Subject Skills and Progression

	Online/E-Safety	Programming	Multimedia	Data Handling	Generic Skills
Year 5	Pupils can: Explain what each of the letters in SMART stand for; Explain what a digital footprint is; Understand what a social media profile is and what they are used for; Know how to search specifically for images, videos, news etc); Begin to think about the accuracy of information online; Can print a webpage correctly; Know how to report inappropriate content; Can explain the dangers of working and communicating online when faced with scenarios; Know the effects of cyber bullying and know how to prevent it.	Pupils can: Add variables to change the appearance and the motion of sprites; Can 'debug' (recognise errors) within a script; Predict the effect of changing a variable; Understand the purpose of using a 'Control' and relate this to everyday electronics; Understands how to read the coordinates; Uses the 'change' blocks within the appearance menu to alter their sprites appearance; Can create irregular shapes using the 'pen' tool.	Pupils can: Convert film clips to the correct format for software; Trim film clips and change the order for the viewer's interest with support; Import captions, titles into a film and be able to apply appropriate formatting; Import a recording from a microphone; Create a multi-scene animation with awareness of camera angle; Change the speed of playback using pre-made models; Be aware of the different presentation software available and know the advantages and disadvantages of each; Change the path of frames within a presentation; Insert film and animation clips to a presentation; Know the appropriate sounds, images and style to use for the audience and purpose; Use paragraph / line spacing;	Pupils can: Able to populate rows and columns with data; Can identify the coordinates of a cell; Can put data into ascending and descending order; Begin to filter data; Use a spreadsheet to explore patterns in numbers; Can use basic formula (four operations); Can format cells including font, borders and fills).	Pupils can: Use search tools to locate work; Begin to use keyboard shortcuts (ctrl c, v); Use the mouse to zoom in and out; Select appropriate printer to print work; Use appropriate computing vocabulary (USB port, cell); Import data from external device; Annotate work using print screen and auto shapes (arrows) to evaluate and justify use of ICT; begin to touch type.

| | | | Insert shapes using the shapes tool;

Format the colour of a textbox and shape;

Knows how to insert a hyperlink;

Insert images from a variety of sources;

Select an appropriate template;

Change the direction of the text. | | |
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| **Year 6** | Pupils can:

Explain how to deal with cyberbullying if it happens to me or someone I know

Recall the SMART letters and rules for each letter

Explain what a critical thinker is and how this can be used to check if a piece of information is reliable

Give a list of social media websites/apps and corresponding age restrictions

Know that emails can contain viruses

Can filter emails e.g. for attachments or person

Know the importance of social media privacy settings and how to keep safe online | Pupils can:

Can create variables such as 'correct' within an operator

Can 'debug' (recognise errors) within a script

Use notepad++ to make a functioning webpage

Format the background colour, text colour and font for a html file

Add an image to a html file

Apply sound to a website appropriately. | Pupils can:

Use a range of word processing skills suitable for the purpose and audience

Trim sound clips and change the order for the viewer's interest

Add captions and titles appropriate to the purpose and audience

Manipulate the recording from a microphone before importing

Choose the most appropriate film/editing software for project

Create a radio station to evoke an audience response

Add hyperlinks to internal and external pages of the webpage they create

Use existing skills to import different medias: sound, images etc | Pupils can:

Know how to input basic formulas into a spreadsheet, thinking about their relevance and the audience

Can change the appearance /format of a spreadsheet

Can use a spreadsheet to answer questions and solve problems

Understand the difference between fields and records

Compare databases and their uses

Choose an appropriate method to format a spreadsheet for a specific audience. | Pupils can:

Use scaling options when printing work

Choose the appropriate quality of a print

Adjust screen resolution

Evaluate and justify appropriate use of ICT for the purpose and audience

Use appropriate computing vocabulary (variable)

To confidently use touch type

To choose an appropriate storage device depending on the file size and usage

Understand what a CPU is within a computer. |

	Know how to report/flag/block inappropriate content Acts as a role model to others for how to stay safe online.		Evaluate existing adverts and explain the designer's style linked to the purpose and audience Create own advert on a specific topic to evoke an audience response.		
Year 7	Pupils can: Explain the SMART rules, how to follow them and the dangers or consequences of not following them Understand the difference between public and private information List and describe what information should and should not be shared online Explain what cyberbullying is and how we can avoid and resolve any cyberbullying situations Explain what a digital footprint is and analyse our own digital footprint to check for negative and positive elements Understand how we can check if a website is safe and reliable	Pupils can: Recognise common uses of information technology beyond school and Can classify devices in terms of input and output. Understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions Plan a linear sequence of instructions Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs	Pupils can: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices Use a range of software packages to produce a presentation suitable for a variety of audiences To plan and produce a realistic and relevant advertisement suitable for a variety of audiences To research, select and use key features of a movie poster using a range of pieces of software. Analyse a range of movie posters giving constructive criticism, giving a	Pupils can: Enter data into an appropriate table using rows, columns and cells. Convert my data into a graph or chart, thinking carefully about my audience and the data Use a range of formulas within a set of data including sum, min, max and average Collect primary and secondary data from the classroom or from the internet Analyse a set of data to give a variety of data points (largest, smallest, mean, median, mode and range) Present data in a systematic way Understand data structures (for example, lists, tables or arrays).	Pupils can: Recognise common uses of information technology in school Judge how successful your work has been in achieving your goal, and identify ways in which you could improve it Identify the advantages and disadvantages of using technology both inside and outside school Identify internal and external components within a computer system and describe their purpose. Explain the similarities and differences between computerised everyday devices.

	Explain what an internet cookie is and discuss the advantages and disadvantages of using them

Understand what copyright and plagiarism are and how we can avoid them. | Pupils develop and improve their instructions.

Pupils present data in a systematic way. | variety of ways in order to improve each poster

Re-use and revise digital artefacts for a given audience, with attention to trustworthiness, design and usability. | | |
| **Year 8** | Pupils can:

Explain the difference and similarities between bullying and cyberbullying

Explain what a digital footprint is and analyse our own digital footprint to check for negative and positive elements

Determine whether a specific piece of information we read online is reliable

Identify the key elements that make a strong password and why this is important

Explain what 2-step verification means

Understand the importance of privacy settings and how they can keep us safe online

Explain what it means to be a critical consumer and how this helps us choose or purchase items online

Give a list of safe habits online and the important of protecting our personal information | Pupils can:

Pupils analyse and present an algorithm for a given task.

Understand how numbers can be represented in binary

Understand how instructions are stored understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally, in the form of binary digits and executed within a computer system

Be able to carry out simple operations on binary numbers [for example, binary addition, and conversion between binary and decimal]. | Pupils can:

Create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability

Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, including collecting and analysing data and meeting the needs of known users

Digitally edit the background of image for a new purpose or audience

Research, choose and use a range of features to produce a magazine cover for a variety of audiences

Use a combination of hardware and software to plan, design, create, film and edit a stop frame animation

create, re-use and revise digital artefacts for a given audience, with attention to trustworthiness, design and usability. | Pupils can:

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

Pupils recognise different types of data: text; number; instruction

Pupils can present data in a structured format suitable for processing

Understand how instructions are stored and executed within a computer system; understand how data of various types (including text, sounds and pictures) can be represented and manipulated digitally. | Pupils can:

Understand how changes in technology affect safety

Selecting which information is relevant, and ensuring that it is useful and efficient

Understand the hardware and software components that make up computer systems

use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. |

	Develop respectful, empathetic and healthy online relationships Identify a range of ways to report concerns about content and contact.			