COMPUTING KNOWLEDGE PROGRESSION

Year	R	1	2	3	4	5	6
Information Technology	**Word Processing/Typing** Use computer/ keyboards/mouse in role play. Know how to play on a touch screen game. Type letters using a keyboard and tablet. **Presentations, web design and eBook Creation** Move and resize images with my fingers or mouse. Record my voice over a picture. **Video and Sound** Know the difference between a photograph and a video. Record a short film using a camera. Watch films back on a camera. Record sounds and voices in storytelling. Find ways to change voice (tube, tin, echo…) **Data Collection** Identify a chart Sort physical objects, take a picture and discuss what has been done. **Photography & digital art** Take a photograph. Use a painting app and explore the paint and brush tools.	**Word Processing/Typing** Identify the parts of a keyboard. Identify parts of a computer/laptop. Use a keyboard to begin to learn to type. Use word processors to type text in a document. **Presentations, web design and eBook Creation** Know how to add labels to an image in an ebook. Order images to create a simple storyboard in an ebook. **Video and Sound** Record a film using a camera app. Select images and record a voiceover. Highlight and zoom into images as I record. Record a sequence of sounds for an ebook. Record my voice for an ebook. **Data Collection** Collect data on a topic. Create a tally chart and pictogram. **Photography & digital art** Edit a photo with simple tools. Use a paint/drawing app to create a digital image.	**Word Processing/Typing** Use a keyboard to learn to type - using the space bar only once between words. Use caps lock for capital letters when typing. Copy and paste images and text. Add images alongside text in a word processed document. **Presentations, web design and eBook Creation** I can add voice labels to an image. Add a voice recording to a storyboard. Add speech bubbles to an image to show what a character thinks. Import images to a project from the web and camera roll. **Video and Sound** Use tools to add affects to a video. Record sound effects. **Data Collection** Create a bar chart or venn diagram to show data collected. **Photography & digital art** I can edit a photo (crop, filters, mark up etc.) I can select and use tools to create digital imagery - controlling the pen and using the fill tool.	**Word Processing/Typing** Use a keyboard to type paragraphs of text using my index fingers on keyboard home keys (f/j), use left fingers for a/s/d/f/g, and use right fingers for h/j/k/l. I can organize and duplicate text using copy, cut, paste. I can edit the style of text to make it more engaging and eye-catching. **Presentations, web design and eBook Creation** I can create and save a document containing text, images and animations. I can create a simple digital timeline/mindmap **Video and Sound** I can create and edit purposeful compositions using music software to create mood or a certain style **Data Collection** I can create my own sorting diagram and complete a data handling activity with it using images and text. **Photography & digital art** I can create a digital image using a variety of tools, brushes and effects	**Word Processing/Typing** I can combine digital images from different sources, objects, and text. Confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text **Presentations, web design and eBook Creation** I can create an interactive quiz eBook demonstrating my understanding of a range of media. I can create an eBook with text, images, sound and hyperlinks **Video and Sound** Create a song following the correct rhythm. **Data Collection** I can create my own online multiple choice questionnaire. I can input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts. **Photography & digital art** I can manipulate shapes to create digital art.	**Word Processing/Typing** I can start to apply other useful effects to my documents such as hyperlinks. I can import sounds to accompany and enhance the text in my document. I can organise and reorganise text on screen to suit a purpose **Presentations, web design and eBook Creation** I can collaborate with peers using online tools, e.g, Google Drive, blogs… I can create and export an interactive presentation including a variety of media, animations, transitions and other effects. **Video and Sound** I can add voice over and edit sound clips (volume, pitch, fade, effect) to add to photos and videos. **Data Collection** I can create and publish my own online questionnaire and analyse the results. I can use simple formulae to solve calculations including =sum and other statistical functions. I can edit and format different cells in a spreadsheet. **Photography & digital art** I can make a digital photo using camera settings. I can enhance digital photos and images using crop, brightness and resize tools.	**Word Processing/Typing** I can confidently choose the best application to demonstrate my learning. I can format text to suit a purpose. I can publish my documents online regularly and discuss the audience and purpose of my content. **Presentations, web design and eBook Creation** I can create a website which includes a variety of media. I can use hyperlinks in my website.. I can evaluate my own content and consider ways to make improvements. **Video and sound** I can add animated subtitles to my film to further enhance my creation. I can create videos using a range of media - animations, film and image. Add voice over and edit sound clips (volume, fade, pitch) to use in a film or radio broadcast. Compose a soundtrack that can be added to a film project. **Data Collection** I can write spreadsheet formula to solve more challenging maths problems. I can create and publish my own online quiz with a range of media (images and video). **Photography & digital art** I can edit a picture to remove items, add backgrounds, merge 2 photos. I can evaluate and discuss images explaining effects and filters that have been used to enhance media.

