



Opening Doors, Enriching Lives

Computing at Tanfield Lea Community Primary School

"Whether you want to uncover the secrets of the universe, or you want to pursue a career in the 21st century, basic computer programming is an essential skill to learn." - Steven Hawking

Pre-School

Topic	Key Vocabulary	Key Knowledge/ Skills
How do we use technology? Autumn term: I can take a photograph using an I-pad Spring term: I can make a video using an I-pad Summer term: I can scan a QR code using an I-pad	I-pad / tablet, print, photograph, camera video, record QR code technology, batteries, plug, names of technical appliances used at home and at school Computer	Information Technology Key Skills: <ul style="list-style-type: none"> I can take a photograph using an I-pad I can make a video using an I-pad I can scan a QR code using an I-pad I can name and use technology in my house. Ensure children are given opportunity to send in evidence from home of them identifying and beginning to use technology
DL : Spring 1st half term Safer internet day	safe, Safer Internet Day, internet	Digital Literacy Key Skills: <ul style="list-style-type: none"> I can recognise and talk about how I can use the internet to find things out Model how this is done throughout the year following children's interests and experiences

Reception

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>On-going through Reception</p> <p>Supported then independent use of interactive whiteboard, I-Pads and other electronic devices in school</p> <p>I can take several photographs and combine these to make a simple digital Collage. Add text by making digital recording of their voice.</p> <p>I can enhance my Pic collages by including: text, paint, doodle, stickers and add a background</p> <p>I can record and play a video using an I-pad</p>	<p>Develop Pre-school vocabulary and introduce:</p> <p>electronic devices</p> <p>app, pic collage, upload, recording, touch screen</p> <p>keyboard</p> <p>Google</p>	<p>Information Technology Key Skills:</p> <ul style="list-style-type: none"> • To play on a touch screen game and use computers/keyboards in child initiated learning • To type letters with increasing confidence using electronic devices. • To take a photograph and use it in an app to create a simple digital collage • To record and play a video
<p>Ongoing through Reception</p> <p>-Using a Bee Bot: incorporate BeeBots into continuous provision and encourage children to begin to operate these by experimenting with the buttons and learning how to charge them</p> <p>-Model how to operate a BeeBots, model how an algorithm can be added to get a BeeBots to move to a given place, children to follow these</p> <p>-Algorithm challenge - children to make their own to get a BeeBots to a given place</p>	<p>BeeBot, algorithm</p>	<p>Computer Science Key Skills:</p> <ul style="list-style-type: none"> • To follow simple algorithms and spot patterns • To sequence instructions for simple familiar tasks • To input a simple sequence of commands to control a digital device with support
<p>On-going through Reception</p> <p>Topics are taken from <i>Education for a Connected World 2020</i>:</p> <ul style="list-style-type: none"> - Self-image and Identity - Online relationships - Online reputation - Online bullying - Managing online information - Health, wellbeing and lifestyle - Privacy and security <p>Activates are planned from National Online Safety.</p> <p>Safer internet day</p>	<p>Develop Pre-school vocabulary and introduce:</p> <p>online, internet, trusted adult, device, technology, search, password</p>	<p>Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • To recognise some ways in which the internet can be used to communicate and find information and to give examples of how I (might) use technology to communicate with people I know and find out information • Know that they should always ask a responsible adult if they want to use a device and ask for help if they see anything that makes me feel sad, embarrassed, worried or upset • Be able to identify some simple examples of my personal information (e.g. name, address, age) and I can describe the people I can trust and can share this with • I can describe ways that some people can be unkind online and can offer examples of how this can make others feel • I can talk about how I can use the internet to find information and can identify devices that I can use • I can identify rules that help keep us safe and healthy in and beyond the home

KS1 Computing Overview	
Computing Strand	NC Objective
Digital Literacy 1x lesson per half term	-Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. -Recognise common uses of information technology beyond school
Information Technology	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Computer Science	- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - Create and debug simple programs - Use logical reasoning to predict the behaviour of simple programs

