

Year R Autumn 1

Domain	Digital Literacy	
Concept	Computing systems and networks	
Knowledge and Skills	Crucial knowledge: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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	
Enrichment		

Year R Autumn 2

Domain	Information Technology	
Concept	Creating media	
Knowledge and Skills	Crucial knowledge: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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	
Enrichment		

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Year R Spring 1

Year R Spring 1	
Domain	Computer science
Concept	Programming
Knowledge and Skills	<p>Crucial knowledge:</p> <ul style="list-style-type: none"> • 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. <p>Using knowledge as a skill:</p> <ul style="list-style-type: none"> • 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.
Vocabulary	Next to, beside, forwards, backwards, sideways, near
Enrichment	

Year R Spring 2

Year R Spring 2	
Domain	Information Technology
Concept	Data and information
Knowledge and Skills	<p>Crucial knowledge:</p> <ul style="list-style-type: none"> • Children need to know that technology can be used to show information. • Children need to know how questions can be used to gain information. <p>Using knowledge as a skill:</p> <ul style="list-style-type: none"> • 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
Enrichment	

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Year R Summer 1	
Domain	Information Technology / Digital Literacy
Concept	Creating media
Knowledge and Skills	<p>Crucial knowledge:</p> <ul style="list-style-type: none"> Children need to know how programs can be used for different purposes. Children need to be able to know that programs have different functions. <p>Using knowledge as a skill:</p> <ul style="list-style-type: none"> Children will be able to use a computer program to make marks. Children will be able to change the colour of their pen.
Vocabulary	Program, functions
Enrichment	

Year R Summer 2	
Domain	Computer science
Concept	Programming
Knowledge and Skills	<p>Crucial knowledge:</p> <ul style="list-style-type: none"> 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. <p>Using knowledge as a skill:</p> <ul style="list-style-type: none"> 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
Enrichment	

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Year 1 - Autumn 1

Milestone LO:

I am learning to recognise uses of information technology in school.

I can give detailed examples of information that is personal (e.g. address, family names, school)

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Digital Literacy	<p>Know that...</p> <ul style="list-style-type: none"> • Technology is when we apply scientific knowledge for practical purposes. • Technology also refers to machinery and equipment required in order to do so. • Information technology means using computers or other technologies to store, receive and send information. • The type of information technology available in school comes in the form of: emails, Google Classroom, digital photography (lpads), Numberbots, TT Rockstars, YouTube, search engines (Google), word, PowerPoint and ActiveInspire. • A computer is an electronic device that stores information. We have computers in the Studio (computer suite). • A laptop is a computer that is portable and suitable for use while travelling. • The screen is a flat panel on an electronic device, on which images and information (data) are displayed. • The monitor is what the screen is attached to (it holds the display). • A mouse is a handheld pointing device which typically translates to a pointer on a display. It allows smooth control of the user interface. • Interface means the communication between a user and a programme. • A keyboard is made up of buttons (known as keys). It is a device used to input text onto a document. • A track pad is a pointing device, using a sensor, instead of a mouse. • A tablet is a small, flat computer, operated by touching the screen. • A smartphone is a phone that has a display screen and a keyboard for text messaging, emailing, using apps and using web browsers. • Information technology is used to create and share information. • In school it is used by children to make content to share their understanding of the curriculum. • In school it is used by adults to share planning and communicate via email. 	<p>Know how...</p> <ul style="list-style-type: none"> • To behave safely in the computer suite • Computers and technology benefit me at school because... • Conduct • Safety
Online safety	<p>Know that...</p> <ul style="list-style-type: none"> • Personal information is any information about you, and includes your name, address and birthday • We can share personal information with trusted adults • Trusted adult is an adult we know and will keep you safe. • Private means only sharing something with a few people that you know and trust. • When we use a computer we often use a username and password. This can help us to keep our personal information private. 	<p>Know how...</p> <ul style="list-style-type: none"> • To keep my personal information safe by only sharing with trusted adults •
Vocabulary	<p>Technology: The use of knowledge to invent new devices or tools. Information technology: using computers and other technologies to store, receive and send information. Computer: an electronic device used to store information Monitor: used to display information being entered and processed on a computer. Mouse: a handheld pointing device used to move the pointer on a computer display. Keyboard: used to input text onto a document. Save: to store data in a computer which can be opened and reused in the future Create: to make something new Trackpad: a pointing device, using a sensor, instead of a mouse Tablet: a small, flat computer that is operated by touching the screen. Smartphone: a mobile telephone which can be used for calls but also connecting to the internet.</p>	
Enrichment & wider development		

Year 1 - Autumn 2

Milestone LO:

I am learning to use technology purposefully to create and save digital content.
I can save my work under a suitable title/name so others know it belongs to me.

