RUBRIC – KS4 Computing – Accessing Information

Subject curriculum intent:	A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.
Intent for this topic:	KS4 Computing- In this module students will learn how to safely access information online, extract and process information from a variety of formats and contexts and understand the importance of be able to access and complete online forms. They will also learn about fake news and image manipulation and how it has become some prevalent within our society, they will learn how to fact check information and how to identify potentially dangerous websites.
Core vocabulary needed for this subject/topic:	Information, access, search, find, manipulate, e-safety, online, offline, PowerPoint
Key vocabulary taught within this topic:	Online, access, information, find, search, manipulate, change, adapt, fake, lies, safety, photo, image, video, charts, graphs
Cross Curricular Links: History, English, PHSCE, Maths	

RRSA:

This unit of work is linked **Article 13** of the UN Convention on the Rights of the Child.

"I have the right to find and share information"

Focussed software for this topic: PowerPoint

Key Knowledge Concepts	PS 1-2	PS 2-3	PS 3-4	PS 4-5	PS 5-6
	Is able to identify the following types of information:	Is able to identify the following types of information:	Is able to identify the following types of information:	Is able to identify the following types of information:	Is able to identify the following types of information:
	A photograph is a still A video is a moving picture	A photograph A video. Audio icons / button / audio files Adverts Video Tutorials Poster / flyer Picture sequences	A photograph A video. Audio icons / button / audio files A range of graphs and charts (pie charts, bar charts, pictograms etc) Adverts Video Tutorials Poster / flyer Picture sequences	A photograph A video. A database (i.e. timetables) A range of graphs and charts (pie charts, bar charts, pictograms, Venn diagram etc) Audio icons / button / audio files Maps Adverts/party political broadcasts Video Tutorials Poster / flyer Picture sequences	A photograph A video. A database (i.e. timetables) A range of graphs and charts (pie charts, bar charts, pictograms, Venn diagram etc) Audio icons / button / audio files Weather charts Maps Adverts/party political broadcasts Video Tutorials Heat maps Infographic Poster / flyer Picture sequences
	<u>Search Engines</u> Understands how to use keywords effectively in a search engine.	<u>Search Engines</u> Understands what a search engine is. Understands that there are a range of search engines (adult and child). Understands why you use keywords in a search engine.	<u>Search Engines</u> Understands what a search engine is. Understands the differences between a search engine and a web browser Understands that there are a range of search engines (adult and child). Understands why keywords are used in a search engine. Understands how to filter a search within a search engine. Understands copyright and how it applies to a download.	<u>Search Engines</u> Understands what a search engine is. Understands the difference between a search engine and an operating system. Understands that there are a range of search engines (adult and child). Understands how to use keywords effectively in a search engine. Understands how to filter a search within a search engine. Understands copyright and how it applies to a download.	<u>Search Engines</u> Understands what a search engine is. Understands the difference between a search engine and an operating system. Understands that there are a range of search engines (adult and child). Understands how to use keywords effectively in a search engine. Understands how to image search.
	<u>Image Manipulation</u> Understands that images can be changed to appear different.	<u>Fake News / Image Manipulation</u> Understands that not everything they see on the internet is true or accurate. Understands the definition of: Fake News.	<u>Fake News / Image Manipulation / Deep Fake</u>		
	<u>Online Work</u> Understands the definition of online work. Understands that they have personal information related to only them	<u>Online Forms /e-safety</u> Understands the definition of an online form. Understands why there are			

| | | different online forms (surveys, bank, school / college related, benefits, medical).

Understands how to report inappropriate information on a website / social media platform. | Understands that not everything they see on the internet is true or accurate.

Understands how to check facts online (forums, encyclopaedias, cross reference etc)

Understands the definition of:
Fake News
Deep Fakes
Image manipulation

<u>Online Forms /e-safety</u>

Understands the definition of an online form.

Is able to recognise a range of online forms (surveys, bank, school / college related, benefits, medical).

Understands how to report inappropriate information on a website / social media platform.

Understands when online information is private or public (i.e. YouTube comment / medical form). | Understands the difference between a search box on a website and a search engine.