Years 1 and 2 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
Autumn Term 1 DL - Media balance and well being NOS - Health wellbeing and lifestyle Activity 1 (Part 1): Rules to keep us safe	• Technology • Permission • Screen • Apps • Information • Website • Tablet • Laptop • Safety • Device • Google • Search engine	NC Objective: To recognise common uses of information technology beyond school Digital Literacy Skills: <ul style="list-style-type: none"> Know that the internet is accessed all over the World and know some devices are connected to the internet.
Autumn Term 1 IT - Our School Activities: <ul style="list-style-type: none"> - Use SeeSaw to explain what they know about our school - To take photos - To create an electronic collage using previous photos. - To create an audio poster about our school - To explain different subject symbols 	iPad, home, app, camera, record, save, upload, microphone, video, screen, save	NC Objective: To use technology purposefully to create, organise, store, manipulate and retrieve digital content Information Technology Skills: <ul style="list-style-type: none"> Be able to independently find and use an app on a tablet for instance to take and view a video or photograph I can record my voice and add different effects. Be able to save a project I can add labels to an image
Autumn Term 2 DL - Cyberbullying NOS - Online bullying Activity 1: Sorting activity	• Messenger • Communication • Apps • Online • Unkind • Safe • Bullying	NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. NC Objective: To recognise common uses of information technology beyond school Digital Literacy Skills: <ul style="list-style-type: none"> To give simple examples of bullying behaviour and how it could look online.
Autumn Term 2 IT - Retell the story of the gunpowder plot Activities: <ul style="list-style-type: none"> -Order the events of the gunpowder plot on pic collage. - Add speech bubbles to pictures in pic collage. 	iPad, image, order, upload, record, screen, save	NC Objective: To use technology purposefully to create, organise, store, manipulate and retrieve digital content Information Technology Skills: <ul style="list-style-type: none"> Be able to independently find and use an app on a tablet for instance to take and view a video or photograph I can order images to create a simple storyboard. Be able to save a project I can add labels to an image

Years 1 and 2 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Spring Term 1 DL - My digital footprint and identity</p> <p>NOS - Online reputation Activity 1: Personal Information</p>	<p>• Social media • Communicate • Facebook • Instagram • Twitter • Apps • Internet • Online • Trusted adult</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Skills:</p> <ul style="list-style-type: none"> • Know that the internet is accessed all over the World and know some devices are connected to the internet. • To identify simple rules that help keep us safe and healthy in and beyond the home when using technology. • To identify some examples of my personal information (e.g. name, address, age, phone number, email, location)
<p>Spring Term 1 Safer Internet Day NOS - Self-image and identity Activity 1: Circle time / class discussion / role play scenarios Activity 2: This Made Me Feel Activity 3: Trusted adults</p>	<p>Trusted adult, Online, Stranger, Emotions, Feelings, Online, Internet, Trust, Help</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>Digital Literacy Skills:</p> <ul style="list-style-type: none"> • Know that the internet is accessed all over the World and know some devices are connected to the internet. • To identify simple rules that help keep us safe and healthy in and beyond the home when using technology. • To identify some examples of my personal information (e.g. name, address, age, phone number, email, location) • To explain how other people's identity online can be different to their identity in real life.
<p>Spring Term 1 CS - Programming BeeBots</p> <p>Activities: - Draw a monster using an algorithm - investigate using the BeeBots - To race using the BeeBots - To program the BeeBot using turns To program the BeeBot to follow algorithms.</p> <p>Creating and Debugging Algorithms</p> <p>Activities: - Use the arrow cards to create a simple algorithm - To draw algorithms for the BeeBot to follow. - To debug algorithms</p>	<p>Bee Bot, algorithm, forwards, backwards, turn left, turn right, debug, program</p>	<p>NC Objective: Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <p>NC Objective: Use logical reasoning to predict the behaviour of simple programs - Know which button on a device represents which action</p> <p>Computer Science Skills:</p> <ul style="list-style-type: none"> • Know how to program a robot to follow simple sequence of instructions (1- 2 turns) • To use logical reasoning to make simple predications about an algorithm and a program. • To know what an algorithm is and are implemented as programs on digital devices. • To understand the sequence of algorithms is important • Know which button on a device represents which action • Be able to change (debug) the program to improve the route • Make a simple sequence of instructions / algorithm • To know what an algorithm is and are implemented as programs on digital devices. • To understand the sequence of algorithms is important • Know which button on a device represents which action • Know how to program a robot to follow simple sequence of instructions (1- 2 turns)

Years 1 and 2 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Spring Term 2 DL - Privacy and security</p> <p>NOS - Privacy and Security Activity 1 (Part 1): Super strong passwords</p>	<ul style="list-style-type: none"> • Technology • Permission • Private • Apps • Online • Safety • Device • Information • Website • Tablet • Laptop • Google • Password • Symbol • Secure 	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Skills:</p> <ul style="list-style-type: none"> • Know that the internet is accessed all over the World and know some devices are connected to the internet. • To identify simple rules that help keep us safe and healthy in and beyond the home when using technology. • To explain what passwords are and with support can use simple passwords for my accounts and devices.
<p>Spring Term 2 CS - To use Blue Bots to code.</p> <p>Activities:</p> <ul style="list-style-type: none"> -Build on knowledge from y1 drawing algorithms for the BeeBot to follow. -Create a simple algorithm using the Blue Bot app to move the Blue Bot to the correct destination. - To draw algorithms for the Blue Bot to follow. - To read algorithms and predict the Blue Bots behaviours - To debug algorithms 	<p>Bee Bot, algorithm, forwards, backwards, turn left, turn right, debug, program</p>	<p>NC Objective To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <ul style="list-style-type: none"> - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs <p>Computer Science Key Skills:</p> <ul style="list-style-type: none"> • To use logical reasoning to predict the outcomes of algorithms • Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting) • To begin to understand decomposition to breakdown the algorithm into smaller parts • Begin to use block programming to complete a simple program. • Be able to debug more complex problems e.g. a route on a maze.