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Information Technology	<p>Know that...</p> <ul style="list-style-type: none"> Information technology means using computers or other technologies to store, receive and send information (revisit from Autumn 1) The type of information technology available in school comes in the form of: emails, Google Classroom, digital photography (I pads), Numberbots, TT Rockstars, YouTube, search engines (Google), word, PowerPoint and ActiveInspire. (revisit from Autumn 1) ActiveInspire is a computer program used for creating and sharing content. A mouse is a handheld pointing device which typically translates to a pointer on a display. It allows smooth control of the user interface (revisit from Autumn 1) To use a computer I first have to log on to the device A keyboard is made up of buttons (known as keys). It is a device used to input text onto a document (Revisit from Autumn 1) Information technology is used to create and share information (revisit from Autumn 1) 	<p>Know how...</p> <ul style="list-style-type: none"> To behave safely in the computer suite (revisit from Autumn 1) To log into the computer by typing my class name into the user field. To open the ActiveInspire program by moving the mouse pointer over the program icon and double-clicking the left mouse button. To make purposeful marks using the computer mouse
Online safety	<p>Know that...</p> <ul style="list-style-type: none"> When we create content in any way, it is important that we name and date our own work so people know who it belongs to. There are special rules called copyright laws set out by the government to stop people pretending something is theirs when it is not. 	<p>Know how...</p> <ul style="list-style-type: none"> To save work under a suitable title so others know it belongs to me. I can do this by using the 'save as' function and typing my name before clicking the save button. To recognise the save button when it is represented by a 'disc' image.
Vocabulary	<p>Technology: The use of knowledge to invent new devices or tools. Information technology: using computers and other technologies to store, receive and send information. Computer: an electronic device used to store information Monitor: used to display information being entered and processed on a computer. Mouse: a handheld pointing device used to move the pointer on a computer display. Keyboard: used to input text onto a document. Save: to store data in a computer which can be opened and reused in the future Create: to make something new Trackpad: a pointing device, using a sensor, instead of a mouse Online safety: knowing how to keep ourselves and others safe when using the internet. ActiveInspire: a computer program used for creating and sharing content. Program icon: a picture used to represent a computer program. Double-click: tapping the left mouse button twice in order to select. Log on: using a user name to access the computer.</p>	
Enrichment & wider development		

FEDERATION



Year 1 - Spring 1

Milestone LO:

I am learning to understand what algorithms are and how they are made up of precise instructions
 I can give examples of when I should ask permission to do something online and explain why this is important.

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Computer Science	Know that... <ul style="list-style-type: none"> Information technology means using computers or other technologies to store, receive and send information (revisit from Autumn 1) Information technology is used to create and share information (revisit from Autumn 1) Computer science is learning how computers and programs work. Instructions explain exactly how something should be done A sequence is the order events must be performed to complete a task. An algorithm is a set of instructions to complete a task. An algorithm is made up of a series of commands A command is an instruction to tell a computer what to do. A code is a special digital language that helps information technology to run properly. For computers, algorithms are written in code. A program is a set of instructions in a computer language for a computer to follow Computer programs execute by following precise and unambiguous instructions. 	Know how... <ul style="list-style-type: none"> To follow simple instructions (revisit from EYFS) to make informed predictions for what is going to happen in an algorithm To create a simple algorithms
Online safety	Know that... <ul style="list-style-type: none"> Many of the digital devices we use are connected to the internet. This means they can share information with lots of other computers and digital devices around the world. When we are connected to the internet, we say we are online. It's best to always ask a trusted adult before we go online. Although we can have fun online, we can sometimes see things on a website or in an online game that makes us feel scared, sad or uncomfortable. We may get stuck when a website or game goes wrong, or we might end up on a different website by accident. 	Know how... <ul style="list-style-type: none"> Trusted adults can help us find the games and activities that are made for children and can enjoyed safely.
Vocabulary	Technology: The use of knowledge to invent new devices or tools. Information technology: using computers and other technologies to store, receive and send information. Computer Science: learning how computers and programs work Instructions: a step by step guide of how something should be done. Algorithm: a set of instructions to complete a task Command: an instruction given to tell a computer what to do. Code: a special computer language that a computer follows to help them run properly. Program: a set of instructions in computer language for a computer to follow. Execute: Debug: to find, remove or correct errors in a computer program. Predict: to guess what a possible outcome could be. Sequence: The order events must be performed to complete a task.	
Enrichment & wider development		

