Hook Junior School Whole School Computing Curriculum Overview

Aims

Areas of study shown in **bold** below are statutory from the national curriculum. Those not in bold are suggested areas of study, linked with the overall topic for that term, and may be able to be changed or adjusted.

The national curriculum for computing aims to ensure that all pupils:

☐ can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation

☐ can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems

☐ can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems

☐ are responsible, competent and confident

Key stage 2

Pupils should be taught to:

☐ design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

☐ 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

☐ 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 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

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

Autumn Term			
Year 3	**Year 4**	**Year 5**	**Year 6**
TITLE/S	TITLE/S	TITLE/S	TITLE/S
NC areas of focus	NC areas of focus	NC areas of focus	NC areas of focus
Concepts	Using technology **responsibility**. **Exploring** algorithms (sequencing). **Accuracy** when searching for information. Safely **communicating** online. **Decomposition** – breaking it down into manageable chunks.	Using technology **responsibility**. **Exploring** algorithms (sequencing). **Accuracy** when searching for information. Safely **communicating** online. **Decomposition** – breaking it down into manageable chunks.	Using technology **responsibility**. **Exploring** algorithms (sequencing). **Accuracy** when searching for information. Safely **communicating** online. **Decomposition** – breaking it down into manageable chunks.	Using technology **responsibility**. **Exploring** algorithms (sequencing). **Accuracy** when searching for information. Safely **communicating** online. **Decomposition** – breaking it down into manageable chunks.
Prior Knowledge	See subject content for Key Stage 1 at the bottom of this document.	See Year 3 knowledge	See Year 3 and 4 knowledge	See Year 3, 4 and 5 knowledge

Note: The "Concepts" and "Prior Knowledge" labels appear as vertical row headers in the leftmost column.

Knowledge				

Information technology
I know how to use a computer responsibly and effectively
I know how to accurately save my work

Computing science
I know what an algorithm is and how it works
I know that I can use a series of commands in a programming language to generate certain outputs (images, sound, sprite moving in a certain direction)
I know when a problem has occurred

Digital literacy
I know that there are safe search engines that I can use to find information

Online safety
I know how to keep myself safe when communicating online

See National Online Safety specific objectives attached

Information technology
I know how to create a presentation using an appropriate software (PowerPoint etc)
I know how to add slides and change layout
I know how to format slides to suit purpose
I know how to add pictures and move around
I know how to reorder slides and view the slideshow

Computing science
I know that there may be more than one algorithm needed to get to a certain point.
I know how to break down simple everyday algorithm into parts
I know how to write a simple algorithm
I know how to debug errors independently

Digital literacy
I know how to use internet search engines effectively
I know of different search engines and discuss their various features (e.g. Google image & video search).
I know how to change the 'Search Settings' to Strict in Google.

Online safety
I know that not everything you find online is accurate and that information needs to be checked and evaluated.
I know sensitive and appropriate language when using online communication tools.
I know when it is unsafe to open an email or an email attachment.
I know what cyberbullying is and the difference and similarities with offline bullying

See National Online Safety specific objectives attached

Information technology
I know how to insert a table, adjust settings and save a copy as a pdf file
I know how to plan, carry out and interpret results of an investigations
I know how to use a simple layout to create a simple spreadsheet model and use it to solve problems.
I know how to change variables in a spreadsheet (e.g. Excel) to solve problems
I know how to enter formulae for the four operations (+-x/) into a spreadsheet
I know how to use 'SUM' to calculate the total of a set of numbers in a range of cells
I know how to use slides to effectively present
I know how to add sound and video file as an object and when this is purposeful

Computing science
Complete unfinished algorithms with selection or repetition
Design
Create multiple sequences that run together in own design
Variable use
Variable used to hold a number or a word and reported
Variables that changes inside a loop
Debugging
Debug variable errors independently
Scratch specific objectives
Design their own game including sprites, backgrounds, scoring and/or timers.
Their game uses conditional statements, loops, variables and broadcast messages.
Their game finishes if the player wins or loses and the player knows if they have won or lost.
Evaluate the effectiveness of their game and debug.

Digital literacy
I know when using the Internet to research work, recognise the need to ask appropriate questions to find appropriate answers.
I know that good online research involves interpreting information, rather than copying.
I know how to carry out more refined web searches by using key words and symbols.
I know how to evaluate search results and refine as necessary for the best results.

Online safety
I know that information found on websites may be inaccurate or biased and to check the validity of a website.
I know how to use websites where resources can be downloaded without infringing copyright.
I know to acknowledge sources used in their work.
I know to be aware of the different forms of technology that can be used to access the Internet and communicate with others.

See National Online Safety specific objectives attached

Information technology
I know how to use various display features to communicate to an audience: e.g. fact/definition boxes, annotated illustration, leaflet layout.
I know how to delete/insert and replace text to improve clarity and mood.
I know how to make corrections using a range of tools (eg spell check, find and replace)
I know how to develop confidence using both hands when typing

Computing science
I know how to create a programme by decomposing the parts and then solving the parts separately.(Algorithms)
I know how to adapt a given design for a new purpose (Design)
I know how to redesign an algorithm for a new purpose
I know how variables interact with other variables (Variables)
I know how to break down code to find exact error by running sections of code (Debugging)
Scratch specific objectives – as other years and relevant to game/design.

Digital literacy
I know how to alter the theme and appearance of their blog, adding background images etc.
I know how to create a new post, save it as a draft and publish it.
I know how to embed photos, hyperlinks and videos into posts.
I know how to reorganise posts and remove posts they no longer want.
I know how to like/follow other blogs and build up their blog content over the year.
I know which online communication tool is the most appropriate to use for a particular purpose, e.g. email, discussion forums, podcast, or multi-user documents.
I know the issues to do with Social Networking. E.g. giving too much information, people using information online, not knowing who is at the other end of the conversation.

Online safety
I know I need to use a range of sources to check the validity of a website.
I know that different viewpoints can be found on the web. They critically evaluate the information they use, and understand some of the potential dangers of not doing so.
I know how to select copyright free images and sounds from sources such as the Audio Networks and NEN image gallery.
I know to be aware of the issues of plagiarism, copyright and data protection in relation to their work.
I know how to discuss the positive and negative impacts a digital footprint
I know how to discuss the use of technology and its wider effect on society
Know that malicious adults use the Internet and attempt to make contact with children and know how to report abuse.

