Computing Long term plan

(Following national centre for computing education)

Term	Year 1	Year 2
Autumn 1	**Computing systems and networks- Technology around us** Learners will become more familiar with the different components of a computer by developing their keyboard and mouse skills and start to consider how to use technology responsibly. Can I s: 1. Can I identify technology? 2. Can I identify a computer and its main parts? 3. Can I use a mouse in different ways? 4. Can I use a keyboard to type on a computer? 5. Can I use the keyboard to edit text? 6. Can I create rules for using technology responsibly? Outcomes: • I can explain technology as something that helps us • I can locate examples of technology in the classroom • I can explain how these technology examples help us • I can name the main parts of a computer • I can switch on and log into a computer • I can use a mouse to click and drag • I can use a mouse to open a program • I can click and drag to make objects on a screen • I can use a mouse to create a picture • I can say what a keyboard is for • I can type my name on a computer • I can save my work to a file • I can open my work from a file • I can use the arrow keys to move the cursor • I can delete letters	**Computing systems and networks – IT around us** How is information technology (IT) being used for good in our lives? With an initial focus on IT in the home, learners explore how IT benefits society in places such as shops, libraries, and hospitals. Whilst discussing the responsible use of technology, and how to make smart choices when using it. Can I s: 1. Can I recognise the uses and features of information technology? 2. Can I identify the uses of information technology in the school? 3. Can I identify information technology beyond school? 4. Can I explain how information technology helps us? 5. Can I explain how to use information technology safely? 6. Can I recognise that choices are made when using information technology? Outcomes: • I can identify examples of computers • I can describe some uses of computers • I can identify that a computer is a part of IT • I can identify examples of IT • I can sort school IT by what it's used for • I can identify that some IT can be used in more than one way • I can find examples of information technology • I can sort IT by where it is found • I can talk about uses of information technology • I can recognise common types of technology • I can demonstrate how IT devices work together • I can say why we use IT • I can list different uses of information technology • I can talk about different rules for using IT

	• I can identify rules to keep us safe and healthy when we are using technology in and beyond the home • I can give examples of some of these rules • I can discuss how we benefit from these rules	• I can say how rules can help keep me safe • I can identify the choices that I make when using IT • I can use IT for different types of activities • I can explain the need to use IT in different ways
Autumn 2	Creating media- digital painting Explore the world of digital art and its exciting range of creative tools with your learners. Empower them to create their own paintings, while getting inspiration from a range of other artists. Conclude by asking them to consider their preferences when painting with, and without, the use of digital devices. Can Is: 1. Can I describe what different freehand tools do? 2. Can I use the shape tool and the line tools? 3. Can I make careful choices when painting a digital picture? 4. Can I explain why I chose the tools I used? 5. Can I use a computer on my own to paint a picture? 6. Can I compare painting a picture on a computer and on paper? Outcomes: • To describe what different freehand tools do. • To use the shape tool and the line tools. • To make careful choices when painting a digital picture. • To explain why I chose the tools I used. • To use a computer on my own to paint a picture. • To compare painting a picture on a computer and on paper.	No computing
Spring 1	Online safety. Safer internet day 11th February 25 Can I be safe online? Can Is: 1. Can I understand why it is important to stay safe online? 2. Can I explain what to do if I see something bad online? 3. Can I recognise the difference between what is bad or good online? 4. Can I send a message online safely? 5. Can I identify what information I should share online?	Online safety Safer internet day 11th February 25 Can I be safe online? Can Is: 1. Can I understand why it is important to stay safe online? 2. Can I explain what to do if I see something bad online? 3. Can I recognise the difference between what is bad or good online? 4. Can I send a message online safely? 5. Can I identify what information I should share online?

	Outcomes: • All children can explain why it is important to stay safe online and describe what information should be kept private. • Know how to use a computer safely. • recognise something online as bad and wrong or good and helpful. • Be able to tell people what they can do if they see anything bad online. • I can list some of the dangers of using the internet. • I can send a message using a computer without upsetting anyone. • I can say how my family could be safer online. • I can list some of the dangers of using the internet.	Outcomes: • All children can explain why it is important to stay safe online and describe what information should be kept private. • Know how to use a computer safely. • recognise something online as bad and wrong or good and helpful. • Be able to tell people what they can do if they see anything bad online. • I can list some of the dangers of using the internet. • I can send a message using a computer without upsetting anyone. • I can say how my family could be safer online. • I can list some of the dangers of using the internet. Creating media – Digital music Core story: Learners will explore how music can make them think and feel. They will make patterns and use those patterns to make music with both percussion instruments and digital tools. They will also create different rhythms and tunes, using the movement of animals for inspiration. Finally, learners will share their creations and compare creating music digitally and non-digitally. Can Is: 1. Can I say how music can make us feel? 2. Can I identify that there are patterns in music? 3. Can I experiment with sound using a computer? 4. Can I use a computer to create a musical pattern? 5. Can I create music for a purpose? 6. Can I review and refine my computer work? Outcomes: • I can identify simple differences in pieces of music • I can describe music using adjectives • I can say what I do and don't like about a piece of music • I can create a rhythm pattern • I can play an instrument following a rhythm pattern • I can explain that music is created and played by humans • I can connect images with sounds • I can use a computer to experiment with pitch • I can relate an idea to a piece of music • I can identify that music is a sequence of notes

