Reeth Community Primary School and Gunnerside Methodist (VC) Primary School Federation

Computing

	National curriculum	Computer Science	Information technology	Digital literacy
Emergent **EYFS**		• To use simple software to make something happen. • To know when buttons or icons are pressed something will happen. • To make choices about which buttons, icons to press, touch or click on. • To control a remote-control toy or robot.	• To understand different types of technology both at home and in school. • To move objects on a screen. • To understand that technology can be used to communicate ideas.	• To use a safe part of the internet to play and learn. • To be kind to others when using technology together. • To know to tell an adult when something on the internet worries or upsets me.
Early **KS1**	• Understand what algorithms are; how they are implemented as programs o digital devices; and that programs execute by following precise and unambiguous instructions. • Create and debug simple programs. • Use logical reasoning to predict the behaviour of simple programs. • Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	• To give and follow clear instructions to a friend to move around (using forward, backward and turn). • To begin to predict what will happen for a short sequence of instructions. • To program a robot or software to do a particular task. • To describe what actions are needed to make something happen and begin to use the word 'algorithm'. • To look at a friend's program and tell you what will happen. • To use programming software to make objects move. • To use the word 'debug' when correcting mistakes when programming. • To watch a program, execute and spot where it goes wrong so that you can debug it.	• To login onto a computer or online service with the help of an adult. • To describe how to use technology in school and at home and why it has been used. • To use technology to create and present ideas. • To save work independently. • To find, edit and resave work. • To use technology to collect information. • To sort different kinds of information and present it to others. • To start understanding branching databases.	• To access a website from a given address and can use the Internet to find information. • To know to keep your password private. • To know what personal information is and that you must not give it out over the internet. • To use technology safely and respectfully. • To describe the things that happen online such as things that you've seen or messages you've received that you must tell an adult about.
Middle **Lower KS2**	• Deign, 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. • 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. • Use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• To put programming commands into a sequence to achieve a specific outcome. • To use a variety of tools to create a program. • To create an algorithm to solve a simple problem and explain how it works. • To describe the algorithm, you will need for a simple task. • To use repeat commands. • To keep testing your program and can recognise when you need to debug it. • To use logical thinking to solve an open-ended problem by breaking it up into smaller parts.	• To login onto a computer or online service independently. • To make new folders. • To discuss use of technology and observations of its use outside of school. • To use key words to search safely on the world wide web. • To collect data to help answer questions and identify which data may be inaccurate. • To use technology to create graphs, make simple databases and present information. • To use a range of technology and software to create, develop, organise, and present my ideas.	• To choose a secure password when using a website. • To recognise website and games appropriate for your age. • To make good choices about the time spent online. • To use search engines independently to produce a list of results. • To know that not all the links will provide relevant or reliable information. • To know to tell a trusted adult about any concerns of any inappropriate information on any website or game. • To know to tell a trusted adult about any concerns about cyber bullying. • To know to comment positively and respectively online.
Later **Upper KS2**		• To write algorithms and programs that stimulate or control physical systems. • To deconstruct a problem into smaller steps, recognising similarities to solutions used before. • To evaluate the effectiveness and efficiency of your algorithm while you continually test the programming of that algorithm. • To use logical reasoning to detect and debug mistakes in a program. • To recognise when to use a variable to achieve a required output. • To refine a procedure using repeat commands to improve a program. • To use 'if' and 'then' commands to select an action. • To use logical thinking, imagination, and creativity to extend a program.	• To manage my own space on a device. • To know how to share files with others safely and responsibly. • To understand ways to communicate and share information with others online. • To select an appropriate tool to collect and analyse data. • To check data collected for accuracy and plausibility. • To use databases and spreadsheets to collect and process data, explore patterns and relationships; make predictions and present my findings. • To choose appropriate technology or software to create, develop, organise, and present ideas. • To share information and ideas in a variety of ways.	• To protect my password and personal information. • To know how to protect myself and friends by being aware of what is appropriate to post online. • To know the importance of communicating kindly and respectfully. • To know about the dangers of spending too long online or playing a game and to choose age-appropriate website. • To acknowledge sources of information including ones online. • To know when to get help to stay safe and who to talk to about concerns. • To evaluate the accuracy of a website and the information it contains. • To explain what copyright is and how to ensure you have permission to use digital content. • To be aware of social media, the impact it has on our lives and the importance of using it responsibly.
Extended **KS3**		• To use a range of inputs and outputs to control physical systems.	• To create links to files and share them with others. • To create webpages using the main features. • To collect, analyse, evaluate, and present data in a range of digital products for a given audience.	• To exchange information safely and responsibly in a variety of ways, including email and other Internet and web-based technologies.