Computing Skills and Knowledge Progression

Declarative knowledge 'Knowing that'
Procedural knowledge 'Knowing how'

Early Years Foundation Stage						
E-Safety	Self-image and identity: Recognise, online or offline, that anyone can say 'no', 'please stop', 'I'll tell', 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset. Online Relationships: Recognise some ways in which the internet can be used to communicate. Give examples of how I (might) use technology to communicate with people I know	Online Bullying: Describe ways that some people can be unkind online Online reputation Identify ways that put information on the internet.	Managing online information: Talk about how to use the internet as a way of finding information online. Identify devices I could use to access information on the internet.	Health, wellbeing and lifestyle: Identify rules that help keep us safe and healthy in and beyond the home when using technology Give some simple examples of these rules	Privacy and Security: Identify some simple examples of my personal information (e.g. name, address, birthday, age, location). Describe who would be trustworthy to share this information with; explain why they are trusted.	Copyright and Ownership: Know that work I create belongs to me. Name my work so that others know it belongs to me.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computing Systems and Networks	Explain how these technology examples help us	Describe some uses of computers	Explain that digital devices accept inputs	Demonstrate how information is shared across the internet	Describe that a computer system features inputs, processes, and outputs	Compare results from different search engines
	Explain technology as something that helps us	Identify examples of computers	Explain that digital devices produce outputs	Describe the internet as a network of networks	Explain that computer systems communicate with other devices	Complete a web search to find specific information
	Switch on and log into a computer	Identify that a computer is a part of IT	Follow a process	Discuss why a network needs protecting	Explain that systems are built using a number of parts	Refine my search
	Use a mouse to click and drag	Identify examples of IT	Classify input and output devices	Describe networked devices and how they connect	Explain the benefits of a given computer system	Explain why we need tools to find things online
	Click and drag to make objects on a screen	Identify that some IT can be used in more than one way	Describe a simple process	Explain that the internet is used to provide many services	Identify tasks that are managed by computer systems	Recognise the role of web crawlers in creating an index
	Use a mouse to create a picture	Sort school IT by what it's used for	Design a digital device	Recognise that the World Wide Web contains websites and web pages	Identify the human elements of a computer system	Relate a search term to the search engine's index
	Use a mouse to open a program	Find examples of information technology	Explain how I use digital devices for different activities	Describe how to access websites on the WWW	Explain that data is transferred over networks in packets	Explain that a search engine follows rules to rank relevant pages
	Save my work to a file	Sort IT by where it is found	Recognise similarities between using digital devices and non-digital tools	Describe where websites are stored when uploaded to the WWW	Explain that networked digital devices have unique addresses	Explain that search results are ordered
	Say what a keyboard is for	Talk about uses of information technology	Suggest differences between using digital devices and non-digital tools	Explain the types of media that can be shared on the WWW	Recognise that data is transferred using agreed methods	Suggest some of the criteria that a search engine checks to decide on the order of results
	Type my name on a computer	Demonstrate how IT devices work together	Discuss why we need a network switch	Explain that internet services can be used to create content online	Explain that the internet allows different media to be shared	Describe some of the ways that search results can be influenced
	Open my work from a file	Recognise common types of technology	Explain how messages are passed through multiple connections	Explain what media can be found on websites	Recognise that connected digital devices can allow us to access shared files stored online	Explain how search engines make money
	Use the arrow keys to move the cursor	Say why we use IT	Recognise different connections	Recognise that add content to the WWW	Send information over the internet in different ways	Recognise some of the limitations of search engines
	Discuss how we benefit from these rules	List different uses of information technology	Demonstrate how information can be passed between devices	Explain that there are rules to protect content	Compare working online with working offline	Choose methods of communication to suit particular purposes
	Give examples of some of these rules	Say how rules can help keep me safe	Explain the role of a switch, server, and wireless access point in a network	Explain that websites and their content are created by people	Make thoughtful suggestions on my group's work	Explain the different ways in which people communicate
	Identify rules to keep us safe and healthy when we are using technology in and beyond the home	Talk about different rules for using IT	Recognise that a computer network is made up of a number of devices	Suggest who owns the content on websites	Suggest strategies to ensure successful group work	Identify that there are a variety of ways of communicating over the internet
		Explain the need to use IT in different ways	Identify how devices in a network are connected together			
		Identify the choices that I make when using IT				

