|  |  |
| --- | --- |
| Computing & Coding | |
| **Programme of Study** | * design and write programs that accomplish specific goals, including controlling or simulating physical systems; * solve problems by decomposing them into smaller parts * use sequence, selection, and repetition in programs; * work with variables and various forms of input and output; * generate **appropriate** inputs and predicted outputs to test programs * use logical reasoning to explain how a simple algorithm works and to detect and correct errors in algorithms and programs |
| **Skills** | 1. Can they recognise the need for an efficient algorithm to achieve a specific outcome? 2. Can they begin to recognise the need to break problems up into smaller parts to achieve a solution? 3. Can they recognise that sensing change can be used to begin an action? |
| **Key Words** | **FOREVER ALGORITHM CONTROL INSTRUCTIONS**  **REPEAT SELECTION SEQUENCE MODEL**  **VARIABLES PROGRAM DECOMPOSITION SIMULATION**  **LOOP EXECUTE LOGICAL REASONING LOGICAL REASONING**  **FOREVER RUN COMPUTATIONAL THINKING** |

|  |  |
| --- | --- |
| Digital Creation | |
| **Programme of Study** | select, use and combine a variety of software (including internet services) on a range of  digital devices to design and create a range of programs, design and create systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information |
| **Skills** | 1. Can they independently select the most appropriate ICT tools for their intended purpose and audience? 2. Can they create an outline plan for a non-linear presentation; producing a diagram to demonstrate understanding how pages link and the need for clarity? 3. Can they understand that images, sounds, video and text can be subject to copyright and abide by copyright rules when creating a presentation? 4. Do they know that images (still and moving) can be used to enhance presentations or communicate ideas? 5. Can they develop consistency across a presentation? 6. Can they make effective use of transitions and animations in presentations? 7. DO they consider their appropriateness and overall effect on the audience? 8. Through self assessment, can they routinely evaluate presentations and make improvements? |
| **Key Works** | **Audience Edit Purpose Sound Media**  **licence Source Digital Web2** |

|  |  |
| --- | --- |
| Working with Data | |
| **Programme of Study** | select, use and combine a variety of software (including internet services) on a range of  digital devices to design and create a range of programs, design and create systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information |
| **Skills** | 1. Can they understand which searches and graph types are relevant to a specific problem and types of information? 2. Can they recognise the consequences of data not being accurate, relate to outside world? (e.g. Police / doctors / banks / school database). 3. Can they understand the need for accuracy and frequent checking when entering formulae? 4. Can they understand that spreadsheets can automate functions, making it easier to test variables? E.g. when planning a budget you can change the number of items and see the changes to total cost. |
| **Key Works** | **DATA FILTER FIELD**  **INFORMATION GRAPH RELIABILITY**  **CELL INTERPRET ACCURACYANALYSIS COMPARE**  **DATABASE RELATIONSHIP RECORD ACCCURACY** |

|  |  |
| --- | --- |
| E-Safety & E- Responsibility | |
| **Programme of Study** | use technology safely, respectfully and responsibly; recognise  acceptable/unacceptable behaviour; identify a range of ways to report concerns about  content and contact. |
| **Skills** | 1. Can I identify spam emails and what to do with them? 2. Can I write citations for the websites I use for research? 3. Can I create strong passwords? 4. Can I recognise when, why and how photographs we see online may have been edited? 5. Can I give examples of unsafe online behaviour and the possible consequences? 6. Can I apply online safety rules to real-life situations? |
| **Key Works** | **ESAFE RESPONSIBILITY Permission FILTERING Licence**  **SECURE Ownership**  **PASSWORD Sharing**  **PROTECTION Inappropriate**  **CYBER-BULLYING SOCIAL NETWORKING** |

|  |  |
| --- | --- |
| Networks Communication and Collaboration | |
| **Programme of Study** | understand computer networks including the internet; how they can provide multiple  services, such as the world wide web; and the opportunities they offer for  communication and collaboration |
| **Skills** | 1. Can they recognise the appropriate online tools to collaborate and communicate with others? 2. Can they recognise material on the Internet which belongs to someone else and know what can be downloaded to use in their own work? 3. Can they recognise and use different forms of electronic communication and web 2.0 tools and recognise appropriateness of using different tools in different contexts and the advantages and disadvantages? |
| **Key Works** | **Email PACKET Blogs**  **Blogging HUB NETWORK**  **Collaboration ROUTER Wikis**  **Contribution PROTOCOL**  **Forums Publish**  **Audience FACE to FACE Communication Feedback** |

|  |  |
| --- | --- |
| Finding & Using Information | |
| **Programme of Study** | use search technologies effectively, appreciate how results are selected and ranked,  and be discerning in evaluating digital content  understand computer networks including the internet; |
| **Skills** | 1. Can they begin to understand some of the ways that search engines select and rank results? 2. Can they use advance search techniques to refine searches? 3. Can they compare websites and other sources to help verify and validate content? 4. Can they recognise that domain names and common website extensions? E.g. .co.uk, .com, .ac, .sch .org, .gov, .net, can support the validation process |
| **Key Works** | Research  Content  Information Search engine Results Ranking  Unique Resource Locator (url)  Validity |