Years 1 and 2 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Summer Term 1 DL - Relationships and communication</p> <p>NOS - Online relationships Activity 2: Being kind</p>	<p>Internet • Online • Offline • Email • Communicate • Email address • Subject • Kin</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Skills:</p> <ul style="list-style-type: none"> • Know that the internet is accessed all over the World and know some devices are connected to the internet. • To identify simple rules that help keep us safe and healthy in and beyond the home when using technology. • To give simple examples of bullying behaviour and how it could look online. • To identify some examples of how I might use technology to communicate with others I don't know well.
<p>Summer Term 1 IT - Paint</p> <p>Activities:</p> <ul style="list-style-type: none"> - Paint a house - Paint the moon and its craters - Use the shape tool to create a rocket - Paint a picture of the moon landing 	<p>Monitor, Keyboard, Mouse, log in, username, password, start, paint, left click, brush, shape, fill, text</p>	<p>NC Objective: To use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Information Technology Skills:</p> <ul style="list-style-type: none"> • Be able to navigate around the screen with a mouse or touchpad • Be able to log onto a computer • Be able to save and print a document • I can use a paint/drawing app to create a digital image
<p>Summer Term 2 DL - News and media literacy</p> <p>NOS - Managing online information Activity 2: Animal facts</p> <p>NOS - Copyright and ownership Activity 1 (Part 1): My Work</p>	<p>• Communication • Apps • Online • Fact • Research • Information • Website</p> <p>• Technology • Permission • Ownership • App • Online • Copyright • Device • Tablet • Laptop • Google</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Skills:</p> <ul style="list-style-type: none"> • Know that the internet is accessed all over the World and know some devices are connected to the internet. • To identify simple rules that help keep us safe and healthy in and beyond the home when using technology. • With support from an adult be able to find information on the internet. • To describe how I know another people's work belongs to them.
<p>Summer Term 2 IT - Word Processing</p> <p>Activities:</p> <ul style="list-style-type: none"> - Play Millie's Keyboard games - Type the alphabet - Label pictures - Type captions for pictures - Type sentences 	<p>Monitor, Keyboard, Mouse, Log in, username, password, start, Word, type, spacebar, backspace, save, print</p>	<p>NC Objective: To use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Information Technology Skills</p> <ul style="list-style-type: none"> • Be able to log onto a computer • Be able to navigate around the screen with a mouse or touchpad • I can confidently type words quickly and correctly on a digital device to create something meaningful. • I can use the space bar to make space, delete to delete letters/words and use enter/return to start a new line. • I can add labels to an image • Be able to save and print a document

