HAWLEY PRIMARY SCHOOL

LONG TERM PLANNING AND PROGRESSION OF SKILLS

COVERAGE

COMPUTING

Cycle A	
EYFS	
Autumn 1 - Is There Room on a Broom for a Gruffalo?	
Long Term Objectives	**Progress of skills**
No specific skill teaching.	
Autumn 2- In with a Bang and Celebrating You	
Long Term Objectives	**Progress of skills**
No specific skill teaching.	
Spring 1- Once Upon a Time	
Long Term Objectives	**Progression of skills**
No specific skill teaching.	
Spring 2- Eggcellent!	

Long Term Objectives	Progression of skills
No specific skill teaching.	
Summer 1- It's a Bug's Life	
Long Term Objectives	**Progression of skills**
Creating Media Uses an iPad to take photos and videos.	○ I know the camera app on an iPad. ○ I can take photos on an iPad. ○ I can take videos on an iPad.
Summer 2- Join Our Journey	
Long Term Objectives	**Progression of skills**
Creating Media Uses an iPad to draw pictures on Paint.	○ I know the Paint app on an iPad. ○ I know how to use the tools on Paint. ○ I can create a picture on Paint.

YEAR 1/2	
Autumn 1 – Out of Africa	
Long Term Objectives	**Progression of Skills**
Digital Foundations In Digital Foundations 1, children will: identify a range of technology found in the home and school; explore the common parts of digital devices; learn how to use a computer mouse or trackpad to control the cursor; learn how to use some of the keys on a computer keyboard; recognise and use common icons found on digital devices; navigate a simple operating system; create digital work using a digital art program; explore online safety concepts, such as personal information, asking a trusted adult for permission, safe passwords, content ownership and digital citizenship.	○ I know simple rules that help me use technology safely and responsibly. ○ I know the names of different digital devices. ○ I know the different things you can do on digital devices. ○ I know the common parts of digital devices and how they are used. ○ I can open and close a program. ○ I can minimise a program. ○ I know there are steps to log in to and power down a digital device. ○ I can hold a computer mouse correctly. ○ I can move the cursor on a computer screen. ○ I can click on an object. ○ I can click and drag to move an object. ○ I know how to double-click on an object. ○ I know the names of some keys on a computer keyboard. ○ I know where to find the letter and number keys. ○ I can type a number, letter or word. ○ I can use the Caps Lock key. ○ I can use the Backspace key. ○ I know some common icons used on digital devices. ○ I can choose the correct icon to select a tool. ○ I can find and open a specific program. ○ I can close the program when I have finished using it. ○ I can save digital work with support. ○ I can choose the correct icon to select a tool. ○ I can select different tools to create digital work.
Autumn 2 – Fire! Fire!	
Long Term Objectives	**Progression of Skills**
Creating Media	○ I know how to choose and change drawing tools. ○ I know how to change the thickness of my drawing tool. ○ I know how to remove and correct mistakes.

In Creating Media 1, children will: explore digital drawing tools; create different types of lines; create different types of shapes; use a range of colours, including tints and shades; experiment with colour and shape to create patterns; discuss the work of different artists; apply the taught skills to create a piece of digital art.	○ I know how to create my own shapes. ○ I can use lines and shapes to create a picture. ○ I can select and change colour. ○ I know how to select a custom colour. ○ I know how to fill shapes. ○ I know what a pattern is. ○ I can use shapes and colours in my art. ○ I can resize objects. ○ I can duplicate objects. ○ I know how to use the work of famous artists as inspiration to create my own work. ○ I can follow a design brief. ○ I know which tool to use depending on the task. ○ I can give and receive feedback. ○ I know if a piece of art is digital or not. ○ I know the difference between copying and using artwork as inspiration.
Spring 1 – Rumble in the Jungle	
Long Term Objectives	**Progression of Skills**
Digital Citizenship In Digital Citizenship 1, children will: recognise different ways technology can be used to go online; recognise examples of personal information; identify how to keep their personal information safe; identify ways they can learn and explore safely online.	○ I know some ways we can use technology to find information online. ○ I know some examples of information that is personal to me. ○ I know why it is important to keep personal information private. ○ I know ways I can protect my personal information online. ○ I know that information can stay online for a long time and can be seen by others. ○ I know ways to communicate safely online. ○ I know what to do if I see something upsetting online. ○ I know the names of some technology that can be used to go online. ○ I know what information can be shared online. ○ I know who to ask before sharing any information online. ○ I know when to get help from a trusted adult.
Spring 2- Marvellous Medicine	
Long Term Objectives	**Progression of Skills**
Computer Systems and Networks	○ I know the difference between technology and information technology.

