

Progression of Computing Knowledge and Skills in KS2
at Mickleton Primary School

Red – Intent – National Curriculum requirements

Blue – Intent – Skills

Green – Implementation

	Year 3	Year 4	Year 5
Computer Science	Unit 3.1 – Coding - I can make a real-life situation into an algorithm for a program. - I can design an algorithm carefully, considering purpose and implementation. - I can identify and fix errors in my program. - I can identify and understand ‘If’ statements, repetition and variables. - I can predict what programs with several steps will do. Unit 3.5 – Email (including email safety) - I can identify different ways that the internet can be used for communication. - I can use email to respond to and share files with others appropriately. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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.	Unit 4.1 – Coding Unit 4.5 – Logo - I can turn a real-life situation to solve into an algorithm. - I can use repetition in my code. - I can use timers within my program designs. - I can use selection (decision) in my programming. - I can use variables within my programming. - I can use user inputs and output features within my program. - I can use a range of methods to identify errors and correct errors in my code. - I can predict what programs with several steps will do with increasing accuracy. Unit 4.8 – Hardware Investigators - I recognise the main component parts of hardware networks. - I understand that network and communication components can be found in many different devices which allow them to join the internet. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Unit 5.1 – Coding Unit 5.5 – Game Creator - I can make more complex real-life problems into algorithms. - I can test and debug my programs as I work. - I can use sequence, selection, repetition, and some other coding structures in my code. - I can organise my code carefully and efficiently. - I can use a range of methods to identify errors and correct errors in my code with increasing accuracy. Unit 5.2 – Online Safety - I know the importance of computer networks in problem solving and communications. - I recognise the main dangers that can be perpetuated via computer networks. - I can explain what personal information is and know strategies for keeping this safe. - I can use the most appropriate form of online communication according to the digital content. Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

		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.	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.
Information Technology	Unit 3.3 – Spreadsheets Unit 3.6 – Branching Databases Unit 3.8 – Graphing - I can carry out searches to find digital content on a range of online systems. - I can collect, input, analyse and present data and information using different software. - I can consider what the most appropriate software to use when given a task by my teacher. Unit 3.4 – Touch Typing - I can use two hands to type letters, full words and a series of words on the keyboard with speed and accuracy. Unit 3.5 – Email (including email safety) - I can create appropriate content and attach this to emails. Unit 3.7 – Simulations - I can analyse and evaluate information using a selection of software. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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.	Unit 4.1 – Coding Unit 4.3 – Spreadsheets Unit 4.4 – Writing for Different Audiences Unit 4.6 – Animation Unit 4.7 – Effective Searching - I understand the purpose of a search engine and the main features within it. - I can look at information on a webpage and make predictions about the accuracy of information contained within it. - I can create and review solutions to a problem based on feedback. - I can work collaboratively to create content and solutions. - I can share digital content using a variety of applications. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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.	Unit 5.1 – Coding Unit 5.3 – Spreadsheets Unit 5.4 – Databases Unit 5.5 – Game Creator Unit 5.6 – 3D Modelling Unit 5.7 – Concept Maps - I can search precisely when using a search engine. - I can explain how accurate, safe and reliable the content is on a webpage. - I can make appropriate improvements to digital work I have created. - I can analyse how successful a digital solution is. - I can work collaboratively to create solutions to problems using appropriate software. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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.
Digital Literacy	Unit 3.2 – Online Safety Unit 3.5 – Email (including email safety) - I can create and explain the importance of having and not sharing a secure password. - I can explain the negative consequences of not keeping passwords safe and secure.	Unit 4.2 – Online Safety - I have a good understanding of my school's online safety rules. - I can demonstrate how to use different online technologies and services safely.	Unit 5.2 – Online Safety I have a secure knowledge of online safety rules taught at school.

	• I understand the importance of keeping safe online and behaving respectfully. • I can use communication tools respectfully and use good etiquette. • I can report unacceptable content and contact to a trusted adult. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• I know I have a right to privacy both on and offline. • I recognise that my wellbeing can be affected by how I use technology. • I can report concerns with content and contact online and know immediate strategies to keep safe. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• I can demonstrate the safe and respectful use of different online technologies and online services. • I can relate appropriate online behaviour to my right to have personal privacy. • I know how to not let my mental wellbeing or others be affected by use of online technologies and services. Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
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