Years 1 and 2 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Autumn Term 1 DL - Media Balance and Well-Being</p> <p>NOS - Health wellbeing and lifestyle Activity 1 (Part 2): Rules to keep us safe</p>	<p>• Technology • Permission • Screen • Apps • Information • Website • Tablet • Laptop • Safety • Device • Google • Search engine</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • To explain simple guidance for using technology in different environments and settings.
<p>Autumn Term 1 IT - Posters (Pic collage)</p> <p>Activities:</p> <ul style="list-style-type: none"> - To log on to computer-based programmes independently. -Use the camera and video on an Ipad - Type sentences using capital letters. -Insert images. -Create a poster about a using pic collage -Print work from a tablet. 	<p>Monitor, Keyboard, Mouse, log in, username, password, start, Publisher, type, spacebar, backspace, save, print, copy, image, search, paste, edit, text box, print</p>	<p>NC Objective To use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Information Technology skills:</p> <ul style="list-style-type: none"> • Be able to save, retrieve (open) and print work • Know how to type, using the space bar only once between words, and format text including basic punctuation and capital letters • Be able to confidently use pointing device • To copy and paste images and text • Be able to add and create simple images • Be able to combine simple text and graphics, for instance create a poster for a purpose, to create a simple presentation, • Be able to take and view a video or photograph and use it to present information.
<p>Autumn Term 2 DL - News and media Literacy</p> <p>NOS - Managing online information Activity 5: Navigating a website</p> <p>NOS - Copyright and ownership Activity 1 (Part 1 and 2): My Work</p>	<p>Technology • Apps • Online • Research • Fact • Information • Website • Auto complete • Google • Search engine</p> <p>Technology • Permission • Ownership • App • Online • Copyright • Device Tablet • Google</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • With support, be able to use a safe search engine and can demonstrate how to navigate a simple webpage. • To recognise that content on the internet may belong to other people.
<p>Autumn term 2 IT - Computer art (paint)</p> <p>Activities:</p> <ul style="list-style-type: none"> -Use paint tools to create digital artwork. - Change the shade of colour for effect. - Produce digital art work in the style of Pier Mondrian. 	<p>Monitor, Keyboard, Mouse, log in, start, paint, left click, brush, shape, fill, text, auto shape, lines, dots, shade,</p>	<p>NC Objectives: To use technology purposefully to create, organise, store, manipulate and retrieve digital content.</p> <p>Information Technology key skills:</p> <ul style="list-style-type: none"> • Be able to save, retrieve (open) and print work • Be able to confidently use pointing device • Be able to add and create simple images • Be able to combine simple text and graphics, for instance create a poster for a purpose, to create a simple presentation,

Years 1 and 2 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Spring Term 1 DL - My Digital Footprint and Identity</p> <p>NOS - Online Reputation Activity 2: My Personal Information</p>	Identity • Personal • Private • Information • Sharing • Internet • Online	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know what personal information is and that they should never share this with anyone they don't know. • To explain simple guidance for using technology in different environments and settings.
<p>Spring Term 1- CS- Coding using Scratch Jr</p> <p>Activities:</p> <ul style="list-style-type: none"> - To write algorithms to draw basic shapes. - To write algorithms using scratch jr. 	Algorithm, debug, programming, block, coding, sprite, repeat, sequence	<p>NC Objective To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <ul style="list-style-type: none"> - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs <p>Computer Science skills:</p> <ul style="list-style-type: none"> -Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting) -Begin to use block programming e.g. Scratch Junior to complete a simple program. <ul style="list-style-type: none"> • To use logical reasoning to predict the outcomes of algorithms • Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting) • To begin to understand decomposition to breakdown the algorithm into smaller parts • Begin to use block programming to complete a simple program.
<p>Spring Term 2 DL - Privacy and Security</p> <p>NOS - Privacy and Security Activity 1 (Part 1, 2 and 3): Super strong passwords</p>	• Technology • Permission • Private • Apps • Online • Safety • Device • Information • Website • Tablet • Laptop • Google • Password • Symbol • Secure	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • To explain simple guidance for using technology in different environments and settings. • To explain what passwords are and can use passwords for my accounts and devices. • Know that they should tell a trusted adult if they are upset or worried about anything on a device.
<p>Spring Term 2- CS- Coding using Scratch Jr (debugging)</p> <p>Activities:</p> <ul style="list-style-type: none"> - To write algorithms to draw basic shapes. - To write algorithms using scratch jr. - To debug algorithms 	Algorithm, debug, programming, block, coding, sprite, repeat, sequence	<p>NC Objective To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</p> <ul style="list-style-type: none"> - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs <p>Computer Science skills:</p> <ul style="list-style-type: none"> -Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting) -Begin to use block programming e.g. Scratch Junior to complete a simple program. <ul style="list-style-type: none"> • To use logical reasoning to predict the outcomes of algorithms • Know how to program a robot to achieve set goal (sequence of 6-7 instructions: maze, point collecting) • To begin to understand decomposition to breakdown the algorithm into smaller parts • Begin to use block programming to complete a simple program. • Be able to debug more complex problems