In Computer Systems and Networks 1, children will: explore how information technology is used in different places and by different people; recognise how information technology helps us; understand how information technology has changed and developed over time; consider how information technology may develop in the future.	○ I know some examples of information technology in the home, at school and in the wider world. ○ I know how information technology is used in different places. ○ I know some examples of how information technology is used by people in different jobs. ○ I know some ways that information technology can help us. ○ I know that digital devices can perform more than one task. ○ I know that information technology can be connected to share information. ○ I know some ways that information technology has changed. ○ I know the names of some people who have helped to change information technology. ○ I can order some developments in information technology on a timeline. ○ I know about some developments in information technology. ○ I know some examples of how information technology might change. ○ I know some ways information technology might help us in the future. ○ I can create a new digital device of the future.
Summer 1 – Under the Sea	
Long Term Objectives	**Progression of Skills**
Creating Media In Creating Media 2, children will develop their understanding of: typing and pasting text into a word processor; using formatting tools to style text; using formatting tools to organise text; inserting images into a document.	○ I can single-click, double-click and right-click. ○ I can click and drag to select text. ○ I can copy and paste text. ○ I can change the text font. ○ I can change the text colour. ○ I can change the text size. ○ I can bold and underline text. ○ I can align the text. ○ I can add a bullet point list. ○ I can add a numbered list. ○ I know how to find and save an image online. ○ I can insert an image into a document. ○ I can make an image bigger or smaller. ○ I can move an image. ○ I can style my text for a specific purpose and audience. ○ I can organise my text for a specific purpose and audience. ○ I can insert and edit an image to support my text. ○ I know why text might need to be set out in different ways. ○ I can save a document. ○ I know how to find and save an image online. ○ I know that content online belongs to someone else.

Summer 2 – Treasure Adventures	
Long Term Objectives	**Progression of Skills**
Computer Systems and Networks In Computer Systems and Networks 2, children will develop their understanding of: the parts of a computer; how to connect to the Internet; how we can be safe online; utilising search engines and how to navigate to a trusted web page on the Internet.	○ I know the key parts of a desktop computer and a laptop. ○ I know some common icons used on digital devices. ○ I know that digital devices use information technology to help them work. ○ I know what a search engine is. ○ I can use a child-friendly search engine to find images on the Internet. ○ I can use keywords to narrow down search results. ○ I know some things that might go wrong while using the Internet. ○ I know some ways to use the Internet safely. ○ I know who can help me if I'm upset or worried by something I see on the Internet. ○ I know what the Internet is. ○ I know some ways we can use the Internet. ○ I know some icons that help us access the Internet on digital devices. ○ I can locate the address bar in a familiar web browser. ○ I can use a keyboard to type a web address into an address bar.

YEAR 3/4	
Autumn 1 – The Rolling Stone Age	
Long Term Objectives	**Progression of Skills**
Digital Foundations In Digital Foundations 3, children will learn concepts and skills to develop their understanding of: technology and input and output devices; device connections; operating system familiarity; recognising icons and symbols; mouse and keyboard skills and formatting text.	○ I know the difference between a device and a digital device and can name some examples. ○ I know what input and output devices are and can give examples of them. ○ I know the function of different input and output devices. ○ I know why devices need to connect. ○ I know how devices can be connected. ○ I can find a file or program on my computing device in different ways. ○ I know what an operating system is. ○ I know some of the different actions that can be achieved with a mouse or trackpad. ○ I know the locations of the main keys on a keyboard. ○ I know which keys are better typed using the right or left hand. ○ I can identify the tool or action an icon represents. ○ I can name a range of common icons and explain what they do. ○ I know that word processing software has tools to check the spelling of text on a page. ○ I can use a mouse or trackpad to select words. ○ I can change the appearance of text on a page.
Autumn 2 – Local Legacy (WWII)	
Long Term Objectives	**Progression of Skills**
Programming In Programming 3, children will develop the skills and knowledge required to create simple programs using Scratch. The five steps in this unit will take the children through various computer programming concepts, such as sequence, selection and repetition, as well as teaching them how to insert sprites and backdrops.	○ I can navigate around the Scratch interface. ○ I know the different types of coding blocks in Scratch and where to find them. ○ I can insert a sprite. ○ I can insert a backdrop. ○ I know what an algorithm is. ○ I know what sequence is. ○ I can combine coding blocks to make a program. ○ I can use simple Motion blocks within programs. ○ I can use simple Looks blocks within programs.

	○ I can use simple Sensing blocks within programs. ○ I can use simple Control blocks within programs. ○ I know the importance of repetition in programming. ○ I know what selection is in programming. ○ I can use the if…then block for selection. ○ I know the names and functions of simple Sensing blocks. ○ I can debug an algorithm.
Spring 1 – At Water's Edge	
Long Term Objectives	**Progression of Skills**
Digital Citizenship In Digital Citizenship 3, children will: understand how to behave appropriately online; recognise how someone's feelings can be hurt by what is said or written online; understand what cyberbullying is and how to recognise it; know how to respond to cyberbullying in a safe and respectful way; understand how their online behaviour impacts their digital footprint.	○ I know that websites and apps collect information about me. ○ I know what a digital footprint is. ○ I know that websites and apps collect information about me. ○ I know that my online choices can create a positive or negative digital footprint. ○ I know appropriate ways to behave towards other people online and why this is important. ○ I know that someone's feelings can be hurt by what is said or written online. ○ I know what bullying is and how it is different from unkind behaviour. ○ I know what cyberbullying is and know how to recognise it. ○ I can identify and explain examples of cyberbullying. ○ I know why someone might choose to cyberbully other people. ○ I know how to recognise if someone is experiencing cyberbullying. ○ I know strategies to respond to cyberbullying in a safe and respectful way. ○ I know what it means to trust someone online and how it is different from liking someone online. ○ I know why it is important to be cautious about who I trust and what information I choose to share online.
Spring 2 – Natural Wonder	
Long Term Objectives	**Progression of Skills**
Physical Computing	○ I can animate an image on a micro:bit. ○ I can display an image on a micro:bit.