FEDERATION



Year 1 - Spring 2

Milestone LO:

I am learning to create simple algorithms and implement these programs on a digital device.
I can explain why things one person finds funny or sad online may not always be seen in the same way online

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Computer Science	<p>Know that...</p> <ul style="list-style-type: none"> • Computer science is learning how computers and programs work (revisit from Spring 1) • Instructions explain exactly how something should be done (revisit from Spring 1) • A sequence is the order events must be performed to complete a task. (revisit from Spring 1) • An algorithm is a set of instructions to complete a task. (revisit from Spring 1) • An algorithm is made up of a series of commands • A command is an instruction to tell a computer what to do. (revisit from Spring 1) • A Beebot is a programmable device which can follow simple commands and algorithms • A code is a special digital language that helps information technology to run properly. For computers, algorithms are written in code. (revisit from Spring 1) • A program is a set of instructions in a computer language for a computer to follow (revisit from Spring 1) • Computer programs execute by following precise and unambiguous instructions. (revisit from Spring 1) • 	<p>Know how...</p> <ul style="list-style-type: none"> • To follow simple instructions (revisit from EYFS) • To safely handle digital devices • To program a Beebot with simple instructions • to make informed predictions for what is going to happen in an algorithm • To create a simple algorithm on a digital device (Beebot) •
Online Safety	<p>Know that...</p> <ul style="list-style-type: none"> • What we post online is not just for us to see. • Sometimes when you share a photo or funny meme you do not know how other people will respond. • When we share, anyone could potentially access and use that content. • you might think there's nothing wrong with that, your friends might disagree. 	<p>Know how...</p> <ul style="list-style-type: none"> • to keep safe online by checking with a trusted adult before we share anything online. • To consider different points of view.
Vocabulary	<p>Computer Science: learning how computers and programs work Instructions: a step by step guide of how something should be done. Algorithm: a set of instructions to complete a task Command: an instruction given to tell a computer what to do. Code: a special computer language that a computer follows to help them run properly. Program: a set of instructions in computer language for a computer to follow. Execute: the process of running a computer program, algorithm or command. Debug: to find, remove or correct errors in a computer program. Predict: to guess what a possible outcome could be. Sequence: The order events must be performed to complete a task.</p>	
Enrichment & wider development		

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Year 1 - Summer 1

Milestone LO:

I am learning to use technology purposefully to create, store and retrieve digital content.
I can describe how to behave online in ways that do not upset others and can give examples

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Information Technology	<p>Know that...</p> <ul style="list-style-type: none"> Information technology means using computers or other technologies to store, receive and send information (revisit from Autumn 2) The type of information technology available in school comes in the form of: emails, Google Classroom, digital photography (Ipads), Numberbots, TT Rockstars, YouTube, search engines (Google), word, PowerPoint and ActiveInspire. (revisit from Autumn 2) Information technology is used to create and share information (revisit from Autumn 1) Word is a word processing document which lets users create written documents on a computer. A mouse is a handheld pointing device which typically translates to a pointer on a display. It allows smooth control of the user interface (revisit from Autumn 2) To use a computer I first have to log on to the device (revisit from Autumn 2) A keyboard is made up of buttons (known as keys). It is a device used to input text onto a document (Revisit from Autumn 1) The shift button is held to make any letter a capital letter. 	<p>Know how...</p> <ul style="list-style-type: none"> To behave safely in the computer suite (revisit from Autumn 2) To log into the computer by typing my class name into the user field. (revisit from Autumn 2) To open the Word typing 'Word' into the search field and then double-clicking the Word program icon to run the program. To use the keyboard to create text within the document To use the shift function to create capital letters for the beginnings of sentences. To save work under a suitable title so others know it belongs to me. I can do this by using the 'save as' function and typing my name before clicking the save button. (revisit from Autumn 2)
Online safety	<p>Know that...</p> <ul style="list-style-type: none"> The internet is a global network of connected computers. The most common use of the internet is to access websites on the world wide web. It allows us to communicate with people all over the world, in lots of different ways. Digital messaging allows us to send short messages, pictures and emails to friends and family, no matter where they are. An email is usually a longer message we send to someone. You need to know someone's email address to send them an email. Emails can be sent from a smartphone, tablet or a computer. We can use the camera on a computer, a tablet or a smartphone to video call someone. The person you are talking to can see you and you can see them. You should never talk to strangers on the internet. On some websites, we can add a comment or click on an icon to show that we like someone's posts or messages. Some games and websites let us type messages and chat to our friends, while we are playing. 	<p>Know how...</p> <ul style="list-style-type: none"> To think carefully before sending messages online Seek advice from a trusted adult to help keep ourselves safe online.
Vocabulary	<p>Technology: The use of knowledge to invent new devices or tools. Information technology: using computers and other technologies to store, receive and send information. Computer: an electronic device used to store information Monitor: used to display information being entered and processed on a computer. Mouse: a handheld pointing device used to move the pointer on a computer display. Keyboard: used to input text onto a document. Save: to store data in a computer which can be opened and reused in the future Create: to make something new Trackpad: a pointing device, using a sensor, instead of a mouse Online safety: knowing how to keep ourselves and others safe when using the internet. ActiveInspire: a computer program used for creating and sharing content.</p>	

