Computing Progression Statements – End of year expectations

		e-Safety	Programming	Handling Data	Multimedia	Technology in our Lives
Foundation Stage		• I can ask an adult when I want to use the Internet. • I can tell an adult when something worrying or unexpected happens while I am using the Internet. • I can be kind to my friends. • I can talk about the amount of time I spend using a computer / tablet / game device. • I am careful with technology devices.	• I can make a floor robot move. • I can use simple software to make something happen. • I can make choices about the buttons and icons I press, touch or click on.	• I can tell you about different kinds of information such as pictures, video, text and sound.	• I can move objects on a screen. • I can create shapes and text on a screen. • I can use technology to show my learning.	• I can tell you about technology that is used at home and in school. • I can operate simple equipment. • I can use a safe part of the Internet to play and learn.
		Key Vocabulary: Technology, Safety, computer, tablet, device	*Key Vocabulary: Robots, click*	*Key Vocabulary: video, text, picture, sound, information*	*Key Vocabulary: move, create, shape, text*	*Key Vocabulary: home, school, safe, operate, equipment, technology, learn, internet*
Year 1		• I can keep my password private. • I can tell you what personal information is. • I can tell an adult when I see something unexpected or worrying online. • I can talk about why it's important to be kind and polite. • I can recognise an age appropriate website. • I can agree and follow sensible e-Safety rules.	• I can give instructions to my friend and follow their instructions to move around. • I can describe what happens when I press buttons on a robot. • I can press the buttons in the correct order to make my robot do what I want. • I can describe what actions I will need to do to make something happen and begin to use the word algorithm. • I can begin to predict what will happen for a short sequence of instructions. • I can begin to use software/apps to create movement and patterns on a screen. • I can use the word debug when I correct mistakes when I program.	• I can talk about the different ways in which information can be shown. • I can use technology to collect information, including photos, video and sound. • I can sort different kinds of information and present it to others. • I can add information to a pictograph and talk to you about what I have found out.	I can be creative with different technology tools. I can use technology to create and present my ideas. I can use the keyboard or a word bank on my device to enter text. I can save information in a special place and retrieve it again.	• I can recognise the ways we use technology in our classroom. • I can recognise ways that technology is used in my home and community. • I can use links to websites to find information. • I can begin to identify some of the benefits of using technology.
		Key Vocabulary: password, information, personal, online, polite, kind, computer, laptop, tablet, mobile, iPad, e-safety rules, website, worry	*Key Vocabulary: instructions, robot, algorithm, sequence, software, sequence, apps, program, left, right, forward, backwards, in front, behind*	*Key Vocabulary: photo, video, sound, present, pictograph, data,*	*Key Vocabulary: keyboard, mouse, trackpad, device, save, retrieve, store, password*	*Key Vocabulary: websites, technology,*

Year 2	• I can explain why I need to keep my password and personal information private. • I can describe the things that happen online that I must tell an adult about. • I can talk about why I should go online for a short amount of time. • I can talk about why it is important to be kind and polite online and in real life. • I know that not everyone is who they say they are on the Internet.	• I can give instructions to my friend (using forward, backward and turn) and physically follow their instructions. • I can tell you the order I need to do things to make something happen and talk about this as an algorithm. • I can program a robot or software to do a particular task. • I can look at my friend's program and tell you what will happen. • I can use programming software to make objects move. • I can watch a program execute and spot where it goes wrong so that I can debug it.	• I talk about the different ways I use technology to collect information, including a camera, microscope or sound recorder. • I can make and save a chart or graph using the data I collect. • I can talk about the data that is shown in my chart or graph. • I am starting to understand a branching database. • I can tell you what kind of information I could use to help me investigate a question.	I can use technology to organise and present my ideas in different ways. I can use the keyboard on my device to add, delete and space text for others to read. • I can tell you about an online tool that will help me to share my ideas with other people. • I can save and open files on the device I use.	• I can tell you why I use technology in the classroom. • I can tell you why I use technology in my home and community. • I am starting to understand that other people have created the information I use. • I can identify benefits of using technology including finding information, creating and communicating. I can talk about the differences between the Internet and things in the physical world.
	Key Vocabulary: e-safety, password, private, online, internet, devices, upload, download	*Key Vocabulary: programming, direction, algorithm, debug, execute, software, hardware, coding*	*Key Vocabulary: presentation, camera, microscope, sound recorder, data, save, save as, create, branching database,*	*Key Vocabulary: multimedia, organise, present, device, online, tools, open, save, save as, insert, PowerPoint, Publisher, Word*	*Key Vocabulary: information, compare, differences, internet, virtual world, communication, mobile, portable, cloud, storage, hard drive*