See National Online Safety specific objectives attached

Skills	Information technology	Information technology	Information technology	Information technology
	I can switch a computer on and off I can log on/off I can care for technological equipment I can save work I can resize windows I can create a folder I can print out my work **Computing science** I can break down simple everyday algorithm into parts I can observe a working programme and understand what it does I can follow a set of instructions to create a program I can identify where there might be a problem **Digital literacy** I can understand the difference between reliable and unreliable information on the internet and know how to search for it **Online safety** **Education for a connected world c and p** **See National Online Safety specific objectives attached**	I can save screenshot and resize images I can understand purpose and audience of a presentation I can add slides and change layout I can add pictures and navigate round the slide show I can format slides to suit purpose I can re-order slides **Computing science** I can recognise that there may be more than one algorithm needed to get to a certain point. I can break down simple everyday algorithm into parts I can write a simple algorithm I can design an algorithm for a specific person or outcome I can change one part of the programme to make it my own. I can identify where there might be a problem I can debug errors independently **Digital literacy** I can use internet search engines to gather resources for my own research work. I can be aware of different search engines and discuss their various features (e.g. Google image & video search). **Online safety** I can use sensitive and appropriate language when using online communication tools. I can develop an understanding of cyberbullying and the difference and similarities with offline bullying **See National Online Safety specific objectives attached**	I can insert a table, adjust settings and save a copy as a pdf file I can develop confidence in using multiple fingers and both hands to enter text I can plan and carry out an investigation using data logging technology I can interpret results, draw conclusions and analyse the effectiveness of the technology I can use a simple layout demonstrated by the teacher, create a simple spreadsheet model and use it to solve problems. I can change variables in a spreadsheet (e.g. Excel) to solve problems I can make predictions and changes and check results. I can enter formulae for the four operations (+-x/) into a spreadsheet I can use 'SUM' to calculate the total of a set of numbers in a range of cells I can change data in a spreadsheet to answer 'what if...?' questions and check predictions I can use slides to effectively present I can know how to add sound and video file as an object and when this is purposeful **Computing science** I can complete unfinished algorithms with selection or repetition I can design and create multiple sequences that run together in own design I can change variables inside a loop I can debug variable errors independently I can design my own game including sprites, backgrounds, scoring and/or timers. I can include conditional statements, loops, variables and broadcast messages. I can evaluate the effectiveness of their game and debug. **Digital literacy** When using the Internet to research work, I can recognise the need to ask appropriate questions to find appropriate answers. I can research online and interpret information, rather than copying. I can carry out more refined web searches by using key words and symbols. I can evaluate search results and refine as necessary for the best results. I can use my knowledge of domain names to aid my judgment of the validity of websites. **Online safety** I know that information found on websites may be inaccurate or biased and to check the validity of a website. I can use websites where resources can be downloaded without infringing copyright. I can acknowledge sources used in their work. I can be aware of the different forms of technology that can be used to access the Internet and communicate with others. **See National Online Safety specific objectives attached**	Word processing I can use various display features to communicate to an audience: e.g. fact/definition boxes, annotated illustration, leaflet layout. I can delete/insert and replace text to improve clarity and mood. I can make corrections using a range of tools (eg spell check, find and replace) I can develop confidence using both hands when typing **Computing science** Algorithms I can create a programme by decomposing the parts and then solving the parts separately. Design I can adapt a given design for a new purpose I can redesign an algorithm for a new purpose Variables I can understand how variables interact with other variables Debugging I can break down code to find exact error by running sections of code _Scratch specific objectives – as other years and relevant to game/design._ **Digital literacy** Communication and collaboration I can alter the theme and appearance of their blog, adding background images etc. I can create a new post, save it as a draft and publish it. I can embed photos, hyperlinks and videos into posts. I can reorganise posts and remove posts they no longer want. I can like/follow other blogs and build up their blog content over the year. I can decide which online communication tool is the most appropriate to use for a particular purpose, e.g. email, discussion forums, podcast, or multi-user documents. I can recap issues to do with Social Networking. E.g. giving too much information, people using information online, not knowing who is at the other end of the conversation. **Online safety** I can use a range of sources to check the validity of a website. I can recognise that different viewpoints can be found on the web. They critically evaluate the information they use, and understand some of the potential dangers of not doing so. I can select copyright free images and sounds from sources such as the Audio Networks and NEN image gallery. I can be aware of the issues of plagiarism, copyright and data protection in relation to their work. I can discuss the positive and negative impacts a digital footprint I can discuss the use of technology and its wider effect on society Know that malicious adults use the Internet and attempt to make contact with children and know how to report abuse. **See National Online Safety specific objectives attached**

