

Burnside Primary School

Computing Progression of Learning

<p>Essence of subject: to be confident and safe in a digital world</p> <p>Fluency: online safety, coding, keyboard and mouse skills & use of the internet</p> <p>Key strands: Computer Science, Information Technology, Digital Literacy</p>			
<p><i>Computing in EYFS ensures that pupils enter Year 1 with a strong foundation, builds problem solving abilities, encourages resilience and supports other areas of learning. The focus in EYFS is on Computational Thinking skills (Computer Science), uses of technology (Information Technology) and Online Safety (Digital Literacy).</i></p>			
Year Group	Computer Science	Information Technology	Digital Literacy
2 Year Olds	<ul style="list-style-type: none"> Notice patterns and arrange things in patterns Know an action has an effect e.g. banging a drum makes a loud noise 	<ul style="list-style-type: none"> Start to develop pretend play, pretending that one object represents another. For example, a child holds a wooden block to their ear and pretends it's a phone. 	<p>Online Safety</p> <ul style="list-style-type: none"> Be increasingly able to talk about and manage their emotions
Nursery	<ul style="list-style-type: none"> Listen to and follow simple instructions Sequence events using language including first, then and after. Use positional language including on top, under, next to and behind Identify patterns around them Make, notice and correct errors in repeating patterns. Discuss routes and locations using words such as in front of, behind. Show skills in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movement or a new image. Can make a Code-a-pillar move. 	<ul style="list-style-type: none"> Operate simple equipment e.g. use a remote control Show an interest in technological toys e.g. Code-a-pillar. Select and use technology e.g. iPad during continuous provision. Knows how to operate simple equipment. Children will have access to role play area where there is technology e.g. telephone, Hoover, washing machine etc. Continuous provision will draw on common uses of control technology for children to experience first-hand or through play. Use correct control and grip with the iPad. 	<p>Online Safety</p> <ul style="list-style-type: none"> Show confidence in asking adults for support. Follow rules for safety. Know about different feelings and be able to talk about them during circle time e.g. happy, sad, angry, worried. Know that if I am upset, I can use phrases such as "stop it", "I don't like it" to convey my discomfort. Start becoming aware of their own feelings through Online Safety stories, and know that some actions and words can hurt others' feelings. Linking to work on Burnside's Core Values, explore how to treat others.
<p>Vocabulary:</p>			

	<i>First, then, after, on top, under, next to, behind, pattern, Code-a-pillar, technology, iPad, screen, worried</i>		
Reception	<ul style="list-style-type: none"> • Come up with a simple set of instructions (algorithm) and begin to program a BeeBot to follow a simple sequence. • Use directional language to describe a sequence using BeeBots • Listen to stories and begin to anticipate what might happen next. • Explore sequence and pattern using stories and maths activities. • Make AB patterns • Make ABB/AAB repeated patterns • Use positional language (under, over, around and through) 	<ul style="list-style-type: none"> • Engage in imaginative role play using technology props through continuous provision e.g. keyboard, microwave, phone. • Explain what technology they have at home • Explore ways of making and listening to sounds using technology. • To use a dominant hand. • To show good control and co-ordination in large and small movements. • Use a range of mark making apps, and will be able to use these to create patterns, shapes and pictures linked to their learning. 	<p>Online Safety</p> <ul style="list-style-type: none"> • Learn how to say when they do or do not need help when working with devices or BeeBots. • Regulate their behaviour accordingly, based on the messages they learn in online safety stories, giving consideration to the feelings of others. • To describe and show friendly behaviour. • To understand how to make the right choices and the consequences of not making the right ones. • Understand the reasons for rules when using technology, knowing right from wrong. • Know to seek adult help if they see something that upsets them online. • Using Burnside's Core Values and Online Safety stories, children will know what it means to be kind and how to treat others online. • Children learn not to share pictures online without adult permission.
