

Appendix A – Progression of Skills

	e-Safety	Programming – Computer Science	Handling Data – Digital Literacy	Multimedia – Digital Literacy	Technology in our lives – Information Technology
Foundation Stage	<ul style="list-style-type: none"> • Ask an adult when they want to use the internet. • Explain to an adult when something is worrying or unexpected happens whilst using the internet. • Be kind to their friends. • Explain to an adult about the amount of time that they spend using technology (computers, tablets and/or game devices) • Is careful with technology devices. 	<ul style="list-style-type: none"> • Make a floor robot move. • Use simple software to make something happen. • Make independent choices about the buttons and icons they press/touch or click. 	<ul style="list-style-type: none"> • Explain about different kinds of information such as pictures, videos, text and sound. 	<ul style="list-style-type: none"> • Move objects on a screen. • Create shapes and test on a screen. • Use technology to show learning. 	<ul style="list-style-type: none"> • Explain technology that is used at home and in school. • Operate simple equipment. • Use a safe part of the internet to play and learn.

	e-Safety	Programming – Computer Science	Handling Data – Digital Literacy	Multimedia – Digital Literacy	Technology in our lives – Information Technology
Year 1 – Key Stage 1	<ul style="list-style-type: none"> • Keep passwords private. • Explain what personal information is. • Talk to an adult when something is seen that is unexpected or worrying online. • Explain why it is important to be kind and polite. • Recognise an age appropriate website. • Follows the school’s e-Safety charter. 	<ul style="list-style-type: none"> • Give instructions to partners and follow their instructions around the room. • Describe what happens when you press buttons on a robot. • Press buttons in the correct order to make the robot complete a simple task. • Describe what actions are needed to make something happen. • Begin to use the word algorithm. • Begin to predict what will happen for a short sequence of instructions. • Begin to use software/apps to create movement and patterns on a screen. • Begin to use the word debug when correcting mistakes. 	<ul style="list-style-type: none"> • Explain about the different ways in which information can be shown. • Use technology to collect information including photos, videos and sound. • Sort different kinds of information and present it to others. • Add information to a pictograph and talk to an adult about what they have found out. 	<ul style="list-style-type: none"> • Begin to be creative with different technology tools. • Use of technology to create and present ideas. • Use of the keyboard or word bank on a device to enter text. • Save information in a special place. • Retrieve information previously saved. 	<ul style="list-style-type: none"> • Recognise the ways in which technology is used on our classroom • Recognise the ways in which technology is used at home and in the community. • Use links to websites find information. • Identify some of the benefits of using technology.

Year 2 – Key Stage 1	e-Safety	Programming – Computer Science	Handling Data – Digital Literacy	Multimedia – Digital Literacy	Technology in our lives – Information Technology
	<ul style="list-style-type: none"> • Explain why it is important to keep their password and personal information private. • Describe the things that happen online. • Explain why it is sensible to be online for a short amount of time. • Explain why it is important to be kind and polite online and in real life. • Understand that not everyone is who they say they are on the internet. • Follows the school’s e-Safety charter. 	<ul style="list-style-type: none"> • Give instructions to partner (using forward, backward and turn) and physically follow their instructions. • Explain the order that is needed to make something happen and talk about this as an algorithm. • Program a robot or software to do a particular task. • Look at partner’s program and explain what will happen. • Use programming software to make objects move. • Watch a program execute and debug if necessary. 	<ul style="list-style-type: none"> • Explain about the different ways we use technology to collect information including a camera, microscope or sound recorder. • Make and save a chart or graph using the data collected. • Explain about the data that is shown on a chart or graph. • Begin to use a branching database. • Explain what kind of information could be used to help investigate a question. 	<ul style="list-style-type: none"> • Use technology to organise and present ideas in different ways. • Use the keyboard on a device to add, delete and space text for other to read. • Explain about an online tool that will help share ideas with other people. • Save and open files on a device. 	<ul style="list-style-type: none"> • Explain why we use technology in the classroom. • Explain why we use technology in our hor and community. • Begin to have an understanding that other people have created the information used. • Identify the benefits c using technology including finding information, creating and communicating. • Explain the difference between the internet and things in the physical world.

