Together We Grow

Buttsbury Infant School

Curriculum Progression Statements

At Buttsbury Infant School we pride ourselves on having an ambitious, broad and balanced curriculum. We follow the National Curriculum and ensure that there is progression throughout each subject, in all year groups. As we follow the National Curriculum, some progression is outlined in statutory documentation; where this is not explicit, we have used a range of other sources to guarantee there is appropriate challenge and variety.

This document sets out how Buttsbury Infant School's curriculum progresses in each subject.

Buttsbury Infant School Computing Skills Progression

EYFS	
Skills progression	Explore uses of technology(hardware) within school and home. Such as telephones, tablets, cameras and computers. Programming 1: instructions. Following, giving, simple debugging and making predictions. Safe use of technology at home and school. Recognising safe amounts of screen time. Programming 2: Control a programmable toy- bee-bots- understanding direction arrows, simple programming, using simple algorithms, programming in more detail. An introduction to data- sorting themselves, answering yes or no, exploring simple pictograms and creating a branching database. Using a computer- becoming familiar with logging in, using a trackpad/mouse to move and click, clicking and dragging.
Early learning goals	**ELG: Understanding the world -** foster their understanding of our culturally, socially, technologically and ecologically diverse world. Children are introduced to basics of safe use of technology and how to report unsettling episodes *Teachers to ensure that technology flows across all areas of learning and provide access to technology to ensure it is incorporated through everything as part of everyday life*

	Year 1	Year 2
Common uses of information technology inside and beyond school.	Understand and identify different forms of technology and explain how they can help us. Identify the different parts of a computer, using a mouse/touchpad to click and drag objects on a screen, open programs and create pictures. To understand and use a keyboard to write familiar words, edit text (including deleting) and use the arrow keys to move the cursor. To save their work to a computer or to a cloud. Key Vocabulary- technology, account, log off, log on, mouse, trackpad, software, computer, Chromebook, screen, tool, click, drag, explore, redo, undo, clipart, resize, portrait	To understand the uses and features of information technology, identifying examples of computers and their uses as an element of IT. Understand different uses of information technology within the school and outside the school and say how these can be used for different purposes. To recognise common types of technology and how they help us and demonstrate how and why we can use these. To save and retrieve their work to edit. Key Vocabulary- desktop, inputs, device, output, robot, battery, camera, digital content, photograph, tablet, wire, intervention, digital record, scanner, video, system
Data handling- Collecting, analysing, evaluating real world data/problem solving	Understand how we can gather data, such as labelling, counting and grouping objects in one or more ways. Demonstrate an understanding of data by describing how to group objects, comparing groups and recording and sharing what they have found. To represent data in different forms –e.g. pictograms, tables and branching databases. Key Vocabulary- data, representation, information, Bar chart, pictogram, resize, chart, line graph, pie chart, table, data, information, represent, digitally, categorise, branching database, data recording,	Understand how we can gather and enter data into different formats, including tally charts, pictorial representations, pictograms Understand how data is used in different ways. Understand how data is gathered and how to interpret the data gathered. Understand how sensors gather specific data. Understand how we can use sensors and algorithms together. To analyse data and make informed decisions using this. Key Vocabulary- digital content, interactive map, survival, sensor, leisure, thermometer, insulation, algorithm, experiment, data, interpret.

