Year Three: Autumn 1

Topic title:

E-safety- Beliefs and opinions

Computer systems and networks - networks **And** Journey inside a computer

Skills used: Computer science (CS) Information Technology (IT) Digital Literacy (DL)

Big question: Networks, How do devices communicate? **Journey inside a computer,** what are input and outputs?

Prior learning:

- What is a computer ?
- online safety year 2- e-safety

E-safety Skills:

Recognising how social media platforms are used to interact. (IT)
Recognising that different information is shared online including facts, beliefs and opinions. (DL)
Learning how to identify reliable information when searching online.(DL)
Learning how to stay safe on social media. (DL)
Consider the impact technology can have on mood.(DL)

E-safety Knowledge:

To know that not everything on the internet is true: people share facts, beliefs and opinions online.
To understand that the internet can affect your moods and feelings.
To know that privacy settings limit who can access your important personal information, such as your name, age, gender, etc.
To know what social media is and that age restrictions apply.

Knowledge:

To understand that a network is a group of interconnected devices.
To know the components that make up a network (Wireless access point/WAP, Network switch, Router, Server and devices).
To know that a server is central to a network and responds to requests made.
To know that the internet connects all the networks around the world.
To know that a router connects us to the internet.
To know what a packet is and why it is important for website data transfer.

Skills:

Learning about the purpose of routers. (CS)
Understanding the role of the key components of a network. (CS)
Understanding that websites & videos are files that are shared from one computer to another. (CS)
Learning about the role of packets. (CS)
Understanding how networks work and their purpose. (CS)
Identifying the key components within a network, including whether they are wired or wireless. (CS)
Recognising links between networks and the internet. (CS)
Learning how data is transferred. (CS)

Critical Content Statements:

E-safety:

Fact- Something that can be proven to be true by evidence.
Belief- Something we accept to exist or be true, usually without proof.
Fake news-Online news or stories that are not true.
Opinion- A view or judgement about something**.**
Auto complete-When software guesses what you are typing and suggests a word or phrase.
Privacy settings-The controls put in place to manage what kind of information and how much of your information can be shared with or seen by other people and companies.
Social media platforms- Websites and apps where people can share information about what's happening in their lives.
Age restrictions- shows the minimum age you should be to use social media sites and apps.

Networks:

Device- Equipment created for a certain purpose or job.
Wireless access point- A device that enables other electronic devices to connect wirelessly to the internet.
Internet -A global network of computers and servers that share and exchange information.
Network- Multiple devices connected via the internet or a local network to share files and information.
Network switch- A device that deals with the movement of network information**.**
Packet data- The transmission of data in small pieces over a network, which are then reassembled at their destination.
Router- A device that provides internet access to a network via wired or wireless connections.
Server- A computer that supplies data and information to other devices.
The cloud- Refers to data and files that are stored and accessed on servers via the internet.
User -An individual who uses a computer and its applications.
Wi-Fi -A wireless network connection that allows devices to connect without cables**.**
Wired- A 'wired' device is connected to the network via cables.
Wireless -A 'wireless' device connects to the network via signals.

Journey inside a computer:

Computer- Electronic machine that accepts and processes information to produce an output, and then stores the results**.**
Instructions- A series of steps that need to be performed in order.
Desktop- A tower computer that needs a mouse, keyboard and monitor, that remains in one place.
Tablet device - A handheld computer, that consists of a touchscreen, operating system and a rechargeable battery.
Trackpad- An input device commonly found built into laptops. It is used to move the cursor with the touch of your finger, and some allow for multiple finger gestures.
CPU-Central Processing Unit. The brain of a computer that deals with all the data it receives from input and output devices, as well as programs run within the computer.
Hard disk drive(HDD)- An internal or external device that can store information such as files, documents, images and programs.
RAM- (Random Access Memory). A piece of hardware that allows data to be recalled or stored within a computer.
ROM -(Read Only Memory). Information stored within ROM can only be read and not edited.

Year Three : Spring 1

Topic title:

E-safety-Who should I ask? **And** When being online makes me upset

Creating media- Video trailers

Skills used: Computer science (CS) Information Technology (IT) Digital Literacy (DL)

Enquiry question: How do I edit photos and videos?