		Use IT for different types of activities Identify the benefits of computer networks	Identify networked devices around me	Explain that not everything on the World Wide Web is true Explain why I need to think carefully before I share or re-share content Explain why some information I find online may not be honest, accurate, or legal	Explain how the internet enables effective collaboration Identify different ways of working together online Recognise that working together on the internet can be public or private	Compare different methods of communicating on the internet Decide when I should and should not share Explain that communication on the internet may not be private
Creating Media Creating media	Draw lines on a screen and explain which tools I used Make marks on a screen and explain which tools I used Use the paint tools to draw a picture Make marks with the square and line tools Use the shape and line tools effectively Use the shape and line tools to recreate the work of an artist Choose appropriate shapes Create a picture in the style of an artist Make appropriate colour choices Choose appropriate paint tools and colours to recreate the work of an artist Say which tools were helpful and why I know that different paint tools do different jobs Change the colour and brush sizes	**Digital Photography:** Explain what I did to capture a digital photo Recognise what devices can be used to take photographs Talk about how to take a photograph Explain the process of taking a good photograph Explain why a photo looks better in portrait or landscape format Discuss how to take a good photograph Identify what is wrong with a photograph Improve a photograph by retaking it Explain why a picture may be unclear Take photos in both landscape and portrait format Experiment with different light sources Explore the effect that light has on a photo and explain my choices	**Animation:** Create an effective flip book—style animation Draw a sequence of pictures Explain how an animation/flip book works Create an effective stop frame animation Explain why little changes are needed for each frame Predict what an animation will look like Break down a story into settings, characters and events Create a storyboard Describe an animation that is achievable on screen Evaluate the quality of my animation Review a sequence of frames to check my work Use onion skinning to help me make small changes between frames Evaluate another learner's animation	**Audio Editing:** Identify digital devices that can record sound and play it back Identify the inputs and outputs required to play audio or record sound Recognise the range of sounds that can be recorded Discuss what other people include when recording sound for a podcast Suggest how to improve my recording Use a device to record audio and play back sound Discuss why it is useful to be able to save digital recordings Plan and write the content for a podcast Save a digital recording as a file Discuss ways in which audio recordings can be altered Edit sections of of an audio recording Open a digital recording from a file	**Video Editing:** Compare features in different videos Explain that video is a visual media format Identify features of videos Suggest filming techniques for a given purpose Experiment with different camera angles Identify and find features on a digital video recording device Make use of a microphone Capture video using a range of filming techniques Review how effective my video is Create and save video content Decide which filming techniques I will use Outline the scenes of my video Explain how to improve a video by reshooting and editing	**Webpage Creation:** Discuss the different types of media used on websites I know that websites are written in HTML Describe what is meant by the term 'fair use' Draw a web page layout that suits my purpose Recognise the common features of a web page Say why I should use copyright free images Describe why navigation paths are useful Explain what a navigation path is Explain the implication of linking to content owned by others Explore a website Suggest media to include on my page Find copyright free images Add content to my own web page