Years 1 and 2 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Summer Term 1 DL - Cyberbullying</p> <p>NOS - Online Bullying Activity 3: Writing area</p>	<p>Messenger • Communication • Apps • Online • Unkind • Safe • Bullying</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know devices that enable direct communication between people through images and text. • Know that they should tell a trusted adult if they are upset or worried about anything on a device. • To explain simple guidance for using technology in different environments and settings. • To talk about how someone can / would get help about being bullied online and offline and understand how bullying can make someone feel.
<p>Summer Term 1 Digital Literacy - Using the Internet.</p> <p>Activities:</p> <ul style="list-style-type: none"> - To access the internet - Understand how to stay safe while using the internet - Use a search engine - Identify links 	<p>Monitor, Keyboard, Mouse, log in, username, password, start, Google chrome, type, spacebar, backspace, save, print, copy, image, search, results, webpage, keywords</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • With support, be able to use a safe search engine and can demonstrate how to navigate a simple webpage. • To explain simple guidance for using technology in different environments and settings. • I can explain why some information I find online may not be true
<p>Summer Term 2 DL - Relationships and Communications</p> <p>NOS - Online relationships Activity 1: Communicating and email Activity 3: Circle time</p>	<p>• Internet • Online • Email • Communicate • Email address • Subject</p>	<p>NC Objective: To use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</p> <p>NC Objective: To recognise common uses of information technology beyond school</p> <p>Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know devices that enable direct communication between people through images and text. • Know that they should tell a trusted adult if they are upset or worried about anything on a device. • To use the internet to communicate with people I don't know well (e.g. email another class)
<p>Summer Term 2 IT - Create a PPT presentation.</p> <p>Activities:</p> <ul style="list-style-type: none"> - Insert new slides - Type and format text using basic punctuation. - Insert images from the internet. - Combine text and graphics - Insert transitions and animations 	<p>Presentation, slide, edit, format, insert, save, upload, copy, paste, screen, save, title, transition, animation.</p>	<p>NC Objective: To use technology purposefully to create, organise, store, manipulate and retrieve digital content</p> <p>Information technology Key Skills:</p> <ul style="list-style-type: none"> • Be able to save, retrieve (open) and print work • Know how to type, using the space bar only once between words, and format text including basic punctuation and capital letters • Be able to confidently use pointing devices. • To copy and paste images and text • Be able to add and create simple images • Be able to combine simple text and graphics, for instance create a poster for a purpose, to create a simple presentation,

LKS2 Computing Overview

Computing Strand	NC Objective
Digital Literacy 1x lesson per half term	-Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
Information Technology	-Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
Computer Science	-Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs -Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration.

Years 3 and 4 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
Autumn Term 1 DL - Media balance and well being NOS - Health wellbeing and lifestyle Activity 1: Health and Safety Reports	• Health • Wellbeing • Lifestyle • Technology • Device(s) • Addictive • Negative • Positive	NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; know ways to report concerns about content/contact. Y3/4 Digital Literacy Key Skills: <ul style="list-style-type: none"> • Know that using technology can sometimes be inappropriate • Know that having a balance of online and offline activities is important.
Autumn Term 1 CS - Coding using Scratch 'The Iron Man' Activities: To sequence simple code using scratch To know how to create your own sprite, make it move and talk. To fulfil a series of challenges using scratch. To understand the process of debugging. To add sounds to your code and use repetition to achieve different outcomes. To plan and create a short animation	Sprite, program, code, sound, draw, sensing, variable, operations, debugging, rotate	NC Objective: Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Computer Science skills: <ul style="list-style-type: none"> • Use a block program to make a simple programme using sequencing and timing. • Input sets of instructions according to programming language and environment • Independently use logical reasoning to be able to debug basic mistakes • Modify their program and be able to predict the effects of any changes • Begin to use conditionals - If I click here then this happens. • To use abstraction to focus on what is important in my design • Be able to explain how their program works • Use repeat loops for instance to create a program to draw regular 2D shapes • To use decomposition to break sets of instructions into steps to achieve goal.

Years 3 and 4 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Autumn Term 2 DL - Cyberbullying</p> <p>NOS - Online bullying Activity 1: Anti-bullying pledge</p>	<p>• Bullying • Cyberbullying • Online • Apps • Report • Block</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that pictures and text share on-line can end up with strangers • Know what to do if they are exposed to unpleasant materials on any device. • To explain what bullying is, can describe how people may bully others and can describe rules about how to behave online. • Know I need to be careful before I share anything about myself/others online.
<p>Autumn Term 2 CS - Understanding how to use our Computer Network Activities: To access computer-based programs independently. To use technology safely and respectfully. (passwords and screen shots.) To select, use and combine a selection of software.</p>	<p>Network, internet, search engine, screen shot, save, copy, paste, documents, folder</p>	<p>NC Objective: Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Select, use and combine software on a range of digital devices to design & create a range of programs, systems and content to get given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Computer Science Skills:</p> <ul style="list-style-type: none"> • I understand that the school computers are networked and why. • I understand that servers on the Internet are located across the planet <p>Information Technology Skills:</p> <ul style="list-style-type: none"> • Be able to log in to computer system and find their documents (personal drive) • Know how to open shared documents and pictures. • Be able to save a document in a shared folder and retrieve this to continue working on it. On an iPad work could be shared by Airdrop or equivalent. • Be able to organise their personal folder eg: folders for each year at school
<p>Safer Internet Day DL - My digital footprint and identity</p> <p>NOS - Self-image and identity Activity 1: Avatars Activity 2: What is Identity?</p>	<p>• Avatar • Profile • Identity • Online • Internet • Privacy • Security • Protect</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that pictures and text share on-line can end up with strangers • Know I need to be careful before I share anything about myself/others online. • Explain how I can represent my identity in different ways online and how I might change my identity depending on what I am doing online • Explain how my online identity can be different to how I present in real life . • Give reasons why I should only share information with people I can trust.

