



Computing – Progression of Skills

Themes	<p>Y1, Autumn – Online safety Introduction, Programming</p> <p>Y1, Spring – Online safety Revisit, Computing Skills</p> <p>Y1, Summer – Programming, Information Technology</p> <p>Y2, Autumn – Online safety Introduction, Programming</p> <p>Y2, Spring – Online safety revisit, Computing Skills</p> <p>Y2 Summer – Programming, Information Technology</p>	<p>Y3, Autumn - Online safety Introduction, Programming</p> <p>Y3, Spring – Online safety revisit, Computing Skills</p> <p>Y3, Summer – Programming</p> <p>Y4, Autumn - Online safety Introduction</p> <p>Y4, Spring – Online safety revisit, Programming</p> <p>Y4, Summer – Computing Skills</p>	<p>Y5, Autumn – Online safety Introduction, Programming</p> <p>Y5, Spring – Online safety revisit, Computing Skills</p> <p>Y5, Summer 1 – Programming</p> <p>Y6, Autumn – Online safety Introduction, Programming</p> <p>Y6, Spring – Computing Skills</p> <p>Y6, Summer - Online safety revisit, Programming</p>
	<p>Early Learning Goals</p> <p>Personal, Social and Emotional Development: Increasingly follow rules, understanding why they are important; Show resilience and perseverance in the face of a challenge; Know and talk about the different factors that support their overall health and wellbeing: sensible amounts of ‘screen time’; Be confident to try new activities and show independence, resilience and perseverance in the face of challenge; Explain the reasons for rules, know right from wrong and try to behave accordingly.</p> <p>Physical Development: Match their developing physical skills to tasks and activities in the setting; Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</p> <p>Understanding the World: Explore how things work.</p> <p>Expressive Arts and Design: Creating with Materials; Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>		

Phase/Year Group	KS1	LKS2	UKS2
	Year 1 Year 2	Year 3 Year 4	Year 5 Year 6
Online safety			
<p>use technology safely and respectfully</p> <p>keeping personal information private</p> <p>identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies</p>	<ul style="list-style-type: none"> To be able to understand the importance of asking for help from an adult when on the internet. Understand they need to follow certain rules to remain safe when visiting places online, introduction to cyber-bullying Learn that many websites ask for information that is private & discuss how to responsibly handle such requests Stay safe online by choosing websites that are good for them to visit & not inappropriate sites Explore what cyber-bullying means & what to do when they encounter it Know that if they put information online it leaves a digital footprint or "trail" & they need to manage it so it's not hurtful 	<ul style="list-style-type: none"> To be responsible, competent, confident and creative users of information and communication technology (Choose a secure password for age-appropriate websites, Talk about what games they enjoying playing and what good choices are when playing games e.g. content, screen time) To use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content To use technology safely, respectfully and responsibly (Agree sensible online safety rules for the classroom); recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact (Discuss what actions could be taken if they are uncomfortable or upset online e.g. Report Abuse button) 	<ul style="list-style-type: none"> To be responsible, competent, confident and creative users of information and communication technology (Discuss their own personal use of the Internet and choices they make and how to protect devices from virus threats). To use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content To use technology safely, respectfully and responsibly (Agree sensible online safety rules for the classroom); recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact (Discuss the importance of keeping an adult informed about what you're doing online, and how to report concerns). To be responsible, competent, confident and creative users of information and communication technology (Discuss their own personal use of the Internet and choices they make and how to protect devices from virus threats).

		<ul style="list-style-type: none"> ● To be responsible, competent, confident and creative users of information and communication technology (Choose a secure password for age-appropriate websites, Talk about what games they enjoying playing and what good choices are when playing games e.g. content, screen time) ● To use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content ● To use technology safely, respectfully and responsibly (Agree sensible online safety rules for the classroom); recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact (Discuss what actions could be taken if they are uncomfortable or upset online e.g. Report Abuse button) 	<ul style="list-style-type: none"> ● To use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content ● To use technology safely, respectfully and responsibly (Agree sensible online safety rules for the classroom); recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact (Discuss the importance of keeping an adult informed about what you're doing online, and how to report concerns).
Computing Skills			
use technology purposefully to create, organise, store, manipulate and	<ul style="list-style-type: none"> ● To label objects ● To identify that objects can be counted ● To describe objects in different ways 	<ul style="list-style-type: none"> ● To create questions with yes/no answers ● To identify the object attributes 	<ul style="list-style-type: none"> ● To use a form to record information ● To compare paper and computer-based databases