Make dots of colour on the page	Recognise that images can be changed	Explain ways to make my animation better	Choose suitable sounds to include in a podcast	Select the correct tools to make edits to my video	Evaluate what my web page looks like on different devices and suggest/make edits
Use dots of colour to create a picture in the style of an artist on my own	Use a tool to achieve a desired effect	Improve my animation based on feedback	Discuss sounds that other people combine	Store, retrieve, and export my recording to a computer	Preview what my web page looks like
Explain that pictures can be made in lots of different ways	Apply a range of photography skills to capture a photo	Add other media to my animation	Use editing tools to arrange sections of audio	Evaluate my video and share my opinions	Make multiple web pages and link them using hyperlinks
Say whether I prefer painting using a computer or using paper	Identify which photos are real and which have been changed	Evaluate my final film	Discuss the features of a digital recording I like	Make edits to my video and improve the final outcome	Create hyperlinks to link to other people's work
Spot the differences between painting on a computer and on paper	Recognise which photos have been changed	Explain why I added other media to my animation	Explain that digital recordings need to be exported to share them	Recognise that my choices when making a video will impact on the quality of the final outcome	Evaluate the user experience of a website
Identify and find keys on a keyboard	**Making Music**	**Desktop Publishing:**	Suggest improvements to a digital recording		**3D Modelling:**
Open a word processor	Identify that music is a sequence of notes	Explain the difference between text and images		**Vectors:**	Discuss the similarities and differences between 2D and 3D shapes
Recognise keys on a keyboard	Describe how music makes me feel, e.g. Happy or sad	Identify the advantages and disadvantages of using text and images	**Photo Editing:**	Discuss how a vector drawing is different from paper based drawings	Explain why we might represent 3D objects on a computer
Enter text into a computer	Identify simple differences in pieces of music	Recognise that text and images can communicate messages clearly	Explain the effect that editing can have on an image	Explain that each element added to a vector drawing is an object	Select, move, and delete a digital 3D shape
Use backspace to remove text	Listen with concentration to a range of music (links to the Music curriculum)	Change font style, size, and colours for a given purpose	Give examples of positive and negative effects that retouching can have on an image	Identify the main drawing tools	Change the colour of a 3D object
Use letter, number, and space keys	Create a rhythm pattern	Edit text	Identify how an image has been retouched	Recognise that vector drawings are made using shapes	Identify how graphical objects can be modified
Explain what the keys that I have learnt about already do	Explain that music is created and played by humans	Explain that text can be changed to communicate more clearly	Explain what has changed in an edited image	Identify the shapes used to make a vector drawing	Resize a 3D object
Identify the toolbar and use bold, italic, and underline	Play an instrument following a rhythm pattern	Create a template for a particular purpose	Sort images into 'fake' or 'real' and explain my choices	Move, resize, and rotate objects I have duplicated	Position 3D objects in relation to each other
Type capital letters	Identify that music is a sequence of notes	Define the term 'page orientation'	Talk about fake images around me	Explain how alignment grids and resize handles can be used to improve consistency	Rotate a 3D object
Change the font	Refine my musical pattern on a computer	Recognise placeholders and say why they are important	Explore how images can be changed in real life	Modify objects to create different effects	Select and duplicate multiple 3D objects
Select all of the text by clicking and dragging	Use a computer to create a musical pattern using three notes	Choose the best locations for my content and make changes to content after I've added it	Identify changes that we can make to an image	Use the zoom tool to help me add detail to my drawings	Create digital 3D objects of an appropriate size
Select a word by double clicking			Change the composition of an image by selecting parts of it		
Decide if my changes have improved my writing					

	Say what tool I used to change the text Use 'undo' to remove changes Explain the differences between typing and writing Make changes to text on a computer Say why I prefer typing or writing	Refine my musical pattern on a computer Use a computer to create a musical pattern using three notes Describe an animal using sounds Explain my choices Save my work Explain how I made my work better Listen to music and describe how it makes me feel Reopen my work	Paste text and images to create a magazine cover Choose a suitable layout for a given purpose Identify different layouts Match a layout to a purpose Compare work made on desktop publishing to work created by hand Identify the uses of desktop publishing in the real world Say why desktop publishing might be helpful	Consider why someone might want to change the composition of an image Choose effects to make my image fit a scenario Explain why my choices fit a scenario Talk about changes made to images Choose appropriate tools to retouch an image Combine parts of images to create new images Compare the original image with my completed publication Consider the effect of adding other elements to my work Evaluate the impact of my publication on others through feedback	Change the order of layers in a vector drawing Identify that each added object creates a new layer in the drawing Identify which objects are in the front layer or in the back layer of a drawing Copy part of a drawing by duplicating several objects Group to create a single object Reuse a group of objects to further develop my vector drawing Apply what I have learned about vector drawings Suggest improvements to a vector drawing I create alternatives to vector drawings	Group a digital 3D shape and a placeholder to create a hole in an object Identify the 3D shapes needed to create a model of a realworld object Choose which 3D objects I need to construct my model Modify multiple 3D objects Plan my 3D model Decide how my model can be improved Evaluate my model against a given criterion Modify my model to improve it
Programming Programming	**Moving Robots:** Explain what my program should do Identify several possible solutions Can match a command to an outcome Predict the outcome of a command on a device Run a command on a device Follow an instruction Give directions	**Robot Algorithms:** Choose a series of words that can be enacted as a sequence Follow instructions given by someone else Give clear and unambiguous instructions Create different algorithms for a range of sequences (using the same commands) Show the difference in outcomes between two sequences that consist of the same commands	**Sequence in Music:** Explain that objects in scratch have attributes (linked to) Identify the objects in a scratch project (sprites, backdrops) Recognise that commands in scratch are represented as blocks Choose a word which describes an onscreen action for my plan Create a program following a design Identify that each sprite is controlled by the commands i choose	**Repetition in Shapes:** Explain the effect of changing a value of a command Identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves Identify patterns in a sequence Create a code snippet for a given purpose Program a computer by typing commands Test my algorithm in a text based language	**Selection in Physical Computing:** Explain what an infinite loop does Identify a real world example of a condition starting an action Identify a condition and an action in my project Create a simple circuit and connect it to a microcontroller Program a microcontroller to make a led switch on Connect more than one output component to a microcontroller	**Variables in Games:** Explain that the way that a variable changes can be defined Identify examples of information that is variable Identify that variables can hold numbers or letters Explain that a variable has a name and a value Identify a program variable as a placeholder in memory for a single value Recognise that the value of a variable can be changed

