

Computing – Year 6

Content

NC objectives - areas of study	End point of area of study	Vocabulary		
<p>1. Use search technologies effectively, appreciate how results are selected and ranked.-search results</p> <p>Understand computer networks including the internet and the opportunities they offer for communication and collaboration-world wide web-communication</p> <p>2. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.-scratch</p> <p>Use, sequence, select and repetition in programs; work with variables and various forms of input and output.-scratch</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs-scratch</p> <p>3. Select, use and combine a variety of software (including internet services) on a range of digital</p>	<p>1. Children will learn how we find information on the world wide web through learning how search engines work Children will investigate different methods of communication and evaluate which methods of internet communication to use for particular purposes. (connect and communicate)</p> <p>2. Children will use variables to create a simulation of a scoreboard. (code)</p> <p>3. Children will create a website for a chosen purpose. Children pay specific attention to copyright and fair use of media, the aesthetics of the site and navigation paths. (create)</p>	Basic	Adventurous	Technical
		<p><u>Connect and communicate</u> Search, search engine, results, world wide web, communicate, private, public</p> <p><u>Code</u> Scratch, project</p> <p><u>create</u> Web page, design, layout, evaluate, edit, improve,</p>	<p><u>Connect and communicate</u> Device, fair use, sources</p> <p><u>code</u> sprites, enhance, indexes</p> <p><u>create</u> user, image, features</p>	<p><u>Connect and communicate</u> Ranked,</p> <p><u>code</u> abstraction, simulation</p> <p><u>create</u> Hyperlink, navigation path, copyright, variables,</p>

<p>devices to design and create content.-web page</p>				
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Knowledge

Substantive Knowledge

e-safety and world wide web-communication-concepts- **Communicate and Connect**

Is it important that search results are ranked?

Is it safe to communicate online?

During this term – visit from Safer Internet Partnership.

Reflect on digital footprint and how it could impact their future.

Lesson 1

L.O: To know that computers can be connected together to form systems.

Vocab-systems, input, process, output

- explain that systems are built using a number of parts.
- describe the input, process and output of a digital system.
- explain that computer systems communicate with other devices.

Lesson 2

L.O: To understand the role of computer systems in our lives.

Disciplinary Knowledge

Working as a junior safeguarding officer e-safety-At the beginning of the lesson tell the children that we are learning how to keep ourselves safe within the context of the online world.

analyse-understand how search engines work and how results are displayed.

Evaluate-strengths and limitations of different methods of online communication.

Vocab-system

- identify tasks that are managed by computer systems.
- identify human elements of a computer system.
- explain benefits of a given computer system.

Wonder at the power of the digital age.

Lesson 3

L.O: To understand how to use a search engine.

Vocab-search engine, search

- chn make use of a web search to find specific information.
- chn refine their web search
- chn compare results from different search engines.

Lesson 4

L.O: To understand how search engines work.

Vocab-index, web crawlers

- introduce 'index' and explain how this relates to search engines.
- introduce 'web crawlers' and explain how search engines use them

to create their search engine index.

-explain what information web crawlers store, including location of the web page.

Lesson 5

L.O: To understand and explain what page ranking is.

Vocab-ranked, results

- introduce what page ranking is in the context of search engines.
- explain search engines may have pay per click adverts at the top of their search results.
- children explore different search engines and discuss why they think some web pages rank higher than others.
- explain some of the things the page ranking program takes into consideration.

Lesson 6

L.O: To understand how search engine optimisation (SEO) is used to improve a page.