<p>retrieve digital content</p> <p>select, use and combine a variety of software (including Internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>understand computer networks including the internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration</p>	<ul style="list-style-type: none"> ● To count objects with the same properties ● To compare groups of objects ● To answer questions about groups of objects ● Use colour coding to think about ● To recognise that we can count and compare objects using tally charts ● To recognise that objects can be represented as pictures ● To create a pictogram ● To select objects by attribute and make comparisons ● To recognise that people can be described by attributes ● To explain that we can present information using a computer 	<p>needed to collect relevant data To create a branching database</p> <ul style="list-style-type: none"> ● To explain why it is helpful for a database to be well structured ● To identify objects using a branching database ● To compare the information shown in a pictogram with a branching database ● To explain that data gathered over time can be used to answer questions ● To use a digital device to collect data automatically ● To explain that a data logger collects 'data points' from sensors over time ● To use data collected over a long duration to find information ● To identify the data needed to answer questions ● To use collected data to answer questions 	<ul style="list-style-type: none"> ● To outline how grouping and then sorting data allows us to answer questions ● To explain that tools can be used to select specific data ● To explain that computer programs can be used to compare data visually ● To apply my knowledge of a database to ask and answer real-world questions ● To understand the work of architects, designers and engineers working in 3-D ● To develop familiarity with a simple CAD tool ● To develop greater spatial awareness through exploring and experimenting with a 3-D virtual environment ● To identify questions which can be answered using data ● To explain that objects can be described using data ● To explain that formulas can be used to produce calculated data ● To apply formulas to data, including duplicating ● To create a spreadsheet to plan an event ● To choose suitable ways to present data ● To develop strategies for exploring and experimenting with interactive computer simulations
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Information Technology			
<p>use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>recognise common uses of information technology beyond school</p>	<ul style="list-style-type: none"> ● To identify technology ● To identify a computer and its main parts ● To use a trackpad mouse in different ways ● To use a keyboard to type on a computer ● To use the keyboard to edit text ● To create rules for using technology responsibly ● To recognise the uses and features of information technology ● To identify information technology in the home 	<ul style="list-style-type: none"> ● Taught through the creative curriculum, use of Google Classroom for units of learning, use of iPads for research and multimedia projects including video and photography, for example stop motion animation. ● Taught through the creative curriculum, use of Google Classroom for units of learning, use of iPads for research and multimedia projects including video and photography, for example stop motion animation. 	<ul style="list-style-type: none"> ● Taught through the creative curriculum, use of Google Classroom for units of learning, use of iPads for research and multimedia projects including video and photography, for example stop motion animation. ● Taught through the creative curriculum, use of Google Classroom for units of learning, use of iPads for research and multimedia projects including video and photography, for example stop motion animation.

	<ul style="list-style-type: none"> ● To identify information technology beyond school ● To explain how information technology benefits us ● To show how to use information technology safely ● To recognise that choices are made when using information technology 		
Programming Skills			
<p>design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>use logical reasoning to explain how some</p>	<ul style="list-style-type: none"> ● Begin to use software to create movement & patterns on a screen ● Begin to identify an algorithm to achieve a specific purpose ● Use the word debug to correct any mistakes when programming ● Begin to predict what will happen for a short sequence of instructions in a program ● To explore Scratch independently ● To write an algorithm ● To program a Bee-Bot ● To debug an algorithm and a program ● To explore Scratch independently ● To predict what a program might do and explain why 	<ul style="list-style-type: none"> ● Decompose a variety of problems by designing, writing (including debugging) and presenting a program using Scratch ● Plan and enter a sequence of instructions on a microbit to achieve specific outcomes, ● Debug the sequence where necessary ● Test & improve / debug programmed sequences ● Plan the content for my web page ● understand the features of Google Sites ● use the features of Google Sites to build a web page ● write a program with a sequence of instructions in Scratch 	<ul style="list-style-type: none"> ● Plan an animation using Scratch ● Develop concepts of loops and repeating commands ● Write a programme including repeating statements ● Debug the programme where necessary ● Test & improve / debug programme ● Plan and enter a sequence of instructions on a microbit to achieve specific outcomes, ● Debug the sequence where necessary ● Test & improve / debug programmed sequences ● Develop understanding of, location of and use of data from a micro:bit's sensors ● Designing gadgets with sensors

<p>simple algorithms work and to detect and correct errors in algorithms and programs</p>		<ul style="list-style-type: none">• Debug a program with a sequence of instructions• Test & improve / debug programmed sequences	<ul style="list-style-type: none">• Using sensors in algorithms and programs• Programme a digital assistant• Debug and test to improve• write a program with a sequence of instructions in Scratch• Debug a program with a sequence of instructions • Test & improve / debug programmed sequences
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