Recall words that can be acted out	Use an algorithm to program a sequence on a floor robot	Create a sequence of connected commands	Use a template to create a design for my program	Design sequences that use count controlled loops	Decide where in a program to change a variable
Compare forwards and backwards movements	Compare my prediction to the program outcome	Explain that the objects in my project will respond exactly to the code	Write an algorithm to produce a given outcome	Use a count controlled loop to control outputs	Make use of an event in a program to set a variable
Predict the outcome of a sequence involving forwards and backwards commands	Follow a sequence	Start a program in different ways	Use a count controlled loop to produce a given outcome	Design a conditional loop	Recognise that the value of a variable can be used by a program
Start a sequence from the same place	Predict the outcome of a sequence	Combine sound commands	Choose which values to change in a loop	Explain that a condition is either true or	Choose the artwork for my project
Compare left and right turns	Explain the choices i made for my mat design	Explain what a sequence is	Identify the effect of changing the number of times a task is repeated	Program a microcontroller to respond to an input	Create algorithms for my project
Experiment with turn and move commands to move a robot	Identify different routes around my mat	Order notes into a sequence	Predict the outcome of a program containing a count controlled loop	Explain that a condition being met can start an action	Explain my design choices
Predict the outcome of a sequence involving up to four commands	Test my mat to make sure that it is usable	Build a sequence of commands	Explain that a computer can repeatedly call a procedure	Use selection (an 'if...then...' statement) to direct the flow of a program	Choose a name that identifies the role of a variable
Choose the order of commands in a sequence	Create an algorithm to meet my goal	Decide the actions for each sprite in a program	Identify 'chunks' of actions in the real world	Create a detailed drawing of my project	Create the artwork for my project
Debug my program	Explain what my algorithm should achieve	Make design choices for my artwork	Identify and name the objects I will need for a project	Describe what my project will do	Test the code that i have written
Plan two programs	Use my algorithm to create a program	Identify and name the objects I will need for a project	Use a procedure in a program	Test and debug my project	Extend my game further using more variables
Use two different programs to get to the same place	Plan algorithms for different parts of a task	Implement my algorithm as code	Design a program that includes count controlled loops	Use selection to produce an intended outcome	Identify ways that my game could be improved
Introduction to coding:	Put together the different parts of my program	Relate a task description to a design	Develop my program by debugging it	Write an algorithm that describes what my model will do	Share my game with others
Compare different programming tools	Test and debug each part of the program	**Events and Actions:**	Make use of my design to write a program	**Selections in Quizzes:**	**Sensing:**
Find which commands to move a sprite	**An introduction to quizzes:**	Choose which keys to use for actions and explain my choices	**Repetition in Games:**	Identify conditions in a program	Identify examples of conditions in the real world
Use commands to move a sprite	Identify that a program needs to be started	Explain the relationship between an event and an action	List an everyday task as a set of instructions including repetition	Identify the outcome of user input in an algorithm	Explain that if you read a variable, the value remains
Run my program	Identify the start of a sequence	Identify a way to improve a program	Modify a snippet of code to create a given outcome	Identify the setup code for a specific program	Apply my knowledge of programming to a new environment
Use a start block in a program	Identify the start of a sequence	Choose a character for my project	Predict the outcome of a snippet of code	Identify ways the program could be improved	
Use more than one block by joining them together	Show how to run my program				

