recognise the implications of linking to content owned by other people.→To identify a range of ways to report concerns about content and contact.	
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