## End of educational stage expectations

### Level Expected at the End of EYFS

**Understanding the World (Technology)**
Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes.

| Key Stage 1 National Curriculum Expectations | Key Stage 2 National Curriculum Expectations |
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| Pupils should be taught to:<br>• understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions;<br>• create and debug simple programs;<br>• use logical reasoning to predict the behaviour of simple programs;<br>• use technology purposefully to create, organise, store, manipulate and retrieve digital content;<br>• recognise common uses of information technology beyond school;<br>• 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. | Pupils should be taught to:<br>• design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts;<br>• use sequence, selection, and repetition in programs; work with variables and various forms of input and output;<br>• use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs;<br>• 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;<br>• use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content;<br>• 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;<br>• use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concerns about content and contact. |

Curriculum intent

**“A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world”**

**A**t Wickhambreaux CEP, we believe that computing is an essential part of the curriculum; a subject that not only stands alone, but is interlinked through all areas, the study of which should form part of learning in all subjects. Computing, in general, is a significant part of modern daily life and children should be at the forefront of new technological developments, and, through a rich and engaging curriculum, should develop a thirst for learning what more is out there. Computing at Wickhambreaux therefore intends to provide a wealth of learning opportunities which foster transferrable skills explicitly within the Computing lesson and across other curriculum subjects.

The study of Computing will cultivate a wide range of skills, knowledge and understanding that children will need in order to become functional citizens in modern society. The content delivered through the curriculum we have designed allows for a broad, deep understanding of practical computing procedures and concepts of computer science, and provides opportunities for children to learn how these link to their lives. A range of opportunities are offered for consolidation, challenge and variety, allowing children to use and apply the fundamental principles and concepts of computer science to different situations and contexts. Pupils develop systematic working, logical reasoning and analytical problem-solving skills, and use these to become safe, responsible, competent, confident and creative users of information technology.

To ensure coverage and progression, the aims and expectations for all pupils at the end of each educational stage have been sub-divided into 5 strands of computing: e-safety, programming, handling data, multimedia and technology in our lives. This means that progression through the strands can be seen and monitored, coverage is clear and sequential, and practitioners are aware of prior learning and next steps.

| | e-Safety | Programming | Handling Data | Multimedia | Technology in our Lives |
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| **Foundation Stage** | • I can ask an adult when I want to use the Internet.<br>• I can tell an adult when something worrying or unexpected happens while I am using the Internet.<br>• I can be kind to my friends.<br>• I can talk about the amount of time I spend using a computer / tablet / game device.<br>• I am careful with technology devices. | • I can make a floor robot move.<br>• I can use simple software to make something happen.<br>• 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.<br>• I can create shapes and text on a screen.<br>• I can use technology to show my learning. | • I can tell you about technology that is used at home and in school.<br>• I can operate simple equipment.<br>• I can use a safe part of the Internet to play and learn. |

| | e-Safety | Programming | Handling Data | Multimedia | Technology in our Lives |
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| **Year 1** | • I can keep my password private.<br>• I can tell you what personal information is.<br>• I can tell an adult when I see something unexpected or worrying online.<br>• I can talk about why it's important to be kind and polite.<br>• I can recognise an age appropriate website.<br>• I can agree and follow sensible e-Safety rules. | • I can give instructions to my friend and follow their instructions to move around.<br>• I can describe what happens when I press buttons on a robot.<br>• I can press the buttons in the correct order to make my robot do what I want.<br>• I can describe what actions I will need to do to make something happen and begin to use the word algorithm.<br>• I can begin to predict what will happen for a short sequence of instructions.<br>• I can begin to use software/apps to create movement and patterns on a screen.<br>• 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.<br>• I can use technology to collect information, including photos, video and sound.<br>• I can sort different kinds of information and present it to others.<br>• 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.<br>• I can use technology to create and present my ideas.<br>• I can use the keyboard or a word bank on my device to enter text.<br>• I can save information in a special place and retrieve it again. | • I can recognise the ways we use technology in our classroom.<br>• I can recognise ways that technology is used in my home and community.<br>• I can use links to websites to find information.<br>• I can begin to identify some of the benefits of using technology. |