Change the value	Change the outcome of a sequence of commands	Choose a suitable size for a character in a maze	Choose when to use a count controlled and an infinite loop	Modify a condition in a program	Test my program on an emulator
Find blocks that have numbers	Match two sequences with the same outcome	Program movement	Modify loops to produce a given outcome	Recall how conditions are used in selection	Transfer my program to a controllable device
Say what happens when I change a value	Predict the outcome of a sequence of commands	Choose blocks to set up my program	Recognise that some programming languages enable more than one process to be run at once	Create a program with different outcomes using selection	Determine the flow of a program using selection
Add blocks to each of my sprites	Build the sequences of blocks I need	Consider the real world when making design choices	Choose which action will be repeated for each object	Identify the condition and outcomes in an 'if... Then... else...' statement	Use a variable in an if, then, else statement to select the flow of a program
Delete a sprite	Decide which blocks to use to meet the design	Use a programming extension	Evaluate the effectiveness of the repeated sequences used in my program	Use selection in an infinite loop to check a condition	Experiment with different physical inputs
Show that a project can include more than one sprite	Work out the actions of a sprite in an algorithm	Build more sequences of commands to make my design work	Explain what the outcome of the repeated action should be	Design the flow of a program which contains 'if... then... else...'	Use a condition to change a variable
Choose appropriate artwork for my project	Choose backgrounds for the design	Choose suitable keys to turn on additional features	Explain the effect of my changes	Explain that program flow can branch according to a condition	Explain the importance of the order of conditions in else, if statements
Create an algorithm for each sprite	Choose characters for the design	Identify additional features (from a given set of blocks)	Identify which parts of a loop can be changed	Show that a condition can direct program flow in one of two ways	Modify a program to achieve a different outcome
Decide how each sprite will move	Create a program based on the new design	Match a piece of code to an outcome	Reuse existing code snippets on new sprites	Outline a given task	Use an operand (e.g. <>=) in an if, then statement
Add programming blocks based on my algorithm	Build sequences of blocks to match my design	Modify a program using a design	Develop my own design explaining what my project will do	Use a design format to outline my project	Decide what variables to include in a project
Test the programs i have created	Choose the images for my own design	Test a program against a given design	Evaluate the use of repetition in a project	Implement my algorithm to create the first section of my program	Design the algorithm for my project
Use sprites that match my design	Create an algorithm	Evaluate my project	Select key parts of a given project to use in my own design	Share my program with others	Design the program flow for my project
	Compare my project to my design	Implement my design	Build a program that follows my design	Test my program	Create a program based on my design
	Debug my program	Make design choices and justify them	Evaluate the steps i followed when building my project	Extend my program further	Test my program against my design
	Improve my project by adding features		Refine the algorithm in my design		Use a range of approaches to find and fix bugs