Physical Computing 2 is designed to give children a basic understanding of the BBC micro:bit and how it can be used to create simple programs that interact with the physical world. During the unit, children will: navigate the MakeCode interface; learn how to display and animate an image on a micro:bit; learn about the importance of sequencing when programming; use Music blocks within simple programs; debug algorithms; use simple Loops blocks in programs; learn when to use selection in programming; use simple Logic blocks in programs.	○ I know different ways that a program can be started on a micro:bit. ○ I can include two or more different inputs in my project. ○ I can use simple Loops blocks within a program. ○ I know when to use repetition in a program. ○ I can use the if […] then Logic block within a program. ○ I know when to use selection within a program. ○ I can debug an algorithm. ○ I can use the on-screen simulator when debugging my project. ○ I know the importance of sequence when programming.
Summer 1 – The Land of Roar	
Long Term Objectives	**Progression of Skills**
Data and Information In Data and Information 2, children are taught the knowledge and skills required to develop an understanding of how data can be used to answer questions and make decisions. The five steps in this unit develop the children's understanding of: what data and information are; collecting and organising data; representing data; analysing and using data and handling data responsibly and ethically.	○ I know what data and information are. ○ I know that data can be represented in different ways. ○ I know the difference between discrete data and continuous data. ○ I know that data can show patterns and trends. ○ I know why data might be collected. ○ I know some sources to collect data from. ○ I know some ways of collecting, organising and representing data. ○ I can organise data in a table. I can organise data in a spreadsheet. ○ I know that data should be collected with consent. ○ I know that data can be represented in different ways. ○ I can interpret data in a bar chart and a time graph. ○ I know that data can show patterns and trends. ○ I can use spreadsheet software to create a bar chart to compare different categories of data. ○ I can use data to make decisions. ○ I can evaluate which data source is the most helpful for a line of enquiry. ○ I know that data is not always accurate. ○ I know that people may not always present data truthfully. ○ I know that data should be protected.

Summer 2 – Sporting Heroes	
Long Term Objectives	**Progression of Skills**
Artificial Intelligence Artificial Intelligence 2 aims to provide children with the knowledge needed to understand what artificial intelligence (AI) is and how AI systems work while also exploring the ethical implications of AI systems in the real world. Throughout the unit, children will: understand what AI systems are; know examples of where AI systems are used; understand how AI models use pattern recognition to make decisions; know what generative AI models are and understand how they use data to generate new content; know what AI bias is and why it can happen; understand why AI bias is a problem; know where training data is sourced from; understand the importance of data privacy in relation to AI systems.	○ I can describe what AI systems are in simple terms. ○ I know what generative AI models are. ○ I can give examples of where AI systems are used. ○ I know what pattern recognition is. ○ I can explain how generative AI models use pattern recognition to generate content. ○ I can explain how AI models use data. ○ I know that some AI systems use public data from the Internet. ○ I know that some AI systems use data from users. ○ I can give examples of where AI systems are used. ○ I can explain what AI bias is. ○ I know that some AI systems use public data from the Internet. ○ I know that some AI systems use data from users. ○ I can explain what bias is. I can explain what AI bias is. ○ I know why AI bias is a problem. ○ I know how generative AI models can generate biased content. ○ I know that some AI systems use data from users. ○ I can explain the importance of data privacy when using AI systems.

YEAR 5/6	
Autumn 1 – Reach for the Stars	
Long Term Objectives	**Progression of Skills**
Digital Foundations In Digital Foundations 5, children will learn concepts and skills to develop their understanding of: technology over time; computer systems and networks; organising files; formatting tools; keyboard shortcuts; hyperlinks and common icons. The steps in this unit can be covered flexibly in order to meet the specific needs of the children.	○ I know what a computer network is. ○ I know the key components involved in a computer network. ○ I know the types of connections used in a computer network. ○ I know that technology has changed over time. ○ I can name at least three key developments in technology. ○ I know that files are organised in folders on a computer. ○ I know how to create a new folder within file explorer. ○ I know how to move a file from one folder to another. ○ I know how to use the search function to perform basic searches. ○ I know a range of keyboard shortcuts. ○ I know which fingers are best used for each key when typing. ○ I know the location of the home keys. ○ I know the name and function of the refresh, share, link, back and forward icons. ○ I can recognise the padlock, bookmark and attachment icons. ○ I know how to copy and paste text and images into a document. ○ I know how to crop and align text and images in a document. ○ I know how to insert and edit a table in a document. ○ I know how to link text and images within a document to an external website.
Autumn 2 – Our Heroes (History WW1)	
Long Term Objectives	**Progression of Skills**
Computer Systems and Networks In Computer Systems and Networks 5, children will develop their understanding of: the benefits of networks; the topology of networks; IP addresses; viruses & malware;	○ I can identify antivirus software. ○ I can identify devices that help reduce the risk of hacking. ○ I know what malware is. ○ I can list at least three types of malwares. ○ I can explain how the networks help us. ○ I can explain the advantages and disadvantages of different network topologies.