Students understand how to save and access websites within a search engine.

<u>Fake News / Image Manipulation / Deep Fake</u>

Understands that not everything they see on the internet is true or accurate.

Understands how to check facts online (forums, encyclopaedias, cross reference etc)

Understands the definition and impact of:
Fake news
Deep Fakes
Image manipulation

Understands how the above is distributed (i.e. you tube channels, web news, adverts, social media etc).

<u>Online Forms /e-safety</u>

Understands the definition of an online form.

Is able to recognise a range of online forms (surveys, bank, school / college related, benefits, medical).

Understands the term phishing | Understands how to filter a search within a search engine.

Understands how a search engine ranks results.

Understands copyright and how it applies to a download.

Understands the difference between a search box on a website and a search engine.

Students understand how to save and access website within a search engine.

<u>Fake News / Image Manipulation / Deep Fake</u>

Understands that not everything they see on the internet is true or accurate.

Understands how to check facts online (forums, encyclopaedias, cross reference etc)

Understands the definition and impact of:
Fake news
Deep Fakes
Image manipulation

Understands how the above is distributed (i.e. you tube channels, web news, adverts, social media etc).

Understands how deep fakes |

				and how this may impact on them / how to spot a fake website. Understands how to report inappropriate information on a website / social media platform. Understands when online information is private or public (i.e. YouTube comment / medical form).	are created. **<u>Online Forms / web forums / e-safety</u>** Understands the definition of an online form. Is able to recognise a range of online forms (surveys, bank, school / college related, benefits, medical). Understands the term phishing and how this may impact on them / how to spot a fake website. Understands how to report inappropriate information on a website / social media platform. Understands when online information is private or public (i.e. YouTube comment / medical form). Understands what a web forum is. Understands how to join a web forum and access information.

Key Skill Concepts	PS 1-2	PS 2-3	PS 3-4	PS 4-5	PS 5-6
	Identifying Information Is able to choose whether information is a photo or a video Is able to capture own images using an iPad or digital camera and add information e.g. name of the subject Can match information on a poster to a specific checklist <u>Using search engines</u> Is able to access the google search engine and find specific information following a checklist e.g. find images of a dog Is able to input information found within a search engine into a PowerPoint document with support <u>Image manipulation/fake news</u> Is able to change the look of an image they have accessed online using an iPad, paper based or PowerPoint Is able to recognise the difference between two images provided (spot the difference) and use software to highlight	**Identifying Information** Can identify the differences between photos and videos Is able to identify how photos and videos are captured and choose the differences between the technology Can extract specific information from various sources e.g. flyers, images and videos **Using search engines** Is able to recognise the different interfaces of several search engines on the web Is able to use different search engines to find information using a key word matrix Is able to say why there are child and adult search engines (e-safety) **Image manipulation/fake news** Is aware of the term fake news and can select information sourced from the internet which is real and/or fake Is able to look at specific images and say whether they	**Identifying information** Is able to extract specific information from several sources e.g. picking out features of an image, understanding why certain information is provided on flyers Is able to use PowerPoint to present information following specific guidelines e.g. insert 2 images, use key words to support an image etc. Can say why they think some information has been used e.g. bright images to represent a kids party **Using search engines** Can use own key words to find information using google and use a key word matrix to find information in Bing. Can find specific information to include in a PowerPoint project using a key information matrix. Is able to use the filter function on a search engine to find information specifics Can choose the reasons why some images, music and videos cannot be downloaded (e-	**Identifying Information** Is able to extract and analyse familiar data from all sources. Is able to choose an appropriate format to present specific data and use computing skills to produce suitable content Is able to discuss the positive and negative aspects of each information format. **Using search engines** Is able to compare the information (images, websites) found in Bing and google e.g. how many of a certain image is found in each using key words Can say why some information can't be downloaded (copyright) and say what can happen if you do not follow the rules Knows the difference between the search bar and search box on a website and can use each one to find specific information e.g. inputting a new website, searching for specific information **Image manipulation/fake news**	**Identifying Information** Is able to extract and process unfamiliar data from several formats. Is able to select the correct piece of software to present information which they say is easily accessed by others Is able to outline the positive and negative aspects of using some information and can suggest some alternatives e.g. using still images in a document rather than videos **Using search engines** Is able to give key differences between an operating system, search engine and web browser. Is able to find copyright free information e.g. music and images to download and import into a PowerPoint project Is able to use specific information to access videos, hyperlinks, images, text within a search engine and download this independently into a PowerPoint presentation **Image manipulation/fake**