Programming- Controlling and programming using hardware and software. (including debugging) Yr 1 Bee-bots. Yr 2 ScratchJr.	Understand how to command a program a robotic toy (bee-bot) and make predictions about how our commands can affect an outcome. physically act out a set of instructions (offline) To act out a precise set of instructions and recall directions we can act out and program into a small toy. Compare directional language including 'forward', 'backwards', 'left turn' and 'right turns' and combine these to create a sequence. Plan a sequence of precise commands (algorithms) to control a programmable toy, debugging any mistakes. To create a video explaining how to use a Bee-bot. Key Vocabulary- bee-bot, algorithm, code, instructions, filming, video, precise, program, debug.	Understand a sequence has a start and an outcome and demonstrate this. Make predictions about algorithms, match sequences and change the outcomes of these. Understand how to create an animation using a given designs, such as, working out the actions of a sprite in an algorithm, decide which blocks to use to meet the design or build the sequences of blocks needed. To know how to change a given design, choosing backgrounds, characters and create a program based on the new design. Create a program using their own design, including images of their own designs, create algorithms and build sequences of blocks to match their design. To create our own element to add to an animation- sound bites. Key Vocabulary- predict, decomposition, artificial intelligence, key features, data, loop, unnecessary, abstraction, bug, debug, error, correction.
Digital media- Creating, organising, store, manipulate and retrieve digital content. (Digital art and and stop motion)	Use different paint tools to make marks and draw a picture in the style of different artists and discuss the different colours and tools used. To create a range of pictures using different artistic styles and explain whether they prefer using a computer or artistic media. Using a digital camera to record a video. Key Vocabulary- paint, fill, tools (line, square, erase) digital media program, image, photograph, sequence, photo story, camera, delete, edit, crop, editing software, save as, import, search engine, edit, orientation, download, photograph, resize,	Develop their understanding of how to take photographs/digital images using a camera and other devices. To take photos in the landscape and portrait format and say which format looks better. Identify when they have taken a good photo and identify how to take a better photograph when they spot a mistake, suggesting how it could be improved, retaking it if necessary. Improve shots by retaking a photo. Think about and experiment with lighting. Explain why a picture might not be clear.

		To be able to edit a photo and experiment with different effects and explain their choices. Creating a stop motion animation using picture they have taken or created. Planning an animation and making a project. Creating a sound bite to add to an animation. Key Vocabulary- editing software, retake, landscape/portrait photo, digital media, animation, still/moving image, flip book, frames, drawing, stop motion, digital device, onion skinning, animator, animated, effects, background, animate
Modelling and simulation software- (including debugging)	Children will learn that algorithms are a set of precise instructions for a computer to follow. Find and use commands for a given purpose, such as, moving a sprite/picture. To show that a series of commands can be joined together To create an algorithm for their own pictures/sprites. To design the parts of a project To learn how virtual assistants need specific instructions and become offline virtual assistants. Key Vocabulary- algorithms, debug, program, robot, instructions, solution, specific, computer, bug, device, artificial intelligence, output, virtual assistant, program, decompose, code, directions, correct,	To decompose a game and predict the algorithms that are used. To understand that computers can use algorithms to make predictions. To design an algorithm and explain what my algorithm should achieve To plan algorithms that will solve problems. To use abstraction to reduce and refine our algorithms. (removing unnecessary details) To debug any instructions in an algorithm. To physically act out a set of algorithms. To use logical reasoning to predict the outcome of a program and compare my prediction to the program outcome Key Vocabulary- coding, programming, block, code, ScratchJr, animation, loop, code, sequence,

E-safety/ safety with computers.	To understand how to use the internet safely. TO understand our emotions when going online. To always be kind and considerate when online. Making kind choices. To consider how much time we spend online and what a healthy amount looks like. To understand what the term 'digital footprint' means and ensure what we do online doesn't impact us later in life. To create rules for using technology responsibly and keeping safe on computers and online, both at school and at home. To know what to do if they encounter something which makes them feel uncomfortable. Key Vocabulary- online safety, device, internet, pop-up, report, responsible digital citizen, personal information, stranger, trusted adult, in-person interactions, online interactions, digital footprint, posting online, sharing online, online experience, screen time, online and offline activity	To understand what happens when we post things online. To know how to keep our things safe online? Making the correct choices when online. To understand that some things we see and hear online may not be true and how to identify what is true or not. To explain how to use information technology safely, listing different uses of information technology and the rules we need to follow. Key Vocabulary- consent, personal information, permission, sharing online, password, private information, accepting, giving permission, pressure, denying permission, fake or real, source, reliable,