Years 3 and 4 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Spring Term 1 DL - My digital footprint and identity</p> <p>NOS - Online reputation Activity 1: Celebrity bodyguards</p>	<p>• Opinion • Fact • Validity • Trustworthy • Positive • Negative</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that pictures and text share on-line can end up with strangers • Know I need to be careful before I share anything about myself/others online. • Explain how I can represent my identity in different ways online and how I might change my identity depending on what I am doing online • Explain how my online identity can be different to how I present in real life . • Give reasons why I should only share information with people I can trust.
<p>Spring Term 1</p> <p>IT - Collect, devise and construct a database using applications across the curriculum. Science branching database.</p> <p>Activities: Identify and interpret databases Devise and construct a branching database linked to scientific study. (classification of insects and plants)</p>	<p>Collect, store, file, pictures, text, sort, database, branch, sort, classify</p>	<p>NC Objective: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Information Technology Skills:</p> <ul style="list-style-type: none"> • Know organizing information helps to find answers to questions • Know information on record cards is divided into fields and that a set of record cards is called a file • Know information can be held as numbers, choices (such as yes/no) or words. • Know information can be taken from pictures or text. • Add a record to a file in a computer database • Answer simple questions by matching the contents of a single field • Use a database to sort and classify information and to present my findings
<p>Spring Term 2 DL - Privacy and security</p> <p>NOS - Privacy and Security Activity 1: Private information</p>	<p>• Private • Personal • Stranger(s) • Dangerous • Internet • Post (online) • Share (online) • Information • Location • Safety • Secure / security</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know some people on the internet should not be trusted • Know pictures and text share on-line can end up with strangers • Know what to do if they are exposed to unpleasant materials on any device. • Create and reliably use a more complex password to access online resources. • Know I need to be careful if I share anything about myself or others online. • Give reasons why I should only share information with people I choose to and can trust. I can explain that if I'm not sure I should ask a trusted adult.
<p>Summer Term 1 IT - Select and combine a variety of software to create a presentation</p> <p>Activities: Plan, design and create a power point presentation based on key facts from the Tommy Armstrong unit. Insert photographs from the Educational visit, saved in the shared area.</p>	<p>Power point, font, animation, insert, copy, paste, transition, save, edit</p>	<p>N.C Objective: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Year3/4 I.T Key skills:</p> <ul style="list-style-type: none"> • Save a document in a shared folder and retrieve this to continue working on it. • Know how to open shared documents and pictures. • Know how to use software to create a simple brochure or poster. • Know how to change font size/style, shapes, backgrounds and use Spellcheck • Sequence and add to slides to make an effective presentation • Create a meaningful document that contains both pictures and text

Years 3 and 4 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Summer Term 1 DL - News and media literacy</p> <p>NOS - Managing online information Activity 1: Search engines</p> <p>NOS - Copyright and ownership Activity 1: Ownership</p>	<ul style="list-style-type: none"> • Search engine • Autocomplete • Internet • Website(s) • Online • Ownership • Copyright • Plagiarism • Credit • Author 	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know words to enter into a search engine to find information and understand how to use autocomplete. • Know which websites are useful and understand not all are trustworthy. • Analyse information and differentiate between opinions, beliefs and facts. • Select useful websites from the results of a search. • When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.
<p>Spring Term 2 IT - Create a meaningful document (Cartoon Strip) Activities: Use images from a children's book (saved in the shared area) and copy these into Publisher document to combine with text to create a cartoon strip</p>	<p>Copy, paste, save, crop, resize, orientate, auto shape, text, text box, borders, font</p>	<p>NC Objective: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Y3/4 IT Key Skills:</p> <ul style="list-style-type: none"> • Know how to open shared documents and pictures. • Create a meaningful document that contains both pictures and text • Be able to save a document in a shared folder and retrieve this to work on it. • Change font size/style; include shapes, backgrounds and use Spellcheck function
<p>Summer Term 2 DL - Relationships and communication</p> <p>NOS - Online relationships Activity 2: Emojis and acronyms</p>	<ul style="list-style-type: none"> • Emoji • Acronym • Interpretation • Symbolise • Alter • Expression 	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that some people on the internet should not be trusted • Know that pictures and text shared on-line can end up with strangers • Give reasons why I should only share information with people I choose /trust. • Explain risks of communications online. • Give examples of technology-specific forms of communication • Explain what it means to 'know someone' online • Explain what is meant by 'trusting someone online.'
<p>Summer Term 2 CS—Coding in turtle logo</p> <p>Activities: Programming letters Programming shapes Patterns and repeats Using loops to create shapes Creating a program</p>	<p>Sprite, program, code, sound, draw, sensing, variable, operations, debugging, rotate</p>	<p>NC Objective: Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts Use sequence, selection, and repetition in programs; work with variables and various forms of input and output Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Computer Science skills:</p> <ul style="list-style-type: none"> • Inputs sets of instructions according to programming language and environment • Independently use logical reasoning to be able to debug basic mistakes • Be able to modify their program and be able to predict the effects of any changes • Be able to explain how their program works • To use abstraction to focus on what is important in my design. • Be able to use a program to sequence and use conditionals • To use decomposition to break sets of instructions into short steps to achieve goal. • Use repeat loops for instance to create a program to draw regular 2D shapes