	<p>Vocabulary: <i>Instructions, BeeBot, pattern, positional language (under, over, around, through), directional language (forwards, backwards, sideways), technology, upset, help, friendly, consequence, rules</i></p>		
Year 1	<p>Moving a Robot: BeeBots</p> <ul style="list-style-type: none"> • Create a simple series of instructions, record their routes with LEGO and follow instructions with Art e.g. play doh. • Understand which directions forwards, backwards, up and down will take them in. 	<p>Digital Painting</p> <ul style="list-style-type: none"> • Begin identifying different components of a computer. • Develop keyboard and cursor control skills using a laptop touchpad. • Develop understanding of a range of tools used for digital painting. 	<p>Technology Around Us:</p> <ul style="list-style-type: none"> • Recognise common uses of information technology beyond school. • Develop understanding of technology and how it helps us. <p>Online Safety:</p> <ul style="list-style-type: none"> • Know the implications of sharing things online. They will learn the importance of

	<ul style="list-style-type: none"> ● Put two instructions together to control a programmable toy. ● Plan and test a BeeBot journey. ● Understand key concept of sequence, using unplugged activities <p>Introduction to Animation: Scratch Jr</p> <ul style="list-style-type: none"> ● Translate simple algorithms into simple programs. ● Using Scratch Jr on iPads, explore the way a project looks by investigating sprites and backgrounds. ● Use programming blocks to use, modify and create simple programs. Focus on sequence in the programme. Learners will also be introduced to the early stages of program design. <p>Vocabulary: <i>Algorithm, sequence, robot, program, command, sprite, programming, predict, blocks, value.</i></p>	<ul style="list-style-type: none"> ● Create their own digital paintings, while gaining inspiration from a range of artists' work. ● Consider preferences when painting with or without use of digital painting. <p>Digital Writing</p> <ul style="list-style-type: none"> ● Create and manipulate text using computing devices. ● Use a keyboard and mouse to insert and then remove text. ● Consider how to change the look of their text and justify their reasoning in making these changes. ● Consider the differences between using a computer to create text, and writing text on paper, then explain their preferences. <p>Grouping Data: J2 Data</p> <ul style="list-style-type: none"> ● Begin using labels and putting objects into groups, labelling these groups in j2 data. ● On j2 data, demonstrate they can count a small number of objects, before and after the objects are grouped. ● Demonstrate their ability to sort objects into different groups, based on the properties they choose. ● Answer questions about the data they have presented. <p>Vocabulary: <i>Paint program, tool, paintbrush, erase, fill tool, undo tool, word processor, keyboard, keys, cursor, space bar, back space, toolbar, bold, italic, underline, font, object, label, group, search, property, value, data</i></p>	<p>asking permission before sharing images and that they should always ask an adult first.</p> <ul style="list-style-type: none"> ● Keep personal information private ● Identify when and where to go for help when concerned ● Know when and why to take breaks from device time ● Consider the feelings or people around them, even when engaged in fun online activities. ● Learn why it's important to be aware and respectful of people while using devices ● Learn the "Pause! Breathe! Finish Up!" routine as a self regulation strategy for transitioning from technology to face-to-face interactions ● Discover that the internet can be used to visit faraway places and learn new things ● Compare how staying safe online is similar to staying safe in the real world ● Explain rules for travelling safely on the internet <p>Vocabulary: <i>Technology, computer, mouse/trackpad, keyboard, screen, input, shift, space bar, safety, rules, share, permission, pop-up, personal information, private, upset, worried, help, trick.</i></p>
Year 2	Algorithms Unplugged & Mind Robots	Digital Photography	IT Around Us