| | e-Safety | Programming | Handling Data | Multimedia | Technology in our Lives |
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| **Year 2** | • I can explain why I need to keep my password and personal information private.<br>• I can describe the things that happen online that I must tell an adult about.<br>• I can talk about why I should go online for a short amount of time.<br>• I can talk about why it is important to be kind and polite online and in real life.<br>• 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.<br>• I can tell you the order I need to do things to make something happen and talk about this as an algorithm.<br>• I can program a robot or software to do a particular task.<br>• I can look at my friend's program and tell you what will happen.<br>• I can use programming software to make objects move.<br>• 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.<br>• I can make and save a chart or graph using the data I collect.<br>• I can talk about the data that is shown in my chart or graph.<br>• I am starting to understand a branching database.<br>• 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.<br>• I can use the keyboard on my device to add, delete and space text for others to read.<br>• I can tell you about an online tool that will help me to share my ideas with other people.<br>• I can save and open files on the device I use.<br>• | • I can tell you why I use technology in the classroom.<br>• I can tell you why I use technology in my home and community.<br>• I am starting to understand that other people have created the information I use.<br>• I can identify benefits of using technology including finding information, creating and communicating.<br>• I can talk about the differences between the Internet and things in the physical world. |

| | e-Safety | Programming | Handling Data | Multimedia | Technology in our Lives |
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| **Year 3** | • I can talk about what makes a secure password and why they are important.<br>• I can protect my personal information when I do different things online.<br>• I can use the safety features of websites as well as reporting concerns to an adult.<br>• I can recognise websites and games appropriate for my age.<br>• I can make good choices about how long I spend online.<br>• I ask an adult before downloading files and games from the Internet.<br>• I can post positive comments online. | • I can break an open-ended problem up into smaller parts.<br>• I can put programming commands into a sequence to achieve a specific outcome.<br>• I keep testing my program and can recognise when I need to debug it.<br>• I can use repeat commands.<br>• I can describe the algorithm I will need for a simple task.<br>• 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.<br>• I can search a ready-made database to answer questions.<br>• I can collect data help me answer a question.<br>• I can add to a database.<br>• I can make a branching database.<br>• 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.<br>• I can combine a mixture of text, graphics and sound to share my ideas and learning.<br>• I can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker.<br>• I can evaluate my work and improve its effectiveness.<br>• 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.<br>• I can talk about the parts of a computer.<br>• I can tell you ways to communicate with others online.<br>• I can describe the World Wide Web as the part of the Internet that contains websites.<br>• I can use search tools to find and use an appropriate website.<br>• I think about whether I can use images that I find online in my own work. |

| | e-Safety | Programming | Handling Data | Multimedia | Technology in our Lives |
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| **Year 4** | • I choose a secure password when I am using a website.<br>• I can talk about the ways I can protect myself and my friends from harm online.<br>• I use the safety features of websites as well as reporting concerns to an adult.<br>• I know that anything I post online can be seen by others.<br>• I choose websites and games that are appropriate for my age.<br>• I can help my friends make good choices about the time they spend online.<br>• I can talk about why I need to ask a trusted adult before downloading files and games from the Internet.<br>• I comment positively and respectfully online. | • I can use logical thinking to solve an open-ended problem by breaking it up into smaller parts.<br>• I can use an efficient procedure to simplify a program.<br>• I can use a sensor to detect a change which can select an action within my program.<br>• I know that I need to keep testing my program while I am putting it together.<br>• I can use a variety of tools to create a program.<br>• I can recognise an error in a program and debug it.<br>• I recognise that an algorithm will help me to sequence more complex programs.<br>• 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.<br>• I can collect data and identify where it could be inaccurate.<br>• I can plan, create and search a database to answer questions.<br>• I can choose the best way to present data to my friends.<br>• 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.<br>• I am confident to explore new media to extend what I can achieve.<br>• I can change the appearance of text to increase its effectiveness.<br>• I can create, modify and present documents for a particular purpose.<br>• I can use a keyboard confidently and make use of a spellchecker to write and review my work.<br>• I can use an appropriate tool to share my work and collaborate online.<br>• 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.<br>• I can identify key words to use when searching safely on the World Wide Web.<br>• I think about the reliability of information I read on the World Wide Web.<br>• I can tell you how to check who owns photos, text and clipart.<br>• I can create a hyperlink to a resource on the World Wide Web. |

