Term	Autumn 1	
Year R	Digital Literacy	
Concept	Computing systems and networks	
Knowledge and Skills	Crucial knowledge: • Children need to know that different types of technology exist. • Children need to understand why there are rules in place. • Children need to understand that technology can be used to achieve a desired outcome.	Using knowledge as a skill: • Children will be able to articulate what technology is and the different types of technology. • Children will be able to use technology to achieve something e.g. draw.
Vocabulary	Technology, rules, outcome	
Year 1	Digital Literacy	
Concept	Computing systems and networks	
Knowledge and Skills	Crucial knowledge: • Children need to be able to recognise different examples of technology. • Children need to understand how a computer is turned on/off and log on. • Children need to be able to recognise the different parts of a computer. • Children should be able to use a mouse for different purposes. • Children need to know how work is saved and managed. • Children need to know how to use technology safely.	Using knowledge as a skill: • Children will be able to verbalise the different types of technology that are used. • Children will be able to turn a computer on/off and log on to their profile. • Children can label a computer and name the parts on a real computer. • Children will be able to use a mouse to draw, drag and click on different things. • Children will be able to open, save and edit their work. • Children will be able to create their own rules for using technology responsibly.
Vocabulary	Technology, mouse, keyboard, program, save, edit, open, responsible, safety	
Year 2	Digital Literacy	
Concept	Computing systems and networks	
Knowledge and Skills	Crucial knowledge: • Children should know what computers are used for. • Children need to know what Information Technology (IT) means. • Children will understand what it means to use IT safely.	Using knowledge as a skill: • Children can articulate what Information Technology (IT) means (technology to communicate, transfer data and process information). • Children will be able to think of some examples of IT in and out of school. • Children will be able to sort IT by what it is used for. • Children will be able to identify the safe choices they make when using IT and why.
Vocabulary	Information Technology, safety, computers	

Term	Autumn 2	
Year R	Information Technology	
Concept	Creating media	
Knowledge and Skills	Crucial knowledge: • Children need to know how technology can be used to draw pictures. • Children need to know that drawings can look different on technology based on the tools they choose to use.	Using knowledge as a skill: • Children to be able to use touchscreen technology to draw. • Children to know how to change colour of their drawings by clicking which they want. • Children to know how to change the brush type/thickness they are using.
Vocabulary	Technology, drawings, colour, thickness	
Year 1	Information Technology	
Concept	Creating media	
Knowledge and Skills	Crucial knowledge: • Children need to know how a computer can be used to draw pictures (revisiting from Year R, Autumn 2). • Children need to know the different tools available to help them draw on the computer.	Using knowledge as a skill: • Children to be able to draw lines on the computer by clicking and dragging the mouse. • Children to use line and shape tools to create different designs. • Children to be able to articulate which tools are helpful to recreate an image and why.
Vocabulary	Draw, tools, shape, line, colour	
Year 2	Information Technology	
Concept	Creating media	
Knowledge and Skills	Crucial knowledge: • Children understand how a program can be used to fulfil a purpose. • Children know how to add images to a document. • Children know why computers are used for different jobs.	Using knowledge as a skill: • Children to be able to open, edit and save a Word document (revisiting from Year 1, Summer 1). • Children to be able to use the internet to search for an image. • Children to copy an image and paste it into their document. • Children to articulate why computers are useful tools when creating a document.
Vocabulary	Program, Word, search, image, copy/paste	