	<ul style="list-style-type: none"> ● Explain the terms sequence, algorithm. ● Spot and create patterns. Children will then build on their understanding by writing instructions for a partner to recreate their pattern. ● Check that their algorithms work through evaluation and debugging. ● Predict the outcomes of a set of instructions. ● Using Clementoni Mind Robots, design a simple program, and test it. ● Use logical reasoning to predict the outcome of a simple program using the Clementoni Mind Robots. <p>Introduction to Quizzes: Scratch Jr</p> <ul style="list-style-type: none"> ● Use music to learn about sequencing, repetition and debugging. ● Use Scratch Jr to understand that sequences of commands have an outcome and make predictions based on their learning. ● Use and modify designs to create their own quiz questions in Scratch Jr using blocks of code. ● Evaluate their program. <p>Vocabulary: <i>Algorithm, program, sequence, instructions, pattern, input, output, debug, predict, repetition, command, outcome, sprite, blocks, design, actions, modify, evaluate.</i></p>	<ul style="list-style-type: none"> ● Recognise that different devices can be used to capture photographs. ● Gain experience capturing, editing and improving photos. ● Recognise that images they see might not be real. ● Use a given story to create a meaningful sequence of images. <p>Digital Music</p> <ul style="list-style-type: none"> ● Explore sequences and patterns to make music with percussion instruments and digital tools (Chrome Music Lab) ● Create rhythms and tunes using Chrome Music Lab. ● Share their creations and compare creating music digitally and non-digitally. <p>Pictograms: J2 Data</p> <ul style="list-style-type: none"> ● Word process a piece of text, using bold, italic and underlining. To delete and insert a word using the mouse and arrow keys. ● Understand what data is and how this can be collected in the form of a tally chart. ● Learn the term ‘attribute’ and use this to help them organise data. ● Use j2 Data to present data in pictograms and block diagrams. <p>Vocabulary: <i>Device, photograph, camera, capture, image, digital, field of view, narrow/wide, format, framing, focal point, subject matter, compose, natural/artificial light, focus, edit, tools, filter, music, pattern, rhythm, pulse, pitch, tempo, notes, digital, create, data, organise, object,</i></p>	<ul style="list-style-type: none"> ● Discuss how information technology is used in school and beyond (e.g. shops, hospitals and libraries) ● Investigate how IT improves our world and how to use it responsibly. <p>Online Safety</p> <ul style="list-style-type: none"> ● Explain SMART rules and how to use the internet responsibly. ● Know the dangers of sharing photos online ● Understand that people are not always who they say they are. ● Know what should and should not be shared online and know to ask if they are unsure. ● Give detailed examples of information which is personal and how this could be taken from photos as well. ● Explain what passwords are and how/why they are used. ● Understand the importance of being safe, responsible and respectful online. ● Learn the “Pause and Think Online” song to remember basic digital citizen concepts. ● Recognise the different kinds of feelings they can have when using technology. ● Know what to do when they don’t have a good feeling when using technology ● Understand that being safe online is similar to staying safe in real life ● Learn to identify websites that are “just right” and “not right” for them. ● Know how to get help from an adult if they are unsure about a website <p>Vocabulary:</p>
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Year 3	<p>Connecting Computers</p> <ul style="list-style-type: none"> Understand devices that make up a computer network’s infrastructure, such as wireless access points and switches. Identify the benefits of connecting devices in a network. Compare digital and non-digital devices. Develop their understanding of digital devices, with an initial focus on inputs, processes and outputs. <p>Sequencing Sounds: Scratch</p> <ul style="list-style-type: none"> Explore Scratch Desktop software by tinkering. Program their own animation by learning how to choose a sprite, backdrop and create an algorithm. Explore the concept of sequencing using a selection of motion, sound and event blocks. Design their own programs featuring sequences. Experiment with sequences where order is and is not important. <p>Lego WeDo</p> <ul style="list-style-type: none"> Using Lego WeDo Construction sets, children learn how to connect the hardware to the software. 	<p>Desktop Publishing</p> <ul style="list-style-type: none"> Apply understanding of text and image and that they can be used to communicate messages. Use desktop publishing software, considering careful choices of font, colour and type to edit and improve premade templates. Use terms ‘templates’, ‘orientation’, ‘placeholders’ and begin to understand how this will support them in making their own cover for a magazine. Carefully select layouts thinking carefully about purpose. Evaluate how and why desktop publishing is used in the real world. <p>Branching Databases: J2 Data</p> <ul style="list-style-type: none"> Know what a branching database is and how to create one using j2 Data. Understand how attributes are used to sort groups of objects by using yes/no questions. Create physical and on-screen branching databases, and know what data should be presented in this way. <p>Digital Animation</p> <ul style="list-style-type: none"> Use a range of techniques to create a stop frame animation using the iPad. Apply animation skills to create a story-based animation. 	