# COMPUTING
## KNOWLEDGE AND SKILLS PROGRESSION

## DIGITAL SAFETY

| YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 |
|---|---|---|---|---|---|
| Create a memorable password and keep it private | Understand how and why to keep personal information private | Create a suitable secure password | Choose and create a secure password | Protect my password and other personal information | Use the internet safely and respectfully, understanding ways in which to keep safe and secure. |
| Understand what personal information is and how to keep it private | Understand what is appropriate and not appropriate and how to tell an adult | Use safety features (e.g. safesearch) and know how to report a problem | Log off any programs used | Choose an age-appropriate website or game | |
| Recognise websites which are age appropriate | Know that not everyone is who they are on the internet | Ask an adult before downloading anything | Know how to protect myself and report any issues | Know which resources on the Internet are safe to download and use. | |
| To follow rules set when using computers | | Understand what is safe to share online | Comment respectfully online | | |
| | | | Begin to identify false information | | |

## PROGRAMMING

| YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 |
|---|---|---|---|---|---|
| Understand that a computer follows commands | Code simple instructions (forward, backward, left and right) | Create, save and open a new project | Solve problems by deconstructing them | Decompose a problem/algorithm into smaller steps | Deconstruct a problem into smaller steps, recognising similarities to solutions used before |
| Issue a robot with simple commands | Decide the order in which instructions need to occur for code to work | Begin to animate a sprite Use repetition to ensure efficiency | Test code regularly to ensure it works | Avoid 'smelly code' by checking my code is efficient | Evaluate the effectiveness and efficiency of my algorithm |
| Break down commands into simple steps | Tell you what will happen by reading a line of code | Edit a sprite | Create and use variables with code | Test, detect and debug issues and problems with my code | |
| | | | Use repeat and selection to ensure efficient code | | |

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|---|---|---|---|---|---|
| Plan, test and debug simple programs and steps | Begin to spot mistakes when watching code execute | Test and debug my code with support from a friend | | | Explain and program each of the steps in my algorithm. |

## HANDLING DATA

| YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 |
|---|---|---|---|---|---|
| Organise files and data into groups<br><br>Locate data within a file<br><br>Search for data using appropriate tools<br><br>Use key words to locate relevant data | Identify the different ways that technology captures data including a camera and a microscope<br><br>Make and save a chart or graph<br><br>Organise and save pictures | Use the internet to research data<br><br>Use suitable tools to search, find and record data<br><br>Use an appropriate tool to record my data | Use an appropriate tool to research and record information<br><br>Know how to save and access work<br><br>Edit, improve and evaluate mine and others' work online | Edit, open and save a document in a specific location<br><br>Share data safely and securely using an appropriate tool<br><br>Present data in an appropriate way | Select the most effective tool/program to collect and represent data<br><br>Present the data I collect in an appropriate way<br><br>Present data in a range of forms using different tools |

## MULTIMEDIA

| YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 |
|---|---|---|---|---|---|
| Select a program by identifying the correct icon<br><br>Present work using a suitable tool<br><br>Begin to use and understand common programs and their purpose | Use suitable tools to complete a task<br><br>Use tools to change font, design and layout of my work<br><br>Begin to learn about what the different software programs can do and are used for | Compose and send an email<br><br>Understand that different multimedia is used for different purposes<br><br>Use spellchecking devices to edit and improve work | Make decisions about the structure and presentation of my work<br><br>Create, modify and present work effectively<br><br>Navigate a keyboard efficiently<br><br>Begin to understand some shortcuts on a keyboard and use them in a program | Use text, photo, sound and video editing software to enhance my work<br><br>Review and improve my own and others' work<br><br>Use skills acquired to create content using unfamiliar tools | Use a broad range of multimedia to accomplish different tasks<br><br>Understand that some multimedia is more appropriate than others when completing tasks<br><br>Edit a range of multimedia to enhance its impact |

## TECHNOLOGY IN OUR LIVES

| YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 |
|--------|--------|--------|--------|--------|--------|
| Create a memorable password and login safely<br><br>Log off shared devices<br><br>Use technology to present my work effectively<br><br>Use different devices including tablets, laptops and robots | Begin to understand how and when to use technology around the class<br><br>Know that information on the internet can come from a range of sources<br><br>Understand the benefits of technology including searching, finding, creating and communicating | Retrieve work from a computer and shared network<br><br>Use search tools to find appropriate websites<br><br>Share information and details using a suitable method | Use key words to use when searching safely on the World Wide Web<br><br>Create a hyperlink within a document/presentation<br><br>Navigate a computer and the shared networks to find and save work. | Use relevant online tools to communicate<br><br>Use search engines appropriately to find information and check its credibility<br><br>Navigate a webpage and understand ways to find what I need | select an appropriate tool to communicate and collaborate online<br><br>check the reliability of a website and its content |