Understanding				
Information technology Understanding the best way to save information (student resources) so it can be easily found Understanding the importance of have a good naming convention when saving work and creating folders (class names) To understand that to be able to find their previous work, they need to understand the file structure on the network **Computing science** Understanding that everyday tasks can be represented in algorithm form Understand that an algorithm is a set of instructions that can be followed by someone else Understand that an algorithm might not be accurate and being able to recognise mistakes Understand the term debugging (children do not need to debug independently but do need to know when there is a problem) **Digital literacy** Understand that there are child friendly searches that take away unwanted inappropriate content (swiggle, skoogle etc) I understand the difference between reliable and unreliable information on the internet **Online safety** Understand the relationship between the online and physical world Understand when communication is used effectively and that there can be unpleasant form of this. Understand what they need to do about any unwanted, unpleasant form of communication. Understand what personal information needs to be kept private Understand that passwords need to be kept private **See National Online Safety specific objectives attached**	**Information technology** Understand how to create a presentation using an appropriate software (PowerPoint etc) Understand how to add slides and change layout Understand how to format slides to suit purpose understand how to add pictures and move around Understand how to reorder slides and view the slideshow **Computing science** Understand that there may be more than one algorithm needed to get to a certain point. Understand how to break down simple everyday algorithm into parts Understand simple algorithms Understand where there might be a problem Understand how to debug errors independently **Digital literacy** Understand that different search engines and discuss their various features (e.g. Google image & video search). Understand how to change the 'Search Settings' to Strict in Google. Understand the importance of framing questions into search criteria when conducting web searches. **Online safety** Understand that not everything you find online is accurate and that information needs to be checked and evaluated. Understand the need for sensitive and appropriate language when using online communication tools. Understand cyberbullying and the difference and similarities with offline bullying **See National Online Safety specific objectives attached**	**Information technology** Understand how to insert a table, adjust settings and save a copy as a pdf file Understand how to use data logging technology Understand how to interpret results, draw conclusions and analyse the effectiveness of the technology Understand how to change variables in a spreadsheet (e.g. Excel) to solve problems Understand how to enter formulae for the four operations (+-x/) into a spreadsheet Understand how to use 'SUM' to calculate the total of a set of numbers in a range of cells Understand how to use slides to effectively present and how to add sound and video file as an object and when this is purposeful **Computing science** Complete unfinished algorithms with selection or repetition Design Create multiple sequences that run together in own design Variable use Variable used to hold a number or a word and reported Variables that changes inside a loop Debugging Debug variable errors independently *Scratch specific objectives* Design their own game including sprites, backgrounds, scoring and/or timers. Their game uses conditional statements, loops, variables and broadcast messages. Their game finishes if the player wins or loses and the player knows if they have won or lost. Evaluate the effectiveness of their game and debug. **Digital literacy** I understand when using the Internet to research work, recognise the need to ask appropriate questions to find appropriate answers. I understand that good online research involves interpreting information, rather than copying. I understand how to carry out more refined web searches by using key words and symbols. I understand how to evaluate search results and refine as necessary for the best results. I understand to use my knowledge of domain names to aid their judgment of the validity of websites. **Online safety** I understand that information found on websites may be inaccurate or biased and to check the validity of a website. I understand how to use websites where resources can be downloaded without infringing copyright. I understand to acknowledge sources used in their work. I understand that different forms of technology that can be used to access the Internet and communicate with others. **See National Online Safety specific objectives attached**	**Information technology** Word processing I understand how to use various display features to communicate to an audience: e.g. fact/definition boxes, annotated illustration, leaflet layout. I understand how to delete/insert and replace text to improve clarity and mood. I understand how to make corrections using a range of tools (eg spell check, find and replace) I understand how to develop confidence using both hands when typing **Computing science** Algorithms I understand how to create a programme by decomposing the parts and then solving the parts separately. Design I understand how to adapt a given design for a new purpose I understand how to redesign an algorithm for a new purpose Variables I understand how variables interact with other variables Debugging I understand how to break down code to find exact error by running sections of code *Scratch specific objectives – as other years and relevant to game/design.* **Digital literacy** Communication and collaboration I understand how to alter the theme and appearance of their blog, adding background images etc. I understand how to create a new post, save it as a draft and publish it. I understand how to embed photos, hyperlinks and videos into posts. I understand how to reorganise posts and remove posts they no longer want. I understand how to like/follow other blogs and build up their blog content over the year. I understand which online communication tool is the most appropriate to use for a particular purpose, e.g. email, discussion forums, podcast, or multi-user documents. I understand issues to do with Social Networking. E.g. giving too much information, people using information online, not knowing who is at the other end of the conversation. **Online safety** I can use a range of sources to check the validity of a website. I can recognise that different viewpoints can be found on the web. They critically evaluate the information they use, and understand some of the potential dangers of not doing so. I can select copyright free images and sounds from sources such as the Audio Networks and NEN image gallery. I can be aware of the issues of plagiarism, copyright and data protection in relation to their work. I can discuss the positive and negative impacts a digital footprint I can discuss the use of technology and its wider effect on society Know that malicious adults use the Internet and attempt to make contact with children and know how to report abuse. **See National Online Safety specific objectives attached**

	Promoting safe and responsible use of the internet			
	Spring term			
	Year 3	**Year 4**	**Year 5**	**Year 6**

Knowledge				
Information technology Word processing I know how to type using capitals through shift or caps lock I know how to delete using backspace or delete button I know how to highlight text to bold, italicize and underline, change font type, colour and size, align text left, right, centre I know how to hold hands over each half of the keyboard and begin to use more than two fingers to enter text **Computing science** Algorithms I know how to break down a simple everyday algorithm into parts (e.g. making breakfast) Read and follow written algorithms – instruction writing Design I know how to follow a set of instructions to create a programme Debugging: I know when to recognise there is a problem and say what the problem i *Scratch specific objectives* I know how to navigate the Scratch programming environment. I know how to create a background and sprite for a game. I know how to add inputs to control my sprite. I know how to use conditional statements (if… then) within my game. **Digital literacy** **Online safety** **See National Online Safety specific objectives attached**	**Information technology** Data I know how to enter data into a graphing package and use it to create a range of graphs, and to interpret data across all subjects I know how to compare how different graphs can be used for different purposes I know how to create and use a branching database to organise, reorganise and analyse information I know how to compare the use of graphing software, branching database and card-based database for organising and interpreting data I know how to explore some real-life examples of branching databases, such as keys for animal identification **Computing science** Algorithms I know that there are more than one algorithm to get to a certain point I know how to write a simple algorithm using words I know how to design an algorithm for a specific person or group of people Design I know how to change one part of a programme to make it their own I know how to adapt a given design for a new purpose Debugging I know how to debug simple sequence errors independently I know how to debug simple selection and repetition errors independently *Scratch specific objectives* I know how to add inputs to control their sprite. I know how to use repeat functions to create a piece of music I know how to use programming to control a physical device **Digital literacy** Digital media Graphics I know how to import a photograph and explore the effects which can be created I know how to use a range of visual effects such as filters, hues and painting over photographs. I know how to create patterns and montages I know how to select areas and manipulate to give different effects. Music and Sound I know to listen to a variety of radio programmes to evaluate their style I know how to write a script for a radio programme I know how to plan and record audio for a radio program, eg interview, news broadcast, advert, cookery programme I know how to evaluate and re-record (maybe editing) I know how to publish work online as a podcast **Online safety** **See National Online Safety specific objectives attached**	**Information technology** Data I know how to plan an investigation using data logging technology I know how to make predictions for this investigation and understand how to make it a fair test I know how to carry out the investigation, ensuring accuracy I know how to interpret results, draw conclusions and analyse the effectiveness of the technology I know how to change variables in a spreadsheet (e.g. Excel) to solve problems I know how to make predictions and changes and check results. I know how to enter formulae for the four operations (+-x/) into a spreadsheet I know how to use 'SUM' to calculate the total of a set of numbers in a range of cells I know how to change data in a spreadsheet to answer 'what if...?' questions and check predictions I know how to use a simple layout demonstrated by the teacher, create a simple spreadsheet model and use it to solve problems. **Computing science** Algorithms I know how to complete unfinished algorithms with selection or repetition Design I know how to create multiple sequences that run together in own design Variable use I know how to add variables that change inside a loop Debugging I know how to debug variable errors independently *Scratch specific objectives* I know how to design my own game including sprites, backgrounds, scoring and/or timers. I know how to use conditional statements, loops, variables and broadcast messages. I know how to evaluate the effectiveness of their game and debug. **Digital literacy** Communication and collaboration I know that files may be saved off their device in 'clouds' (servers). I know how to upload/download a file to the cloud on different devices. I know about syncing files using cloud computing folders. **Online safety** I know how to develop strategies to ignore or cancel unsolicited advertising (pop-ups, banners, videos or audio). I know how social networks work, that they have age limits, and what is appropriate and inappropriate I know what online chatting involves, keeping safe and how you know who you are talking to I know the issues surrounding social networks and cyberbullying and understanding the impact on an individual of sending or uploading unkind or inappropriate content. **See National Online Safety specific objectives attached**	**Information technology** Data I know how to identify a problem which can be solved by collecting data I know which data I need to collect I know how to collect data in an efficient and accurate way I know how to organise data by designing fields and records in a database I know how to interpret data by using a range of searches and graphs I know how to draw conclusions from data I know how to use conclusions to solve the original problem I know how to present findings to a specified audience to justify reasons for their choices and explain why other methods were not appropriate **Computing science** Algorithms I know how to create a programme by decomposing the parts and then solving the parts separately. Design I know how to adapt a given design for a new purpose I know how to redesign an algorithm for a new purpose Variables I know how variables interact with other variables Debugging I know how to break down code to find exact error by running sections of code *Scratch specific objectives – as other years and relevant to game/design.* **Digital literacy** Digital Media I know how to explore the features of a given video editing or animation package I know how to plan a storyboard for a video or animation to suit a purpose I know how to film, create, edit and refine to ensure quality; present to an audience **Online safety** **See National Online Safety specific objectives attached**

