Year 5
Computer Systems and Networks: Sharing Information

Prior Learning (Y4):
Learners will apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure. They will learn that the World Wide Web is part of the internet, and will be given opportunities to explore the World Wide Web for themselves in order to learn about who owns content and what they can access, add, and create. Finally, they will evaluate online content to decide how honest, accurate, or reliable it is, and understand the consequences of false information.

Current Learning (Y5):
Learners will develop their understanding of computer systems and how information is transferred between systems and devices. Learners will consider small-scale systems as well as large-scale systems. They will explain the input, output, and process aspects of a variety of different real-world systems. They will also understand how to work collaboratively online.

Future Learning (Y6):
Learners will find out about the World Wide Web as a communication tool. 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.

Key Vocabulary

System	A system is a number of things (parts, components, people) that work together to complete or perform a task.
Packets	Are small parts of the messages that the digital devices are sharing.
Collaboration	The action of working with someone to produce something

Key Questions:

- How are computers connected together to form systems?
- What is the role of computer systems in our lives?
- How is information transferred across the internet?
- How does sharing information online let people in different places work together?
- What is the best way to work collaboratively online?

DIGITAL SYSTEMS:

These are systems which are on a digital device or a computer. These will often have an **input, process and output.**

Some examples of Digital systems are:

If we send messages or information from one computer to another, we must write their IP address. An example of an IP address is below.

192.168.1.200

When sending messages through systems and networks, computers use **packets** to send from one IP address to another. Computers can hold only one packet at a time. If they are holding one, they can't accept another until they have passed on the packet that they are holding to the relevant computer.

When sharing information across networks, we are able to work collaboratively on projects, especially if we do not live nearby. Data and information can be stored on the network and accessed from different computers also connected to that network, meaning information can be shared easily.