COMPUTING KNOWLEDGE ORGANISERS

Year 1 to Year 6

Hanslope Primary School
Computing Knowledge Organiser

Year 1/2   **Computer systems and networks**

How does this link to my previous learning?

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

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

Year 3: Creating Media – Animation

National Curriculum Links:

- 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

How does this link to my previous learning?

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

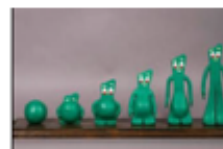## How does this link to my future learning?

- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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:

- **Animation** - moving images created from drawings, models, etc. that are photographed or created by a computer:
- **Frame** - one of the pictures on a strip of photographic film, or one of the single pictures that together form a television or cinema film
- **Illusion** - something that is not really what it seems to be
- **Sequence** -a series of related things or events, or the order in which they follow each other:
- **Onion Skinning** - a technique used in creating animated cartoons and editing movies to see several frames at once
- **Playback**- the act of playing a recording again in order to hear or see something again:
- **Storyboard**- series of drawings or images showing the planned order of images
- **Audio** – Connection with sound and the recording and broadcasting of sound
- **Consistency** - the quality of always behaving or performing in a similar way

What will I know by the end of this unit:

- To explain that animation is a sequence of drawings or photographs
- To relate animated movement with a sequence of images
- To plan an animation
- To identify the need to work consistently and carefully
- To review and improve an animation
- To evaluate the impact of adding other media to an animation

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

Year 5: Creating Media – Video Production

National Curriculum Links:

- 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

How does this link to my previous learning?

Use technology purposefully to create, organise, store, manipulate and retrieve digital content
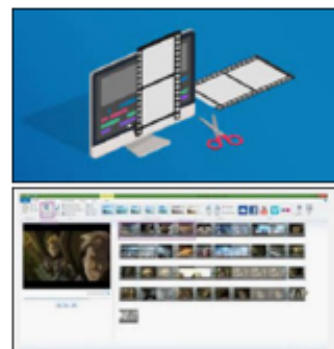
How does this link to my future learning?

- Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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:

- **Audio –** Connected with sound and the recording and broadcasting of sound
- **Video -** A recording of moving pictures and sound, especially as a digital file
- **Themes -** The main subject of a talk, book, film, etc.
- **Message -** A short piece of information that you give to a person when you cannot speak to them directly
- **Dialogue -** Conversation that is written for a book, play, or film
- **Plot -** The story of a book, film, play
- **Zoom -** To (cause a camera or computer to) make the image of something or someone appear much larger and nearer, or much smaller and further away
- **Props -** An object used by the actors performing in a play or film
- **Angle -** The space between two lines or surfaces at the point at which they touch each other, measured in degrees
- **Tilt -** The space between two lines or surfaces at the point at which they touch each other, measured in degrees

What will I know by the end of this unit:

- To explain what makes a video effective
- To use a digital device to record video
- To capture video using a range of techniques
- To create a storyboard
- To identify that video can be improved through reshooting and editing
- To consider the impact of the choices made when making and sharing a video

Year 6: Communication

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 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.

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:

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.

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