them Can select information which they believe to be true false from simple statements, words, symbols or images **Online Forms /e-safety** Is able to put basic information into an online form following written support e.g. copy name and age into a form online Is able to select the correct image/symbol to say why we don't share certain information online (e-safety)	are fake and give at least one reason why **Is able to choose their own image online and make changes to it for their project** **Online Forms /e-safety** Is able to recognise a range of online forms (surveys, bank, school / college related, benefits, medical). Is able to input information into an online form following step by step instructions Is able to choose at least 3 reasons why you shouldn't share information on untrusted website/chats, forums, emails	safety) **Image manipulation/fake news** Is able to say why fake news is negative and can independently differentiate between real and fake images, news articles and videos. Is able to find sources of information online using a search engine to check information regarding certain news articles Is able to find own images online and make changes to create own fake news article in their project **Online Forms /e-safety** Can recognise different online forms and state why they are used e.g. for medical purposes Can input specific information into an online form independently e.g. name, address, gender etc. Is able to recognise when a website might be asking for information when it shouldn't and understand where they can report this Is able to state when they should report a user on social media if they are asking for	Is able to compare three sources of information to check validity e.g. online and offline sources Is able to use given websites to search for information regarding how to spot fake news Is able to use specific websites from a list to enable them to manipulate specific parts of an image for their project **Online Forms /e-safety** Can say why online forms require certain information related to what you are trying to answer e.g. when shopping online, filling in applications Is able to select specific information relating to fake websites e.g. payment applicable, dates, images Is able to select specific information from a matrix that they shouldn't share as this could lead to people stealing from them Knows the term phishing and can select key words used to steal information Can create a unique password that others cannot guess	**news** Is able to compare several sources of information to check validity e.g. online and offline sources Is able to independently use the correct websites to search for information regarding fake news and fact check information Is able to use specific websites from a list to enable them to manipulate several parts of an images for their project **Online Forms /e-safety** Can say why online forms require certain information and e.g. when shopping online, filling in applications Is able to give specific information on how to spot a fake websites e.g. payment applicable, dates, images Is able to outline specific information that they shouldn't share as this could lead to people stealing from them Is able to say how phishing works and find key words used when people are stealing information Knows how to create a unique password and secondary

		information Can say why some information should be private and some information is public when online.		authentication information that others cannot guess

Personal Development	Problem solving- Linked to resolving hardware and software issues. Communication skills- Asking appropriate questions and listening to responses when troubleshooting ICT issues. Self-belief- Never giving up if unable to resolve the issues, continue to ask, listen and try different solutions. Self-management- Linked to independent research tasks and selecting appropriate information.

Key Activities	Suggested Learning Activities – Adapted for pupil need where applicable – Include Active learning where relevant
Identifying Information	- Spot the different with several images - Capturing images - Matching information from different sources - Accessing different types of information and inserting into PowerPoint - Accessing and extracting information from charts and graphs
Using Search Engines	- Information investigation using google - Inserting information into PowerPoint from specific search engine criteria e.g. images, text, video links - Finding relevant and useful information without copyright - Finding key information using search filtering checklists
Manipulating images/fake news/ deep fakes	- Analysing a number of images to look for anomalies (fake images) - Creating own images and manipulating using suitable software and hardware - Comparing and fact checking information in news articles (fake news)
Online forms/e-safety	- Inputting basic personal information into simple forms - True/false statements regarding information to include - E-safety checklist when completing forms - Analysing phishing scams to pick out key information - Keeping information safe using unique password creation

Online Resources

E-safety for schools | NSPCC Learning

Fake News Checker

Google

Bing

PhotoGrid: Video Collage Maker on the App Store (apple.com)

Computer Skills Mouse and Keyboarding Games | HP® Tech Takes