Skills

Information technology Word processing I can type using capitals through shift or caps lock I can delete using backspace or the delete button I can highlight text to bold, italicize, underline, change font type, colour and size I can align text left, right, centre and justify I can hold hands over each half of the keyboard and begin to use more than two fingers to enter text **Computing science** Algorithms I can break down a simple everyday algorithm into parts (e.g. making breakfast) I can observe a working programme and think about how it may be decomposed I can read and follow written algorithms – instruction writing Design I can follow a set of instructions to create a programme Debugging: I can recognise there is a problem and say what the problem is I can identify where the problem might be *Scratch specific objectives* I can navigate the Scratch programming environment. I can create a background and sprite for a game. I can add inputs to control their sprite. I can use conditional statements (if… then) within my game. **Digital literacy** **Online safety** **See National Online Safety specific objectives attached**	**Information technology** Data I can enter data into a graphing package and use it to create a range of graphs, and to interpret data across all subjects I can compare how different graphs can be used for different purposes I can search a branching database I can create and use a branching database to organise, reorganise and analyse information I can compare the use of graphing software, branching database and card-based database for organising and interpreting data I can explore some real-life examples of branching databases, such as keys for animal identification **Computing science** Algorithms I can recognise that there are more than one algorithm to get to a certain point I can rewrite a simple algorithm using words I can design an algorithm for a specific person or group of people Design I can change one part of a programme to make it their own I can adapt a given design for a new purpose Debugging I can debug simple sequence errors independently I can debug simple selection and repetition errors independently *Scratch specific objectives* I can add inputs to control my sprite. I can use repeat functions to create a piece of music I can use programming to control a physical device **Digital literacy** Digital media Graphics I can import a photograph and explore the effects which can be created I can use a range of visual effects such as filters, hues and painting over photographs. I can create patterns and montages I can select areas and manipulate to give different effects. Music and Sound I can listen to a variety of radio programmes, evaluating their style I can write a script for a radio programme I can plan and record audio for a radio program, eg interview, news broadcast, advert, cookery programme I can evaluate and re-record (maybe editing) I can publish work online as a podcast **Online safety** **See National Online Safety specific objectives attached**	**Information technology** Data I can plan an investigation using data logging technology I can make predictions for this investigation and understand how to make it a fair test I can carry out the investigation, ensuring accuracy I can interpret results, draw conclusions and analyse the effectiveness of the technology I can change variables in a spreadsheet (e.g. Excel) to solve problems I can make predictions and changes and check results. I can enter formulae for the four operations (+-x/) into a spreadsheet I can use 'SUM' to calculate the total of a set of numbers in a range of cells I can change data in a spreadsheet to answer 'what if...?' questions and check predictions I can use a simple layout demonstrated by the teacher to create a simple spreadsheet model and use it to solve problems. **Computing science** Algorithms I can complete unfinished algorithms with selection or repetition Design I can create multiple sequences that run together in own design Variable use I can change variables inside a loop Debugging I can debug variable errors independently *Scratch specific objectives* I can design their own game including sprites, backgrounds, scoring and/or timers. I can use conditional statements, loops, variables and broadcast messages. I can evaluate the effectiveness of their game and debug. **Digital literacy** Communication and collaboration I can understand files may be saved off their device in 'clouds' (servers). I can upload/download a file to the cloud on different devices. I can understand about syncing files using cloud-computing folders. **Online safety** I can develop strategies to ignore or cancel unsolicited advertising (pop-ups, banners, videos or audio). I can understand how social networks work, that they have age limits, and what is appropriate and inappropriate I can understand what online chatting involves, keeping safe and how you know who you are talking to I can be aware of the issues surrounding social networks and cyberbullying and understanding the impact on an individual of sending or uploading unkind or inappropriate content. **See National Online Safety specific objectives attached**	**Information technology** Data I can identify a problem which can be solved by collecting data I can identify which data to collect I can collect data in an efficient and accurate way I can organise data by designing fields and records in a database I can interpret data by using a range of searches and graphs I can draw conclusions from data I can use conclusions to solve the original problem I can present findings to a specified audience to justify reasons for their choices and explain why other methods were not appropriate **Computing science** Algorithms I can create a programme by decomposing the parts and then solving the parts separately. Design I can adapt a given design for a new purpose I can redesign an algorithm for a new purpose Variables I can use variables that interact with other variables Debugging I can break down code to find exact error by running sections of code *Scratch specific objectives – as other years and relevant to game/design.* **Digital literacy** Digital Media I can explore the features of a given video editing or animation package I can plan a storyboard for a video or animation to suit a purpose I can film, create, edit and refine to ensure quality; present to an audience **Online safety** **See National Online Safety specific objectives attached**