	<p>Program icon: a picture used to represent a computer program. Double-click: tapping the left mouse button twice in order to select. Log on: using a user name to access the computer. Webpage - An online page of information with words, pictures, video and sound that we see on a screen. Website - A collection of connected webpages.</p>
Enrichment & wider development	



Year 1 - Summer 2

Milestone LO:

I am learning to create and debug simple algorithms and implement these programs on a digital device.
I can explain why it is important to be considerate and kind to people online and to respect their choices

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Computer Science	<p>Know that...</p> <ul style="list-style-type: none"> • Computer science is learning how computers and programs work (revisit from Spring 2) • Instructions explain exactly how something should be done (revisit from Spring 2) • A sequence is the order events must be performed to complete a task. (revisit from Spring 2) • An algorithm is a set of instructions to complete a task. (revisit from Spring 2) • An algorithm is made up of a series of commands • A command is an instruction to tell a computer what to do. (revisit from Spring 2) • A Beebot is a programmable device which can follow simple commands and algorithms • A code is a special digital language that helps information technology to run properly. For computers, algorithms are written in code. (revisit from Spring 2) • A program is a set of instructions in a computer language for a computer to follow (revisit from Spring 2) • Computer programs execute by following precise and unambiguous instructions. (revisit from Spring 2) • Debugging means to work out what is wrong with a simple algorithm • 	<p>Know how...</p> <ul style="list-style-type: none"> • To follow simple instructions (revisit from EYFS) • To safely handle digital devices • To program a Beebot with simple instructions • to make informed predictions for what is going to happen in an algorithm • To create a simple algorithm on a digital device (Beebot) • To debug simple algorithms, identifying where commands may be out of sequence
Online safety	<p>Know that...</p> <ul style="list-style-type: none"> • We can be kind online by always checking with a trusted adult before we share a photo or send a message. • We can also stop and think about how a photo or message might make someone feel. • If we are not sure, then it's best not to share it. • You should always check with a trusted adult before you spend time with people online. • If you think someone online is being unkind, to you or someone else, then talk to a trusted adult and show them what has upset you. • It's not good to say something unkind to someone who has upset you. They might not mean to be unkind. 	<p>Know how...</p> <ul style="list-style-type: none"> • To check with a trusted adult before spending time with people online. • To respond or seek help from a trusted adult if someone is unkind to us online.
Vocabulary	<p>Computer Science: learning how computers and programs work Instructions: a step by step guide of how something should be done. Algorithm: a set of instructions to complete a task Command: an instruction given to tell a computer what to do. Code: a special computer language that a computer follows to help them run properly. Program: a set of instructions in computer language for a computer to follow. Execute: the process of running a computer program, algorithm or command. Debug: to find, remove or correct errors in a computer program. Predict: to guess what a possible outcome could be. Sequence: The order events must be performed to complete a task.</p>	
Enrichment & wider development		

FEDERATION



Year 2 - Autumn 1

Milestone LO:

I am learning to recognise uses of information technology beyond school

I can explain what bullying is, how people may bully others and how bullying can make someone feel.