Years 3 and 4 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Autumn Term 1 DL - Media Balance and Well-Being</p> <p>NOS - Health wellbeing and lifestyle Activity 2 (Part 1): Screen time</p>	<p>• Screen time • Health • Wellbeing • Devices • Technology</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that using technology can sometimes be inappropriate • Know that having a balance of online and offline activities is important.
<p>Autumn Term 1 IT/CS: Applying my knowledge of digital art to coding to create new sprites.</p> <p>Activities: Use Scratch to create an animation of the 3 Billy Goats Gruff that includes digital art produced Sprites, movement and sound.</p>	<p>Sprite, program, code, sound, draw, sensing, variable, operations, debugging, rotate</p>	<p>NC Objective: -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>-Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>-Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Computer Science skills:</p> <ul style="list-style-type: none"> • Use a block program to make a simple programme using sequencing and timing. • Inputs sets of instructions according to programming language and environment • Independently use logical reasoning to be able to debug basic mistakes • Begin to use conditionals - If I click here then this happens... • Be able to modify their program and be able to predict the effects of any changes • To use abstraction to focus on what is important in my design • Be able to explain how their program works • To use decomposition to break sets of instructions into short steps to achieve goal. <p>IT Key Skills:</p> <p>-Create a meaningful document that contains both pictures and text</p>
<p>Autumn Term 2 DL - Cyberbullying</p> <p>NOS - Online bullying Activity 2: Story writing crossroads</p>	<p>• Bullying • Cyberbullying • Online</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Reliably know what to do if exposed to unpleasant materials on any device. • Know that using technology can sometimes be inappropriate • To explain what bullying is, how people may bully others and can describe rules • To recognise I need to be careful before I share anything about people online.
<p>Autumn Term 2 IT: Use and combine digital devices as a digital citizen</p> <p>DL: My Digital Footprint and Identity</p> <p>Activities: Use iPads to plan, create and present an online safety video.</p>	<p>Online, safety, stranger, cyber-bullying, communication, iMovie, edit, titles, timeline, transition,</p>	<p>N.C Objective: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>-Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 IT skills:</p> <p>-I can create my own movie trailer.</p> <p>-I can sequence clips of mixed media in a timeline and record a voiceover</p> <p>-I can trim and cut film clips and add titles and transitions</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Describe ways people who have similar likes/interests can get together online. • Give examples of technology-specific forms of communication • Explain some risks of communications online with others I don't know well. • Explain why I should be careful who I trust online and what information I can trust them with. • Explain how my and others' feelings can be hurt by what is said or written online.