	e-Safety	Programming	Handling Data	Multimedia	Technology in our Lives
Year 3	• I can talk about what makes a secure password and why they are important. • I can protect my personal information when I do different things online. • I can use the safety features of websites as well as reporting concerns to an adult. • I can recognise websites and games appropriate for my age. • I can make good choices about how long I spend online. • I ask an adult before downloading files and games from the Internet. • I can post positive comments online.	• I can break an open-ended problem up into smaller parts. • I can put programming commands into a sequence to achieve a specific outcome. • I keep testing my program and can recognise when I need to debug it. • I can use repeat commands. • I can describe the algorithm I will need for a simple task. • I can detect a problem in an algorithm which could result in unsuccessful programming.	• I can talk about the different ways data can be organised. • I can search a ready-made database to answer questions. • I can collect data help me answer a question. • I can add to a database. • I can make a branching database. • I can use a data logger to monitor changes and can talk about the information collected.	• I can create different effects with different technology tools. • I can combine a mixture of text, graphics and sound to share my ideas and learning. • I can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker. • I can evaluate my work and improve its effectiveness. • I can use an appropriate tool to share my work online.	• I can save and retrieve work on the Internet, the school network or my own device. • I can talk about the parts of a computer. • I can tell you ways to communicate with others online. • I can describe the World Wide Web as the part of the Internet that contains websites. • I can use search tools to find and use an appropriate website. • I think about whether I can use images that I find online in my own work.
	Key Vocabulary: protect, password, secure, websites, cookies, age-appropriate, image, navigate, report, emails, filtering, network, router, cyberbullying, messenger, responsible	*Key Vocabulary: commands, sequence, repeat, algorithm, task, animation, errors, debugging, build, levels, coding*	*Key Vocabulary: database, data logger, branching, monitor store, program, columns, cells, rows, analyse, report,*	*Key Vocabulary: animation, device, spell checker, transitions, commands, graphics, text, sound, microphones, web-cameras*	*Key Vocabulary: save, retrieve, network, cloud, storage, device, communicate, images, safety, private, create, search*
Year 4	• I choose a secure password when I am using a website. • I can talk about the ways I can protect myself and my friends from harm online. • I use the safety features of websites as well as reporting concerns to an adult. • I know that anything I post online can be seen by others. • I choose websites and games that are appropriate for my age. • I can help my friends make good choices about the time they spend online. • I can talk about why I need to ask a trusted adult before downloading files and games from the Internet. • I comment positively and respectfully online.	• I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts. • I can use an efficient procedure to simplify a program. • I can use a sensor to detect a change which can select an action within my program. • I know that I need to keep testing my program while I am putting it together. • I can use a variety of tools to create a program. • I can recognise an error in a program and debug it. • I recognise that an algorithm will help me to sequence more complex programs. • I recognise that using algorithms will also help solve problems in other learning such as Maths, Science and Design and Technology.	• I can organise data in different ways. • I can collect data and identify where it could be inaccurate. • I can plan, create and search a database to answer questions. • I can choose the best way to present data to my friends. • I can use a data logger to record and share my readings with my friends.	• I can use photos, video and sound to create an atmosphere when presenting to different audiences. • I am confident to explore new media to extend what I can achieve. • I can change the appearance of text to increase its effectiveness. • I can create, modify and present documents for a particular purpose. • I can use a keyboard confidently and make use of a spellchecker to write and review my work. • I can use an appropriate tool to share my work and collaborate online. • I can give constructive feedback to my friends to help them improve their work and refine my own work.	• I can tell you whether a resource I am using is on the Internet, the school network or my own device. • I can identify key words to use when searching safely on the World Wide Web. • I think about the reliability of information I read on the World Wide Web. • I can tell you how to check who owns photos, text and clipart. • I can create a hyperlink to a resource on the World Wide Web.
	Key Vocabulary: CEOP, protect, online safety, sharing, report, online gaming, apps, download, upload, respect, world wide web	*Key Vocabulary: logical, sensors, code, program, sequence, complex,*	*Key Vocabulary: data, database, question, plan, create, report, share, data logger*	*Key Vocabulary: presenting, photos, video, graphics, podcast, save, modify, spellchecker, constructive feedback, refine, appearance*	*Key Vocabulary: resource, internet, device, world, wide web, clipart, hyperlink, secure, research*