Information technology
Word processing
To understand how to use the following word processing skills to:
Type using capitals through shift or caps lock
Delete using backspace or delete
Highlight text to bold, italicize and underline
Changing font type, colour and size
Align text left, right, centre and justify
Hold hands over each half of the keyboard and begin to use more than two fingers to enter text

Computing science
Algorithms
To understand how to break down a simple everyday algorithm into parts (e.g. making breakfast)
To understand a working programme and think about how it may be decomposed
Design
To understand how to follow a set of instructions to create a programme
Debugging:
To understand that there is a problem and say what the problem is
To understand where the problem might be
Scratch specific objectives
To understand how to navigate the Scratch programming environment.
To understand how to create a background and sprite for a game.
To understand how to add inputs to control my sprite.
To understand how to use conditional statements (if… then) within my game.

Digital literacy.

Online safety

See National Online Safety specific objectives attached

Information technology
Data
I understand how to enter data into a graphing package and use it to create a range of graphs, and to interpret data across all subjects
I understand how to compare how different graphs can be used for different purposes
I understand how to search a branching database
I understand how to create and use a branching database to organise, reorganise and analyse information
I understand how to compare the use of graphing software, branching database and card-based database for organising and interpreting data
I understand how to explore some real-life examples of branching databases, such as keys for animal identification

Computing science
Algorithms
I understand that there are more than one algorithm to get to a certain point
I understand how to write a simple algorithm using words
I understand how to design an algorithm for a specific person or group of people
Design
I understand how to change one part of a programme to make it their own
I understand how to adapt a given design for a new purpose
Debugging
I understand how to debug simple sequence errors independently
I understand how to debug simple selection and repetition errors independently
Scratch specific objectives
I understand how to add inputs in to control my sprite.
I understand how to use repeat functions to create a piece of music
I understand how to use programming to control a physical device

Digital literacy
Digital media
Graphics
I understand how to import a photograph and explore the effects which can be created
I understand how to use a range of visual effects such as filters, hues and painting over photographs.
I understand how to create patterns and montages
I understand how to select areas and manipulate to give different effects.
Music and Sound
I understand the need to listen to a variety of radio programmes, evaluating their style
I understand how to write a script for a radio programme
I understand how to plan and record audio for a radio program, eg interview, news broadcast, advert, cookery programme
I understand how to evaluate and re-record (maybe editing)
I understand how to publish work online as a podcast

Online safety

See National Online Safety specific objectives attached

Information technology
Data
I understand how to plan an investigation using data logging technology
I understand how to make predictions for this investigation and understand how to make it a fair test
I understand how to carry out the investigation, ensuring accuracy
I understand how to interpret results, draw conclusions and analyse the effectiveness of the technology
I understand how to change variables in a spreadsheet (e.g. Excel) to solve problems
I understand how to make predictions and changes and check results.
I understand how to enter formulae for the four operations (+-x/) into a spreadsheet
I understand how o use 'SUM' to calculate the total of a set of numbers in a range of cells
I understand how to change data in a spreadsheet to answer 'what if...?' questions and check predictions
I understand how to use a simple layout demonstrated by the teacher, create a simple spreadsheet model and use it to solve problems.

Computing science
Algorithms
I understand how to complete unfinished algorithms with selection or repetition
Design
I understand how to create multiple sequences that run together in own design
Variable use
I understand how variables changes inside a loop
Debugging
I understand how to debug variable errors independently
Scratch specific objectives
I understand how to design their own game including sprites, backgrounds, scoring and/or timers.
I understand how to use conditional statements, loops, variables and broadcast messages.
I understand the need to evaluate the effectiveness of my game and debug.

Digital literacy
Communication and collaboration
I understand files may be saved off their device in 'clouds' (servers).
I understand how to upload/download a file to the cloud on different devices.
I understand about syncing files using cloud computing folders.

Online safety
I understand how to develop strategies to ignore or cancel unsolicited advertising (pop-ups, banners, videos or audio).
I understand how social networks work, that they have age limits, and what is appropriate and inappropriate
I understand what online chatting involves, keeping safe and how you know who you are talking to
I understand the issues surrounding social networks and cyberbullying and understanding the impact on an individual of sending or uploading unkind or inappropriate content.

See National Online Safety specific objectives attached

Information technology
Data
I understand how to identify a problem which can be solved by collecting data
I understand how to identify which data to collect
I understand how to collect data in an efficient and accurate way
I understand how to organise data by designing fields and records in a database
I understand how to interpret data by using a range of searches and graphs
I understand how to draw conclusions from data
I understand how to use conclusions to solve the original problem
I understand how to present findings to a specified audience
I understand how to justify reasons for their choices and explain why other methods were not appropriate
Computing science
Algorithms
I understand how to create a programme by decomposing the parts and then solving the parts separately.
Design
I understand how to adapt a given design for a new purpose
I understand how to redesign an algorithm for a new purpose
Variables
I understand that variables interact with other variables
Debugging
I understand how to break down code to find exact error by running sections of code
Scratch specific objectives – as other years and relevant to game/design.