hacking and looking at technologies that help us deal with online threats.	○ I can list examples of networks. ○ I can explain why a network is needed. ○ I know what topology means. ○ I can draw and identify different network topologies. ○ I know the definition of a MAC address. ○ I know the definition of an IP address. ○ I can give an example of an IP address.
Spring 1 – Oh Maya!	
Long Term Objectives	**Progression of Skills**
Digital Citizenship In Digital Citizenship 5, children will: understand the concept of an online reputation; understand how others may use online information to make judgements; understand the importance of building a positive online presence; recognise the lasting effect of words and actions in the digital environment; understand that not all online activities are suitable for them; recognise healthy and unhealthy online behaviours; understand how to collaborate effectively online.	○ I know ways to find out information about others by searching online. ○ I know how to take useful steps to stay safe online. ○ I know why some online activities have age restrictions and why this is important. ○ I know what healthy and unhealthy online behaviour looks like. ○ I know ways to develop healthy habits and online behaviours. ○ I know some strategies to support my own wellbeing online. ○ I know some steps I can take to build a positive online presence. ○ I know some steps I can take to protect my online reputation. ○ I know that my online information can be used by others to make judgements. ○ I know that information about someone online can be used by others to make judgments about them and why these judgments may be incorrect. ○ I know ways to make positive contributions. ○ I know ways to collaborate constructively with others. ○ I know strategies for finding safe online communities. ○ I know how to be kind and show respect for others online. ○ I know the benefits of the Internet. ○ I know the risks of sharing certain information online. ○ I know what information I should not put online without asking a trusted adult first. ○ I know that what you share online can have an impact on your family, friends or future opportunities. ○ I know who I can talk to if others pressure me to do something online that makes me feel uncomfortable.

Spring 2 – Boom! (Natural Disasters)	
Long Term Objectives	**Progression of Skills**
Creating Media In Creating Media 5, children will learn: what podcasts are; how to record and edit high-quality audio using a digital audio workstation (DAW); the structure and content of podcast episodes and how advertising is used. Children also learn about copyright law and how to identify royalty-free content online.	○ I can make a simple audio recording. ○ I can import audio files to add background music to my project. ○ I can manipulate the sound of my audio recording by adding effects. ○ I can record and produce a podcast using multiple audio tracks and use effects appropriately. ○ I know the features of an effective podcast advert. ○ I can write my own advertisement with a target audience in mind. ○ I can plan a podcast, considering the content and target audience. ○ I can review someone else's work and offer constructive feedback to improve their project. ○ I can read a review of my own project and use it to suggest improvements. ○ I know what podcasts are. I know the key features of a podcast. ○ I can save a project and export an audio file. ○ I can download files from an online source and locate them on a digital device. ○ I can import audio files to add background music to my project. ○ I can export a project as an audio file and consider any copyright issues. ○ I know the difference between facts, opinions and beliefs. ○ I know about copyright laws and know that some online content can be reused. ○ I know some of the risks and benefits of podcast advertising. ○ I can export my project as an audio file and consider any copyright issues. ○ I know what online reviews are and that they can contain facts and opinions. ○ I know some of the risks and benefits of using online reviews.
Summer 1 and 2 – Eureka (Ancient Greece)	
Long Term Objectives	**Progression of Skills**
Computer Systems and Networks In Computer Systems and Networks 6, children will learn about search engines and how they work. They will also learn how to assess search results and online content critically.	**Computer Systems and Networks** ○ I can explain what a web crawler (or spider) is and how it visits pages on the World Wide Web. ○ I can describe how search engines store information from the Internet by creating an index. ○ I can explain how search engines make it easier for us to find the information we want. ○ I know some of the criteria that page ranking programs use to decide page ranking. ○ I know how algorithms are used to rank search results.

Creating Media In Creating Media 6A, children will: learn what 3D modelling is; learn that 3D designs can be printed to make physical three-dimensional objects; consider the benefits of 3D modelling in the real world and explore how this technology is used in the workplace. Through the use of Tinkercad, children will develop the practical computing skills of adding, moving, manipulating and combining objects to create 3D designs.	○ I know what Search Engine Optimisation (SEO) is. ○ I know why web pages use SEO. ○ I know how SEO can help web pages improve their ranking on a search engine results page. ○ I know how to check if an online source is reliable. ○ I can identify reliable online information by checking multiple sources. ○ I can identify signs of bias by looking for language that reflects opinions rather than facts. ○ I can analyse online sources to determine which are reliable and which are biased. ○ I know what critical thinking is. ○ I understand why critical thinking is important. ○ I know why I need to think critically when viewing online content. ○ I can use critical thinking to form my own opinion about online content. **Creating Media** ○ I can add, delete, duplicate and move a 3D object. ○ I can raise and lower a 3D object. ○ I can align 3D objects. ○ I can combine 3D objects. ○ I can use the ViewCube to view 3D objects from different viewpoints. ○ I know the difference between the Orthographic and Perspective view. ○ I can use the Orthographic view to help me create designs. ○ I can use tools to resize, recolour, rotate and group 3D objects. ○ I can modify 3D objects to create a simple design. ○ I can follow a design brief to create design ideas. ○ I can use the Scribble tool to draw unique shapes for my design. ○ I can use 3D modelling skills in Tinkercad to create a 3D character. ○ I can give and receive feedback to improve a design. ○ I can evaluate my design work. ○ I know that a 3D object has three dimensions: width, depth and height. ○ I know what 3D modelling is and why it is useful. ○ I can combine readymade 3D objects.

