Computing

Progression of Key Skills

Reception – Year 6 *Rev June 2022*

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	**Online Safety** Smartie the Penguin e Book - talking about good and bad choices. **Basic Skills** Using a mouse/ keyboard: Drag and drop pictures, write name	**Basic Skills** Using a mouse/ keyboard: Drag and drop practice **Hour of Code activities**	**Basic Skills** Importing pictures using right mouse button (2Publish) **BHoC** Sequencing/ programming **Safer Internet Day activities**	**Basic Skills** Using mouse to draw over an outline (2Publish) **Lego Coding Express** Designing a track and using arrows/stop/go to make a train move (iPad app)	**Basic Skills** Using mouse to draw pictures (2Paint a Picture) **Lego Coding Express cont'd** Designing a track and using arrows/stop/go to make a train move (iPad app)	**BeeBots/BHoC** Using arrows for directions **Chromakey** Using iPads to take photos using chromakey technology

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	**Online Safety** *CEOP resources: Watching videos* **Technology around us** Recognising technology in school and using it responsibly **BHM activities**	**Online Safety** *Commonsense resources: 'Media Balance is Important'* *How do we find a happy balance between our online and offline activities?* **Digital painting** Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally **Hour of Code activities**	**Online Safety** *CEOP resources: Chatting online* **Digital writing** Using a computer to create and format text, before comparing to writing non-digitally. **Safer Internet Day activities**	**Online Safety** *Commonsense resources: 'Pause for People'* *How do you say goodbye to technology when you don't want to?* **Grouping data** Exploring object labels, then using them to sort and group objects by properties.	**Online Safety** *CEOP resources: Playing games* **Moving a robot** Writing short algorithms and programs for floor robots, and predicting program outcomes.	**Online Safety** *Commonsense resources: 'Safety in My Online Neighbourhood'* *How do you go places safely online?* **Programming animations** Designing and programming the movement of a character on screen to tell stories.

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Year 2	**Online Safety** CEOP resources: Sharing pictures **Information technology around us** Identifying IT and how its responsible use improves our world in school and beyond. **BHM activities**	**Online Safety** Commonsense resources: 'Pause & Think Online' How can we be safe, responsible and respectful online? Recognising the ways in which digital devices can be distracting **Digital photography** Capturing and changing digital photographs for different purposes. **Hour of Code activities**	**Online Safety** CEOP resources: Chatting online **Making music** Using a computer as a tool to explore rhythms and melodies, before creating a musical composition. **Safer Internet Day activities**	**Online Safety** Commonsense resources: 'How Technology Makes You Feel' Why is it important to listen to your feelings when using technology? **Pictograms** Collecting data in tally charts and using attributes to organise and present data on a computer.	**Online Safety** CEOP resources: Playing games **Robot algorithms** Creating and debugging programs, and using logical reasoning to make predictions.	**Online Safety** Commonsense resources: 'Internet Traffic Light' How do you stay safe when visiting a website or app? **Programming quizzes** Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	**Online Safety** Commonsense resources: 'We, the Digital Citizens' How can we be good digital citizens? **Connecting computers** Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks. **BHM activities**	**Online Safety** Commonsense resources: 'Device-Free Moments' Why is it important that we have device-free moments in our lives? **Stop-frame animation** Capturing and editing digital still images to produce a stop-frame animation that tells a story **Hour of Code activities**	**Online Safety** Commonsense resources: 'That's Private!' What kinds of information should I keep to myself when I use the internet? **Desktop Publishing** Creating documents by modifying text, images, and page layouts for a specified purpose. **Safer Internet Day activities**	**Online Safety** Commonsense resources: 'Digital Trails' What information is OK to have in your digital footprint? **Branching databases** Building and using branching databases to group objects using yes/no questions.	**Online Safety** Commonsense resources: 'Who Is in Your Online Community?' How are we all part of an online community? **Sequencing sounds** Creating sequences in a block-based programming language to make music.	**Online Safety** Commonsense resource 'Putting a STOP to Online Meanness' What should you do if someone is mean to you online? **Events and actions in programs** Writing algorithms and programs that use a range of events to trigger sequences of actions.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 4	**Online Safety** Commonsense resources: 'Your Rings of Responsibility' How do digital citizens take responsibility for themselves, their communities and their world? **The internet** Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. **BHM activities**	**Online Safety** Commonsense resources: 'Password Power-Up' How can a strong password help protect your privacy? **Lego WeDo** Making and programming a robot **Data logging** Recognising how and why data is collected over time, before using data loggers to carry out an investigation. **Hour of Code activities**	**Online Safety** Commonsense resources: 'This Is Me' How does what I post online affect my identity? **Repetition in shapes** Using a text-based programming language to explore count-controlled loops when drawing shapes. **Safer Internet Day activities**	**Online Safety** Commonsense resources: 'Our Digital Citizenship Pledge' What makes a strong online community? **Photo editing** Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.	**Online Safety** Commonsense resources: 'The Power of Words' What should you do when someone uses mean or hurtful language on the internet? **Repetition in games** Using a block-based programming language to explore count-controlled and infinite loops when creating a game.	**Online Safety** Commonsense resources: 'Is Seeing Believing?' Why do people alter digital photos and videos? **Audio editing** Producing a podcast, including editing work, adding multiple tracks, and opening and saving audio files.