Digital literacy
Digital Media
I understand how to explore the features of a given video editing or animation package
I understand how to plan a storyboard for a video or animation to suit a purpose
I understand how to film, create, edit and refine to ensure quality; present to an audience

Online safety

See National Online Safety specific objectives attached

Summary term

	Year 3	Year 4	Year 5	Year 6
Knowledge	**Information technology** Data I know how to collect information by designing and using a simple questionnaire to record numbers, text and choices. I know how to create record cards to store collected information (Junior Viewpoint) I know how to use a database to generate bar charts and graphs to answer questions I know how to answer questions by searching and sorting the database (Excel/Viewpoint) *Recap/address gaps from previous terms.* **Computing science** *Extend through additional projects linked to Topic* **Digital literacy** Digital media I know how to use still and video cameras, independently I know how to *take photographs with a digital microscope(equipment dependent)* I know how to evaluate quality of footage taken I know I need to frame shots and keep the camera still I know how to download still images and video I know how to sequence still images and video and use simple editing techniques to create a presentation I know how to create a simple animation either by using stop-motion techniques with a webcam, or by using animation software. *Recap/address gaps from previous terms.* **Online safety** *Objectives tailored to address concerns for Year group – from Autumn objectives.* **See National Online Safety specific objectives attached**	**Information technology** Word processing I know how to build lists using bullet points or numbers I know how to highlight and drag text I know how to move words through cut and paste I know how to check spelling and grammar I know how to change page orientation, view and size I know how to insert word art/picture and format when purposeful I know how to develop confidence in using multiple fingers to enter text *Recap/address gaps from previous terms.* **Computing science** *Extend through additional projects linked to Topic.* **Digital literacy** Communication and collaboration I know how to use at least two online communication methods (e.g. online survey (e.g. Survey Monkey) quiz, blog (e.g. Wizkids), shared folders) I know how to discuss the pros and cons of these communication methods I know the difference between different styles of online communication methods and their purposes *Recap/address gaps from previous terms.* **Online safety** *Objectives tailored to address concerns for Year group – from Autumn objectives.* **See National Online Safety specific objectives attached**	**Information technology** Presentation I know how to use slides to effectively present I know how to add sound and video file as an object and when this is purposeful I know how to change running order and timings *Recap/address gaps from previous terms.* **Computing science** *Extend through additional projects linked to Topic.* **Digital literacy** Digital Media I know how to use different filming techniques and camera angles e.g. zoom, panning, wide shot etc to create different mood/perspective I know how to plan a video or animation by drawing a storyboard I know how to use a range of sound effects, music and voice-overs to create mood/ atmosphere I know how to select and edit sounds, text, movie clips and other effects to suit purpose and audience I know how to evaluate and improve work with a view to purpose and audience Music and sound I know how to record sounds using sound editing software I know how to collect sounds from a variety of sources (online, digital sound recorder) I know how to import sounds into sound editing software I know how to layer and edit sounds I know how to plan, create and refine either a radio programme or play with sound effects or a sonic postcard I know how to save as a web compatible format - share online *Recap/address gaps from previous terms.* **Online safety** *Objectives tailored to address concerns for Year group – from Autumn objectives.* **See National Online Safety specific objectives attached**	**Information technology** Presentation I know how to use transitions and animations effectively with clear purpose, to add to presentation effect I know how to record a commentary to go alongside I know how to Use hyperlinks to create non-linear presentation *Recap/address gaps from previous terms.* **Computing science** *App inventor:* I know the role of the component designer, block editor, and phone/emulator I know how to create a simple app with button components to enable navigation I know how to add media (sounds and images) to apps and upload them from a computer I know how to test and run apps using App Inventor's live testing I know how to package an app and download them to a phone or tablet. *Recap/address gaps from previous terms.* **Digital literacy** Digital Media I know how to explore the features of a given video editing or animation package I know how to plan a storyboard for a video or animation to suit a purpose I know how to film, create, edit and refine to ensure quality; present to an audience *Recap/address gaps from previous terms.* **Online safety** *Objectives tailored to address concerns for Year group – from Autumn objectives.* **See National Online Safety specific objectives attached**

Skills

Information technology	Information technology	Information technology	Information technology
Data	Word processing	Presentation	Presentation
I can collect information by designing and using a simple questionnaire to record numbers, text and choices.	I can build lists using bullet points or numbers	I can use slides to effectively present	I can use transitions and animations effectively with clear purpose, to add to presentation effect
I can create record cards to store collected information (Junior Viewpoint)	I can highlight and drag text	I can add sound and video file as an object and when this is purposeful	I can record commentary to go alongside
I can use a database to generate bar charts and graphs to answer questions	I can move words through cut and paste	I can change running order and timings	I can use hyperlinks to create non-linear presentation
I can answer questions by searching and sorting the database (Excel/Viewpoint)	I can check spelling and grammar		
	I can change page orientation, view and size	*Recap/address gaps from previous terms.*	
	I can insert word art/picture and format when purposeful		
	I can develop confidence in using multiple fingers to enter text		*Recap/address gaps from previous terms.*
Recap/address gaps from previous terms.		**Computing science**	**Computing science**
Computing science		*Extend through additional projects linked to Topic.*	*App inventor:*
Extend through additional projects linked to Topic.		**Digital literacy**	I can understand the role of the component designer, block editor, and phone/emulator
Digital literacy	*Recap/address gaps from previous terms.*	Digital Media	I can create a simple app with button components to enable navigation
Digital media	**Computing science**	I can use different filming techniques and camera angles e.g. zoom, panning, wide shot etc to create different mood/perspective	I can add media (sounds and images) to apps and upload them from a computer
I can use still and video cameras, independently	*Extend through additional projects linked to Topic.*	I can plan a video or animation by drawing a storyboard	I can test and run apps using App Inventor's live testing
I can *take photographs with a digital microscope(equipment dependent)*	**Digital literacy**	I can use a range of sound effects, music and voice-overs to create mood/ atmosphere	I can package an app and download them to a phone or tablet.
I can evaluate quality of footage taken	Communication and collaboration	I can select and edit sounds, text, movie clips and other effects to suit purpose and audience	
I can understand the need to frame shots and keep the camera still	I can use at least two online communication methods (e.g. online survey (e.g. Survey Monkey) quiz, blog (e.g. Wizkids), shared folders)	I can evaluate and improve work with a view to purpose and audience	*Recap/address gaps from previous terms.*
I can download still images and video	I can discuss the pros and cons of these communication methods	Music and sound	
I can sequence still images and video and use simple editing techniques to create a presentation	I can identify the difference between different styles of online communication methods and their purposes	I can record sounds using sound editing software	**Digital literacy**
I can create a simple animation either by using stop-motion techniques with a webcam, or by using animation software.		I can collect sounds from a variety of sources (online, digital sound recorder)	Digital Media
		I can import sounds into sound editing software	I can explore the features of a given video editing or animation package
Recap/address gaps from previous terms.	*Recap/address gaps from previous terms.*	I can layer and edit sounds	I can plan a storyboard for a video or animation to suit a purpose
Online safety	**Online safety**	I can plan, create and refine either a radio programme or play with sound effects or a sonic postcard	I can film, create, edit and refine to ensure quality; present to an audience
Objectives tailored to address concerns for Year group – from Autumn objectives.	*Objectives tailored to address concerns for Year group – from Autumn objectives.*	I can save as a web compatible format - share online	
See National Online Safety specific objectives attached	**See National Online Safety specific objectives attached**	*Recap/address gaps from previous terms.*	*Recap/address gaps from previous terms.*
		Online safety	**Online safety**
		Objectives tailored to address concerns for Year group – from Autumn objectives.	*Objectives tailored to address concerns for Year group – from Autumn objectives.*
		See National Online Safety specific objectives attached	**See National Online Safety specific objectives attached**