Year 3 – Lower Key Stage 2	e-Safety	Programming – Computer Science	Handling Data – Digital Literacy	Multimedia – Digital Literacy	Technology in our lives Information Technolog
	<ul style="list-style-type: none"> • Explain what makes a secure password and why they are important. • Protect personal information when doing different things online. • Ability to use the safety features of websites as well as reporting concerns to an adult. • Recognise websites and games appropriate for age group of this year. • Make good choices about how long they spend online. • Asks an adult before downloading files and games from the internet. • Posting positive comments online. • Follows the school’s e-Safety charter. 	<ul style="list-style-type: none"> • Begin to break an open-ended problem up into smaller parts. • Input programming commands into a sequence to achieve a specific outcome. • Test their own programs and can debug it if necessary. • Use the repeat commands. • Describes the algorithm they need for a simple task. • Detect a problem in an algorithm which could result in unsuccessful programming. 	<ul style="list-style-type: none"> • Discuss the different ways data can be organised. • Search a ready-made database to answer questions. • Collect data in order to help answer a question. • Make a branching database. • Use data logger to monitor changes and can discuss the information collected. 	<ul style="list-style-type: none"> • Create different effects with different technology tools. • Combine a mixture of text, graphics and sound to share their ideas and learning. • Use of appropriate keyboard commands to amend text on the device, including making use of a spell checker. • Evaluate their own work and improve its effectiveness. • Use of an appropriate tools to share work using a secure online tool. 	<ul style="list-style-type: none"> • Save and retrieve work on the internet, the school network or a device. • Explain about the parts of a computer. • Explain ways to communicate with others online. • Describe what the World Wide Web is and its role within the internet that contains a website. • Use of search tools to find and use an appropriate website. • Decide whether children can use the images that they find online in their own work.

Year 4 – Lower Key Stage 2	e-Safety	Programming – Computer Science	Handling Data – Digital Literacy	Multimedia – Digital Literacy	Technology in our lives Information Technolog
	<ul style="list-style-type: none"> Selected a secure password and an appropriate screen name when using a website. Explain the ways to protect themselves (and friends) from harm whilst online. Use the safety features of websites as well as reporting concerns to an adult. Understand that anything that is shared online can be seen by others. Recognise websites and games appropriate for age group of this year. Make good choices about how long they spend online. Asks an adult before downloading files and games from the internet. Posting positive comments online and through text messaging. Follow the school’s e-Safety charter. 	<ul style="list-style-type: none"> Use logical thinking to solve an open-ended problem by breaking it up into smaller parts. Use of an efficient procedure to simplify a program. Use of a sensor to detect change which can select an action within my program. Keep testing the program whilst putting it together. Use of a variety of tools to create a program. Recognise an error in a program and debug if necessary. Recognise that an algorithm will help to sequence more complex programs. Recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology. 	<ul style="list-style-type: none"> Organise data in different ways. Collect and identify where data could be inaccurate. Plan, create and search a database to answer questions. Select the best way to present data to the class. Use a data logger to record and share readings with the class. 	<ul style="list-style-type: none"> Use photos, video and sound to create an atmosphere when presenting to different audiences. Confidence in exploring new media to extend what they want to achieve. Change the appearance of text to increase its effectiveness. Create, modify and present documents for a particular purpose. Use a keyboard confidently and make use of a spellchecker to write and review own work. Use an appropriate tool to share work and collaborate online. Provide constructive feedback to partners to help them improve their work and refine own. 	<ul style="list-style-type: none"> Informs teacher if a resources being use on the internet, sch network or actual device. Identify key words t use when searching safely on the World Wide Web. Thinks about the reliability of inform that is on the World Wide Web. Explain how they ca check to see who o photos, text and cli from the internet. Create a hyperlink t resource on the Wc Wide Web. Recognise that web use different methc to advertise produc

