Beech Hill Primary School Knowledge Organiser

Topic: Computing – Digital literacy	Year group	Term
Computer Systems and Networks	Year 1	Summer 1 4 sessions

Background knowledge

Computer Systems and Networks 1 aims to help children recognise how information technology is used in the wider world, understand its benefits and explore its evolution and future development. This is a 'Big Question' unit and children will be working towards answering the following question: How does information technology help us? The steps in this unit include concepts and activities designed to support children in answering the unit's Big Question.

To teach this unit confidently, it is essential to have a good understanding of how information technology is used in various contexts. It is key to be aware of the diverse ways people can utilise information technology, such as to communicate, entertain and work. Recognising the benefits of information technology is also helpful. Having a good knowledge of the significant individuals in information technology who have influenced the digital world today and understanding how information technology has changed over time is crucial. To support children in understanding how information technology may develop in the future, a solid grasp of emerging technologies, potential future developments and their implications is beneficial. If needed, each step includes a CPD in 3 Video and a CPD Quick Guide that aim to build confident subject knowledge before teaching the step.

What should I already know?

EYFS – Technology
Knows how to operate simple equipment (30-50)
Knows that information can be retrieved from computers (30-50)
They recognise a range of technology is used in places such as homes and schools (ELG)

Before beginning this Computer Systems and Networks 1 unit, it would be beneficial for children to be able to recognise and name different examples of technology. It would be helpful if children have previously explored examples of technology, including digital technology, through role-play activities to understand how they work.

National Curriculum Objectives / Key Skills	The Journey
NC Children should be taught to: * recognise common uses of information technology beyond school; * use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. **Key Skills** This unit provides children with knowledge and skills that can be applied in their use of technology throughout the curriculum, for example: * exploring how information technology in the home, at school and in the wider world can help us; * using digital devices to perform specific tasks; *connecting to other information technology, such as digital devices, to share information; *researching significant individuals in IT to enhance learning.	Throughout the unit, children will: 1. To understand how information technology is used in different places and by different people. Task 1: Who uses information technology. Match the person to the technology (cards to print out, cut and match up) Task 2: What information technology Do I Use (worksheet) 2. To recognise how information technology can help us in different ways. Task 1: Match the piece of technology to the person in the supermarket (card to print out, cut up and match). Task 2: How do digital devices help us pdf. Ipads needed. How many of these things can the children do on an ipad. Can they take photos, film a video, play a game, type their name, etc. 3. To understand how information technology has changed and developed over time. Task 1: Information technology discussion cards. To discuss in pairs, small groups, then as a whole class. What did these old pieces of technology do? Task 2: Information technology pictures. Print out, then cut up. Children arrange the pictures in order from earliest to latest to show how tech has changed over time. 4. To think about how information technology may develop in the future. Task 1: Information Technology of the future discussion cards. (finding videos online of these things might also help with the discussion)

	Task 2: You are a robot. In pairs, children role play what a robot might, or might not be able to do in the future. Swap roles after five minutes. One child can instruct the robot on how to help. Remind the children of the importance of safe play. Emphasis clear instructions for the robot. Eg "pick up the cup in your left hand". "Pass me my blue coat." "Give me a yellow pencil please."

Outcomes

This unit begins your children's journey towards the following key milestone concepts:

* Children will understand how information technology is used in various places and by different people and recognise the many ways it helps us.

* Children will explore how information technology has changed and developed over time and begin to think about how it may evolve in the future.

Throughout the unit, children will:

I know the difference between technology and information technology.
I know some examples of information technology in the home, at school and in the wider world.
I know how information technology is used in different places.
I know some examples of how information technology is used by people in different jobs.

I know some ways that information technology can help us.
I know that digital devices can perform more than one task.
I know that information technology can be connected to share information.

I know some ways that information technology has changed.
I know the names of some people who have helped to change information technology.
I can order some developments in information technology on a timeline.

I know about some recent developments in information technology.
I know some examples of how information technology might change.
I know some ways information technology might help us in the future.
I can create a new digital device of the future.

Key Vocabulary

technology
information technology (IT)
create
save
share
digital devices
stream
connected
network
inventor
develop
influence
Internet
Internet of Things (IoT)
augmented reality (AR)
virtual reality (VR)
artificial intelligence (AI)

Question of the week.

1. What technology / equipment does a musician need?
2. Tell me three things that **you** can do on an ipad.
3. Tell me the name of (or describe) an old piece of technology that we don't use anymore.
4. Give me an example of a piece of future tech?