Cycle B (2022/2023)	
YEAR 1/2	
Autumn 1 – Hooray for Hawley	
Long Term Objectives	**Progression of Skills**
Digital Foundations In Digital Foundations 2, children will: identify a range of technology used in the wider world; learn about health and safety requirements related to digital devices; name and know the function of common parts of digital devices; learn how to use a computer mouse or trackpad, including functions of the left and right buttons; learn to recognise the main keys on a computer keyboard; recognise and use common icons found on digital devices; navigate a simple operating system; become familiar with common icons used in a digital art program; create, save and open digital work; explore online safety concepts, such as personal information, trusted adults, safe passwords, content ownership and digital citizenship.	○ I know why safety rules are important when using technology. ○ I know some different ways to stay safe when using technology. ○ I know the names of a variety of digital devices. ○ I know that a digital device contains a computer or microcomputer. ○ I know that some digital devices can be used to create, share and save information. ○ I know the common features of digital devices. ○ I can select, open and close programs independently. ○ I can minimise, restore and resize a program. ○ I can log in with support. ○ I can log out and power down a computer with support. ○ I can use a computer mouse or trackpad to move the cursor on a screen. ○ I know the different parts of a computer mouse or trackpad and their functions. ○ I can single-click and double-click. ○ I can click and drag to move objects of different sizes and shapes. ○ I can use right-click to copy and paste objects. ○ I know the name and function of the main keys on a computer keyboard. ○ I can use the computer keyboard to add, delete and space text for others to read. ○ I can recognise and match icons that have a similar function. ○ I can recognise icons that represent specific tools within a program. ○ I can find and open a file with support. ○ I can save digital work as a file. ○ I can recognise icons that represent specific tools within a program. ○ I can create a piece of digital art.
Autumn 2 – Celebrations	
Long Term Objectives	**Progression of Skills**

Programming In Programming 1, children will: learn what an algorithm is; recognise and follow the steps in simple algorithms; understand that algorithms can be modified and practise modifying existing algorithms; recognise that errors can occur in algorithms and learn how to debug them; understand how repetition works in algorithms; design and create their own simple algorithms; explore online safety concepts, such as online communication, online behaviours and digital citizenship.	○ I know that an algorithm is made up of step-by-step instructions. ○ I know some examples of everyday algorithms. ○ I can recognise and follow the steps in a simple algorithm. ○ I know that the steps in an algorithm can be changed. ○ I know that changing the steps in an algorithm could change its outcome. ○ I can change the steps in a simple algorithm to create a different outcome. ○ I know that repetition means to do something more than once. ○ I know why repetition is used in algorithms. ○ I can create a simple algorithm that uses repetition. ○ I know that algorithms can have errors. ○ I know that debugging is about finding and fixing errors in an algorithm. ○ I can find and fix an error in a simple algorithm. ○ I can run my algorithm to check it works correctly. ○ I can debug my algorithm.
Spring 1 – Victorians	
Long Term Objectives	**Progression of Skills**
Digital Citizenship In Digital Citizenship 2, children will: identify different ways to behave kindly and respectfully online; recognise bullying behaviour online and how to report it; learn what a digital footprint is and why it is important; learn how to reduce their digital footprint and make it more positive.	○ I know that information can stay online for a long time and can be seen by others. ○ I know that our online information makes up our digital footprint. ○ I know ways to reduce my digital footprint. ○ I know that the way I behave and communicate online can impact my digital footprint. ○ I know to behave online in ways that do not upset others. ○ I know why it is important to be kind to people online and to respect their choices. ○ I know that people may not always think or feel the same way. ○ I know that some people can be unkind online. ○ I know what online bullying is and how it can happen. ○ I know some ways online bullying can make someone feel. ○ I know what to do if I or someone else is being bullied online. ○ I know what information I should not put online without asking a trusted adult first. ○ I know that our online information can be copied. ○ I know who to talk to if something has been put online without consent or if it is incorrect.
Spring 2 –Into the Toybox	
Long Term Objectives	**Progression of Skills**
Programming	○ I can navigate around the ScratchJr interface.

In Programming 2, children will develop their understanding of: the ScratchJr interface; programming a character to move and change its appearance; displaying written messages and sending messages between characters and repeating blocks or entire algorithms.	○ I can insert different characters. I can insert a background. ○ I can make a character move in different ways. ○ I can make a character grow and shrink. ○ I can make a character hide and show. ○ I can program a character to display a message. ○ I can use the Send Message block to send a message to a character. ○ I can program a character to reply to a message using the Start on Message block. ○ I can use the Repeat block to repeat an action. ○ I can use the Repeat Forever block to repeat an entire algorithm. ○ I can set how many times I want an action to be repeated. ○ I can check my project for errors and debug it.
Summer 1 –Superheroes	
Long Term Objectives	**Progression of Skills**
Artificial Intelligence Artificial Intelligence 1 introduces children to the concepts of machines and artificial intelligence (AI), encouraging them to explore how machines work, how humans learn and how AI technologies are trained. Throughout the unit, children will: learn what machines are and how they have changed over time; understand how humans learn by using their senses, practising tasks and making mistakes; discover what artificial intelligence is and how AI technologies are trained using data; compare humans and AI technologies to understand the differences and limitations of these technologies.	○ I know what a machine is. ○ I know that AI technologies are created by humans to use data, find patterns and do certain jobs. ○ I know ways AI technologies are used in everyday life. ○ I can spot differences between older and newer machines. ○ I can talk about what machines might be like in the future. ○ I know humans learn by seeing, listening, doing and trying again. ○ I can talk about how I get better at something. ○ I can explain what helps me learn. ○ I can say how different machines work. ○ I know that machines can be trained to spot patterns using lots of examples. ○ I know that AI is a type of technology that follows patterns. ○ I can name machines I see around me and say what they do. ○ I can talk about things only humans can do, such as feeling or imagining. ○ I know that AI technologies are created by humans to use data, find patterns and do certain jobs. ○ I know that machines don't think or feel like humans. ○ I can explain how humans and AI technologies are different. ○ I know ways AI technologies are used in everyday life.
Summer 2 – Going for Gold	

