

PROGRESSION OF SKILLS – COMPUTING 2023-24 (Aut/Spr/Sum)

| | KS1 | | LKS2 | | UKS2 | |
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| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| | <p>Computing systems and networks – technology around us</p> <ul style="list-style-type: none"> -To identify technology -To identify a computer and its main parts -To use a mouse in different ways -To use a keyboard to type -To use the keyboard to edit text -To create rules for using technology responsibly | <p>Computing systems and networks – IT around us</p> <ul style="list-style-type: none"> -To recognise the uses and features of information technology -To identify information technology in the home -To identify information technology beyond school -To explain how information technology benefits us -To show how to use information technology safely -To recognise that choices are made when using information technology | <p>Computing systems and networks – Connecting computers</p> <ul style="list-style-type: none"> -To explain how digital devices function -To identify input and output devices -To recognise how digital devices can change the way we work -To explain how a computer network can be used to share information -To explore how digital devices can be connected -To recognise the physical components of a network | <p>Computing systems and networks – The Internet</p> <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 | <p>Computing systems and networks – Sharing information</p> <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 | <p>Computing systems and networks – Communication</p> <ul style="list-style-type: none"> -To identify how to use a search engine -To describe how search engines, select results -To describe how search engines, select results -To explain how search results are ranked -To recognise why the order of results is important, and to whom -To recognise how we communicate using technology -To evaluate different methods of online communication |
| | <p>Creating media Digital painting</p> <ul style="list-style-type: none"> -To describe what different freehand tools do -To use the shape tool and the line tools -To make careful choices when painting a digital picture -To explain why I chose the tools I used -To use a computer on my own to paint a picture -To compare painting a picture on a computer and on paper | <p>Creating media Digital photography</p> <ul style="list-style-type: none"> -To use a digital device to take a photograph -To make choices when taking a photograph -To describe what makes a good photograph -To decide how photographs can be improved -To use tools to change an image -To recognise that photos can be changed | <p>Creating media Animation Online safety</p> <ul style="list-style-type: none"> -To explain that animation is a sequence of drawings or photographs -To relate animated movement with a sequence of images -To plan an animation -To identify the need to work consistently and carefully -To review and improve an animation -To evaluate the impact of adding other media to an animation | <p>Creating media Audio editing Online safety</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>Creating media Video editing Online safety</p> <ul style="list-style-type: none"> -To explain what makes a video effective -To use a digital device to record video -To capture video using a range of techniques -To create a storyboard -To identify that video can be improved through reshooting and editing -To consider the impact of the choices made when making and sharing a video | <p>Creating media Webpage creation Online safety</p> <ul style="list-style-type: none"> -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 (copyright) -To recognise the need to preview pages -To outline the need for a navigation path -To recognise the implications of linking to content owned by other people |