<p>Online Safety</p> <ul style="list-style-type: none"> Recall and explain SMART rules. Understand what to do if something upsets you online Understand that we only talk to people we know in the real world Understand why we should not always trust what we read online and how to check Understand that being a good digital citizen means being safe and responsible online. Take a pledge to be a good digital citizen. Recognise the ways in which digital devices can be distracting Identify how they feel when others are distracted by their devices. Identify ideal device-free moments for themselves and others Recognise the kind of information that is private Understand that they should never give out private information online Learn that the information they share online leaves a digital footprint or “trail” Understand that we need to have permission to share a photo online Explore what information is okay to be shared online

	<ul style="list-style-type: none"> Children will design a program with a specific goal using a sensor and a motor in the Lego WeDo kits. Children will be encouraged to solve any problems they encounter by decomposing them into smaller steps. Children will explore the role of the wait block. <p>Vocabulary: <i>Digital device, input, output, process, connections, messages, network, network switch, server, wireless access point, Scratch, programming, blocks, commands, code, sequence, algorithm, sprite, stage, costume, backdrop, motion, event, design, bug, debug, sensor, scientists, engineers, physical computing, motor, motion, wait, tilt</i></p>	<ul style="list-style-type: none"> Add other types of media to their animation such as text and pictures. <p>Vocabulary: <i>Text, images, communicate, template, font/style, page orientation, layout, content, desktop publishing, copy/paste, purpose, benefits, database, branching database, objects, questions, attribute, data, value, selecting, tree structure, theme, compare, animation, sequence, movement, stop frame, consistent, delete, frame, review, change/modify, media, import, transition</i></p>	<ul style="list-style-type: none"> Compare and contrast how they are connected to different people and places, in person and on the internet Demonstrate an understanding of how people can connect on the internet Understand what online meanness can look like and how it can make people feel. Identify ways to respond to mean words online using “S-T-O-P” Explain how giving credit is a sign of respect for people’s work Learn how to give credit in their schoolwork for content they use from the internet. <p>Vocabulary: <i>Safety, rules, reliable, unreliable, belief, fact, opinion, passwords, private, respect, responsibility, peer pressure, manipulation, digital wellbeing, report, concerns, communication, sharing, identity, trust, appropriate, digital footprint, credit, respect, connect, private.</i></p>
<p>Year 4</p>	<p>Kodu Game Design</p> <ul style="list-style-type: none"> Use Kodu Game Lab to explore the concept of selection using ‘when’ and ‘do’ blocks. To write algorithms to design and create a game in Kodu Game Lab including selection. To effectively debug their code using logical reasoning. <p>Music Videos: Scratch</p> <ul style="list-style-type: none"> Create a music video animation in Scratch Desktop, including new 	<p>Photo Editing</p> <ul style="list-style-type: none"> Know how digital images can be changed and edited, and how they can then be resaved and reused. Consider the impact that editing images can have, and evaluate the effectiveness of their choices. <p>Audio Production</p> <ul style="list-style-type: none"> Examine devices capable of recording digital audio, including identifying the input device and output devices. 	<p>The Internet</p> <ul style="list-style-type: none"> Explain how internet use can be monitored. Understand that the World Wide Web is part of the internet and be given opportunities to explore the WWW themselves to learn about who owns content and what they can access, add and create. <p>Online Safety</p> <ul style="list-style-type: none"> Give examples of how to be respectful to others online.

