KNOWLEDGE ORGANISER

Year 5 Computing – Sharing Information

What I should already know

- To demonstrate how networks physically connect to other networks.
- To describe how networked devices connect to make the Internet.
- To identify how websites can be shared via the World Wide Web.
- To describe how content can be added and accessed on the WWW.
- To recognise how WWW content is created by people.
- To evaluate the consequences of unreliable content on the WWW.

Sharing Information

- Information technology (I.T.) includes computers and things that work with computers.
- Computers have Input, Process and Output (IPO) components.
- Computer systems are built using a number of parts.
- Computer systems can communicate with other devices.
- There are many different kinds of computer systems all around the world, ranging from small-scale to large scale.

Systems

-Systems are a set of things working together as parts of a whole.
-Computer systems are made up of inputs (something that sends a message to the device), processes (the way the device acts on the message) and outputs (something that is sent out by the device). Below are some examples.

Washing Machine:

Input: Dials and buttons.

Process: The computer inside follows a program.

Output: The clothes are washed and the display shows the remaining time.

DVD Player:

Input: The disc is inserted and play is pressed on the remote.

Process: The system reads the information on the disc

Output: The screen displays the movie/ show.

Smart Locker:

Input: The customer scans in a barcode.

Process: The code is recognised by the system.

Output: The correct locker is opened.

Transferring Information

Protocols and Packets

-Protocols are an agreed way of doing something. When we communicate, we use an agreed set of protocols (greeting, speaking, listening, etc.).

-In computing, agreed protocols are the way that computers communicate with one another.

-The digital information they send is called a 'packet.'

- Media, files and information can be shared on the internet either privately via email/cloud space or publicly on websites.

IP Addresses

-Computers and their users are not always in the same place as one another.

With billions of computers around the world, computers need to send the information to the correct place.

-To do this, computers use special addresses called IP addresses. They may look like this:

From: 216. 58. 1. 214

To: 216. 64. 1. 20

What I will learn by the end of this unit

- Explain that computers can be connected together to form systems.
- Recognise the role of computer systems in our lives.
- Recognise how information is transferred over the Internet.
- Recognise that connected digital devices allow online file-sharing.
- Recognise how to contribute effectively to a shared project online.
- Evaluate different ways of working together online.

Disciplinary Skills

- Use search technologies effectively.
- Appreciate how results are selected and ranked.
- Be discerning in evaluating digital content.
- Create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.

Working Together

-Collaborating is another word for working together on something, to reach a shared goal.

-The internet can be used to help people collaborate online, even when they are a long distance apart!

-'Chat' functions can be used keep each other updated with new information.

-Shared 'cloud' spaces and online drives can allow one or more person to have access to/ edit documents.

-When building upon someone else's work, you need to be aware of copyright and intellectual property rules.

Key Vocabulary

system	connection	digital
input	process	output
protocol	address	collaboration