Year 5 – Upper Key Stage 2	e-Safety	Programming – Computer Science	Handling Data – Digital Literacy	Multimedia – Digital Literacy	Technology in our lives Information Technolog
	<ul style="list-style-type: none"> Select a secure password and screen name. Protect password and other personal information. Explain why it is important to protect friends (and themselves) whilst being online. Explain how to report any concerns to an appropriate adult. Know that anything posted online can be seen, used and may affect others. Talk about the dangers of spending too long online or playing a game. Explain the importance of communicating kindly and respectfully. Discuss the importance of choosing an age-appropriate website, app or game. Explain why it is important to protect computers or devices from harm. 	<ul style="list-style-type: none"> Decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. Refine a procedure using repeat commands to improve a program. Use a variable to increase programming possibilities. Change an input to a program to achieve a different output. Use ‘if’ and ‘then’ commands to select an action. Discuss how a computer model can provide information about a physical system. Use logical reasoning to detect and debug mistakes in a program. Use logical thinking, imagination and creativity to extend a program. 	<ul style="list-style-type: none"> Use a spreadsheet and database to collect and record data. Select an appropriate tool to help collect data. Present data in an appropriate way. Search a database using different operators to refine the search. Discuss the mistakes in data and suggest how it could be checked. 	<ul style="list-style-type: none"> Use text, photo, sound and video editing tools to refine their work. Use the skills already developed to create content using unfamiliar technology. Select, use and combine the appropriate technology tools to create effects that will have an impact on others. Select an appropriate online or offline to create and share ideas. Review and improve own work and support others to improve their work. 	<ul style="list-style-type: none"> Describe different parts of the internet. Use different online communication tools for different purposes. Use a search engine to find appropriate information and check its reliability. Recognise and evaluate different types of information found on the World Wide Web. Describe the different parts of a webpage. Locate who the information on a webpage belongs to. Know which resources on the internet can be downloaded and used. Describe the ways in which websites advertise their products.

Year 6 – Upper Key Stage 2	e-Safety	Programming – Computer Science	Handling Data – Digital Literacy	Multimedia – Digital Literacy	Technology in our lives Information Technolog
	<ul style="list-style-type: none"> • Protect password and other personal information. • Explain the consequences of sharing too much information whilst online. • Support peers in the class to protect themselves and make good choices whilst online. • Report any concerns to a responsible adult. • Explain the consequences of spending too much time online or on a game. • Explain the consequences of not communicating kindly and respectfully. • Protect computer/devices from harm on the internet. 	<ul style="list-style-type: none"> • Deconstruct a problem into smaller steps, recognising similarities to solutions used before. • Explain and program each of the steps in the algorithms created. • Evaluate the effectiveness and efficiency of the algorithm whilst continually testing the programming of that algorithm. • Recognise when it is applicable to use a variable to achieve a required output. • Use a variable and operators to stop a program. • Use different inputs (including sensors) to control a device or onscreen action and predict what will happen. • Use logical reasoning to detect and correct errors in an algorithm and program. 	<ul style="list-style-type: none"> • Plan the process needed to investigate the world around them. • Select the most effective tool to collect data for an investigation. • Check the data collected for accuracy and plausibility. • Interpret the data collected. • Present the data collected in an appropriate way. • Use the skills developed to interrogate a database. 	<ul style="list-style-type: none"> • Discuss the audience, atmosphere and structure when planning a particular outcome. • Confidently identifies the potential of unfamiliar technology to increase creativity. • Combine a range of media, recognising the contribution of each to achieve a particular outcome. • Explain why they have selected a particular online tool for a specific purpose. • Be digitally discerning when evaluating the effectiveness of own work (and the work of others). 	<ul style="list-style-type: none"> • Explain about the internet services that can be used for different purposes. • Describe how information is transported on the internet. • Select an appropriate tool to communicate and collaborate online. • Discuss the way search results are selected and ranked. • Check the reliability of a website. • Inform others about copyright and acknowledge the sources of information that have been found online. • Know that websites use data to make decisions and target their advertising.