	<p>computational thinking concepts of loops, events and parallelism.</p> <ul style="list-style-type: none"> ● Become more familiar with the concepts of sequence and experiment with new blocks in the Events, Control, Sound and Looks categories. <p>The Internet</p> <ul style="list-style-type: none"> ● Apply their knowledge and understanding of networks to appreciate the internet as a network of networks which need to be kept secure. ● Learn that the World Wide Web is part of the internet. <p>Vocabulary: <i>Kodu, design, blocks, code, algorithm, program, bug, debug, when...do..., selection, sequence, repetition, commands, logical reasoning, input, actions, events, parallelism, loops, control, broadcasts, scripts, animation, internet, networks, secure, World Wide Web.</i></p>	<ul style="list-style-type: none"> ● Use Audacity to produce a podcast, which will include editing their work, adding multiple tracks, and opening and saving audio files. They will also consider audio rights. <p>Spreadsheets & Presentation</p> <ul style="list-style-type: none"> ● Prepare for a pizza party by collecting and storing data on a spreadsheet for the pizza toppings: Pupils to input data into a pre-prepared spreadsheet, recognising what a spreadsheet, cell, row and column are. ● Sort, highlight and search a database to answer simple questions about the pizzas. ● Use their data to create a bar chart and work out the costs. <p>Vocabulary: <i>Digital image, editing, composition, filters, effects, retouching, tools, elements, fake images, cut, crop, background, foreground, publication, layer, hue/saturation, sepia, input, output, device, record, re-record, audio, playback, soundwave, software, trim, podcast, align, tracks, content, sound effects, search, research, spreadsheet, data, attributes, values, cells, analyse, function, sum, calculate, totals.</i></p>	<ul style="list-style-type: none"> ● Identify where online bullying might take place and ways people can be bullied through a range of media (image, video, text, chat) and manipulation/peer pressure. ● Explain and describe a range of ways to report concerns e.g. block, report, tell adult, Childline. Link to dangers of talking to people they don't know. ● Give some simple examples and understand what copyright is. ● Examine both online and in-person responsibilities ● Describe the "Rings of Responsibility" as a way to think about how our behaviour affects ourselves and others ● Identify examples of online responsibilities of others ● Define the term "password" and describe its purpose ● Understand why a strong password is important ● Practise creating a strong and memorable password ● Consider how posting selfies or other images will lead others to make assumptions about them ● Reflect on the most important parts of their unique identities ● Identify ways they can post online to best reflect who they are ● Define what a community is, both in person and online
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Year 5	<p>Selection in Quizzes: Scratch</p> <ul style="list-style-type: none"> ● Develop their knowledge of selection by revising how conditions can be used in programming. ● Understand how the 'if...then...else' structure can be used to select different 	<p>Vector Drawings</p> <ul style="list-style-type: none"> ● Understand that vector images are made up of shapes. ● Use different drawing tools (e.g. in Powerpoint) to create images in layers. 	<p>Online Safety</p> <ul style="list-style-type: none"> ● Give examples of how they might get help if they feel upset, worried or uncomfortable. ● Block abusive users.

	<p>outcomes depending on whether a condition is 'true' or 'false'.</p> <ul style="list-style-type: none"> ● Represent understanding of selection in algorithms and then by constructing programs in Scratch. ● Write programs that ask questions and use selection to control outcomes based on answers given. ● Design a quiz in response to a given task and implement it as a program. ● Evaluate their program by identifying any modifications needed and how it meets requirements of the task. <p>Systems & Searching</p> <ul style="list-style-type: none"> ● Develop understanding of computer systems and how information is transferred between systems and devices. ● Use search technologies effectively. ● Consider small-scale systems as well as large-scale systems. ● Explain the input, output and process aspects of a variety of different real-world systems. ● Understand how search engines work including how they select and rank results and what influences searching. <p>Digital Music: Sonic Pi</p> <ul style="list-style-type: none"> ● Use Sonic Pi and text-based programming language called Ruby, and explore its capabilities with tinkering time. ● Use their programming skills to recreate their choice of music and remix it using loops and effects. 	<ul style="list-style-type: none"> ● Explore the ways in which images can be grouped and duplicated. ● Make cohesive images. <p>Video Editing</p> <ul style="list-style-type: none"> ● Create short topic-based videos in groups, developing the skills of capturing, editing, and manipulating video. <p>Flat-file Databases: J2 Data</p> <ul style="list-style-type: none"> ● Look at how flat-file databases can be used to organise data in records. ● Use tools within a database to order and answer questions about data. ● Create graphs and charts from their data to help solve problems. ● Use real-life databases to answer a question, and present their work to others. <p>Vocabulary: <i>Vector drawings, graphics, elements, objects, line, drawing tools, move, resize, rotate, duplicate, alignment, modify, consistency, layers, order, grouping, video, audio, recording, script, dialogue, soundtrack, capture, zoom, videographer, AV (audiovisual), pan, tilt, angle, import, edit, split, trim, end credits, transitions, retake, data, database, field, order, sort, group, flat-file, record, combine, chart, filter, graphics, refine, present, value</i></p>	<ul style="list-style-type: none"> ● Explain how they would report online bullying on the apps and platforms they use. ● Describe the helpline services who can support them and what they would say and do if they needed their help (e.g.Childline) ● Be discerning in their evaluation of digital content and explain how choices are made from search results. ● Recognise examples of spam and know how to identify it. Understand risks associated with spam mail. ● Learn the “What? When? How much?” framework for describing their media choices ● Use this framework and their emotional responses to evaluate how healthy different types of media choices are ● Begin to develop their own definition of a healthy media balance ● Identify the reasons why people share information about themselves online ● Explain the difference between private and personal information ● Explain why it is risky to share private information online ● Define the term “digital footprint” and identify the online activities that contribute to it ● Identify ways they are – and are not – in control of their digital footprint ● Explain how apps/services may read and share private information e.g. geolocation.