<table>
<tr><td>Term</td><td colspan="2">Spring 1</td></tr>
<tr><td>Year R</td><td colspan="2">Computer science</td></tr>
<tr><td>Concept</td><td colspan="2">Programming</td></tr>
<tr><td>Knowledge and Skills</td><td>Crucial knowledge:
Children need to understand why instructions are important.
Children need to be able to know basic positional and directional language.
Children need to know that instructions can be used to make a robot move.</td><td>Using knowledge as a skill:
Children need to be able to follow simple instructions.
Children need to be able to give simple instructions.
Children to be able to explain to someone something using positional and directional language.
Children to be able to make a BeeBot move by pressing the buttons.</td></tr>
<tr><td>vocabulary</td><td colspan="2">Next to, beside, forwards, backwards, sideways, near</td></tr>
<tr><td>Year 1</td><td colspan="2">Computer science</td></tr>
<tr><td>Concept</td><td colspan="2">Programming</td></tr>
<tr><td>Knowledge and Skills</td><td>Crucial knowledge:
Children need to know how to give and follow instructions/directions.
Children need to know how to run a command on a device.
Children need to be able to understand what a command is going to do before it is run.
Children will understand what debugging means and will be able to debug their program.</td><td>Using knowledge as a skill:
Children will be able to think about making their instructions unambiguous so they can be easily followed.
Children will be able to use buttons on the BeeBots to make it move following their program.
Children will be able to match commands up with outcomes.
Children will be able to articulate how they will debug their program to make it better.</td></tr>
<tr><td>Vocabulary</td><td colspan="2">Program, instructions, command, debug, forwards, backwards, left, right, clear, pause</td></tr>
<tr><td>Year 2</td><td colspan="2">Computer science</td></tr>
<tr><td>Concept</td><td colspan="2">Programming</td></tr>
<tr><td>Knowledge and Skills</td><td>Crucial knowledge:
Children need to know that instructions need to be in the correct sequence to achieve the desired outcome.
Children need to know what an algorithm is.
Children need to be able to predict the outcome of a program (revisiting from Year 1, Spring 1).
Children need to be able to debug a program (revisiting from Year 1, Spring 1).
Children need to be able to record their program for someone else to follow.</td><td>Using knowledge as a skill:
Children will be able to give a set of instructions in a way they can be easily followed.
Children need to be able to articulate what an algorithm is and why they are used.
Children need to be able to create their own programs, debug and record their work.</td></tr>
<tr><td>Vocabulary</td><td colspan="2">Algorithm, debug, instructions</td></tr>
</table>

Term	Spring 2	
Year R	Information Technology	
Concept	Data and information	
Knowledge and Skills	Crucial knowledge: • Children need to know that technology can be used to show information. • Children need to know how questions can be used to gain information.	Using knowledge as a skill: • Children need to be able to explain the types on information that can be shown on technology. • Children need to be able to ask appropriate questions to receive the information they want.
vocabulary	Information, questions	
Year 1	Information Technology	
Concept	Data and information	
Knowledge and Skills	Crucial knowledge: • Children need to know that objects can be grouped based on their common properties. • Children need to know what questions to ask to separate different objects. • Children need to know that technology is useful to represent different types of data. • Children need to be able to use technology to show how objects can be grouped.	Using knowledge as a skill: • Children need to be able to organise objects based on common properties. • Children need to be able to think of questions to separate different objects based on their properties. • Children need to be able to articulate how technology can be used to show the different properties of things as well as data that has been collected. • Children need to be able to represent their sorting of objects by creating a branch (J2E – branches).
Vocabulary	Properties, group, question, branch	
Year 2	Information Technology	
Concept	Data and information	
Knowledge and Skills	Crucial knowledge: • Children need to know that technology is useful to represent different types of data (revisiting from Year 1, Spring 2). • Children need to know how to collect data using a tally chart. • Children need to know how data can be presented in different ways using technology. • Children need to know how to draw conclusions from the data they have collected.	Using knowledge as a skill: • Children need to be able to draw a tally chart using 4 vertical strokes and one diagonal stroke to represent 5. • Children need to be able to create a pictogram using a computer from the data that has been collected. • Children need to be able to create a bar chart using a computer from the data that has been collected. • Children need to be able to articulate conclusions they can draw from the data they have found.
Vocabulary	Data, tally, conclusions, pictogram, bar chart	