Data and information						
Describe objects using labels	Give simple examples of why information should not be shared	Explain that questions need to be ordered carefully to split objects into similarly sized groups	Choose a data set to answer a given question	Explain how information can be recorded	Explain the relevance of data headings
Identify the label for a group of objects	Compare totals in a tally chart	Explain what a branching database tells me	Identify data that can be gathered over time	Explain what a 'field' and a 'record' is in a database	Explain the relevance of a cell's data type
Match objects to groups	Record data in a tally chart	Explain what a pictogram tells me	Explain that sensors are input devices	Explain the benefits of using a computer to create graphs	Explain why data should be organised
Compare groups of objects	Represent a tally count as a total	Create two groups of objects separated by one attribute	Explain the benefits of using a data logger	Explain how information can be grouped	Identify that changing inputs changes outputs
Decide how to group objects to answer a question	Enter data onto a computer	Investigate questions with yes/no answers	Identify that data from sensors can be recorded	Order, sort, and group my data cards	Answer questions from an existing data set
Describe groups of objects	Use a computer to view data in a different format	Make up a yes/no question about a collection of objects	Suggest questions that can be answered using a given data set	Create multiple questions about the same field	Ask simple relevant questions which can be answered using data
Describe an object	Use pictograms to answer simple questions about objects	Arrange objects into a tree structure	Use data from a sensor to answer a given question	Choose which field to sort data by to answer a given question	Apply an appropriate number format to a cell
Describe a property of an object	Explain what the pictogram shows	Create a group of objects within an existing group	Identify a suitable place to collect data	Navigate a flat file database to compare different views of information	Build a data set in a spreadsheet application
Find objects with similar properties	Organise data in a tally chart	Select an attribute to separate objects into groups	Identify the intervals used to collect data	Combine grouping and sorting to answer more specific questions	Explain what an item of data is
Count a group of objects	Use a tally chart to create a pictogram	Group objects using my own yes/no questions	Talk about the data that i have captured	Group information to answer questions	Construct a formula in a spreadsheet
Count objects	Answer 'more than'/'less than' and 'most/least' questions about an attribute	Prove my branching database works	Import a data set	Choose multiple criteria to answer a given question	Apply a formula to multiple cells by duplicating it
Group objects	Create a pictogram to arrange objects by an attribute	Select objects to arrange in a branching database	Use a computer program to sort data	Choose which field and value are required to answer a given question	Create a formula which includes a range of cells
Count how many objects share a property	Tally objects using a common attribute	Compare two branching database structures	Use a computer to view data in different ways	Outline how 'and' and 'or' can be used to refine data selection	Recognise that data can be calculated using different operations
Group objects in more than one way	Choose a suitable attribute to compare people	Create yes/no questions using given attributes	Plan how to collect data using a data logger	Refine a chart by selecting a particular filter	Apply a formula to calculate the data that is needed to answer questions
Group similar objects	Collect the data i need	Create questions and apply them to a tree structure	Propose a question that can be answered using logged data		Use a spreadsheet to answer questions
Choose how to group objects	Create a pictogram and draw conclusions from it		Use a data logger to collect data		
Record how many objects are in a group	Share what i have found out using a computer				
Record and share what I have found					

		Use a computer program to present information in different ways	Select a theme and choose a variety of objects Use my branching database to answer questions Compare two ways of presenting information	Draw conclusions from the data that I have collected Interpret data that has been collected using a data logger	Select an appropriate chart to visually compare data Ask questions that will need more than one field to answer Present my findings to a group Refine a search in a real world context	Produce a graph Suggest when to use a table or graph Use a graph to show the answer to questions
E-safety						
Self-Image and Identity Self-image and identity	Recognise that there may be people online who could make someone feel sad, embarrassed or upset If this happens children can give example of when and how to speak to an adult they can trust and how they can help	Explain how other people may look and act differently online and offline Give examples of issues online that make someone feel worries, sad or frightened; give examples of how they may get help	Explain what is meant by the term 'identity'. Explain how people can represent themselves in different ways online 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.	Explain how my online identity can be different to my offline identity. Describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them. Explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.	Explain how identity online can be copied, modified or altered. Demonstrate how to make responsible choices about having an online identity, depending on context.	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. Describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline. Explain the importance of asking until I get the help needed.
Online Relationships Online relationships	Give examples of when children should ask permission to do something online and explain why this is important Can use the internet with adult support to communicate with people I know Explain why it is important to be considerate and kind to people online and respect their choices Explain why things one person finds funny or sad online may not always be seen in the same way by others	Give example of how someone might use technology to communicate with others they don't also know offline and explain why this may be risk. (e.g. Email, online gaming, a penpal) Explain who I should ask before sharing things about myself or others online. Describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure.	Describe ways people who have similar likes and interests can get together online. Explain what it means to 'know someone' online and why this might be different from knowing someone offline. Explain what is meant by 'trusting someone online', why this is different from '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. Explain what is meant by 'trusting someone online', why	Describe strategies for safe and fun experiences in a range of online social environments (e.g. Livestreaming, gaming platforms) Give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours. Explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.	Give examples of technology specific forms of communication (e.g. Emojis, memes and gifs). Explain that there are some people I communicate with online who may want to do me or my friends harm. Recognise that this is not my / our fault. 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).	Explain how sharing something online may have an impact either positively or negatively 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. Describe how things shared privately online can have unintended consequences for others. E.g. Screengrabs. Explain that taking or sharing inappropriate images of someone (e.g. Embarrassing