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Year 5	**Online Safety** Commonsense resources: 'My Media Choices' What makes a healthy media choice? **Sharing information** Identifying and exploring how information is shared between digital systems. **BHM activities**	**Online Safety** Commonsense resources: 'Private & Personal Information' What information about you is OK to share online? **3D Modelling** Creating 3D objects & building using SketchUp **Hour of Code activities**	**Online Safety** Commonsense resources: 'Our Online Tracks' How does our online activity affect the digital footprints of ourselves and others? **Lego WeDo** Making and programming a robot **Safer Internet Day activities**	**Online Safety** Commonsense resources: 'Keeping Games Fun & Friendly' How can I help myself and others be positive and have fun while playing online games? **Flat-file databases** Using a database to order data and create charts to answer questions.	**Online Safety** Commonsense resources: 'Be a Super Digital Citizen' How can we be upstanders when we see cyberbullying? **Vector drawing** Creating images in a drawing program by using layers and groups of objects.	**Online Safety** Commonsense resources: 'a Creator's Rights & Responsibilities' What rights and responsibilities do you have as a creator? **Selection in quizzes** Exploring selection in programming to design and code an interactive quiz.

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Year 6	**Online Safety** Commonsense resources: 'Finding My Media Balance' What does media balance mean for me? **Communication & collaboration** How data is transferred over the internet; how the internet facilitates online communication and collaboration; how to communicate responsibly by considering what should and should not be shared on the internet **BHM activities**	**Online Safety** Commonsense resources: 'You Won't Believe This!' What is clickbait and how can you avoid it? **Webpage creation** Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. **Hour of Code activities**	**Online Safety** Commonsense resources: 'Beyond Gender Stereotypes' How do gender stereotypes shape our experiences online? **Variables in games** Exploring variables when designing and coding a game. **Safer Internet Day activities**	**Online Safety** Commonsense resources: 'Digital Friendships' How do you keep online friendships safe? **Introduction to spreadsheets** Answering questions by using spreadsheets to organise and calculate data.	**Online Safety** Commonsense resources: 'Is It Cyberbullying?' What is cyberbullying and what can you do to stop it? **Lego WeDo** Making and programming a robot **Introduction to Python** Using 'print' for text & ASCII art, exploring use of colours	**Online Safety** Commonsense resources: 'Reading News Online' What are the important parts of an online news article? **Python cont'd** Using variables, encrypting & decrypting messages.
Cultural Capital	Code Club; Online safety assemblies; Visits from relevant groups/individuals; Visits to local secondary schools/Science Museum/other relevant exhibitions/venues; STEAM days; Black History Month activities					