

COMPUTING KNOWLEDGE ORGANISERS

AUTUMN 1



Hanslope Primary School

Computing Knowledge Organiser

Year 1: Computer systems and networks

How does this link to my previous learning?

Personal, Social and Emotional Development

- Show resilience and perseverance in the face of a challenge.

Physical Development

- Develop their small motor skills so that they can use a range of tools competently, safely, and confidently.

What key vocabulary will I learn:

- **Technology** – made by people to help us
- **Man-made** - made or caused by human beings (as opposed to occurring or being made naturally).
- **Digital** - using electronic technology to generate, store, and process data
- **Screen** - an output device that displays information in pictorial or textual form
- **Mouse** - a hand-held pointing device that detects two-dimensional motion relative to a surface.
- **Keyboard** - a panel of keys that operate a computer or typewriter.
- **Program** - provide (a computer or other machine) with coded instructions for the automatic performance of a task.
- **Click** - selecting an option on an electronic interface by pressing a button or touching a screen.
- **Cursor** - a movable indicator on a computer screen identifying the point that will be affected by input from the user.

National Curriculum Links:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

How does this link to my future learning?

- 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.

What will I know by the end of this unit:

- To identify technology
- To identify a computer and its main parts
- To use a mouse in different ways
- To use a keyboard to type on a computer
- To use the keyboard to edit text
- To create rules for using technology responsibly





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Year 2: Computer systems and networks

How does this link to my previous learning?

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

National Curriculum Links:

- Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

How does this link to my future learning?

- 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.

What key vocabulary will I learn:

- **Information Technology** - the study or use of systems (especially computers and telecommunications) for storing, retrieving, and sending information.
- **Computer** - an electronic device for storing and processing data, typically in binary form, according to instructions given to it in a variable program.
- **Device** - a thing made or adapted for a particular purpose, especially a piece of mechanical or electronic equipment.
- **Barcode** - a machine-readable code in the form of numbers and a pattern of parallel lines of varying widths, printed on a commodity and used especially for stock control.
- **Scanner** - a device for examining, reading, or monitoring something.
- **Communication** - means of sending or receiving information, such as phone lines or computers.

What will I know by the end of this unit:

- To recognise the uses and features of information technology
- To identify the uses of information technology in the school
- To identify information technology beyond school
- To explain how information technology helps us
- To explain how to use information technology safely
- To recognise that choices are made when using information technology





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Year 3: Connecting Computers

How does this link to my previous learning?

- 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

What key vocabulary will I learn:

Digital device - a piece of physical equipment that uses digital data, such as by sending, receiving, storing or processing it.

Input - a place where, or a device through which, energy or information enters a system

Process - a series of actions or steps taken to achieve a particular end.

Output - a place where power or information leaves a system.

Connection - a link between a plug or connector into a port or jack

Network - a system that connects two or more computing devices for transmitting and sharing information.

Server - a computer or system that provides resources, data, services, or programs to other computers, known as clients, over a network.

National Curriculum Links:

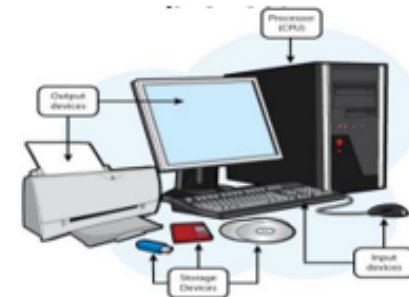
- Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration

How does this link to my future learning?

- Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems

What will I know by the end of this unit:

- To explain how digital devices function
- To identify input and output devices
- To recognise how digital devices can change the way we work
- To explain how a computer network can be used to share information
- To explore how digital devices can be connected
- To recognise the physical components of a network





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Year 4: The Internet

How does this link to my previous learning?

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.

National Curriculum Links:

- 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
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

How does this link to my future learning?

- Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems

What key vocabulary will I learn:

- **World Wide Web (WWW)** - The World Wide Web is the part of the internet where we visit web pages and websites.
- **Network** - connect different devices to one another, allowing for information sharing.
- **Internet**- The internet is a network of networks, that is used around the world to share information and communicate.
- **Router** - A router is something that finds a route between networks, connecting them
- **Website** – A set of webpages.
- **Webpage** - may contain different features, e.g. a title, links to other pages, images, videos, and text.
- **Browser** - Web browsers like Google Chrome and Internet Explore let us look at different pages on the internet.
- **Domain**- On the Internet, a domain is a space with a specific address
- **Reliable** - consistently good in quality or performance; able to be trusted.

What will I know by the end of this unit:

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





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Year 5: Sharing information

How does this link to my previous learning?

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.

What key vocabulary will I learn:

- **System** – A set of things working together as parts of a whole.
- **Input** – Something that sends a message to the device.
- **Process** - the way the device acts on receiving a message
- **Output** – Something that is sent out by a device.
- **Protocol** – Protocols are an agreed way of doing something. When we communicate, we use an agreed set of protocols (greeting, speaking, listening, etc.).
- **IP Address** - 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.
- **Collaboration** - working together on something, to reach a shared goal.

National Curriculum Links:

- 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
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

How does this link to my future learning?

- Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems

What will I know by the end of this unit:

To explain that computers can be connected together to form systems
To recognise the role of computer systems in our lives
To recognise how information is transferred over the internet
To explain how sharing information online lets people in different places work together
To contribute to a shared project online
To evaluate different ways of working together online





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Year 6: Communication

How does this link to my previous learning?

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.

What key vocabulary will I learn:

Internet - the internet is a network of networks.

World Wide Web (WWW) - Part of the internet where we can visit websites and webpages.

Search Engine - A search engine is a program that finds websites & webpages based on key words entered by the user.

Browser - A computer program with a graphical user interface for displaying and navigating between web pages.

Google - Use the Google search engine to obtain information about (someone or something)

Tim Berners-Lee – Inventor of the World Wide Web.

Algorithm - a process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.

National Curriculum Links:

- 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
- Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

How does this link to my future learning?

- Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems.

What will I know by the end of this unit:

- To identify how to use a search engine
- To describe how search engines select results
- To explain how search results are ranked
- To recognise why the order of results is important, and to whom
- To recognise how we communicate using technology
- To evaluate different methods of online communication