Long Term Objectives	**Progression of Skills**
Physical Computing In Physical Computing 1, children will: learn what a programmable toy is; understand how a Bee-Bot follows instructions; identify the features of a BeeBot; demonstrate how to use a Bee-Bot safely and responsibly; use the buttons on a Bee-Bot to control its movement; build and sequence simple algorithms; use repetition in algorithms; debug algorithms; design and create their own Bee-Bot journey.	○ I can use a Bee-Bot safely and share it with others. ○ I know the forward and backward commands. ○ I know the left turn and right turn commands. ○ I know that programmable toys follow instructions. ○ I can experiment with the buttons on a Bee-Bot to explore how it moves. ○ I can press the correct buttons to make a Bee-Bot turn left and right. ○ I can use the forward button to make a Bee-Bot move left and right. ○ I can press the correct buttons to make a Bee-Bot move forwards and backwards. ○ I can use the delete button correctly. ○ I can program a Bee-Bot to move in different directions. ○ I can program a Bee-Bot correctly to reach one or more targets. ○ I can repeat commands to make a Bee-Bot reach a target. ○ I know why sequencing is important in algorithms. ○ I can sequence commands to create an algorithm. ○ I can debug an algorithm.

<table>
<tr><th colspan="2">YEAR 3/4</th></tr>
<tr><th colspan="2">Autumn 1 – The Power of Words</th></tr>
<tr><th><u>Long Term Objectives</u></th><th><u>Progression of Skills</u></th></tr>
<tr><td><u>Digital Foundations</u>

In Digital Foundations 4, children will learn concepts and skills to develop their understanding of: technology and digital devices; operating system familiarity; mouse and keyboard skills; understanding icons and symbols; creating digital artefacts; Internet safety and awareness and digital citizenship.</td><td>○ I can name some input and output devices.
○ I can explain the stages of the IPO model for computing.
○ I can give an example of the IPO model for computing.
○ I know that a computing device is made of connected parts and can be connected to other computing devices.
○ I can describe different ways that computing devices can connect to each other.
○ I know some of the advantages and disadvantages of different connections.
○ I can explain some reasons why computing devices might need to be connected to each other.
○ I know that files and programs can be organised and accessed in different ways.
○ I can modify the content in a file and save the results.
○ I can select a file in a folder and delete it.
○ I can identify the operating system of my device.
○ I can navigate the operating system to find a file and open it.
○ I know that there are different types of click available when using a mouse or trackpad.
○ I can explain the functions of different types of click.
○ I can find the keys on a keyboard.
○ I can use the keys on a keyboard to type with increasing speed and accuracy.
○ I can name some tools and actions available on computing devices.
○ I can recognise the icons that are used to represent common tools and actions.
○ I know that the tools and actions available on a device or in a program are not always the same.
○ I can change the layout of text on a page on screen.
○ I can change the way the page is set up.
○ I can use tools in a word processing program to check the spelling and grammar of the text.
○ I can add images to a page and change how they fit in with the text.</td></tr>
<tr><th colspan="2">Autumn 2 – Were the Romans Really Rotten?</th></tr>
<tr><th><u>Long Term Objectives</u></th><th><u>Progression of Skills</u></th></tr>
</table>

Creating Media In Creating Media 3, children will learn how to: insert and edit text; use keyboard shortcuts; format slides; insert and edit images; consider audience and purpose.	○ I can format text in presentation software. ○ I can use keyboard shortcuts to edit text. ○ I can organise text in presentation software. ○ I can format, edit and organise text in a presentation. ○ I can format slides using colour, alignment and borders. ○ I can format text using borders and colour. ○ I can insert images into a presentation. ○ I can insert and format images in a presentation. ○ I can adjust the size of images using the resize handles. ○ I can crop images using the crop handles. ○ I can improve slides using transitions and animations. ○ I can format slides using colour, animations and transitions. ○ I can consider the audience when designing a presentation. ○ I know how to consider the audience and purpose when designing a presentation. ○ I know why images are used in presentations.
Spring 1 and 2– Walk Like an Egyptian	
Long Term Objectives	**Progression of Skills**
Digital Citizenship In Digital Citizenship 4, children will: understand which games are safe to play; understand how games use persuasion to keep people playing; know strategies to help limit how much time is spent playing games; understand what scams are and know how to avoid them while gaming online; understand what 'fake news' is and know strategies to notice it online; understand that not everyone online is who they say they are; know strategies for keeping personal information private; understand what respectful online gaming behaviour looks like. **Computer Systems and Networks**	**Digital Citizenship** ○ I know strategies for keeping my personal information private. ○ I know that games have age restrictions and I know how to identify the age rating of a game. ○ I know some of the methods used to encourage people to spend more time playing games and know how to recognise some of these methods. ○ I know that online games can be a distraction from other things, in both a positive and negative way. ○ I know strategies to help limit the amount of time spent playing games. ○ I know strategies for safe and fun experiences while playing games online. ○ I know that online behaviour can have real-life consequences. ○ I know strategies to help me be a respectful online gamer. ○ I know how to identify how someone online is feeling and respond respectfully. ○ I know that others online can pretend to be someone else.