| | e-Safety | Programming | Handling Data | Multimedia | Technology in our Lives |
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| **Year 5** | • I protect my password and other personal information.<br>• 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.<br>• I know that anything I post online can be seen, used and may affect others.<br>• I can talk about the dangers of spending too long online or playing a game.<br>• I can explain the importance of communicating kindly and respectfully.<br>• I can discuss the importance of choosing an age-appropriate website or game.<br>• I can explain why I need to protect my computer or device from harm.<br>• 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.<br>• I can refine a procedure using repeat commands to improve a program.<br>• I can use a variable to increase programming possibilities.<br>• I can change an input to a program to achieve a different output.<br>• I can use 'if' and 'then' commands to select an action.<br>• I can talk about how a computer model can provide information about a physical system.<br>• I can use logical reasoning to detect and debug mistakes in a program.<br>• I use logical thinking, imagination and creativity to extend a program. | • I can use a spreadsheet and database to collect and record data.<br>• I can choose an appropriate tool to help me collect data..<br>• I can present data in an appropriate way.<br>• I can search a database using different operators to refine my search.<br>• 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.<br>• I can use the skills I have already developed to create content using unfamiliar technology.<br>• I can select, use and combine the appropriate technology tools to create effects that will have an impact on others.<br>• I can select an appropriate online or offline tool to create and share ideas.<br>• I can review and improve my own work and support others to improve their work. | • I can describe different parts of the Internet.<br>• I can use different online communication tools for different purposes.<br>• I can use a search engine to find appropriate information and check its reliability.<br>• I can recognise and evaluate different types of information I find on the World Wide Web.<br>• I can describe the different parts of a webpage.<br>• I can find out who the information on a webpage belongs to. |

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| **Year 6** | • I protect my password and other personal information.<br>• I can explain the consequences of sharing too much about myself online.<br>• I support my friends to protect themselves and make good choices online, including reporting concerns to an adult.<br>• I can explain the consequences of spending too much time online or on a game.<br>• I can explain the consequences to myself and others of not communicating kindly and respectfully.<br>• 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.<br>• I can explain and program each of the steps in my algorithm.<br>• I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.<br>• I can recognise when I need to use a variable to achieve a required output.<br>• I can use a variable and operators to stop a program.<br>• I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen.<br>• 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.<br>• I can select the most effective tool to collect data for my investigation.<br>• I can check the data I collect for accuracy and plausibility.<br>• I can interpret the data I collect.<br>• I can present the data I collect in an appropriate way.<br>• I use the skills I have developed to interrogate a database. | • I can talk about audience, atmosphere and structure when planning a particular outcome.<br>• I can confidently identify the potential of unfamiliar technology to increase my creativity.<br>• I can combine a range of media, recognising the contribution of each to achieve a particular outcome.<br>• I can tell you why I select a particular online tool for a specific purpose.<br>• 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.<br>• I can describe how information is transported on the Internet.<br>• I can select an appropriate tool to communicate and collaborate online.<br>• I can talk about the way search results are selected and ranked.<br>• I can check the reliability of a website.<br>• I can tell you about copyright and acknowledge the sources of information that I find online. |