		• I can explain how my music can be played in different ways • I can refine my musical pattern on a computer • I can create a rhythm which represents an animal I've chosen • I can create my animal's rhythm on a computer • I can add a sequence of notes to my rhythm • I can review my work • I can explain how I changed my work • I can listen to music and describe how it makes me feel
Spring 2	Programming A – Moving a robot Core story: This unit introduces learners to early programming concepts. Learners will explore using individual commands, both with other learners and as part of a computer program. They will identify what each floor robot command does and use that knowledge to start predicting the outcome of programs. The unit is paced to ensure time is spent on all aspects of programming and builds knowledge in a structured manner. Learners are also introduced to the early stages of program design through the introduction of algorithms. Can I: 1. Can I explain what a given command will do? 2. Can I act out a given word? 3. Can I combine 'forwards' and 'backwards' commands to make a sequence? 4. Can I combine four direction commands to make sequences? 5. Can I plan a simple program? 6. Can I find more than one solution to a problem? Outcomes: • To explain what a given command will do • To follow instructions and give commands. • Make a sequence-using forwards and backwards, turn. • To plan a simple program. To find more than one solution to a problem.	
Summer 1	Creating media – Digital writing Promote your learners' understanding of the various aspects of using a computer to create and change text. Learners will familiarise themselves with typing on a keyboard and begin using tools to change the look of their writing, and then they	Programming B – programming quizzes This unit initially recaps on learning from the Year 1 Scratch Junior unit 'Programming B - Programming animations'. Learners begin to understand that sequences of commands have an outcome and make predictions based on their learning. They use and modify designs to create their own quiz questions in

	will consider the differences between using a computer and writing on paper to create text. Can Is: 1. Can I use a computer to write? 2. Can I add and remove text on a computer? 3. Can I identify that the look of text can be changed on a computer 4. Can I make careful choices when changing text? 5. Can I explain why I used the tools that I chose? 6. Can I compare typing on a computer to writing on paper? Outcomes: ● I can open a word processor ● I can recognise keys on a keyboard ● I can identify and find keys on a keyboard ● I can enter text into a computer ● I can use letter, number, and Space keys ● I can use Backspace to remove text ● I can type capital letters ● I can explain what the keys that I have already learnt about do ● I can identify the toolbar and use bold, italic, and underline ● I can select a word by double-clicking ● I can select all of the text by clicking and dragging ● I can change the font ● I can say what tool I used to change the text ● I can decide if my changes have improved my writing ● I can use 'Undo' to remove changes ● I can make changes to text on a computer ● I can explain the differences between typing and writing ● I can say why I prefer typing or writing	ScratchJr and realise these designs in ScratchJr using blocks of code. Finally, learners evaluate their work and make improvements to their programming projects. You will need to introduce Scratch junior as unit not taught in Y1 (Y1 unit: This unit introduces learners to on-screen programming through ScratchJr. Learners will explore the way a project looks by investigating sprites and backgrounds. They will use programming blocks to use, modify, and create programs. Learners will also be introduced to the early stages of program design through the introduction of algorithms.) Can Is: 1. Can I explain that a sequence of commands has a start? 2. Can I explain that a sequence of commands has an outcome? 3. Can I create a program using a given design? 4. Can I change a given design? 5. Can I create a program using my own design? 6. Can I decide how my project can be improved? Outcomes: ● I can identify the start of a sequence ● I can identify that a program needs to be started ● I can show how to run my program ● I can predict the outcome of a sequence of commands ● I can match two sequences with the same outcome ● I can change the outcome of a sequence of commands ● I can work out the actions of a sprite in an algorithm ● I can decide which blocks to use to meet the design ● I can build the sequences of blocks I need ● I can choose backgrounds for the design ● I can choose characters for the design ● I can create a program based on the new design ● I can choose the images for my own design ● I can create an algorithm ● I can build sequences of blocks to match my design ● I can compare my project to my design ● I can improve my project by adding features ● I can debug my program

Summer 2	No computing	Programming A Robot algorithms This unit develops learners' understanding of instructions in sequences and the use of logical reasoning to predict outcomes. Learners will use given commands in different orders to investigate how the order affects the outcome. They will also learn about design in programming. They will develop artwork and test it for use in a program. They will design algorithms and then test those algorithms as programs and debug them. Can I: 1. Can I describe a series of instructions as a sequence? 2. Can I explain what happens when we change the order of instructions? 3. Can I use logical reasoning to predict the outcome of a program? 4. Can I explain that programming projects can have code and artwork? 5. Can I design an algorithm? 6. Can I create and debug a program that I have written? Outcomes: • To describe a series of instructions as a sequence. • To explain what happens when we change the order of instructions. • To use logical reasoning to predict the outcome of a program. • To explain that programming projects can have code and artwork. • To design an algorithm. • To create and debug a program that I have written.