In Computer Systems and Networks 3, children will develop their understanding of: how devices are connected to each other; computer networks; the Internet; the World Wide Web and safe searching.	○ I know that adults can monitor what I do online. ○ I know what is meant by the term fake news and why someone would want to create it. ○ I know what scams are and why people create them. ○ I can use strategies to spot examples of scams and fake news online. ○ I know strategies to help me notice suspicious online profiles. **Computer Systems and Networks** ○ I can use a search engine to find information. ○ I can explain how the Internet works. ○ I know how to search for information safely. ○ I can identify how to trust a website is safe. I know what the Internet is. ○ I know what the Internet can be used for. ○ I know what the World Wide Web is. ○ I know how content can be viewed on the World Wide Web. ○ I know and understand how content can be created and posted online. ○ I can describe how devices are connected to each other. ○ I can explain what devices can do once they are connected to each other. ○ I can describe how the devices in my school are connected to each other. ○ I can describe what a computer network is. ○ I can name some of the devices that can form a computer network. ○ I can describe my school network and the devices that form it.
Summer 1 and 2 – Lights, Camera Action	
Long Term Objectives	**Progression of Skills**
Creating Media In Creating Media 4, children will: gain an understanding of what animation is and the different ways in which animations can be created; understand how to create a smooth animation; navigate digital animation software; plan an animation using a storyboard; create and evaluate their own animations.	**Creating Media** ○ I can create multiple frames to create a simple moving image. ○ I can make small changes to each frame of my animation. ○ I can use onion skinning to help me make small changes between frames. ○ I can use a digital device to photograph a series of frames. ○ I know there are different types of animation.

Computer Systems and Networks In Computer Systems and Networks 4, children will explore how technology can help us work, collaborate and communicate effectively in our daily lives. The steps build on children's understanding of networks, communication technology and the impact that the invention of the Internet has had on communication and collaboration.	○ I can create multiple frames to create a simple moving image. ○ I can make small changes to each frame of my animation. ○ I can use onion skinning to help me make small changes between frames. ○ I can use a digital device to photograph a series of frames. ○ I know what different elements I will need to create to make my animation. ○ I can use stop motion animation software to create an animation. ○ I know what different elements I will need to create to make my animation. ○ I can use stop motion animation software to create an animation. ○ I know that animators use storyboards to plan out an animation. ○ I can create a simple story. ○ I can plan out my animation using a storyboard. ○ I can follow a storyboard. ○ I know what different elements I will need to create to make my animation. ○ I can present and evaluate my animation. ○ I know that an animation is made from multiple frames. ○ I can navigate digital animation software. **Computer Systems and Networks** ○ I can identify some different digital devices. ○ I know some ways that digital devices have changed the way we work. ○ I can identify the key skills for communicating and collaborating. ○ I know the effective ways of communicating and collaborating with more than one person. ○ I can give examples of changes in communication technology. ○ I know how communication technology has become more effective. ○ I can recognise and identify the different collaborative elements of online communication software. ○ I can safely and effectively use online communication software to collaborate. ○ I can explain how networks help us to communicate and collaborate with each other. ○ I know what a network is.

YEAR 5/6	
Autumn 1 – Coastal Adventures	
Long Term Objectives	**Progression of Skills**
Digital Foundations In Digital Foundations 6, children will learn concepts and skills to develop their understanding of: changes in technology; computer networks; file organisation and advanced search terms; keyboard shortcuts, including the function keys; hyperlinks and common icons.	○ I can explain different network types. ○ I can explain how connecting computers together in a network supports communication and collaboration. ○ I know why technology changes. ○ I can make predictions about future changes in technology. ○ I know the different levels of permissions within folders. ○ I can use logical folder structures to organise my digital workspace. ○ I can use advanced search functions to improve my search results. ○ I can successfully use the function keys on a keyboard. ○ I can use both hands when typing. ○ I can recognise common icons such as the settings, Wi-Fi, search and toggle icons. ○ I know about page margins, page layout and page orientation in a document or presentation. ○ I know about headers and footers in a document or presentation. ○ I can use paste special to paste unformatted text. ○ I can create internal hyperlinks in a document or presentation.
Autumn 2 – Sensational Shang	
Long Term Objectives	**Progression of Skills**
Programming In Programming 4, children will develop an understanding of what programming is through hands-on projects and apply their knowledge in practical ways. The five steps in this unit will guide the children through various programming concepts, such as selection, repetition and variables, building up the necessary skills and knowledge to create an independent project.	○ I can confidently navigate around the Scratch interface. ○ I know that the Stage is made from x and y coordinates. ○ I can change a background and costume in a program. ○ I know there are different ways to change how something looks in Scratch. ○ I know that there are many different programming languages. ○ I can use Control and Looks blocks in a program. ○ I can use a Sensing block in a program. ○ I can use an Operators block in a program. ○ I can use x and y coordinates to move a sprite in Scratch.