Strand Progression: KS! —> LKS2 —> UKS2

E-safety

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| Children begin to consider their activity on the internet and learn about ways to keep themselves safe and why it is important to do so. They also compare appropriate and inappropriate activity on the internet and decide what to<br>do next.<br>KS1 Computing National Curriculum<br>Children can use technology safely and respectfully, keeping personal information private; they identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.<br>Children can:<br>a. identify what things count as personal information;<br>b. identify what is appropriate and inappropriate behaviour on the internet;<br>c. agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords;<br>d. seek help from an adult when they see something that is unexpected or worrying;<br>e. demonstrate how to safely open and close applications and log on and log off from websites;<br>f. use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, key, question, tell, safe, share, stranger, danger, internet. | Children become more aware of their digital footprint by reflecting on their experience on the internet. They are able to understand more about age-appropriate websites and adverts and how adverts are used by companies. Children are also introduced to the concept of plagiarism and citation.<br>KS2 Computing National Curriculum<br>Children use technology safely, respectfully and responsibly. They recognise acceptable/ unacceptable behaviour and identify a range of ways to report concerns about content<br>and contact.<br>Children can:<br>a. reflect on their own digital footprint and behaviour online;<br>b. identify what is appropriate and inappropriate behaviour on the internet, recognising the term cyberbullying;<br>c. agree and follow sensible online safety rules, e.g. taking pictures, sharing information, storing passwords;<br>d. seek help from an adult when they see something that is unexpected or worrying;<br>e. demonstrate understanding of age-appropriate websites and adverts;<br>f. use key vocabulary to demonstrate knowledge and understanding in this strand: safe, meet, accept, reliable, tell, online, trusted, adult, information, safety, personal, internet, world wide web, communicate, message, social media, email, password, cyberbullying/bullying, plagiarism, profiles, account, private, public. | Children are encouraged to identify online risks and share their knowledge of the risks and consequences for people online. They begin to think more critically about what they see online and look at the concept of fake news and false photographs. KS2 Computing National Curriculum<br>Children use technology safely, respectfully and responsibly. They recognise acceptable/ unacceptable behaviour and identify a range of ways to report concerns about content<br>and contact.<br>Children can:<br>a. protect their password and other personal information;<br>b. be a good online citizen and friend;<br>c. judge what sort of privacy settings might be relevant to reducing different risks;<br>d. seek help from an adult when they see something that is unexpected or worrying;<br>e. discuss scenarios involving online risk;<br>f. use key vocabulary to demonstrate knowledge and understanding in this strand: spam, link, privacy, virus, scam, phishing, inbox, junk, sender, subject, secure, safe, account, online, private, social media, adverts, cyberbullying, reporting, anonymous, victim, fraud/ fraudulent, policy, private/personal. |

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| Children begin to understand their influence on technology by developing their programming skills to determine output. They begin to understand that an algorithm is a series of steps for solving problems and a code is a series of steps that machines can execute. They begin to explore debugging, predicting when codes may not work and changing them.<br>KS1 Computing National Curriculum<br>Children understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions. They create, debug and use logical reasoning to predict the behaviour of simple programs.<br>Children can:<br>a. give commands one at a time to control direction and movement, including straight, forwards, backwards, turn;<br>b. control the nature of events: repeat, loops, single events and add and delete features;<br>c. give a set of instructions to follow and predict what will happen;<br>d. improve/change their sequence of commands by debugging;<br>e. use key vocabulary to demonstrate knowledge and understanding in this strand: algorithm, instruction, order, debug, program, turn, left, right, clockwise, anticlockwise, blocks, sequence, project, repeat, repeat forever, invisible, grow, shrink. | Children build on their programming skills by solving problems and programming commands to achieve a specific outcome. They begin to write programs, explain algorithms and identify errors in their work.<br>KS2 Computing National Curriculum<br>Children design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; they solve problems by decomposing them into smaller parts. They use sequence, selection, and repetition in programs and work with variables and various forms of input and output. They use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.<br>Children can:<br>a. use logical thinking to solve an open-ended problem by breaking it up into smaller parts;<br>b. write a program, putting commands into a sequence to achieve a specific outcome;<br>c. give a set of instructions to follow and predict what will happen;<br>d. keep testing a program and recognise when it needs to be debugged;<br>e. use variables to create an effect, e.g. repetition, if, when, loop;<br>f. use key vocabulary to demonstrate knowledge and understanding in this strand: decompose, decomposing, logical sequence, flowchart, sprite, block, command, algorithm, answer, correct, errors, program, algorithm, instructions, commands, forward (fd), left (lt), right (rt), move, turn, clear screen (cs), variable. | Children build on their programming skills by using new systems such as a flowchart. They continue to break down problems and create algorithms to solve them. They are able to explain the outcome of an algorithm with confidence and accuracy.<br>KS2 Computing National Curriculum<br>Children design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; they solve problems by decomposing them into smaller parts. They use sequence, selection, and repetition in programs and work with variables and various forms of input and output. They use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.<br>Children can:<br>a. use external triggers and infinite loops to demonstrate control;<br>b. follow a sequence of instructions, e.g. in a flowchart and modify a flowchart using symbols;<br>c. use conditional statements and edit variables;<br>d. decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program;<br>e. keep testing a program and recognise when it needs to be debugged;<br>f. use key vocabulary to demonstrate knowledge and understanding in this strand: flowchart, algorithm, control, output, symbol, start, stop, delay, process, decision, loop, backdrop, script, block, repeat, commentary, sequence, consequence, debug, program, Kodu, world, object, tool palette, program environment, smooth, flatten, raise, |