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	<ul style="list-style-type: none"> • Use sequence, selection and repetition loops in a program. <p>Vocabulary: <i>Scratch, algorithm, code, program, bug, debug, sequence, repetition, selection, infinite loop, conditions, modify, outcomes, branching structure, design, implement, logical reasoning, digital systems, connections, input, processes, output, devices, search engine, refine, address bar, web crawlers, index, rank, influence, criteria, limitations, text language, Ruby, Sonic Pi, loops, nested loops, tempo, command, effects, modify.</i></p>		<ul style="list-style-type: none"> • Understand what responsibilities they have for the digital footprints of themselves and others • Define “social interaction” and give an example • Describe the positives and negatives of social interaction in online games • Create an online video game cover that includes guidelines for positive social interaction • Reflect on the characteristics that make someone an upstanding digital citizen • Recognise what cyberbullying is • Recognise when someone is upset, hurt and angry online. • Describe how to get help for someone who is being bullied online and assess when they need to do something or tell someone. • Show ways to be an upstanding digital citizen • Define “copyright” and explain how it applies to their creative work • Describe their rights and responsibilities as creators • Apply copyright principles to real-life scenarios <p>Vocabulary: <i>Communities, harm, communicate, help/support, uncomfortable, block Abusive, report, helplines, Childline, private, strong password, geolocation, personal, modified/altered, online identity,</i></p>
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			<i>responsible choices, digital wellbeing, digital footprint, judgement, permission, in-app purchase, spam, copyright, stereotypes, challenge, acceptable, unacceptable, online bullying, upstander, social interaction</i>
Year 6	<ul style="list-style-type: none"> ● Communication & Collaboration ● Explore how data is transferred over the internet, how addresses work and the makeup and structure of data packets. ● Know how the internet facilitates online communication and collaboration. ● Variables in Games: Scratch ● Understand what a variable is and what data they can hold. ● Explain why variables are used and how they can be changed ● Use variables to improve a game using Scratch ● Create loops and nested loops to make code more efficient. ● Use variables and conditions to extend a game (e.g add levels) ● Use logical reasoning to predict outcomes and debug their code. ● Sensing: Micro:bit ● Combine the 4 programming concepts taught in KS2 of sequence, selection, repetition and variables using Micro:bits. ● Create variables, design and program the Micro:bit to use as a step counter. ● Choose appropriate names for variables. 	<ul style="list-style-type: none"> ● 3D Modelling: Tinkercad ● Use Tinkercad to produce 3D models. Children will combine 3D objects to make a building and compare the difference with working with 2D and 3D graphics. ● Make accurate 3D models of objects which include using 3D objects as placeholders. ● Plan, develop and create their own 3D design. ● Spreadsheets: Excel/Google Sheets ● Using Excel, organise data into columns and rows. ● Format data in a Spreadsheet to support calculations. ● Understand how formulas are used in Spreadsheets to produce calculated data. ● Apply formulas to multiple cells by duplicating them, and explore functions. ● Use a spreadsheet to plan an event. ● Web Design ● Understand that websites are created for a chosen purpose. ● Identify what makes a good webpage and use this information to design and evaluate their own website using School 360. ● Pay specific attention to copyright and fair media, the aesthetics of the website and navigation paths. 	<ul style="list-style-type: none"> ● Online Safety ● Know how to capture evidence of bullying content and identify a range of ways to report concerns both in school and at home about online bullying. ● Describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. ● Make references and acknowledge sources they have used from the internet, and explain what copyright is. ● Consider what “media balance” means and how it applies to them ● Create a personalised plan for healthy and balanced media use ● Define “the curiosity gap” ● Explain how clickbait uses the curiosity gap to get your attention ● Use strategies for avoiding clickbait ● Describe ways in which some online content targets people to gain money or information illegally and how to identify scams/phishing. ● Analyse and evaluate the validity of ‘facts’, explaining why it is important. ● Explain how and why some people might present ‘opinions’ as ‘facts’. ● Describe mis/dis-information, influence, manipulation and persuasion.