Year 5	• I protect my password and other personal information. • I can explain why I need to protect myself and my friends and the best ways to do this, including reporting concerns to an adult. • I know that anything I post online can be seen, used and may affect others. • I can talk about the dangers of spending too long online or playing a game. • I can explain the importance of communicating kindly and respectfully. • I can discuss the importance of choosing an age-appropriate website or game. • I can explain why I need to protect my computer or device from harm. • I know which resources on the Internet I can download and use.	• I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. • I can refine a procedure using repeat commands to improve a program. • I can use a variable to increase programming possibilities. • I can change an input to a program to achieve a different output. • I can use 'if' and 'then' commands to select an action. • I can talk about how a computer model can provide information about a physical system. • I can use logical reasoning to detect and debug mistakes in a program. • I use logical thinking, imagination and creativity to extend a program.	• I can use a spreadsheet and database to collect and record data. • I can choose an appropriate tool to help me collect data. • I can present data in an appropriate way. • I can search a database using different operators to refine my search. • I can talk about mistakes in data and suggest how it could be checked.	• I can use text, photo, sound and video editing tools to refine my work. • I can use the skills I have already developed to create content using unfamiliar technology. • I can select, use and combine the appropriate technology tools to create effects that will have an impact on others. • I can select an appropriate online or offline tool to create and share ideas. • I can review and improve my own work and support others to improve their work.	• I can describe different parts of the Internet. • I can use different online communication tools for different purposes. • I can use a search engine to find appropriate information and check its reliability. • I can recognise and evaluate different types of information I find on the World Wide Web. • I can describe the different parts of a webpage. • I can find out who the information on a webpage belongs to.
	Key Vocabulary: password, security, online, age-appropriate, harm, gaming, CEOP, reporting, screenshot, respect, rules	*Key Vocabulary: outcome, repeat, variable, commands, possibilities, detect, debug, creativity, errors*	*Key Vocabulary: spreadsheet, database, cells, Autosum,*	*Key Vocabulary: drag & drop, screen shot, screen grab, editing, refine, online/offline,*	*Key Vocabulary: Unacceptable/acceptable, reliable, webpage, behaviour, cyberbullying, Wifi, 4G, 5G*

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Year 6	• I protect my password and other personal information. • I can explain the consequences of sharing too much about myself online. • I support my friends to protect themselves and make good choices online, including reporting concerns to an adult. • I can explain the consequences of spending too much time online or on a game. • I can explain the consequences to myself and others of not communicating kindly and respectfully. • I protect my computer or device from harm on the Internet.	• I can deconstruct a problem into smaller steps, recognising similarities to solutions used before. • I can explain and program each of the steps in my algorithm. • I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm. • I can recognise when I need to use a variable to achieve a required output. • I can use a variable and operators to stop a program. • I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen. • I can use logical reasoning to detect and correct errors in a algorithms and programs.	• I can plan the process needed to investigate the world around me. • I can select the most effective tool to collect data for my investigation. • I can check the data I collect for accuracy and plausibility. • I can interpret the data I collect. • I can present the data I collect in an appropriate way. • I use the skills I have developed to interrogate a database.	• I can talk about audience, atmosphere and structure when planning a particular outcome. • I can confidently identify the potential of unfamiliar technology to increase my creativity. • I can combine a range of media, recognising the contribution of each to achieve a particular outcome. • I can tell you why I select a particular online tool for a specific purpose. • I can be digitally discerning when evaluating the effectiveness of my own work and the work of others.	• I can tell you the Internet services I need to use for different purposes. • I can describe how information is transported on the Internet. • I can select an appropriate tool to communicate and collaborate online. • I can talk about the way search results are selected and ranked. • I can check the reliability of a website. • I can tell you about copyright and acknowledge the sources of information that I find online.
	Key Vocabulary: consequences, reporting, keeping safe, protect, route tracer, IP address, unacceptable/acceptable	*Key Vocabulary: deconstruct, evaluate, variable, input, predict, circuit,*	*Key Vocabulary: Excel, create, interrogate, plausible, accuracy,*	*Key Vocabulary: presentation, green screen, step-animation, podcast, YouTube,*	*Key Vocabulary: copyright, acknowledgment, sources, ranking, format, hyperlink, IP address,*