Handling data

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| | Children begin to explore expressing information in tables, sorting and organising information for others to be able to understand.<br>KS2 Computing National Curriculum<br>Children 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.<br>Children can:<br>**a** talk about the different ways data can be organised; **b** sort and organise information to use in other ways; **c** search a ready-made database to answer questions; **d** use key vocabulary to demonstrate knowledge and understanding in this strand: Google Docs, insert, table. | Data Handling in UKS2 focuses on selecting the correct method to display data and using software such as spreadsheets. Children also learn how to check the accuracy of data and compare data for a specific purpose.<br>KS2 Computing National Curriculum<br>Children 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.<br>Children can:<br>a. construct data on the most appropriate application;<br>b. know how to interpret data, including spotting inaccurate data and comparing data;<br>c. use keyboard shortcuts and functions to input data on spreadsheets and create formulas for spreadsheets;<br>d. add data to an existing database;<br>e. use key vocabulary to demonstrate knowledge and understanding in this strand: Google Docs, insert, table, spreadsheet, cell, row, column, formula/ formulas, calculate, format, edit, insert, ascending, descending. |

Multimedia

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| Children begin to develop their creativity using technology through recording sound. Children will also begin to develop their editing skills and control of the tools.<br>KS1 Computing National Curriculum<br>Children use technology purposefully to create, organise, store, manipulate and retrieve digital content.<br>Children can:<br>a. use software to record sounds;<br>b. change sounds recorded;<br>c. save, retrieve and organise work;<br>d. use key vocabulary to demonstrate knowledge and understanding in this strand: commands, add sound. | Children develop their editing skills further by cropping, organising and arranging film clips. They are able to share work and offer feedback and ideas for improvement with animation and film, giving their opinion on which software to use. In LKS2, children also look at the history of animation and reflect upon the changes over time.<br>KS2 Computing National Curriculum<br>Children 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.<br>Children can:<br>a. use software to record, create and edit sounds and capture still images;<br>b. change recorded sounds, volume, duration and pauses;<br>c. use software to capture video for a purpose;<br>d. crop and arrange clips to create a short film;<br>e. plan an animation and move items within each animation for playback;<br>f. use key vocabulary to demonstrate knowledge and understanding in this strand: audio, sound, video, movie, embed, link, file format, animate, animation, still image, thaumatrope, zoetrope, zoopraxiscope, stereoscope, flip book, frame, onion skinning, loop, frame rate, record, stop, play, stop motion, stop frame. | Children begin to look more into multimedia broadcasting, learning new skills including recording jingles, podcasts and narration. They become more confident in post-production with editing, trimming and refining their work based on plans they have made.<br>KS2 Computing National Curriculum<br>Children 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.<br>Children can:<br>a. collect audio from a variety of resources including own recordings and internet clips;<br>b. use a digital device to record sounds and present audio;<br>c. trim, arrange and edit audio levels to improve quality;<br>d. publish their animation and use a movie editing package to edit/refine and add titles;<br>e. use key vocabulary to demonstrate knowledge and understanding in this strand: audio, record, edit, play stop, skip, waveform, input, output, record, edit, play podcast, digital content, downloadable, backing track, voiceover, mute, gain, production, post-production, documentary, project, evaluation, screening, ceremony, upload. |

