

SYSTEMS AND SEARCHING – OVERVIEW

Overview

This unit will develop students' understanding of how computer systems work together and refine their knowledge of searching using a range of strategies. Students will develop their understanding of computer networks including the internet and how networks can provide multiple services, such as the World Wide Web. Students will learn to use search technologies more effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. Students will use technology safely, respectfully and responsibly and they will recognise acceptable and unacceptable behaviour reporting any concerns.

In this unit, students will learn to identify components of digital systems and explain how they interact. They will develop their understanding of how data is transmitted over the internet. Students will refine searches using advanced techniques such as Booleans values, filters, and a variety of tools. Students will explore larger systems such as the school network and/or smart homes and identify their components. Students will apply systems and search knowledge to complete a research challenge.

National Curriculum

Knowledge and understanding	Computing concepts
To understand computer networks, including the internet and how they can provide multiple services, such as the world wide web.	Computer systems – understanding that digital devices are part of larger systems and networks can be used to retrieve and share information.
To use search technologies effectively.	Digital literacy – understand how to use keywords and search techniques, and how to evaluate results.
To use technology safely, respectfully, and responsibly; recognise unacceptable behaviour; identify a range of ways to report concerns about content and contact.	Digital literacy – understanding how to behave responsibly when using digital services and e-safety.

The computing curriculum

Where the knowledge and understanding developed in this unit fits into Illuminate's computing curriculum is outlined below:

Prior Learning	Future Learning
EYFS Unit: Using a computer	Year 6 Unit: Communicating and collaborating
Year 1 Unit: Mouse skills, typing and saving	
Year 2 Unit: Parts of a computer	
Year 3 Unit: Connecting computers	
Year 4 Unit: Search Engines	

Cross-curricular links and extension activities

This unit provides opportunities for cross-curricular links in English through reading and writing as students evaluate author intent and bias, take notes from websites, practise skimming and scanning text, and present findings in clearly structured formats.

This unit provides opportunities for links in geography when researching place based topics and being aware of the global infrastructure like undersea cables which connect the worldwide network.

This unit also provides cross-curricular links through science as students research scientific questions and encourages scientific enquiry when interpreting online data.

This unit provides opportunities for cross-curricular links in Art and Design as students create comic strips, system diagrams and research posters.

This unit provides cross-curricular links in PSHE as students develop skills in critical digital literacy and safe online behaviour as they recognise acceptable/unacceptable behaviour and know a range of ways to report concerns.