Substantive Knowledge	Substantive Knowledge	Disciplinary Knowledge
Digital Literacy	<p>Know that...</p> <ul style="list-style-type: none"> • Technology is when we apply scientific knowledge for practical purposes. (revisit from Year 1) • Technology also refers to machinery and equipment required in order to do so. (revisit from Year 1) • Information technology means using computers or other technologies to store, receive and send information. (revisit from Year 1) • A computer network is a group of computers which are linked together, either physically or virtually. • A physical network of computers are linked together with wires. Our computers in the studio are an example of a physical network. • A virtual network of computers are linked together wirelessly. Our school laptops are one example of a virtual network. • The internet is also called the World Wide Web. This is another example of a virtual network. • A computer is an electronic device that stores information. We have computers in the Studio (computer suite). • A laptop is a computer that is portable and suitable for use while travelling. • Interface means the communication between a user and a programme. • A keyboard is made up of buttons (known as keys). It is a device used to input text onto a document. • A track pad is a pointing device, using a sensor, instead of a mouse. • A tablet is a small, flat computer, operated by touching the screen. • A smartphone is a phone that has a display screen and a keyboard for text messaging, emailing, using apps and using web browsers. • Information technology is used to create and share information. • Most jobs require people to use some form of digital technology, from a shop worker using a till to a farmer ordering feed for their animals. 	<p>Know how....</p> <ul style="list-style-type: none"> • To behave safely in the computer suite • To identify examples of computers • To describe some uses of computers • To identify that a computer is a part of IT • To sort school IT by what it's used for • To identify that some IT can be used in more than one way • To talk about some uses of information technology both inside and outside of school • To talk about different rules for using IT • To say how rules can help keep me safe • To identify the choices that I make when using IT • To use IT for different types of activities • To explain the need to use IT in different ways • To describe where technology can be found in shops and how it can be used.
Online Safety	<p>Know that...</p> <ul style="list-style-type: none"> • When we share things online, we can't always see each other's faces or hear each other speak. Sometimes this means we can forget to be kind. • We can be kind online by always checking with a trusted adult before we share a photo or send a message. • We can also stop and think about how a photo or message might make someone feel. • If we are not sure, then it's best not to share it. 	<p>Know how...</p> <ul style="list-style-type: none"> • To check with a trusted adult before spending time with people online. • To respond or seek help from a trusted adult if someone is unkind to us online. •
Vocabulary	<p>Technology: The use of knowledge to invent new devices or tools. Information technology: using computers and other technologies to store, receive and send information. Computer: an electronic device used to store information Physical network: a group of computers connected with wires to share information Virtual network: a group of computers connected wirelessly to share information Internet: the World Wide Web, a global virtual network used to share information. Mouse: a handheld pointing device used to move the pointer on a computer display. Keyboard: used to input text onto a document. Tablet: a small, flat computer that is operated by touching the screen. Smartphone: a mobile telephone which can be used for calls but also connecting to the internet. Games console – A device that is used to play computer games on a screen or TV. Online – Connected to the internet. Trusted adult – An adult that you know and will keep you safe.</p>	
Enrichment & wider development		

Year 2 - Autumn 2

Milestone LO:

I am learning to use technology purposefully to create, organise, store, manipulate and retrieve digital content.

I can explain some rules for keeping personal information private (e.g. passwords)

