

F-10 Scope and sequence overview

F-1	Hardware and software Students explore and carry out some key functions on digital systems to meet a purpose.	Data is all around us Represent data as symbols, numbers and pictures. Collect, sort and present data in a digital format.	An introduction to algorithms Explore algorithms through guided play, including hands-on and interactive learning experiences.	Online safety Explore what personal information is safe to share and ways to behave responsibly online.
Yr 2	Changes in technology Use the focus of changing technology to explore digital systems and their use.	Exploring data Represent data in different ways. Collect, sort and present data in digital formats.	Pre-programming Learn basic computational skills - working out steps and decisions to solve simple problems.	Staying safe online Learn about the importance of passwords, explore cyberbullying and computer security and use an online space to safely share ideas.
Yr 3	Peripheral devices Explore, sort and classify peripheral devices. Use peripheral devices for a particular task.	Secret messages and codes Explore ways to represent data using the context of secret messages and codes.	Intro to programming Follow the problem solving process to design and create a digital solution.	Communicate ideas and information Learn about information systems that can be used by students and others in their community.
Yr 4	Exploring input and output Explore inputs and outputs using a circuit board, electronic kit or programmable board.	Use data to solve problems Use a meaningful context to collect and organise data to answer a question.	Programming project Develop an understanding of computer programming as a series of instructions.	Apply protocols Develop a school ICT agreement and collaborate with others to complete an online task, using agreed protocols.
Yr 5	Data and information Design and create digital information that incorporates a data visualisation eg. an infographic.	Binary numbers Examine the way that computers use whole numbers to represent data.	Problem-solving processes Design and create digital solution that uses a visual programming language.	Digital citizenship Apply protocols while interacting in a collaborative learning space or creating a blog or website.
Yr 6	Connecting digital components hours Examine digital systems that have internal and external components that perform different functions.	Representing images using binary Learn about pixels and the way computers store an image as an array of individual pixels.	Creating a digital game Use a visual programming language to create a digital game.	Collaborative project Collaborate with others to create a digital solution, using agreed protocols.
Yr 7	Get connected Discuss types of networks, simulate a network and discuss security requirements.	Data and information This sequence uses the context of meal planning to demonstrate a process to solve a problem; in this case, what meal to cook for teenagers with various needs.	Creating an app or game Use the context of apps and digital games development to learn text-based programming.	Digital citizenship As people connect to the internet in more social and interactive ways, it is important to carry out online relationships responsibly.
Yr 8	Networks and performance Develop a basic understanding of network performance and ways to connect wirelessly or by wired connections.	Computers and binary Examine the ways all computer data including text, images and sound is represented using binary.	Robotics and embedded systems Explore the way computer programming uses a collection of smaller programs – functions to solve problems.	Collaborative project Use collaborative tools and manage a digital project that uses Virtual Reality VR in its solution.
Yr 9	Connected via a network Examine different types of networks, protocols and the role of software and hardware plays.	Data-driven innovation Examine the way 'big data' is being used on a large scale to inform decision making.	Creating an app, game or website A digital game can give students the opportunity to learn and refine their object-oriented programming (OOP) skills which is a requirement at years 9-10.	Managing a group project: Augmented Reality (AR) Plan and manage a group project that uses an AR platform to create an AR experience in response to a problem.
Yr 10	Data: controlled and secured Explore how data can be secured through access controls, virus checking, and encryption.	Organise, visualise and analyse Use tools to organise data and make sense of complex data to identify patterns and trends.	Robotics and embedded systems Choose from a selection of four projects to explore programming and designing a digital solution to suit an identified need or solve a problem.	Collaborative project Students choose an issue that matters to them and, in collaborative teams, create a media plan and campaign and associated content.