			this is different from '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. Explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried. Explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried. Explain how someone's feelings can be hurt by what is said or written online. 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 videos.		Explain how someone can get help if they are having problems and identify when to tell a trusted adult. Demonstrate how to support others (including those who are having difficulties) online.	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 ★★★★★ Online reputation	Recognise that information can stay online and could be copied Describe what information I should not put online without asking a trusted adult first	Can explain how information put online about someone can last for a long time Describe how anyone's online information could be seen by others. Know who to talk to if something has been put online without consent or if it is incorrect	Explain how to search for information about others online Give examples of what anyone may or may not be willing to share about themselves online. Explain the need to be careful before sharing anything personal. Explain who someone can ask if they are unsure about putting something online.	Describe how to find out information about others by searching online. Explain ways that some of the information about anyone online could have been created, copied or shared by others.	Search for information about an individual online and summarise the information found. Describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect	Explain the ways in which anyone can develop a positive online reputation. Explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity.
Online Bullying Hi! Online relationships	Describe how to behave online in a ways that do not upset others and give examples	Explain what bullying is, how people may bully others and how bullying can make someone feel Explain why anyone who experiences bullying is not to blame Talk about how anyone experiencing bullying can get help	Describe appropriate ways to behave towards other people online and why this is important. Give examples of how bullying behaviour could appear online and how someone can get support.	Recognise when someone is upset, hurt or angry online. Describe ways people can be bullied through a range of media (e.g. Image, video, text, chat). Explain why people need to think carefully about how content they post might affect others, their feelings and how it	Recognise online bullying can be different to bullying in the physical world and can describe some of those differences. Describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying.	Describe how to capture bullying content as evidence (e.g screengrab, URL, profile) to share with others who can help me. Explain how someone would report online bullying in different contexts.

				may affect how others feel about them (their reputation).	Explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult.

Identify a range of ways to report concerns and access support both in school and at home about online bullying.

Explain how to block abusive users.

Describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix). | |
| **Managing Online Information**

Managing online information | Give simple explained of how to find information using digital technologies eg search engines, voice activated searching

Know and understand they we can encounter a range of things online including things we like and don't like as much as well as things with are real of make believe/ a joke

Know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable worries or frightened | Use simple keywords in search engines

Demonstrate how to navigate a simple webpage to get to information I need (e.g. Home, forward, back buttons; links, tabs and sections).

Explain what voice activated searching is and how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri).

Explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'

Explain why some information I find online may not be real or true. | Demonstrate how to use key phrases in search engines to gather accurate information online.
Explain what autocomplete is and how to choose the best suggestion.

Explain how the internet can be used to sell and buy things

Explain the difference between a 'belief', an 'opinion' and a 'fact. And can give examples of how and where they might be shared online, e.g. In videos, memes, posts, news stories etc.

Explain that not all opinions shared may be accepted as true or fair by others (e.g. Monsters under the bed).

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. | 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.

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).

Describe some of the methods used to encourage people to buy things online (e.g. Advertising offers; inapp purchases, popups) and can recognise some of these when they appear online.

Explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.

Explain that technology can be designed to act like or impersonate living things (e.g. Bots) and describe what the benefits and the risks might be. | Explain the benefits and limitations of using different types of search technologies e.g. Voice activation search engine.
Explain how some technology can limit the information I am presented with.

Explain what is meant by 'being sceptical'; give examples of when and why it is important to be 'sceptical'.

Evaluate digital content and can explain how to make choices about what is trustworthy e.g. Differentiating between adverts and search results.

Evaluate digital content and can explain how to make choices about what is trustworthy e.g. Differentiating between adverts and search results.

Explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence.

Identify ways the internet can draw us to information for different agendas, e.g. Website notifications, popups, targeted ads | Explain how search engines work and how results are selected and ranked.

Explain how to use search technologies effectively.

Describe how some online information can be opinion and can offer examples.

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.

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).

Understand the concept of persuasive design and how it can be used to influences peoples' choices.