	<ul style="list-style-type: none"> ● Plan and predict how their program will control the physical system. ● Run their code on an emulator to test it. ● Evaluate the effectiveness of the step counter as a sensor. <p>Vocabulary: <i>Sequence, selection, repetition, variable, value, algorithm, code, debug, logical reasoning, blocks, program, conditional loop, modify, protocols, IP addresses, DNS(Domain name server), data, devices, packets, internet, header, payload, collaboration, files, reuse, modify, communication, internet security, Micro:bit, input, output, program, code, flash, emulator, operand, bug, debug, simulate, sensor.</i></p>	<ul style="list-style-type: none"> ● Incorporate other elements including embedding a film link from Youtube. ● Use ICT to record sounds and capture both still and moving images as well as links to other web pages. <p>Vocabulary: <i>Workplane, create, manipulate, select, position, graphics, resize, rotate, relation, duplicate, decompose, dimensions, placeholder, construct, spreadsheet, data set, cell, data headings, format, inputs, outputs, formulas, calculate, duplicate, sum, total, function, graph, media, HTML, layout, features, purpose, effect, audience, fair use, copyright, images, ownership, content, devices, evaluate, navigation path, hyperlink.</i></p>	<ul style="list-style-type: none"> ● Define “gender stereotypes” and describe how they can be present online ● Describe how gender stereotypes can lead to unfairness or bias ● Compare and contrast different kinds of online-only friendships ● Describe the benefits and risks of online-only friendships ● Give examples of how they might get help both on and offline, and can explain why they must keep asking until they get the help they need. ● Identify, flag and report inappropriate contact. ● Explain that there are some people they communicate with online who may want to do them or their friends harm, and understanding manipulation and flattery. Recognise that this is not their fault. ● Describe how to respond to an online-only friend if the friend asks something that makes them feel uncomfortable ● Know that it is their choice to accept online contact and understand the meaning of the term ‘consent’. ● Explain how impulsive and rash communications online may cause problems (e.g. flaming, content produced in livestreams). ● Recognise similarities and differences between in-person bullying, cyberbullying and being mean ● Empathise with the targets of cyberbullying
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			<ul style="list-style-type: none"> ● Identify strategies for dealing with cyberbullying and ways they can be an upstander for those being bullied ● Understand the purposes of different parts of an online news page ● Identify the parts and structure of an online news article ● Learn about things to watch out for when reading online news pages, such as sponsored content and advertisements ● Identify a range of ways to report inappropriate online content and contact including CEOPs and Childline. <p>Vocabulary: <i>Evidence, capture/screenshot, rules, online bullying, report concerns, support, helplines, Childline, CEOPs, identify/flag/report, appropriate/acceptable, inappropriate, communicate, harm, manipulation, flattery, choice/consent, impulsive, livestream, content, permission, strong password, strategies, privacy settings, reputation, PEGI/BBFC, age rating, digital wellbeing, self-regulation, cyber security, fake news, fact validity, mis- dis- information, influence, persuasion, reference, copyright.</i></p>
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