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
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| **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
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| **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).
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| **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
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| **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
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| **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
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| **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
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