Beech Hill Primary School Knowledge Organiser

Topic: Computing – Digital literacy	Year group	Term
Computer Systems and Networks	Year 3	Summer 1 5 sessions

Background knowledge

Computer Systems and Networks 3 has been designed to provide children with the knowledge and skills to understand how computer systems and networks, including the Internet, work. The five steps in the unit teach concepts and skills to develop the children's understanding of: how devices are connected to each other; computer networks; the Internet; the World Wide Web and safe searching.
Alongside these computing concepts, the five steps also teach the online safety aspects of: creating passwords and keeping them private; how connected devices can collect and share anyone's information with others; why spending too much time using technology can sometimes negatively impact someone; how the Internet can be used to buy and sell things; and if everything online can be trusted.
This is a 'Big Question' unit and children will be working towards answering the following question: What is the difference between the Internet and the World Wide Web?

In order to teach Computing Systems and Networks 3 confidently, a good understanding of how different devices can be connected is essential for teaching about networks and how they work. It is also important to understand what networks are and how they work to support the children in understanding what the Internet is. A secure knowledge of the World Wide Web, what it can be used for and how it works is required to teach the children about the World Wide Web. Knowing the clear differences between the Internet and the World Wide Web is required to help support the children in answering the Big Question for the unit. Each step includes a CPD in 3 Video and a CPD Quick Guide aimed to build confident subject knowledge before teaching the step.

What should I already know?

It would be beneficial for the children to have prior knowledge of different devices and how they can be connected. They would also benefit from having some experience of using the Internet and using a search engine to search the World Wide Web.

National Curriculum Objectives / Key Skills	The Journey
NC Pupils should be taught to: 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. **Key Skills** Computer Systems and Networks 3 provides children with the knowledge and skills that can be applied to the use of technology throughout the curriculum, for example: searching the web and evaluating information for other curriculum subjects; collaborating and communicating with others within other curriculum subjects.	Throughout the unit, children will: 1. To understand how devices are connected to each other. (Connection detectives) 2. Understand what a computer network is. (Make a network activity sheet) 3. To understand what the internet is and how it works. (Use AI eg. Copilot, to research what the internet is and how it works. Type some pre-prepared questions into Copilot. EXT: Think of your own questions to ask). 4. To understand the World Wide Web. (Use AI eg. Copilot, to research what the world wide web is, how it works and who invented it. Type some pre-prepared questions into Copilot. EXT: Think of your own questions to ask). 5. To know how to use a search engine safely. (Safe search results activity)

Outcomes
This unit begins your children's journey towards the following key milestone concepts: Children will know how devices are connected and what they can do once they are connected. Children will understand what a network, including the Internet, is and how they allow us to communicate and collaborate. Children will know what the World Wide Web is and how we can create and post content on it. Children will understand how to check a website is secure and contains reliable content.

Throughout the unit, children will:

I can describe how devices are connected to each other.
I can explain what devices can do once they are connected to each other.
I can describe how the devices in my school are connected to each other.

I can describe what a computer network is.
I can name some of the devices that can form a computer network.
I can describe my school network and the devices that form it.

I know what the Internet is.
I can explain how the Internet works.
I know what the Internet can be used for.

I know what the World Wide Web is.
I know how content can be viewed on the World Wide Web.
I know and understand how content can be created and posted online.

I can use a search engine to find information.
I know how to search for information safely.
I can identify how to trust a website is safe.

Key Vocabulary

device

connection

wireless

infrared

satellite

data

cable

radio waves

computer network

server

switch

wireless router

Internet

transmit

router

Internet Service Provider (ISP)

web server

Internet Protocol Address (IP address)

World Wide Web

web page

website

web browser

Uniform Resource Locator (URL)

HyperText Markup Language (HTML)

web hosting provider

search

search engine

search box

Question of the week.
1. Tell me some ways devices can be connected together. 2. (Picture task) Which of these do or do not belong in a network? 3. Tell me one fact you learned about the internet. 4. True of false, the internet was invented in 1989? (False, the www was) 5. If a website has a padlock, is it likely to be a safe website or an unsafe website. Why?