National Centre for

Computing Education

# Year 6 - Communication

### Unit introduction

In this unit, the class will learn about the World Wide Web as a communication tool. First, they will learn how we find information on the World Wide Web, through learning how search engines work (including how they select and rank results) and what influences searching, and through comparing different search engines. They will then investigate different methods of communication, before focusing on internet-based communication. Finally, they will evaluate which methods of internet communication to use for particular purposes.

### Overview of lessons

Lesson	Brief overview	Learning objectives
1 Searching the web	In this lesson, learners will be introduced to a range of search engines. They will be given the opportunity to explain how we search, then they will write and test instructions. Next, they will learn that searches do not always return the results that we are looking for, and will refine their searches accordingly. Finally, they will be introduced to the two most common methods of searching: using a search engine and the address bar.	<ul> <li>To identify how to use a search engine</li> <li>I can complete a web search to find specific information</li> <li>I can refine my search</li> <li>I can compare results from different search engines</li> </ul>
2 Selecting search results	In this lesson, learners will gain an understanding of why search engines are necessary to help us find things on the World Wide Web. They will conduct their own searches and	<ul> <li>To describe how search engines select results</li> <li>I can explain why we need tools to find things online</li> </ul>

	break down, in detail, the steps needed to find things on the web. They will then emulate web crawlers to create an index of their own classroom. Finally, they will consider why some searches return more results than others.	<ul> <li>I can recognise the role of web crawlers in creating an index</li> <li>I can relate a search term to the search engine's index</li> </ul>
3 How search results are ranked	This lesson includes an unplugged activity in which the class will learn about some of the main factors that influence how a search engine ranks a web page. Learners will create paper-based 'web pages' in groups, on a topic that they are currently studying. They will then discover how their web pages would rank when searching for keywords relating to their content.	<ul> <li>To explain how search results are ranked</li> <li>I can explain that search results are ordered</li> <li>I can explain that a search engine follows rules to rank relevant pages</li> <li>I can suggest some of the criteria that a search engine checks to decide on the order of results</li> </ul>
4 How are searches influenced?	In this lesson, learners will explore how the person performing a web search can influence the results that are returned, and how content creators can optimise their sites for searching. Learners will also explore some of the limitations of searching, then discuss what cannot be searched.	<ul> <li>To recognise why the order of results is important, and to whom <ul> <li>I can describe some of the ways that search results can be influenced</li> <li>I can recognise some of the limitations of search engines</li> <li>I can explain how search engines make money</li> </ul> </li> </ul>
5 How we communicate	In this lesson, learners will deepen their understanding of the term 'communication'. They will explore different methods of communication, then they will consider internet-based	To recognise how we communicate using technology I can explain the different ways in which people communicate

	communication in more detail. Finally, they will evaluate which methods of communication suit particular purposes.	<ul> <li>I can identify that there are a variety of ways of communicating over the internet</li> <li>I can choose methods of communication to suit particular purposes</li> </ul>
6 Communicating responsibly	In this lesson, learners will use information provided and their own prior knowledge to categorise different forms of internet communication. They will then choose which method they would use for the scenarios discussed in the previous lesson. During these activities, they will explore issues around privacy and information security.	<ul> <li>To evaluate different methods of online communication</li> <li>I can compare different methods of communicating on the internet</li> <li>I can decide when I should and should not share</li> <li>I can explain that communication on the internet may not be private</li> </ul>

### Progression

This unit progresses students' knowledge and understanding of computing systems and online collaborative working.

Please see the learning graph for this unit for more information about progression.

# Curriculum links

#### National curriculum links

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- 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

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- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

#### Education for a Connected World links

- I can describe and assess the benefits and the potential risks of sharing information online.
- I can use various additional tools to refine my searches (e.g. search filters: size, type, usage rights etc.).
- I can explain how to use search effectively and use examples from my own practice to illustrate this.
- I can explain how search engine rankings are returned and can explain how they can be influenced (e.g. commerce, sponsored results).

### Assessment

#### Summative assessment

• Please see the assessment question and answer documents for this unit.

# Subject knowledge

Enhance your subject knowledge to teach this unit through the following training opportunities:

#### Online training courses

• <u>Raspberry Pi Foundation online training courses</u>

#### Face-to-face courses

• National Centre for Computing Education face-to-face training courses

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