<p>Vocab-ranked, fair use</p> <ul style="list-style-type: none"> - explain what SEO is-when people use their knowledge of how search engine ranking works to boost a web pages ranking in a search engine. - complete a search and explain why they think these web pages are so successful in the page ranking. -chn use knowledge of SEO to improve a fake web page. 	
<p>Programming-variables in games-concepts-code</p> <p><u>What is a variable?</u></p> <p><u>Lesson 1</u></p> <p><u>L.O: To understand that a variable is something that is changeable.</u></p> <p>Vocab-variable, changeable</p> <ul style="list-style-type: none"> - identify examples of information that is variable. - explain that the way a variable change can be defined. - identify that variables can hold numbers or letters. <p><u>Lesson 2</u></p> <p><u>L.O: To understand and explain why a variable is used in a program.</u></p> <p>Vocab-placeholder, variable</p> <ul style="list-style-type: none"> - identify a program variable as a placeholder in memory for a single value. - explain that a variable has a name and a value. - recognise that the value of a variable can be changed. <p><u>Lesson 3</u></p> <p><u>L.O: To know how to improve a game by using variables.</u></p> <p>Vocab-program</p> <ul style="list-style-type: none"> - decide where in a program to change a variable - make use if an event in a program to set a variable. - recognise that the value of a variable can be used by a program. <p>How can we learn from our mistakes?</p> <p><u>Lesson 4</u></p> <p><u>L.O: To design a project that builds on a given example.</u></p> <p>Vocab-project,</p>	<p>Working as a computer programmer- Why is what we have learned today important to our understanding of using technology?</p> <p>Problem solving- testing algorithms, identifying and bugs and debugging throughout. Explore how to improve a game by including a variable.</p> <p>Design –create a game for an audience.</p> <p>Evaluate-test algorithms and program and suggest strengths and improvements.</p>

- choose artwork for project.
- create algorithms for project
- explain design choices

Lesson 5

L.O: To know how to create a project using their design.

Vocab-simulation, debug

- add art work to project based on their designs.
- choose appropriate names for variables and implement code based on their algorithms.
- test and debug project.

Think about other people and their talents and interests when designing a game.

Lesson 6

L.O: To evaluate my project.

Vocab-enhance, evaluate

- identify ways that game can be improved.
- use variables to extend game
- share game with others.

Web page- concepts- create

What makes a good website?

Lesson 1

L.O: To know what makes a good website.

Vocab-website, media, HTML

- explore a website.
- review existing website and consider its structure.
- discuss different types of media used on websites.
- know that websites are written in HTML.

Lesson 2

L.O: To know and plan the features of a web page.

Vocab-web page, features,layout

- recognise common features of a web page.
- suggest media to include on their page.

Working as a website designer- Why is what we have learned today important to our understanding of using technology to design?

Design- create a website suitable for the user and on a range of devices.

Evaluate- edit and improve web pages after testing them out on users and on different devices.

-draw a web page layout that suite a purpose.

Lesson 3

L.O: To understand and consider the ownership and use of images (copyright).

Vocab-copyright, fair use

- explain why they should sue copyright-free images.
- find copy-right free images.
- describe what is meant by the term 'fair use'.

Consider the beauty of the natural world through images of creation.

Lesson 4

L.O: To understand the need to preview pages.

Vocab- preview, edit, improve

- add content to own web page.
- preview what web page looks like.
- evaluate what web page looks like on different devices and suggest/make edits.

Lesson 5

L.O: To understand the need for a navigation path.

Vocab-navigation path, hyperlink

- explain what a navigation path is.
- describe why navigation paths are useful.
- make multiple web pages and link them using hyperlinks.

Lesson 6

L.O: To understand the implications of linking to content owned by other people.

Vocab-user, hyperlinks

- explain implication of linking to content owned by others.
- create hyperlinks to link to other people's work.
- evaluate the user experience of a website.

Reflect on the rights of others around their online content, and consent to share images.

Concepts

Connect and communicate

Code

Create

ASSESSMENT

KNOW MORE, REMEMBER MORE, DO MORE...

In this unit of learning, progress has been made when a learner knows more. This 'distance travelled' from the starting point is evidenced through them remembering more and doing more: in books, low stakes quizzes, retrieval, use of mind maps, answering the big question and being able to feel more confident about this unit.