Year	R	1	2
Digital literacy	**Self image and identity** Recognise right to say 'no'/'please stop'/'I'll tell'/'I'll ask' to somebody who asks to do something that makes you feel sad, embarrassed or upset. **Online Relationships** Recognise some ways the internet can be used to communicate. **Online Bullying** Describe ways people can be unkind online. Offer examples of how this can make others feel. **Managing online information** Talk about how we can use the internet to find things out. Identify devices I could use to access information on the internet. **Health and well-being and lifestyle** Identify rules that keep us safe and healthy in and beyond the home when using technology. **Privacy and Security** Identify some simple examples of my personal information (e.g. name, address, birthday, age, location) Describe the people that I can trust and share personal information with. **Copyright and Ownership** I know that work I create belongs to me. I can name my work so that others know it belongs to me.	**Self image and identity** Recognise that there may be people online that make me feel sad, embarrassed or upset. Know how and when to speak to an adult I trust about things that make me feel sad, worried, uncomfortable or frightened. **Online Relationships** 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. **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. **Online Bullying** Describe how to behave online in ways that do not upset others. **Managing online information** Know how to enter a website address into the address bar. Know how to view and navigate a website to find things out. Use simple keywords in a search engine. Describe how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable, worries or frightened. **Health and well-being and lifestyle** Explain rules that keep us safe and healthy in and beyond the home when using technology. Give examples of these rules. **Privacy and Security** Recognise more detailed examples of information that is personal to me (e.g, where I live, my family's names, where I go to school). Explain how passwords can be used to protect information and devices. **Copyright and Ownership** Explain why work I create using technology belongs to me (e.g, 'my idea' or 'I designed it')	**Self image and identity** Explain how other people's identity online can be different to their identity in real life. Give examples of issues online that might make me feel sad, worried, uncomfortable or frightened. **Online Relationships** Use the internet to communicate with people I don't know well (e.g, email a school in another country). **Online Reputation** Explain how information put online about me can last for a long time. Know who to talk to if I think someone has made a mistake about putting something online. **Online Bullying** Give examples of bullying behavior and how it could look online. Talk about how someone can/would get help about being bullied online or offline. **Managing online information** Use keywords in search engines. Demonstrate how to navigate a simple webpage to get to information needed. Explain why some information I find online may not be true. **Health and well-being and lifestyle** Explain simple guidance/rules for using technology in different environments and settings. Say how those rules/guides can help me. **Privacy and Security** Describe why other people's work belongs to them. Recognise that content on the internet may belong to other people. **Copyright and Ownership** Save my work so people know it belongs to me (e.g, filename, name on content)

Year	3	4	5	6
Digital literacy	**Self image and identity** 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 **Online Relationships** 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. **Online Reputation** 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 anything personal **Online Bullying** 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. **Managing online information** I can demonstrate how to use key phrases in search engines to gather accurate information online. I can explain the difference between a belief, an opinion and a fact and give examples **Health and well-being and lifestyle** I can explain why spending too much time using technology can sometimes have a negative impact on anyone I can explain why some online activities have age restrictions **Privacy and Security** 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 describe how connected devices can collect and share anyone's information with others. **Copyright and Ownership** 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.	**Self image and identity** 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. **Online Relationships** 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. **Online Reputation** 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 **Online Bullying** 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) **Managing online information** I can analyse information to make a judgement about probable accuracy I can explain that technology can be designed to act like or impersonate living things (e.g. bots) **Health and well-being and lifestyle** 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 **Privacy and Security** 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 can describe how some online services may seek consent to store information about me I know what the digital age of consent is **Copyright and Ownership** 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. can give some simple examples of content which I must not use without permission from the owner e.g. videos, music, images	**Self image and identity** Explain how identity online can be copied, modified or altered. Demonstrate responsible choices about my online identity, depending on context. **Online Relationships** Explain that there are some people I communicate with online who may want to do me or my friends harm. Recognise that this is noy my/our fault. Make positive contributions and be part of online communities. Describe some of the communities in which I am involved and describe how I work with others positively. **Online Reputation** Search for information about an individual online and create a summary report of the information I find. Describe the ways that information about people online can be used by others to make judgements about an individual. **Online Bullying** Describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone. Explain how to block abusive users. Explain how to report online bullying on apps and platforms used. Describe the helpline services who can support and what to say and do if their help is needed (e.g. Childline) **Managing online information** Evaluate digital content and explain how I make choices from search results. Explain why I need to think carefully about forwarding anything online. Explain why some information I find online may not be honest, accurate or legal. **Health and well-being and lifestyle** Describe was technology can affect healthy sleep and describe some of the issues. Describe some strategies, tips or advice to promote healthy sleep with regards to technology. **Privacy and Security** Create and use strong passwords. Explain that many free apps may read and share my private information (e.g. friends, contacts, likes, images, videos, voice, geolocation). Explain how and why some apps may request or take payment for additional content (e.g. in-app purchases) and explain why I should seek permission from a trusted adult before purchasing. **Copyright and Ownership** Assess and identify when it is acceptable to use the work of others. Give examples of content that is permitted to be reused.	**Self image and identity** Describe ways in which media can shape ideas about gender. Identify messages about gender roles and make judgements based on them. Challenge and explain why it is important to reject inappropriate messages about gender online. Describe issues online that might make me or others feel sad, worried, uncomfortable or frightened. Know and give examples of how to help both on and offline. Explain why it is important to keep asking until you get the help you need. **Online Relationships** Show I understand my responsibilities for the wellbeing of others in my online social group. Explain how impulsive and rash communications online may cause problems. Demonstrate how I would support others online. Demonstrate ways of reporting problems online for both ,myself and my friends. **Online Reputation** Explain how I am developing an online reputation which will allow other people to form an opinion of me. Describe some simple ways that help build a positive online reputation. **Online Bullying** Describe how to capture bullying content as evidence (e.g. screen-grab, URL, profile) to share with others that can help. Identify a range of ways to report concerns both in school and at home about online bullying. **Managing online information** Explain how search engines work and how results are selected and ranked. Explain how and why some people may present 'opinions' as 'facts' - define the terms 'influence', "manipulation' and 'persuasion'. Identify, flag and report inappropriate content. **Health and well-being and lifestyle** Describe common systems that regulate age-related content (e.g. PEGI, parental warnings) and describe their purpose. Assess and action different strategies to limit the impact of technology on my health (e.g. night mode, regular breaks, correct posture, sleep, diet and exercise). **Privacy and Security** Use different passwords for a range of online services. Describe effective strategies for managing those passwords (e.g. password managers, acronyms, stories). Know what to do if your password is lost or stolen. 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 (e.g. scams, phishing) **Copyright and Ownership** 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.