<table>
<tr><td>Term</td><td colspan="2">Summer 1</td></tr>
<tr><td>Year R</td><td colspan="2">Information Technology / Digital Literacy</td></tr>
<tr><td>Concept</td><td colspan="2">Creating media</td></tr>
<tr><td>Knowledge and Skills</td><td>Crucial knowledge:
Children need to know how programs can be used for different purposes.
Children need to be able to know that programs have different functions.</td><td>Using knowledge as a skill:
Children will be able to use a computer program to make marks.
Children will be able to change the colour of their pen.</td></tr>
<tr><td>Vocabulary</td><td colspan="2">Program, functions</td></tr>
<tr><td>Year 1</td><td colspan="2">Information Technology / Digital Literacy</td></tr>
<tr><td>Concept</td><td colspan="2">Creating media</td></tr>
<tr><td>Knowledge and Skills</td><td>Crucial knowledge:
Children need to know how to open, edit and save a Word document.
Children need to know the uses of a Word document.
Children need to know the different tools available to them in Word.
Children need to know the importance of keeping themselves safe on technology.</td><td>Using knowledge as a skill:
Children will be able to open a Word document by double clicking.
Children will be able to identify and find appropriate keys on a keyboard
Children need to be able to add and remove text to a word document.
Children need to be able to change the font of their text including the use of bold, italic, underline, font and colour.
Children need to be able to select words by clicking and dragging.
Children will be able to articulate the difference between typing and writing.
Children will be able to explain how to keep themselves safe on technology.
Children need to know who to go to if they see something that worries them online.</td></tr>
<tr><td>Vocabulary</td><td colspan="2">Open, edit, save, keyboard, keys, bold, italic, underline, safe</td></tr>
<tr><td>Year 2</td><td colspan="2">Information Technology / Digital Literacy</td></tr>
<tr><td>Concept</td><td colspan="2">Creating media</td></tr>
<tr><td>Knowledge and Skills</td><td>Crucial knowledge:
Children need to know the uses of a PowerPoint document.
Children need to know how to edit and present a PowerPoint.
Children need to know the importance of keeping themselves safe on technology (revisiting from Year 1, Summer 1).</td><td>Using knowledge as a skill:
Children will be able to add slides to a PowerPoint.
Children will be able to add, edit and remove text to the PowerPoint slides.
Children will be able to add images to the slides.
Children will be able to present their PowerPoint so it shows the information they want.
Children will be able to explain how to keep themselves safe on technology (revisiting from Year 1, Summer 1).
Children need to know who to go to if they see something that worries them online (revisiting from Year 1, Summer 1).</td></tr>
<tr><td>Vocabulary</td><td colspan="2">PowerPoint, slides, present</td></tr>
</table>

Term	Summer 2	
Year R	Computer science	
Concept	Programming	
Knowledge and Skills	Crucial knowledge: • Children will know how to follow and give instructions (revisiting from Year R, Spring 1). • Children will know how to change instructions based on the outcome.	Using knowledge as a skill: • Children need to be able to follow simple instructions. • Children need to be able to give simple instructions. • Children will be able to adapt their instructions if they haven't worked to make them work next time.
Vocabulary	Instructions, outcome	
Year 1	Computer science	
Concept	Programming	
Knowledge and Skills	Crucial knowledge: • Children need to know what a program is. • Children need to know how to program a character to make it move. • Children need to know how to change the background in Scratch. • Children need to know how to test and debug their programs.	Using knowledge as a skill: • Children will be able to click and drag the programs to the command box. • Children will be able to run a program using a 'start' block. • Children will be able to join programming blocks together. • Children will be able to change the value of movement blocks with numbers to make the Sprite move different amounts. • Children will be able to click on the right buttons to change the background of their Scratch program. • Children will be able to change and edit their program based on the result of the previous test.
Vocabulary	Program, command, start, blocks, Scratch, Sprite, movement	
Year 2	Computer science	
Concept	Programming	
Knowledge and Skills	Crucial knowledge: • Children need to know what a program is (revisiting from Year 1, Summer 2). • Children need to know how to program a character to make it move (revisiting from Year 1, Summer 2). • Children need to know how to change the background in Scratch (revisiting from Year 1, Summer 2). • Children need to know how to test and debug their programs (revisiting from Year 1, Summer 2). • Children need to know how to get a character to speak. • Children need to know how to change a character.	Using knowledge as a skill: • Children will be able to click and drag the programs to the command box (revisiting from Year 1, Summer 2). • Children will be able to run a program using a 'start' block (revisiting from Year 1, Summer 2). • Children will be able to join programming blocks together (revisiting from Year 1, Summer 2). • Children will be able to change the value of movement blocks with numbers to make the Sprite move different amounts (revisiting from Year 1, Summer 2). • Children will be able to click on the right buttons to change the background of their Scratch program (revisiting from Year 1, Summer 2). • Children will be able to change and edit their program based on the result of the previous test (revisiting from Year 1, Summer 2). • Children will be able to use a programming block to get a character to speak.
Vocabulary	Program, command, start, blocks, Scratch, Sprite, movement	