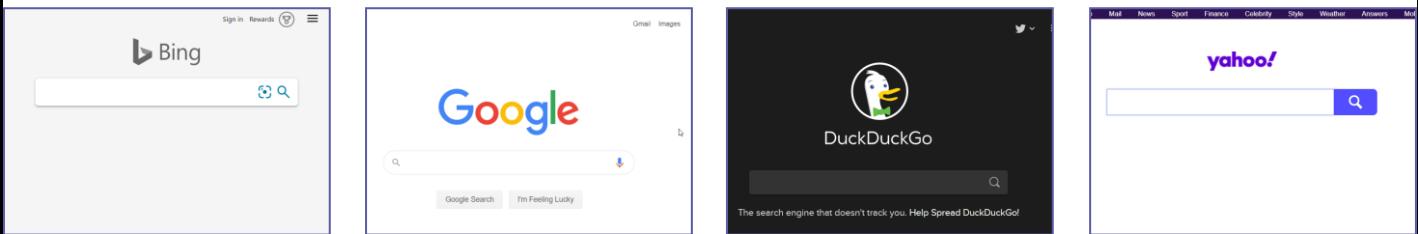


Knowledge Organiser for Year 6

Big question: How do search engines and online communication shape the way we find information and connect with others?

KS2 National curriculum specification

- 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
- 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



In this unit, the children will:

Identify how to use a search engine

Describe how search engines select results

Explain how search results are ranked

Recognise why the order of results is important, and to whom

Recognise how we communicate using technology

Evaluate different methods of online communication

Key vocabulary:

Internet	A global network that connects millions of computers and devices so they can share information.
World Wide Web	A collection of websites and pages that you can access through the internet using a browser.
Search Engine	A tool that helps you find information on the web by typing in words or questions.
Browser	A program used to view websites on the internet.
Keyword	A word or phrase you type into a search engine to find information.
Google	A popular search engine that helps you find information online.
Tim Berners-Lee	The computer scientist who invented the World Wide Web in 1989.
Ranking	The order in which search results appear, based on how relevant they are to your search.
Crawlers	Programs used by search engines to scan websites and collect information for indexing.

Algorithm	A set of rules a computer follows to solve a problem or make decisions. (Example: Search engines use algorithms to rank results.)
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Search Engines – Introduction	Online Communication
<ul style="list-style-type: none"> -We can find information on the World Wide Web by using search engines. -A search engine is a program that finds websites & webpages based on key words entered by the user. -When the World Wide Web was invented by Tim Berners-Lee in 1989, there was only 1 website. By 2018, there were 1,630, 322, 579! The World Wide Web is a big place, and we need search engines to be able to find what we need. -Some examples of search engines are Bing, Google, Yahoo, DuckDuckGo and Kiddle. -You can also type searches into the address bar of the browser (e.g. Google Chrome or Microsoft Internet Explorer). 	<ul style="list-style-type: none"> -Communication is when we share information with one another. We can communicate in lots of different ways on the internet, e.g. messaging services, emails, social media, video calling and gaming platforms. -Public communication is visible to all, whilst private communication is restricted to only some people. -Some communications are one-way (e.g. YouTube) whilst others are two-way (e.g. Skype). -Some communications are to one person, whilst others are to many. -We should consider which type of communication is most appropriate to our needs, safety and privacy.

Selecting and Ranking Search Results

Selecting Search Results	Ranking Search Results
<ul style="list-style-type: none"> -Search engines use programs known as crawlers to index the World Wide Web. -They ‘crawl’ websites for searchable information – they then store where it is found in a huge index. -Search engines select information from this index when we type in key words. -Searching for some search terms can bring many millions of results. -We need to make sure that our search terms are as refined as possible, in order to allow the search engine to select the information that is most relevant. 	<ul style="list-style-type: none"> -Search engines ‘rank’ the web pages (the highest ranked page is at the top). -Search engines use algorithms to do this – algorithms look at a number of different factors and give web pages a score for each. -The web page with the highest score ranks the highest. -Some factors include if the search term is in the title of the page (high points) or if it appears in the paragraphs of the text on the page (lower points). -Web designers consider algorithms when making web pages.

Teacher Information:

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