	○ I know that a user can interact with a program in many different ways. ○ I know that Control blocks within Scratch use selection and repetition. ○ I know the difference between an if…then and an if…then…else block and when to use them. ○ I know what variables are and how they can be useful in programming. ○ I can create a variable and use it in my program. ○ I can explain what my variable is doing in my program. ○ I know that it is important to test and debug an algorithm.
Spring 1 and 2 – We Rule!	
Long Term Objectives	**Progression of Skills**
Digital Citizenship In Digital Citizenship 6, children will: understand how misinformation is shared online; understand the dangers of posting or sharing misinformation; learn how to critically evaluate the authenticity and trustworthiness of online content; know how to manage their digital footprint; identify and recognise online risks; understand how to protect themselves against cybersecurity threats. **Data and Information** In Data and Information 3, children are taught the knowledge and skills required for collecting, organising, representing, analysing and presenting data. The steps in this unit develop children's understanding of: data types and their uses; selecting appropriate data sources; collecting and organising data; filtering and sorting data; representing and analysing data and making datainformed decisions.	**Digital Citizenship** ○ I can search for information about an individual online and summarise the information found. ○ I know strategies for keeping personal information private. ○ I know what to do if a password is shared, lost or stolen. ○ I know ways people can manage passwords. ○ I know that some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure. ○ I know how to identify, flag and report inappropriate content. ○ I know that some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am not sure. ○ I know that there are some people I communicate with online who may want to do me or my friends harm. ○ I can recognise that this is not my fault. ○ I know what is meant by being sceptical; I can give examples of when and why it is important to be sceptical about things online. ○ I can use the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online. ○ I know that someone can get help if they are having problems and can identify when to tell a trusted adult. ○ I know how fake news may affect someone's emotions and behaviour and can explain why this may be harmful. ○ I know the difference between online misinformation and disinformation.

	○ I know what is meant by a hoax. ○ I know the difference between a belief, an opinion and a fact and can give examples. ○ I know how to evaluate digital content and can explain how to make choices about what is trustworthy. ○ I know how to explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence. ○ I know ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content. **<u>Data and Information</u>** ○ I know the main types of data. ○ I know the differences between first-party, second party and third-party data. ○ I can analyse data, drawing out patterns and trends. ○ I know why data is more useful when it is structured. ○ I know ways that large datasets are collected and used. ○ I know that data can be collected from different sources. ○ I know ways data can be collected and organised. ○ I can choose the most appropriate data source for a given enquiry. ○ I can collect data using questionnaires and surveys. ○ I know various ways data can be represented and how to select the most appropriate representation. ○ I can represent data using pie charts and comparative graphs. ○ I can analyse data, drawing out patterns and trends. ○ I know ways to analyse data critically. ○ I can structure and organise data using spreadsheets. ○ I know what it means to sort data. ○ I know what it means to filter data. ○ I can sort and filter data to help me focus my enquiry. ○ I can choose the most appropriate data source for a given enquiry. ○ I can draw conclusions based on reliable data. ○ I can make informed decisions using data. ○ I know ways that large datasets are collected and used.

	○ I know ways to analyse data critically.
Summer 1 and 2 – Ever Evolving	
Long Term Objectives	**Progression of Skills**
Artificial Intelligence In Artificial Intelligence 3, children will develop the ability to think critically about the role of AI systems in everyday life, including evaluating safety, ethical implications and usefulness. Building on this understanding, children will design their own AI system, ensuring it is safe, fair and beneficial. To conclude the unit, they will prepare and deliver a pitch to justify their design choices and demonstrate how their AI system meets key ethical and practical criteria. **Physical Computing** Physical Computing 3 provides children with the skills and knowledge to design and program a BBC micro:bit using Microsoft MakeCode. They will gain an understanding of what physical computing is and access practical projects to put this knowledge to the test. The five steps in this unit will take the children through various computing programming concepts, such as selection, repetition and variables, as well as using the micro:bit's sensors and ability to connect to other objects like crocodile clips.	**Artificial Intelligence** ○ I can explain some different types of AI systems in simple terms. ○ I can design an AI system that is ethical and solves a real-world problem. ○ I can explain how and why AI systems are used in different fields. ○ I know different types of problems that AI technologies can help solve. ○ I understand and can explain how an AI system could impact society. ○ I can discuss the potential impact of AI technologies in the future. ○ I can discuss some benefits and explain how they could lead to advancements in the future. ○ I understand the role of an AI developer. ○ I can discuss some benefits of AI technologies and explain how they could lead to advancements in the future. ○ I can discuss some limitations of AI technologies and explain how they could lead to problems in the real world. ○ I know ways to evaluate the potential benefits and limitations of an AI system. ○ I understand what it means to be human-led. ○ I understand what it means to be ethical. ○ I know some ethical concerns of using AI technologies. ○ I understand what makes an AI system safe, fair and useful. ○ I can discuss some ethical considerations that AI developers have to think about. ○ I know ways to make AI systems safer and fairer. ○ I know ways to use AI technologies ethically and responsibly. ○ I can design an AI system that is ethical and solves a real-world problem. **Physical Computing** ○ I can confidently navigate around the MakeCode interface. ○ I can use MakeCode blocks to create a program. ○ I can use additional objects to interact with the micro:bit.

	○ I know what the different input sensors on the micro:bit are and how I can use them. ○ I can use different repetition MakeCode blocks in an algorithm. ○ I know that there are different ways to use repetition and selection in a program. ○ I can use different selection MakeCode blocks in an algorithm. ○ I can create variables and use them in a program. ○ I can create a program using multiple variables. ○ I know what a variable is and how it can be used in a program. ○ I know when a variable has been used in a program and understand why it has been used. ○ I know how variables can be used on the micro:bit. ○ I can describe how my variable works. ○ I know that it is important to test and debug an algorithm. ○ I can use given strategies to debug an error and explain what the error was.