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Information Technology	<p>Know that...</p> <ul style="list-style-type: none"> Information technology means using computers or other technologies to store, receive and send information (revisit from Autumn 1) The type of information technology available in school comes in the form of: emails, Google Classroom, digital photography (Ipads), Numberbots, TT Rockstars, YouTube, search engines (Google), word, PowerPoint and ActiveInspire. (revisit from Year 1) Information technology is used to create and share information (revisit from Autumn 1) Word is a word processing document which lets users create written documents on a computer. A mouse is a handheld pointing device which typically translates to a pointer on a display. It allows smooth control of the user interface (revisit from Autumn 2) To use a computer I first have to log on to the device (revisit from Autumn 2) A keyboard is made up of buttons (known as keys). It is a device used to input text onto a document (Revisit from Autumn 1) The shift button is held to make any letter a capital letter. 	<p>Know how...</p> <ul style="list-style-type: none"> To behave safely in the computer suite (revisit from Year 1) To log into the computer by typing my class name into the user field. (revisit from Year 1) To open the Word typing 'Word' into the search field and then double-clicking the Word program icon to run the program. To use the keyboard to create text within the document To use the shift function to create capital letters for the beginnings of sentences. To insert and manipulate photographs within a document To save work under a suitable title so others know it belongs to me. I can do this by using the 'save as' function and typing my name before clicking the save button. (revisit from Autumn 2)
Online safety	<p>Know that...</p> <ul style="list-style-type: none"> Personal information is any information about you, and includes your name, address and birthday We can share personal information with trusted adults Personal information can also be used when we use computers, phones, tablets and other online devices to access games, websites or apps. Some kinds of personal information can tell others exactly who you are and how to find you. It is important that we keep this sort of information private. Private means only sharing something with a few people that you know and trust. When we use a computer we often use a username and password. This can help us to keep our personal information private. 	<p>Know how...</p> <ul style="list-style-type: none"> To create a secure user name and password Keep passwords private and only share them with trusted adults who can help us to keep safe.
Vocabulary	<p>Technology: The use of knowledge to invent new devices or tools.</p> <p>Information technology: using computers and other technologies to store, receive and send information.</p> <p>Computer: an electronic device used to store information</p> <p>Monitor: used to display information being entered and processed on a computer.</p> <p>Mouse: a handheld pointing device used to move the pointer on a computer display.</p> <p>Keyboard: used to input text onto a document.</p> <p>Save: to store data in a computer which can be opened and reused in the future</p> <p>Create: to make something new</p> <p>Trackpad: a pointing device, using a sensor, instead of a mouse</p> <p>Online safety: knowing how to keep ourselves and others safe when using the internet.</p> <p>ActiveInspire: a computer program used for creating and sharing content.</p> <p>Program icon: a picture used to represent a computer program.</p> <p>Double-click: tapping the left mouse button twice in order to select.</p> <p>Log on: using a user name to access the computer.</p> <p>Internet - A giant network of computers connected across the world.</p> <p>Private - Sharing something with only a small trusted group of people.</p> <p>Personal information - Information that could be used to identify someone.</p> <p>Username - A nickname used to login to a game, app or account.</p>	

	Password - A secret series of letters, numbers and symbols used to keep an account private. Trusted adult - An adult that you know and will keep you safe.
Enrichment & wider development	



Year 2 - Spring 1

Milestone LO:

I am learning to create and debug simple programs using Scratch Jr.

I can explain how other people may look and act differently online and offline.

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Computer Science	<p>Know that...</p> <ul style="list-style-type: none"> • Computer science is learning how computers and programs work (revisit from Year 1) • A sequence is the order events must be performed to complete a task. (revisit from Year 1) • An algorithm is a set of instructions to complete a task. (revisit from Year 1) • An algorithm is made up of a series of commands (revisit from Year 1) • A command is an instruction to tell a computer what to do. (revisit from Year 1) • Scratch Jr is a program which can follow simple commands and algorithms • A code is a special digital language that helps information technology to run properly. For computers, algorithms are written in code. (revisit from Year 1) • A program is a set of instructions in a computer language for a computer to follow (revisit from year 1) • Computer programs execute by following precise and unambiguous instructions. (revisit from Year 1) • Debugging means to work out what is wrong with a simple algorithm (Revisit from Year 1) • 	<p>Know how...</p> <ul style="list-style-type: none"> • To access Scratch Jr on xxx • To create simple algorithms to control a sprite within the program • to make informed predictions for what is going to happen in an algorithm • To debug simple algorithms, identifying where commands may be out of sequence
Online safety	<p>Know that...</p> <ul style="list-style-type: none"> • Your identity is the way that your parents, friends, teachers and others think about you. • An online identity is all of the information we leave on the internet. • Your online identity and real-world identity can be different depending on what you choose to share. • Information we share online creates a digital footprint which creates a lasting record. • We often meet other people when we are using a digital device. We might be chatting to a friend on the phone or sharing a picture or video with a family member but might meet people we don't know. • We should never talk to a stranger when we are online, even if they know our name and are being friendly. • 	<p>Know how...</p> <ul style="list-style-type: none"> • To explain what is meant by the term 'identity' in an online and offline context. • To recognise that identity online can be copied, changed or altered. • To speak to a trusted adult if someone we don't know tries to talk to us online. Not everyone we meet will be friendly or kind. • To know how to keep personal information safe online. • To recognise when to ask for help with something online and offline, and how to do this.
Vocabulary	<p>Computer Science: learning how computers and programs work Instructions: a step by step guide of how something should be done. Algorithm: a set of instructions to complete a task Command: an instruction given to tell a computer what to do. Code: a special computer language that a computer follows to help them run properly. Program: a set of instructions in computer language for a computer to follow. Execute: the process of running a computer program, algorithm or command. Debug: to find, remove or correct errors in a computer program. Predict: to guess what a possible outcome could be. Scratch Jr: a coding program using block coding Coding block: a block of code which can be slotted together with other blocks like jigsaw pieces Control: To manage or run something on a digital device Sprite: Characters used within Scratch Jr which can be instructed to perform tasks by following algorithms. Sequence: The order events must be performed to complete a task.</p>	
Enrichment & wider development		

Year 2 - Spring 2

Milestone LO:

I am learning to create and debug simple programs using Lightbot
I can recognise that content on the internet may belong to other people.

