**Year 5 Computing Curriculum – Autumn 1**

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| **Theme: Sharing Information** | | | | | | | | |
| **Curriculum objectives** | | | **Vocabulary** | | | | | **Links across the curriculum** |
| - 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  - Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content | | | **Keyword** | Definition | content creator | Someone who creates websites, videos, etc specifically for others to read or watch | | [**Education for a Connected World links**](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683895/Education_for_a_connected_world_PDF.PDF)  Managing Online Information   * I can explain the benefits and limitations of using different types of search technologies e.g. voice-activation search engine. I can explain how some technology can limit the information I am presented with.   Privacy and Security   * I can explain what a strong password is and demonstrate how to create one   [**Relationships Education, Relationships and Sex Education (RSE) and Health Education**](https://assets.publishing.service.gov.uk/media/62cea352e90e071e789ea9bf/Relationships_Education_RSE_and_Health_Education.pdf)  Internet safety and Harms   * Pupils should know how to be a discerning consumer of information online, including that from search engines, is ranked, selected and targeted | |
| storage | The amount of data something can hold | selection | To choose something | |
| refine | To improve and tweak something slightly | ranking | To chronologically order something | |
| Search Engine Optimisation (SEO) | The process by which some websites appear higher in the list than others |  |  | |
| web crawler | An Internet bot that browses websites |  |  | |
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| **Prior Knowledge:**  Year 1 – Technology Around Us; Year 2 – IT Around Us; Year 3 – Connecting Computers; Year 4 – The Internet | | | | | **Future Knowledge:**  Year 6 - Communication | | | |
| **Lesson Sequence** | | **Key Knowledge** | | | | | **Key Skills** | |
| 1 Systems | | Learners are introduced to the concept of a system. They begin to understand that components can work together to perform a task. Finally, learners explore how digital systems can work and learn about physical and electronic connections. | | | | | To explain that computers can be connected together to form systems   * I can explain that systems are built using a number of parts * I can describe the input, process, and output of a digital system * I can explain that computer systems communicate with other devices | |
| 2 Computer systems and us | | Learners consider how larger computer systems work. They see how devices and processes are connected, and reflect on how computer systems can help them. | | | | | To recognise the role of computer systems in our lives   * I can identify tasks that are managed by computer systems * I can identify the human elements of a computer system * I can explain the benefits of a given computer system * I can explain how to keep my personal information safe online | |
| 3 Searching the web | | Learners are introduced to a range of search engines. They are given the opportunity to explain how to search, before they write and test instructions. Next, they learn that searches do not always return the results that someone is looking for, and refine their searches accordingly. Finally, learners are introduced to the two most common methods of searching: using a search engine and using the address bar. | | | | | To identify how to use a search engine   * I can make use of a web search to find specific information * I can refine my web search * I can compare results from different search engines * I can explain why I should search trustworthy websites and not share any personal information online. | |
| 4 Selecting search results | | Learners gain an understanding of why search engines are necessary to help them find things on the World Wide Web. They conduct their own searches and break down, in detail, the steps needed to find things on the web. Learners then emulate web crawlers to create an index of their own classroom. Finally, they consider why some searches return more results than others. | | | | | To describe how search engines select results   * I can explain why we need tools to find things online * I can recognise the role of web crawlers in creating an index * I can relate a search term to the search engine’s index | |
| 5 How search results are ranked | | Learners take part in an unplugged activity to find out about how a webpage’s content can influence where it is ranked in search results. In groups, learners create paper-based webpages on a topic that they are familiar with. They then discover how their webpages would rank when searching for keywords relating to their content. | | | | | To explain how search results are ranked   * I can order a list by rank * I can explain that a search engine follows rules to rank results * I can give examples of criteria used by search engines to rank results | |
| 6 How are searches influenced? | | Learners explore how someone performing a web search can influence the results that are returned, and how content creators can optimise their sites for searching. They also explore some of the limitations of searching and discuss what cannot be searched. | | | | | To recognise why the order of results is important, and to whom   * I can describe some of the ways that search results can be influenced * I can recognise some of the limitations of search engines * I can explain how search engines make money | |
| **Themes and links** | | | | | | | | |
| **Computing themes** | **Where these are covered:** | | | | | | | |
| **Technology around us**  Autumn 1 | * Scratch links to the real world and computer games the children know. | | | | | | | |
| **Digital painting**  Autumn 2 | * Understanding the need for coding and algorithms | | | | | | | |
| **Programming A**  Spring 1 | * Programming the Scratch | | | | | | | |
| **Data /information**  Spring 2 | * Storing the commands and the effect on language on the outcome of your commands. | | | | | | | |
| **Creating media**  Summer 1 | * Your own designs of Scratch | | | | | | | |
| **Programming B**  Summer 2 | * Using Scratch to implement an algorithm as a code | | | | | | | |