Prior learning:	**E-safety Skills:**	**Knowledge:**	**Skills:**
● Digital Imagery	Recognising how social media platforms are used to interact. (IT) Recognising that different information is shared online including facts, beliefs and opinions. (DL) Learning how to identify reliable information when searching online.(DL) Learning how to stay safe on social media. (DL) Consider the impact technology can have on mood.(DL) **E-safety Knowledge:** To know that not everything on the internet is true: people share facts, beliefs and opinions online. To understand that the internet can affect your moods and feelings. To know that privacy settings limit who can access your important personal information, such as your name, age, gender, etc. To know what social media is and that age restrictions apply.	To know that different types of camera shots can make my photos or videos look more effective. To know that I can edit photos and videos using film editing software. To understand that I can add transitions and text to my video.	Using logical thinking to explore more complex software; predicting, testing and explaining what it does. (CS) Taking photographs and recording video to tell a story. (IT) Using software to edit and enhance their video adding music, sounds and text on screen with transitions. (IT)

Critical Content Statements:

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Fake news-Online news or stories that are not true.

Opinion- A view or judgement about something**.**

Auto complete-When software guesses what you are typing and suggests a word or phrase.

Privacy settings-The controls put in place to manage what kind of information and how much of your information can be shared with or seen by other people and companies.

Social media platforms- Websites and apps where people can share information about what's happening in their lives.

Age restrictions- shows the minimum age you should be to use social media sites and apps.

Video trailers:

Edit - To change and amend something.

Film - Recorded moving pictures that can make up a clip or film.

Film editing software -Software with editing abilities to cut, crop and add effects to video footage.

Import (software) - To pull another file into software, to place, edit and manipulate.

Plan - An idea about how to do something in future.

Transitions -Transitions are visual effects that can be applied to occur in-between digital media (slides, images or video clips).

Year three: Summer 1

Topic title:

E-safety- Sharing information online **And**

programming - Scratch

Skills used: Computer science (CS) Information Technology (IT) Digital Literacy (DL)

Enquiry question: What do scratch blocks do?

Prior learning:

- Scratch jr
- Who should I ask? **And** When being online makes me upset- E-safety

Future learning:

- Further coding with Scratch.

E-safety Skills:

Recognising how social media platforms are used to interact. (IT)
Recognising that different information is shared online including facts, beliefs and opinions. (DL)
Learning how to identify reliable information when searching online.(DL)
Learning how to stay safe on social media. (DL)
Consider the impact technology can have on mood.(DL)

E-safety Knowledge:

To know that not everything on the internet is true: people share facts, beliefs and opinions online.
To understand that the internet can affect your moods and feelings.
To know that privacy settings limit who can access your important personal information, such as your name, age, gender, etc.
To know what social media is and that age restrictions apply.

Knowledge:

To know that Scratch is a programming language and some of its basic functions.
To understand how to use loops to improve programming.
To understand how decomposition is used in programming.
To understand that you can remix and adapt existing code.

Skills:

Using decomposition to explore the code behind an animation. (CS)
Using repetition in programs. (CS)
Using logical reasoning to explain how simple algorithms work. (CS)
Explaining the purpose of an algorithm. (CS)
Forming algorithms independently. (CS)
Using logical thinking to explore more complex software; predicting, testing. (CS)
Incorporating loops to make code more efficient. (CS)
Continuing existing code. (CS)
Making reasonable suggestions for how to debug their own and others' code. (CS)

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Privacy settings-The controls put in place to manage what kind of information and how much of your information can be shared with or seen by other people and companies.
Social media platforms- Websites and apps where people can share information about what's happening in their lives.
Age restrictions- shows the minimum age you should be to use social media sites and apps.

Scratch:

Algorithm - Steps or instructions to solve a problem or complete a task.
Coding - Writing instructions for a computer.
Animation - Bringing concepts to life through 2D or 3D moving pictures or photographs, e.g. cartoons.
Code block - Similar to puzzle pieces, they can be dragged, dropped and snapped together to create an algorithm.
Decomposition - Breaking a problem into smaller parts.
Remixing code - Altering code that already exists.
Sprite - An image or character that moves or reacts to commands.
Tinker - To explore and play with something to discover its key functions.