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Computer Science	<p>Know that...</p> <ul style="list-style-type: none"> • Computer science is learning how computers and programs work (revisit from Spring 1) • A sequence is the order events must be performed to complete a task. (revisit from Spring 1) • An algorithm is a set of instructions to complete a task. (revisit from Spring 1) • An algorithm is made up of a series of commands (revisit from Spring 1) • A command is an instruction to tell a computer what to do. (revisit from Spring 1) • Lightbot is a program which can follow simple commands and algorithms • A code is a special digital language that helps information technology to run properly. For computers, algorithms are written in code. (revisit from Spring 1) • A program is a set of instructions in a computer language for a computer to follow (revisit from Spring 1) • Computer programs execute by following precise and unambiguous instructions. (revisit from Spring 1) • Debugging means to work out what is wrong with a simple algorithm (revisit from Spring 1) • 	<p>Know how...</p> <ul style="list-style-type: none"> • To access Lightbot on xxx • To create simple algorithms to control a sprite within the program • to make informed predictions for what is going to happen in an algorithm • To debug simple algorithms, identifying where commands may be out of sequence
Online Safety	<p>Know that...</p> <ul style="list-style-type: none"> • When we create content in any way, it is important that we name and date our own work so people know who it belongs to. • Websites are a bit like an online book. • Information online all belongs to someone • Digital content is the name we give to things which we make and share on a digital device. • There are laws called copyright laws set out by the government to stop people pretending something is theirs when it is not. 	<p>Know how...</p> <ul style="list-style-type: none"> • To save work under a suitable title so others know it belongs to me. • To take ideas and inspiration from other people's work without copying.
Vocabulary	<p>Computer Science: learning how computers and programs work Instructions: a step by step guide of how something should be done. Algorithm: a set of instructions to complete a task Command: an instruction given to tell a computer what to do. Code: a special computer language that a computer follows to help them run properly. Program: a set of instructions in computer language for a computer to follow. Execute: the process of running a computer program, algorithm or command. Debug: to find, remove or correct errors in a computer program. Predict: to guess what a possible outcome could be. Lightbot: a coding program using block coding Problem solving: exploring multiple options to find a solution. Robot: a computer which can perform different tasks. Coding block: a block of code which can be slotted together with other blocks like jigsaw pieces Control: To manage or run something on a digital device Sprite: Characters used within Scratch Jr which can be instructed to perform tasks by following algorithms. Sequence: The order events must be performed to complete a task.</p>	
Enrichment & wider development		

Year 2 - Summer 1

Milestone LO:

I am learning to use technology purposefully to create, organise, store, manipulate and retrieve digital content.