Understanding			
Information technology Data I understand how to collect information by designing and using a simple questionnaire to record numbers, text and choices. 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present to an audience *Recap/address gaps from previous terms.* **Online safety** *Objectives tailored to address concerns for Year group – from Autumn objectives.* **See National Online Safety specific objectives attached**

Key Vocabulary	**E-safety:** *Settings, safety, passwords, privacy, spam, virus, troll, phishing, file sharing, consent, security, social network, cyber bullying.* **Digital Literacy:** *Search engines, fake news, reliable, internet search, settings, research, draft, publish, edit, communication tools, consent, social networking, presentation. editing, quality.* **Computing Science:** *Algorithm, program, debugging, instructions, problem, navigate, variables, decomposing, code, component, app, media.* **Information Technology:** *Logging on, saving, resizing, creating, printing, screenshots, images, presentation, slideshow, insert, adjust, save, display features, layout, typing, highlight predictions, database, data, logging, conclusions, spreadsheets.*	**E-safety:** *Settings, safety, passwords, privacy, spam, virus, troll, phishing, file sharing, consent, security, social network, cyber bullying.* **Digital Literacy:** *Search engines, fake news, reliable, internet search, settings, research, draft, publish, edit, communication tools, consent, social networking, presentation. editing, quality.* **Computing Science:** *Algorithm, program, debugging, instructions, problem, navigate, variables, decomposing, code, component, app, media.* **Information Technology:** *Logging on, saving, resizing, creating, printing, screenshots, images, presentation, slideshow, insert, adjust, save, display features, layout, typing, highlight predictions, database, data, logging, conclusions, spreadsheets.*	**E-safety:** *Settings, safety, passwords, privacy, spam, virus, troll, phishing, file sharing, consent, security, social network, cyber bullying.* **Digital Literacy:** *Search engines, fake news, reliable, internet search, settings, research, draft, publish, edit, communication tools, consent, social networking, presentation. editing, quality.* **Computing Science:** *Algorithm, program, debugging, instructions, problem, navigate, variables, decomposing, code, component, app, media.* **Information Technology:** *Logging on, saving, resizing, creating, printing, screenshots, images, presentation, slideshow, insert, adjust, save, display features, layout, typing, highlight predictions, database, data, logging, conclusions, spreadsheets.*	**E-safety:** *Settings, safety, passwords, privacy, spam, virus, troll, phishing, file sharing, consent, security, social network, cyber bullying.* **Digital Literacy:** *Search engines, fake news, reliable, internet search, settings, research, draft, publish, edit, communication tools, consent, social networking, presentation. editing, quality.* **Computing Science:** *Algorithm, program, debugging, instructions, problem, navigate, variables, decomposing, code, component, app, media.* **Information Technology:** *Logging on, saving, resizing, creating, printing, screenshots, images, presentation, slideshow, insert, adjust, save, display features, layout, typing, highlight predictions, database, data, logging, conclusions, spreadsheets.*
Key texts	Scratch/crumble book Vodafone Goldilocks – A fairy-tale for the modern age Oscar's adventures in the online world (National online safety)	Scratch/crumble book Vodafone Goldilocks – A fairy-tale for the modern age Oscar's adventures in the online world (National online safety)	Scratch/crumble book Vodafone Goldilocks – A fairy-tale for the modern age Oscar's adventures in the online world (National online safety)	Scratch/crumble book Vodafone Goldilocks – A fairy-tale for the modern age Oscar's adventures in the online world (National online safety)

Subject content (Key stage 1)

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions

- create and debug simple programs

- use logical reasoning to predict the behaviour of simple programs

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

- 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 online technologies.

Self-image and identity

Learning Objectives

Year 3:
- I can explain what is meant by the term 'identity'.
- I can explain how people can represent themselves in different ways online.
- I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why.

Year 4:
- I can explain how my online identity can be different to my offline identity.
- I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.
- I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.

Year 5:
- I can explain how identity online can be copied/modified or altered.
- I can demonstrate how to make responsible choices about having an online identity, depending on context.

Year 6:
- I can identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online.
- I can explain the importance of asking until I get the help needed.

Online Relationships

Learning Objectives

Year 3:

- I can describe ways people who have similar likes and interests can get together online.
- I can explain what it means to 'know someone' online and why this might be different from knowing someone offline.
- I can explain what is meant by 'trusting someone' online, why this is different to 'liking someone' online, and why it is important to be careful about who to trust online including what information and content they are trusted with.
- I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried.
- I can explain how someone's feelings can be hurt by what is said or written online.
- I can explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline e.g. sharing images and photos.

Year 4:

- I can describe strategies for safe and fun experiences in a range of online social environments e.g. livestreaming, gaming platforms.
- I can give examples of how to be respectful to others online and how to recognise healthy and unhealthy behaviours.
- I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts, feelings and beliefs.

Year 5:

- I can give examples of technology – specific forms of communication (e.g. emojis, memes, gifs).
- I can explain that there are some people I can communicate with online who may want to do me or my friends harm/ I can recognise this is not my/our fault.
- I can describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups)
- I can explain how someone can get help if they are having problems and identify when to tell a trusted adult.
- I can demonstrate how to support others (including those who are having difficulties) online.