Year	R	1	2	3	4	5	6
Computing science - theory	Identify technology in the classroom. Identify technology in the home.	Identify input devices and their uses (keyboard, mouse, lens/camera, microphone). Identify output devices and their uses (Headphones, monitor screen, printer, light) Identify technology uses at home.	Identify and use input devices and their uses. (keyboard, mouse, lens/camera, microphone). Identify and use output devices and their uses (Headphones, monitor screen, printer, light) Identify technology uses at home as well as in the wider world such as supermarkets and airports.	I understand what digital devices are and how they work I understand that computers in a school are connected in a network I understand how and why digital devices are connected in a network I understand the difference between the internet and the world wide web	I understand how the Internet helps us to collaborate I understand that Internet servers are located all over the planet I understand how email is sent	I understand how we view web pages on the internet. I use search technologies effectively. I appreciate how pages are ranked in a search engine.	I understand what HTML is and recognise HTML tags. I know a range of HTML tags and can remix a web page. I can create a webpage using HTML.

Year	R	1	2	3	4	5	6
Computing science – programming	Spot simple patterns. Sequence simple familiar tasks. Use a mouse, touch screen or appropriate access device to target and select options on screen. Input a simple sequence of commands to control a digital device with support (Bee Bots).	Understand what an algorithm is. Write simple algorithms. Understand the sequence of algorithms is important. Debug simple algorithms. Implement a simple program into a digital device (floor robot). Find and correct mistakes in codes.	Write algorithms for everyday tasks. Use logical reasoning to predict the outcome of algorithms. Implement a simple program into a digital device (floor robot and apps). Debug simple algorithms. Create programs on a variety of digital devices. Debug programs. Use logical reasoning to predict the outcome of simple programs.	I understand abstraction is focusing on important events I can decompose tasks into separate steps to create an algorithm when programming I can identify patterns in algorithms I can use repetition in algorithms and programs I can design and create programs that achieve a specific goal I can work with a variety of inputs	I can use abstraction to focus on what is important in my algorithm design I can write increasingly precise algorithms Use logical reasoning to detect and correct errors in algorithms and programs I can use simple selection in algorithms and programs I can work with a variety of outputs	Solve problems by decomposing them into smaller parts. Use selection in algorithms and programs. Recognise the need for condition in repetition within algorithms and programs. Use logical reasoning to explain how algorithms work. Use logical reasoning to detect and correct errors in algorithms. Create programs by decomposing them into smaller parts. Work with variables. Create programs that control or simulate physical systems. Evaluate my work and identify errors.	Recognise, and make use, of patterns across programming projects. Write precise algorithms for use when programming. Identify variables needed and their use in selection and repetition. Decompose code into sections for effective debugging. Critically evaluate my work and suggest improvements. Use a range of sequence, selection and repetition commands. Identify and write generic code for use across multiple projects.