I can explain why some information I find online may not be real or true

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Information Technology	<p>Know that...</p> <ul style="list-style-type: none"> Information technology means using computers or other technologies to store, receive and send information (revisit from Autumn 1) The type of information technology available in school comes in the form of: emails, Google Classroom, digital photography (Ipads), Numberbots, TT Rockstars, YouTube, search engines (Google), word, PowerPoint and ActiveInspire. (revisit from Year 1) Information technology is used to create and share information (revisit from Autumn 1) PowerPoint is a presentation program used to create slides and present information A presentation is used to inform or give new information to an audience Slides are single pages of information which can be sequenced to create a presentation. A mouse is a handheld pointing device which typically translates to a pointer on a display. It allows smooth control of the user interface (revisit from Autumn 2) To use a computer I first have to log on to the device (revisit from Autumn 2) A keyboard is made up of buttons (known as keys). It is a device used to input text onto a document (Revisit from Autumn 1) The shift button is held to make any letter a capital letter. 	<p>Know how...</p> <ul style="list-style-type: none"> To behave safely in the computer suite (revisit from Year 1) To log into the computer by typing my class name into the user field. (revisit from Year 1) To open PowerPoint by typing 'PowerPoint' into the search field and then double-clicking the PowerPoint program icon to run the program. To use the keyboard to create text within the document To use the shift function to create capital letters for the beginnings of sentences. To add new slides to the presentation by clicking the 'new slide' icon on the toolbar. To insert pictures into a slide using the inset>online pictures function and manipulate. To save work under a suitable title so others know it belongs to me. I can do this by using the 'save as' function and typing my name before clicking the save button. (revisit from Autumn 2)
Online Safety	<p>Know that...</p> <ul style="list-style-type: none"> Not all information on the internet is true There are lots of different reasons why people may share false information online. Some people deliberately share wrong information – this can be called 'fake news' Sometimes, wrong information is shared by accident – this is called 'misinformation' People online are not always who they say they are. Some websites are not safe for children to explore 	<p>Know how...</p> <ul style="list-style-type: none"> To use a child-friendly web browser such as swiggle or kidzsearch to keep themselves safe online To check with a trusted adult when we find information online. To check information we find online is true by making comparisons across websites. Trusted adults can support us if we see a mistake on a website or the website feels unsafe.
Vocabulary	<p>Technology: The use of knowledge to invent new devices or tools. Information technology: using computers and other technologies to store, receive and send information. Computer: an electronic device used to store information Monitor: used to display information being entered and processed on a computer. Mouse: a handheld pointing device used to move the pointer on a computer display. Keyboard: used to input text onto a document. Save: to store data in a computer which can be opened and reused in the future Create: to make something new Trackpad: a pointing device, using a sensor, instead of a mouse Online safety: knowing how to keep ourselves and others safe when using the internet. PowerPoint: A presentation program used to sequence and share information Presentation: inform or give new information to an audience Slide: a single page of information within a presentation, Program icon: a picture used to represent a computer program. Double-click: tapping the left mouse button twice in order to select. Log on: using a user name to access the computer.</p>	
Enrichment & wider development		

Year 2 - Summer 2

Milestone LO:

I am learning to Use technology purposefully to create and organise digital data

I can explain how some people may have devices in their homes connected to the internet e.g. lights, fridges, toys and televisions.

Substantive Concepts	Substantive Knowledge	Disciplinary Knowledge
Computer Science	<p>Know that...</p> <ul style="list-style-type: none"> • Computer science is learning how computers and programs work (revisit from Spring 1) • Data is information such as facts and numbers. • Data can be recorded and shared in lots of different ways • Data can be collected by asking people for their opinions. • A tally is a simple way of collecting and recording data, grouping numbers into groups of 5. • A chart is a way of showing data as a picture • A pictogram uses pictures or symbols to represent data • A bar graph uses bars of differing lengths to represent data. • J2e is a computer program which has lots of different uses. It can be used to create different types of chart. 	<p>Know how...</p> <ul style="list-style-type: none"> • Data is used in day to day life. • To create a tally to capture data, using a 'five bar gate' model • To log on to the school network by typing the class name in the user field (revisit from Summer 1) • To access j2e by double clicking on the 'swiggle' internet browser button and typing 'j2e data' into the browser search bar. • To select a suitable template for chart creation, • To insert data and using this to create a variety of charts – bar charts and pictograms. • To read and interpret the data charts they have created.
Online Safety	<p>Know that...</p> <ul style="list-style-type: none"> • A device is is a thing made for a particular purpose • In the modern world, many basic devices now connect to the internet • Devices such as lightbulbs, doorbells fridges and televisions can all connect to the internet • Digital devices have lots of advantages in modern life • There is always a risk to personal information when connecting devices to the internet 	<p>Know how...</p> <ul style="list-style-type: none"> • To use these devices safely and with adult supervision • To keep themselves safe online by never sharing personal information.
Vocabulary	<p>Computer Science: learning how computers and programs work Instructions: a step by step guide of how something should be done. Algorithm: a set of instructions to complete a task Command: an instruction given to tell a computer what to do. Code: a special computer language that a computer follows to help them run properly. Program: a set of instructions in computer language for a computer to follow. Execute: the process of running a computer program, algorithm or command. Debug: to find, remove or correct errors in a computer program. Predict: to guess what a possible outcome could be. Lightbot: a coding program using block coding Problem solving: exploring multiple options to find a solution. Robot: a computer which can perform different tasks. Coding block: a block of code which can be slotted together with other blocks like jigsaw pieces Control: To manage or run something on a digital device Sprite: Characters used within Scratch Jr which can be instructed to perform tasks by following algorithms. Sequence: The order events must be performed to complete a task.</p>	
Enrichment & wider development		