Wilby CE Primary School
Computing Knowledge and Progression

Intent

At Wilby Primary School we believe that in order for our pupils to develop into the leaders and innovators of tomorrow, they must be equipped with the necessary skills for the 21st century. According to Piaget: "The principal goal of education in schools should be creating men and women who are capable of doing new things, not simply repeating what other generations have done; men and women who are creative, inventive and discoverers...". The requirement for pupils to develop their skills in Computing is therefore taken very seriously.

EYFS –see Development Matters 2021 for detailed examples of how to support learning in EYFS

Using technology to take a photo or video, play a game or to create a piece of art. Naming some uses of technology, e.g. audiobooks, listening to music, watching films, sending messages. Show an understanding of how technology can help us. Understanding how to stay safe online and when using technology.

Nursery	Reception
C&L: Uses a wider range of vocabulary UTW: Talk about what they see, using a wide vocabulary. Explore how things work.	C&L: Learn New Vocabulary. Ask questions to find out more and check that they understand what has been said. Use talk to work out problems and organise thinking and activities, and to explain how things work and why they might happen. PSED: Staying safe online, understanding and following rules, trying new things UTW: Understanding differences between the past and the present.

AREAS OF STUDY	National Curriculum: - Pupils should be taught to 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 their online technologies.		National Curriculum: - Pupils should be taught to use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour, identify a range of ways to report concerns about content and contact. Be discerning in evaluating digital content			
Digital Literacy: E-Safety and ESense	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	**YEAR 6**

	• 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 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 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 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 can 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 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 protect my password and other personal information. • I can explain the consequences of sharing too much information 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
Information Technology – Handling Data	National Curriculum: - Pupils should be taught to use technology purposefully to organise and manipulate digital content.		National Curriculum: - Pupils should be taught to 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			
	• I can talk about the different ways in which information can be shown. • I can use technology to collect information, including photos,	• I can 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	• 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 to help me answer a question. • I can add to a	• 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	• 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 plan the process needed to carry out an investigation. • 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

	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.	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	database. • I can make a branching database. • I can use a data logger to monitor changes and can talk about the information collected.	my friends. • I can use a data logger to record and share my readings with my friends.	• I can talk about mistakes in data and suggest how it could be checked.	collect. • I can present the data I collect in an appropriate way. • I use the skills I have developed to interrogate a database.
Information Technology - Multimedia	National Curriculum: - Pupils should be taught to use technology purposefully to create digital content		National Curriculum: - Pupils should be taught to 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.			
	• 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 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 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 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	• 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 work and support others to improve their work.	• 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 work and the work of others.

				their work and refine my own work.		
Computer Science – Technology in our lives	National Curriculum: - Pupils should be taught to use technology purposefully to store and retrieve digital content and to recognise common uses of information technology beyond school.		National Curriculum: - Pupils should be taught to 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.			
	• I can recognise the way 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	• 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.	• 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 can think about whether I can use images that I find online in 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 source on the World Wide Web.	• I can describe different parts of the internet. • I can use different online communication 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.	• I can tell you the internet services I need to use for different purposes. • I 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.
Computer Science - Programming Significance of events and people	National Curriculum: - Pupils should be taught to understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. - Create and debug simple programs.		National Curriculum: - Pupils should be taught to 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. - 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.			
	• I can give instructions to my friend and follow their instructions to move around.	• I can give instructions to my friend (using forward, backward and turn) and	• I can break an open-ended problem up into smaller parts. • I can put programming	• I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts.	• 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 deconstruct a problem into smaller steps, recognising similarities to solutions used before.

	• 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.	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.	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 and explain how to debug it.	• 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/animation while I am putting it together. • I can use a variety of tools to create a program/animation. • I can recognise an error in a program and debug it. • I can recognise that an algorithm will help me sequence more complex programs. • I recognise that using algorithms will also help solve problems in other learning such as maths, science and design technology	• 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 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 algorithms and programs.