Demonstrate how to analyse and evaluate the validity of |

				Explain what is meant by fake news e.g. Why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.	Describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. By commercial companies or by vloggers, content creators, influencers). 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. Describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful. Explain what is meant by a 'hoax'. Explain why someone would need to think carefully before they share.	'facts' and information and explain why using these strategies are important. Explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. Explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. Explain why information that is on a large number of sites may still be inaccurate or untrue. Assess how this might happen (e.g. The sharing of misinformation or disinformation). Identify, flag and report inappropriate content.
Healthy Wellbeing and lifestyle Healthy, wellbeing and lifestyle	Can explain rules to keep myself safe when using technology both in and beyond the home	Explain simple guidance for using technology in different environments and settings e.g. Accessing online technologies in public places and the home environment. Say how those rules / guides can help anyone accessing online technologies	Explain why spending too much time using technology can sometimes have a negative impact on anyone; give some examples of both positive and negative activities where it is easy to spend a lot of time engaged Explain why some online activities have age restrictions, why it is important to follow them and know who 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).	Explain how using technology can be a distraction from other things, in both a positive and negative way. Identify times or situations when someone may need to limit the amount of time they use technology e.g. Suggest strategies to help with limiting this time.	Describe ways technology can affect health and wellbeing both positively (e.g. Mindfulness apps) and negatively. Describe some strategies, tips or advice to promote health and wellbeing with regards to technology. Recognise the benefits and risks of accessing information about health and wellbeing online and how we should balance this with talking to trusted adults and professionals. Explain how and why some apps and games may request or take payment for additional content (e.g. Inapp purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing.	Describe common systems that regulate agerelated content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. Recognise and can discuss the pressures that technology can place on someone and how / when they could manage this. Recognise features of persuasive design and how they are used to keep users engaged (current and future use). Assess and action different strategies to limit the impact of technology on health (e.g. Nightshift mode, regular breaks, correct posture, sleep, diet and exercise).

Privacy and Security Privacy and security	Can explain how passwords are used to protect information, accounts and devices. Recognise more detailed examples of information that is personal to someone (e.g. where someone lives and goes to school) Explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others.	Explain how passwords can be used to protect information, accounts and devices. Explain and give examples of what is meant by 'private' and 'keeping things private'. Describe and explain some rules for keeping personal information private (e.g. Creating and protecting passwords). Explain how some people may have devices in their homes connected to the internet and give examples (e.g. Lights, fridges, toys, televisions).	Describe simple strategies for creating and keeping passwords private. Give reasons why someone should only share information with people they choose to and can trust. Explain that if they are not sure or feel pressured then they should tell a trusted adult. Describe how connected devices can collect and share anyone's information with others.	Describe strategies for keeping personal information private, depending on context. Explain that internet use is never fully private and is monitored, e.g. Adult supervision. Describe how some online services may seek consent to store information about me; I know how to respond appropriately and who ask if I am not sure. Know what the digital age of consent is and the impact this has on online services asking for consent.	Explain what a strong password is and demonstrate how to create one. 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. Explain what app permissions are and can give some examples.	Describe effective ways people can manage passwords (e.g. Storing them securely or saving them in the browser). Explain what to do if a password is shared, lost or stolen. Describe how and why people should keep their software and apps up to date, e.g. Auto updates. Describe simple ways to increase privacy on apps and services that provide privacy settings. Describe ways in which some online content targets people to gain money or information illegally; describe strategies to help me identify such content (e.g. Scams, phishing). Know that online services have terms and conditions that govern their use.
Copyright and Ownership Copyright and ownership	Explain why work I created using technology belongs to me Can say why it belongs to me Able to save my work under a suitable title or name so that others know it belongs to me. Understand that work created by others does not belong to me even if I save a copy.	Recognise that content on the internet may belong to other people. Describe why other people's work belongs to them	Explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause.	When searching on the internet for content to use, explain why I need to consider who owns it and whether I have the right to reuse it. Give some simple examples of content which I must not use without permission from the owner, e.g. Videos, music, images.	Assess and justify when it is acceptable to use the work of others Give examples of content that is permitted to be reused and know how this content can be found online.	Demonstrate the use of search tools to find and access online content which can be reused by others. Demonstrate how to make references to and acknowledge sources I have used from the internet.