Long Term Plan and Progression sheet for Computing

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| Year group | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Year 1 | Logging in and out  Access 2do’s on Purple Mash to use simple activities | Digital Publisher/ Artist | Digital Researcher/ Presenter | Digital Programmer | Digital Animator/ Broadcaster | Digital Musician/ Data Handler |
| Year 2 | Digital Researcher/ Presenter | Data Handler | Digital Filmmaker/  Musician | Digital Publisher/ Artist | Digital Designer/ Programmer | Digital Animator/ Broadcaster |
| Year 3 | Digital Researcher/ Presenter | Digital Filmmaker/ Animator/ Musician | Digital Designer/ Programmer | Digital Artist | Digital Broadcaster | Digital Data Handler/ Publisher |
| Year 4 | Digital Researcher/ Presenter | Digital Publisher/ Artist | Digital Musician/  Filmmaker/ Animator | Digital Designer/ Programmer | Digital Broadcaster | Digital Data Handler |
| Year 5 | Digital Designer/ Programmer | Digital Publisher/ Data Handler | Digital Broadcaster | Digital Filmmaker/ Animator | Digital Artist/  Researcher/ Presenter | Digital Musician |
| Year 6 | Digital Researcher/ Presenter | Digital Designer/ Programmer/  Broadcaster | Digital Data Handler | Digital Filmmaker/ Animator | Digital Musician | Digital Publisher/ Artist |

Progression in Computing:

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| **Year group** | **Online safety** | **Programming** | **Knowledge and Skills** |
| **Early Years** | * Ask adult when they want to use the internet * Tell an adult when something worrying or unexpected happens whilst using the internet | * Make a floor robot move * Use simple software to make something happen * Make choices about the buttons and icons pressed, touched or clicked on | * Talk about different kinds of information (pictures, videos, text and sound) * Move objects on a screen * Create shapes and text on a screen * Operate simple equipment * Use a safe part of the internet to play and learn |
| **Year 1** | * Keep password private * Know what personal information is * Understand importance of being kind and polite online * Recognise age appropriate websites | * Describe functions of the buttons on a robot * Press buttons in the correct sequence to make it move in a specific way * Begin to use the words ‘algorithm’ and ‘debug’ when describing a sequence or correcting mistakes * Predict results for a short sequence of instruction * Use software/apps to create movements on a screen | * Use technology to collect information (photos, videos and sound) * Use technology to create and present ideas * Use a keyboard to enter text * Save work and retrieve it (2do’s on Purple Mash) * Continue to use websites for playing and learning |
| **Year 2** | * Explain why passwords and personal information should be kept private * Describe events that can occur online which they must tell an adult about * Understand why they must be kind and polite online and in real life * Understand that not everyone is who they say they are on the internet | * Program a robot or software to do a particular task * Look at the program of others and predict what will happen * Use programming software to make things move * Watch a program, identify where it goes wrong and debug it | * Use technology to organise and present ideas in different ways * Use a keyboard to type information (using knowledge of space bar and delete button) * Save and open files (Purple Mash and Google Classroom) * Use links to websites to find information * Understand that other people have created the information they use * Identify uses of technology (finding information, creating and communicating). |
| **Year 3** | * Discuss secure passwords and why they are important * Understand how to protect personal information whilst online * Begin to use safety features of websites as well as reporting concerns to adults * Recognise age appropriate websites and games | * Put Programming commands into a sequence to achieve a specific outcome * Test their program and recognise when they need to debug it * Use repeat commands * Describe algorithms needed for a simple task * Detect problems in algorithms which could result in program being unsuccessful | * Combine text, graphics and sound to share ideas * Use keyboard to create text and commands to amend text (punctuate sentences and use a spellchecker) * Use appropriate tools to share work online * Save and retrieve work (internet, school network or device) * Talk about parts of a computer * Discuss ways to communicate with others online * Describe World Wide Web as the part of the internet that contains websites * Use search tools to find and use appropriate websites * Consider the use of images found online |
| **Year 4** | * Choose a secure password * Discuss ways to protect themselves and their friends from harm online * Be positive and respectful online * Know that anything posted online can be seen by others | * Use efficient procedures to simplify a program * Use a variety of tools to create a program * Recognise errors and debug them | * Organise data in different ways * Explore new media confidently * Create, modify and present documents for a particular purpose * Use keyboards confidently * Use spellchecker to review own work * Change appearance of text to increase effectiveness (bold, italics, highlighted, underlines or coloured etc.) * Use appropriate tools to share work and collaborate online * Identify key words to use when searching safely * Consider the reliability of the information they find * Create a hyperlink to a resource |
| **Year 5** | * Protects own password and personal information * Know that things posted online can be seen, used and may affect others * Discuss the importance of choosing age appropriate websites and games * Explain why devices need to be protected from harm * Explain the importance of communicating kindly and respectfully * Know which resources on the internet can be downloaded and used | * 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 and action * Use logical reasoning to detect and debug mistakes in a program | * Collect, record and present data using appropriate tools * Use text, photo, sound and video editing tools to refine work * Select, use and combine appropriate technology tools to create effects * Select appropriate online or offline tools to create and share ideas * Review and improve own work and support other to improve their work * Describe different parts of the internet * Use online communication tools for different purposes * Use a search engine to find appropriate information and check reliability * Describe different parts of a webpage |
| **Year 6** | * Protects own password and personal information * Explain the consequences of sharing too much information online * Explain consequences to themselves and others of not communicating kindly and respectfully * Protects own devices from harm on the internet | * Evaluate the effectiveness and efficiency of an algorithm while testing it continually * Recognise when to use a variable to achieve a required output * Use variables 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 algorithms and programs * Use logical thinking, imagination and creativity to extend a program | * Select most appropriate tools to collect, record and present data * Check data collected for accuracy and plausibility * Talk about audience, atmosphere and structure when planning a particular outcome * Combine a range of media, recognising the contribution of each to achieve a particular outcome * Say why they select an online tool for a particular purpose * Be digitally discerning when evaluating the effectiveness of their own work and the work of others * Describe how information is transported on the internet * Select appropriate tools to communicate and collaborate online * Talk about the way search results are selected and ranked * Check the reliability of a website * Talk about copyright and acknowledge the sources of information that they find online |