Year 6:

- I can explain how sharing something online may have an impact positively or negatively.
- I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not.
- I can describe how things shared privately online can have unintended consequences for others. E.g. Screen-grabs.
- I can explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this.

Online Reputation

Learning Objectives

Year 3:

- I can explain how to search for information about others online.
- I can give example of what anyone may or may not be willing to share about themselves online. I can explain the need to be careful before sharing.
- I can explain who someone can ask if they are unsure about putting something online.

Year 4:

- I can describe how to find out information about others by searching online.
- I can explain ways that some of the information about anyone online could have been created, copied or shared by others.

Year 5:

- I can search for information about an individual online and summarise the information found.
- I can describe ways that information about anyone online can be used by others to make judgements about an individual and why these may be incorrect.

Year 6:

- I can explain the ways in which anyone can develop a positive online reputation.
- I can explain strategies anyone can use to protect the 'digital personality' and online reputation, including degrees of anonymity.

Online Bullying

Learning Objectives

National Online Safety

Year 3:
- I can describe appropriate ways to behave towards other people online and why this is important.
- I can give examples of how bullying behaviour could appear online and how someone can get support.

Year 4:
- I can recognise when someone is upset, hurt or angry online.
- I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).
- I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affects how others feel about them (their reputation).

Year 5:
- I can recognise that online bullying can be different to bullying in the physical world and can describe some of those differences.
- I can describe how what one person perceives as playful joking and teasing (including banter) might be experienced by others as bullying.
- can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult.
- I can identify a range of ways to report concerns and access support both in school and at home about online bullying.
- I can explain how to block abusive users.
- I can describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix).

Year 6:
- I can describe how to capture bullying content as evidence (e.g. Screen-grab, URL, profile) to share with others who can help me.
- I can explain how someone would report online bullying in different contexts.

Managing online information

Learning Objectives

National Online Safety®

Year 5:
- I can explain the benefits and limitations of using different types of search technologies e.g. voice-activated search engine. I can explain how some technology can limit the information I am presented with e.g. voice-activated only giving one search result.
- I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be sceptical.
- I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results.
- I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence.
- I can identify ways the internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads.
- I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers).
- I can explain what is meant by the term 'stereotype', how 'stereotypes' are amplified and reinforced online, and why accepting 'stereotypes' may influence how people think about others.
- I can describe how fake news may affect someone's emotions and behaviour and explain why this may be harmful.

Year 6:
- I can explain what is meant by a 'hoax'. I can explain why someone would need to think carefully before they share.
- I can explain how search engines work and how the results are selected and ranked.
- I can explain how to use search technologies effectively.
- I can describe how some online information can be opinions and can offer examples.
- I can explain how and why some people may present opinions as facts; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal.
- I can define the terms 'influence', 'manipulation', and 'persuasion' and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news.).
- I can explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this.
- I understand the concept of persuasive design and how it can be used to influence peoples' choices.
- I can demonstrate how to analyse and evaluate the validity of facts and information and I can explain why using these strategies are important.
- I can describe the difference between online misinformation and disinformation.
- I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen (e.g. the sharing of misinformation or disinformation.
- I can identify, flag and report inappropriate content.

Learning Objectives

Year 3:
- I can demonstrate how to use key phrases in search engines to gather accurate information online.
- I can explain what autocomplete is and how to choose the best suggestion.
- I can explain how the internet can be used to buy and sell things
- I can explain the difference between a belief, an opinion and a fact and give examples of how and where they might be shared online. E.g. In videos, memes, posts, news stories etc.
- I can explain that not all opinions shared may be accepted as true or fair by others (E.g. monsters under the bed)
- I can describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened.

Year 4:
- I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.
- I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).
- I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in app purchases; pop ups) and can recognise some of these when they appear online.
- I can explain why lots of people sharing the same opinions or beliefs online do not make those beliefs or opinions true.
- I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and risks might be.
- I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend that something is true when it isn't.

Health, wellbeing and lifestyle

Learning Objectives

National Online Safety

Year 3:
- I can explain why spending too much time using technology can sometimes have a negative impact on anyone, e.g. mood, sleep, body, relationships; I can give examples of both positive and negative activities where it is easy to spend a lot of time engaged (e.g. doing homework, games, films, videos).
- can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites).

Year 4:
- I can explain how using technology can be a distraction from other things, in both a positive and negative way.
- I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.

Year 5:
- I can describe ways that technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively.
- I can describe some strategies, tips or advice to promote health and well-being with regards to technology.
- I can recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals.
- I can explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, loot boxes) and explain the importance of seeking permission from a trusted adult before purchasing.

Year 6:
- I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.
- I recognise and can discuss the pressures that technology can place on someone and how/when they could manage this.
- I can recognise features of persuasive design and how they are used to keep users engaged (current and future use).
- I can assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise).

Privacy and security

Learning Objectives

Year 3:

- I can describe simple strategies for creating and keeping passwords private.
- I can give reasons why someone should only share information with people they choose to and can trust. I can explain that if they are not sure of feel pressured then they should tell a trusted adult.
- I can describe how connected devices can collect and share anyone's information with others.

Year 4:

- I can describe strategies for keeping personal information private, depending on context.
- I can explain that internet use is never fully private and is monitored e.g. adult supervision.
- I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure.
- I know what the digital age of consent is and the impact this has on online services asking for consent.

Year 5:

- I can explain what a strong password is and demonstrate how to create one.
- I can explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice messages, geolocation) with others.
- I can explain what app permissions are and can give some examples.

Year 6:

- I can describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser.
- I can explain what to do if a password is shared, lost or stolen.
- I can describe how and why people should keep their software and apps up to date e.g. auto updates.
- I can describe simple ways to increase privacy on apps and services that provide privacy settings.
- I can describes ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing).
- I know that online services have terms and conditions that govern their use.

Copyright and ownership

Learning Objectives

Year 3:

- I can explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.

Year 4 :

- When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to use it.
- I can give some simple examples of content which I must not use without permission from the owner e.g. videos, music, images.

Year 5:

- I can assess and justify when it is acceptable to use the work of others.
- I can give examples of content that is permitted to be reused and know how this content can be found online.

Year 6:

- I can demonstrate the use of a search tool to find and access online content which can be reused by others.
- I can demonstrate how to make references to and acknowledge sources I have used from the internet.