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| | <p>Programming A Moving a robot</p> <ul style="list-style-type: none"> -To explain what a given command will do -To act out a given word -To combine forwards and backwards commands to make a sequence -To combine four direction commands to make sequences -To plan a simple program -To find more than one solution to a problem | <p>Programming A Robot algorithms</p> <ul style="list-style-type: none"> -To describe a series of instructions as a sequence -To explain what happens when we change the order of instructions -To use logical reasoning to predict the outcome of a program (series of commands) -To explain that programming projects can have code and artwork -To design an algorithm -To create and debug a program that I have written | <p>Programming A Sequence in music</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>Programming A Repetition in shapes</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>Programming A Selection in physical computing</p> <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 -To explain that a loop can be used to repeatedly check whether a condition has been met -To design a physical project that includes a selection -To create a program that controls a physical computing project | <p>Programming A Variables in games</p> <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 |
| | <p>Data and information Grouping data Online safety</p> <ul style="list-style-type: none"> -To label objects -To identify that objects can be counted -To describe objects in different ways -To count objects with the same properties -To compare groups of objects -To answer questions about groups of objects | <p>Data and information Pictograms Online safety</p> <ul style="list-style-type: none"> -To recognise that we can count and compare objects using tally charts -To recognise that objects can be represented as pictures -To create a pictogram -To select objects by attribute and make comparisons -To recognise that people can be described by attributes -To explain that we can present information using a computer | <p>Data and information Branching databases</p> <ul style="list-style-type: none"> -To create questions with yes/no answers -To identify the attributes needed to collect data about an object -To create a branching database -To explain why it is helpful for a database to be well structured -To plan the structure of a branching database -To independently create an identification tool | <p>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 recognise how a computer can help us analyse data -To identify the data needed to answer questions -To use data from sensors to answer questions | <p>Data and information Flat-file databases</p> <ul style="list-style-type: none"> -To use a form to record information -To compare paper and computer-based databases -To outline how you can answer questions by grouping and then sorting data -To explain that tools can be used to select specific data -To explain that computer programs can be used to compare data visually -To use a real-world database to answer questions | <p>Data and information Spreadsheets</p> <ul style="list-style-type: none"> -To create a data set in a spreadsheet -To build a data set in a spreadsheet -To explain that formulas can be used to produce calculated data -To apply formulas to data -To create a spreadsheet to plan an event -To choose suitable ways to present data |

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| | <p>Creating media Digital writing Online safety</p> <ul style="list-style-type: none"> -To use a computer to write -To add and remove text on a computer -To identify that the look of text can be changed on a computer -To make careful choices when changing text -To explain why I used the tools that I chose -To compare typing on a computer to writing on paper | <p>Creating media Making music Online safety</p> <ul style="list-style-type: none"> -To say how music can make us feel -To identify that there are patterns in music -To experiment with sound -using a computer -To use a computer to create a musical pattern -To create music for a purpose -To review and refine our computer work | <p>Creating media Desktop publishing Online safety</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 -To consider how different layouts can suit different purposes -To consider the benefits of desktop publishing | <p>Creating media Photo editing Online safety</p> <ul style="list-style-type: none"> -To explain that the composition of digital images can be changed -To explain that colours can be changed in digital images -To explain how cloning can be used in photo editing -To explain that images can be combined -To combine images for a purpose -To evaluate how changes can improve an image | <p>Creating media Vector drawing Online safety</p> <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 the desired effect -To recognise that vector drawings consist of layers -To group objects to make them easier to work with -To apply what I have learned about vector drawings | <p>Creating media 3D modelling Online safety</p> <ul style="list-style-type: none"> -To recognise that you can work in three dimensions on a computer -To identify that digital 3D objects can be modified -To recognise that objects can be combined in a 3D model -To create a 3D model for a given purpose -To plan my own 3D model -To create my own digital 3D model |
| | <p>Programming B Introduction to animation</p> <ul style="list-style-type: none"> To choose a command for a given purpose To show that a series of commands can be joined together To identify the effect of changing a value To explain that each sprite has its own instructions To design the parts of a project To use my algorithm to create a program | <p>Programming B An introduction to quizzes</p> <ul style="list-style-type: none"> To explain that a sequence of commands has a start To explain that a sequence of commands has an outcome To create a program using a given design To change a given design To create a program using my own design To decide how my project can be improved | <p>Programming B Events and actions</p> <ul style="list-style-type: none"> To explain how a sprite moves in an existing project To create a program to move a sprite in four directions To adapt a program to a 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 | <p>Programming B Repetition in games</p> <ul style="list-style-type: none"> To develop the use of count-controlled loops in a different programming environment To explain that in programming there are infinite loops and count-controlled loops To 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 To create a project that includes repetition | <p>Programming B Selection in quizzes</p> <ul style="list-style-type: none"> -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 that uses selection To create a program that uses selection To evaluate my program | <p>Programming B Sensing</p> <ul style="list-style-type: none"> -To create a program to run on a controllable device -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 |

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