

Progression of Skills and Knowledge KS1 – Computing

Ongoing skills:

Year 1	Year 2
• Recognising common uses of information technology. • Logging in and saving work on their own account. • Knowing what to do if they have concerns about content or contact online. • Understanding of how to create digital art using an online paint tool. • Learning to locate where keys are on the keyboard. • Developing basic mouse skills. • Understanding how to create algorithms. • Learning that computers need information to be presented in a simple and clear way. • Understanding how to break a computational thinking problem into smaller parts in order to solve it. • Understanding that they need to be kind on the internet, as they would in real life. • Discovering which devices connect to the internet. • Understanding some tips for staying safe and why this is important. • Learning how to explore and tinker with hardware to find out how it works. • Constructing a series of instructions into a simple algorithm. • Applying computing concepts to real world situation in an unplugged activity. • Using technology purposefully to create, recognise, store, manipulate and retrieve digital content. • Using cameras to take photos. • Using logical reasoning to predict the behaviour of simple programs.	• Learning about inputs and outputs and how they are used in algorithms. • Understanding what a computer is and the role of individual components. • Identifying how to keep personal information private. • Use technology purposefully to create, recognise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Using word processing software to type and reformat text. • Using technology respectfully by asking for permission before sharing about others online. • Creating and debugging simple programs. • Using logical reasoning to predict the behaviour of simple programs. • Understanding what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.

Specific skills/knowledge:	Year 1	Year 2
Computing systems and networks	Improving mouse skills • to log in to a computer and access a website • to develop mouse skills • to use mouse skills to draw and manipulate shapes • to use a range of tools to create desired effects • to understand how to layer shapes to create an image	What is a computer? • to recognise the parts of a computer • to recognise how technology is controlled • to recognise technology • to create a design for an invention • to understand the role of computers Information technology • to touch type • to copy and paste photos from the internet • to create a document with words and pictures
Programming	Algorithms unplugged • to understand what an algorithm is • to follow instructions precisely to carry out an action • to understand that computers and devices around us use inputs and outputs • to understand and be able to explain what decomposition is • to know how to debug an algorithm Beebots • to explore a new device • to create a demonstration video • to plan and follow a set of instructions precisely • to program a device • to create a program	Algorithms and debugging • to decompose a game to predict the algorithms that are used • to understand that computers can use algorithms to make predictions • to plan algorithms that will solve problems Scratchjr • to explore a new animation • to create an animation • to use characters as buttons • to follow an algorithm • to plan and use code to create an algorithm

Creating media	Digital imagery • to understand and create a sequence of pictures • to take clear photos • to edit photos • to search for and import images • to create a photo collage	Digital photography • to make choices when taking a photograph • to describe what makes a good photograph • to decide how photographs can be improved • to use tools to change an image • to recognise that photos can be changed Stop motion • to understand what animation is • to understand what stop motion animation is • to add effects to my stop motion • to create a stop motion animation
Data handling	Introduction to data • to represent data in different ways • to use technology to represent data in different ways • to collect and record data • to sort data • to design an invention to gather data	
Online safety	• to know what the internet is and how to use it safely • to understand different feelings when using the internet • to understand how to treat others, both online and in person • to understand the importance of being careful about what we post and share online	• what happens to information posted online • to know how to keep things safe and private online • to explain what should be done before sharing information online • to explain why I have the right to say no and deny permission • some strategies that will help me to decide if something I see online is true or not

Vocabulary

Term introduced: Term 1 Term 2 Term 3	Computing systems and networks	Programming	Creating media	Data handling	Online safety
Year 1	account, clipart, computer, log on/off, password, resize, screen (monitor), software, tools, username	algorithm, bug, computer, debug, decompose, device, input, instructions, output, solution bee-bot, code, controller, judge, explain, explore, destination, mat, mistake, programming	crop, delete, download, drag and drop, editing software, image, import, resize, save as, search engine, sequence, smart device, storage space, visual effects	categorise, chart, data, information, label, pictogram, record, sort, table, text	respect, online, communicate, kind, unkind, internet, internet safety, online safety, devices, instructions, connection, predict digital footprint
Year 2	As year 1 and battery, buttons, computer, desktop, device, electricity, invention, laptop, technology, wire, peripheral keyboard, space bar, touch typing, delete, backspace, copy, paste, import, highlight, undo, redo, bold, italics, underline	As year 1 and decomposition, loops animation, code, imitate, sequence	As year 1 and landscape, portrait, framing, subject, compose, light sources, flash, focus, background, filter, format animator, stop-motion, still image, moving image, frames, flip-book, pen tool, onion skinning, debug		As year 1 and offline, information, private, safe, trusted adult content, permission, share, pressure, accepting reliable, edit, pop ups, images