Computing 24-25

Year 3 – Computing Systems and networks, connecting computers

Sticky knowledge:	Key vocabulary	
• I can classify input and output devices • I can Recognise that a computer network is made up of a number of devices • I can explain how I use digital devices for different activities • I can explain how messages are passed through multiple connections • I can explain the role of a switch, server, and wireless access point in a network • I can identify how devices in a network are connected together	Digital device input process output Program digital non-digital network sockets	Connection network network switch Server, wireless access point Network cables

Prior learning Year 1:	Year 2:
• I can explain technology as something that helps us • I can locate examples of technology in the classroom • I can name the main parts of a computer • I know what a keyboard is and I can type my name on a computer • I can identify rules to keep us safe and healthy when we are using technology in and beyond the home	• I can identify examples of computers • I can find examples of IT in school and sort school IT by what it's used for • I can talk about uses of information technology • I can demonstrate how IT devices work together • I can say how rules can help keep me safe

National curriculum:
- ● use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- ● 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

Features

You will need digital devices for learners to interact with during this unit. Lesson 3 requires digital devices with a painting application. Lesson 6 includes a 'network tour', which involves learners identifying key parts of your school network. You will therefore need access to your school's server, switch, and wireless access points.

LO	Title / Focus	Lesson outline
	Lesson 1- How does a digital device work? **LO-** To explain how digital devices function **Sticky Knowledge-** I can classify input and output devices	This lesson introduces the concepts of input, process, and output. These concepts are fundamental to all digital devices.
	Lesson 2- What parts make up a digital device? **LO-** To identify input and output devices **Sticky Knowledge-** I can classify input and output devices	Learners will develop their knowledge of the relationship between inputs, processes, and outputs and apply it to devices and parts of devices that they will be familiar with from their everyday surroundings.
	Lesson 3- How do digital devices help us? **LO-** To recognise how digital devices can change the way that we work **Sticky Knowledge-** I can explain how I use digital devices for different activities	Learners will apply their learning from Lessons 1 and 2 by using programs in conjunction with inputs and outputs on a digital device. They will create two pieces of work with the same focus, using digital devices to create one piece of work, and non-digital tools to create the other. Learners will then compare and contrast the two approaches.
	Lesson 4- How am I connected? **LO-** To explain how a computer network can be used to share information **Sticky Knowledge-**	Many digital devices are now connected to other digital devices, eg computers through wires, tablets through Wi-Fi, and smartphones through mobile phone networks. The benefit of connecting digital devices is that it allows information to be shared between users and systems.

I can explain how messages are passed through multiple connections	This lesson introduces the concept of connections and moving information between connected devices. Learners will learn to explain how and why computers are joined together to form networks.
Lesson 5- How are computers connected? **LO-** To explore how digital devices can be connected **Sticky Knowledge-** I can explain how messages are passed through multiple connections I can explain the role of a switch, server, and wireless access point in a network	This lesson introduces key network components, including a server and wireless access points. Learners will examine each device's functionality and look at the benefits of networking computers.
Lesson 6- What does our school network look like? **LO-** To recognise the physical components of a network **Sticky Knowledge-** I can identify how devices in a network are connected together	Learners will further develop their understanding of computer networks. They will see examples of network infrastructure in a real-world setting and relate them to the activities in Lesson 5.

Working towards	**End of Unit Assessment** Working at Age related expectations	Working at a greater depth