Technology in our lives

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| Children begin to make links to how they use technology outside of the classroom. They begin to think about the benefits of using technology in their lives, making links to learning about online safety.<br>KS1 Computing National Curriculum<br>Children recognise common uses of technology beyond school. They use technology safely and respectfully, keeping personal information private; they identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.<br>Children can:<br>a. recognise ways that technology is used in the home and community, e.g. taking photos, blogs, shopping;<br>b. use links to websites to find information;<br>c. recognise age-appropriate websites;<br>d. use safe search filters;<br>e. use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, internet, subject, address, communicate, sender, safe, secure. | Children refer to online safety rules when discussing technology in their lives. They are able to navigate between websites and use safe search terms on trusted search engines. They become more confident in using email for communication, including attaching and saving files from emails.<br>KS2 Computing National Curriculum<br>Children 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. They use search technologies effectively, appreciate how results are selected and ranked, and are discerning in evaluating digital content.<br>Children can:<br>a. explain ways to communicate with others online;<br>b. describe the world wide web as the part of the internet that contains websites;<br>c. add websites to a favourites list;<br>d. use search tools to find and use an appropriate website and content;<br>e. use strategies to improve results when searching online;<br>f. use key vocabulary to demonstrate knowledge and understanding in this strand: filter, Google, search engine, image, keyboard, email, subject, address, communicate, sender, safe, secure, internet, world wide web, social media. | Children can use safe search terms on trusted search engines, and evaluate websites based on layout and information. They become more confident in understanding Google rankings, adverts and the reliability of websites.<br>KS2 Computing National Curriculum<br>Children 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. They use search technologies effectively, appreciate how results are selected and ranked, and are discerning in evaluating digital content.<br>Children can:<br>a. search for information using appropriate websites and advanced search functions within Google;<br>b. use strategies to check the reliability of information (cross-check with another source such as books);<br>c. talk about the way search results are selected and ranked;<br>d. check the reliability of a website, including the photos on site;<br>e. tell you about copyright and acknowledge the sources of information;<br>f. use key vocabulary to demonstrate knowledge and understanding in this strand: world wide web, search, search engine, advanced search, results, Google, browser, terms of use, bias, authority, citation, plagiarism, source, website, secure, https, site, domain, website, browser, address bar. |

## Curriculum implementation

Each lesson will be designed to build upon prior learning by containing elements of revision, extend procedural knowledge and conceptual understanding through analysis and problem-solving, and make clear links to a range of contextual applications of what is learned. Through this approach, pupils subject knowledge and skills can be sequentially developed, teaching staff can see the clear progression from what has come before to what is to come after, and high expectations are maintained for all pupils to make progress.

Pupils will be inspired to develop a love of the digital world, and learn the skills they will need to navigate it safely and use it responsibly. Lesson plans and selected resources are chosen to help children to build on prior knowledge at the same time as introducing new skills and challenges.

In KS1, the focus is on developing the use of algorithms, programming skills and understanding of how technology can be used safely and purposefully.

In KS2, lessons still focus on algorithms, programming and coding but in a deeper and more complex way and for different purposes. Children also develop their knowledge of computer networks, internet services and the safe and purposeful use of the internet and technology. Data Handling is featured more heavily in UKS2. Skills learnt through KS1 and LKS2 are used to support data presentation. Assessments are used at regular intervals appropriate to topic and purpose, enabling staff to feel confident in the progression of skills and knowledge and that outcomes have been met.

Knowledge organisers are designed and shared with parents/carers so that the home-school learning partnership can be strengthened and developed. These contain details of what is to be studied in each topic and some key vocabulary terms, which can also be utilised by teachers to assess understanding and progress through vocabulary.

## Curriculum impact

**“A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world”**

Learning in computing will be enjoyed across the school. Teachers will have high expectations and quality evidence will be presented in a variety of forms. Children will use digital and technological vocabulary accurately, alongside a progression in their technical skills. They will be confident using a range of hardware and software and will produce high-quality purposeful products. Children will see the digital world as part of their world, extending beyond school, and understand that they have choices to make. They will be confident and respectful digital citizens going on to lead happy and healthy digital lives.