Years 3 and 4 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Spring Term 1 DL - My Digital Footprint and Identity</p> <p>NOS - Online reputation Activity 2: Celebrity Judgement</p>	<p>• Opinion • Fact • Validity • Trustworthy • Positive • Negative</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills</p> <ul style="list-style-type: none"> • Know that pictures and text share on-line can end up with strangers • To recognise I need to be careful before I share anything about myself/others • To explain how I can represent my identity in different ways online and how I might change my identity depending on what I am doing online • To explain how my online identity can be different to the identity I present in real life and can describe the right decisions about how I interact with others • I can give reasons why I should only share information with people I choose to and can trust. I can explain that if I'm not sure , I should ask a trusted adult.
<p>PSHE Lesson DL - My Digital Footprint and Identity</p> <p>NOS - Self-image and identity Activity 3: Game Show</p>	<p>• Identity • Profile • Social media • Fake • False • True • Trust • Security • Privacy</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that pictures and text share on-line can end up with strangers • Recognise I need to be careful before I share anything about myself /others • Explain how I can represent my identity in different ways online and how I might change my identity depending on what I am doing online • Explain how my online identity can be different to the identity I present in real life and can describe the right decisions about how I interact with others and how others perceive me. • Give reasons why I should only share information with people I choose to and can trust. I can explain that if I'm not sure , I should ask a trusted adult.
<p>Spring Term 1 CS: To create a game</p> <p>Activities: To know how to create your own sprite, make it move and talk. To fulfil a series of challenges using scratch. To understand the process of debugging. Use Scratch to create a game using repeated loops.</p>	<p>Sprite, program, code, sound, draw, sensing, variable, operations, debugging, rotate, forever loop, repeated loop</p>	<p>NC Objective: -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p>Computer Science skills:</p> <ul style="list-style-type: none"> • Use a block program to make a simple programme using sequencing and timing. • Inputs sets of instructions according to programming language and environment • Independently use logical reasoning to be able to debug basic mistakes • Begin to use conditionals - If I click here then this happens... • Be able to modify their program and be able to predict the effects of any changes • To use abstraction to focus on what is important in my design • Be able to explain how their program works • To use decomposition to break sets of instructions into short steps to achieve goal.

Years 3 and 4 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Spring Term 2 DL - Privacy and Security</p> <p>NOS - Privacy and Security Activity 3: Passwords (Step 1-3)</p>	<p>• Password(s) • Privacy • Security • Device(s)</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Create and reliably uses a more complex password to access online resources. • Be able to log in and out of websites used at school
<p>Spring Term 2 IT - Create a stop frame animation based on The Romans</p> <p>Can a picture move? Frame by frame What is the story? Picture perfect Evaluation Recording</p>	<p>Stop motion Animation, sound, software, edit, present, onion skinning</p>	<p>N.C Objective: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Y3/4 IT Key Skills:</p> <ul style="list-style-type: none"> • Use font sizes appropriately for audience and purpose. • Create a meaningful document that contains both pictures and text • Know that information can be taken from pictures or text. • I can sequence clips of mixed media in a timeline and record a voiceover • I can trim and cut film clips and add titles and transitions • I can take multiple animations of a character I have created and edit them together for a longer video. • I can use software to create a 3D animated story. • I can use animation tools in presenting software to create simple animations. • I can combine digital images from different sources, objects, and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets. • I can add simple subtitles to a video clip.
<p>Summer Term 1 DL - Relationships and Communications</p> <p>NOS - Online relationships Activity 3: Online friends</p>	<p>• Online • Trust • Communication • Friend(s) • Social</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that some people on the internet should not be trusted • Know that pictures and text shared on-line can end up with strangers • Reliably know what to do if they are exposed to unpleasant materials on any device. • I can give reasons why I should only share information with people I choose to and can trust. I can explain that if I'm not sure or I feel pressurised, I should ask a trusted adult. • To explain some risks of communications online and the information I share with others I don't know well. • To give examples of technology-specific forms of communication (To explain what it means to 'know someone' online and why this might be different to knowing someone in real life. • To explain what is meant by 'trusting someone online.' I can explain why this is different to 'liking someone online.'

Years 3 and 4 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Summer Term 1 IT - Create a podcast about the Romans</p> <p>Activities: Linked to English, the children plan, create, record, edit and produce a podcast relating to the Romans.</p>	Edit, record, sound, produce, background, script, crop, layer	<p>N.C Objective: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Y3/4 IT Key Skills:</p> <ul style="list-style-type: none"> • Be able to log in to computer system as themselves and can find their documents • Be able to organise their personal folder effectively • Be able to save a document in a shared folder and retrieve this to continue working on it. • Know how to open shared documents and pictures. • Know that ICT can be used to store and sort information • I can sequence clips of mixed media in a timeline and record a voiceover • I can trim and cut audio clips and add titles and transitions • I can combine digital images from different sources, objects, audio and text to make a final piece of a variety of tasks: posters, documents, eBooks, scripts, leaflets.
<p>Summer Term 2 DL - News and media Literacy</p> <p>NOS - Managing online information Activity 2: Random Questions</p> <p>NOS - Copyright and ownership Activity 2: Be information wise</p>	<ul style="list-style-type: none"> • Search engine • Internet • Website(s) • Online • Ownership • Copyright • Plagiarism • Internet • Laws 	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y3/4 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know what words to enter into a search engine to find information and understand how to use autocomplete to choose the best suggestion. • Know which websites are useful and begin to understand all might not be trustworthy. • To analyse information and differentiate between 'opinions', 'beliefs' and 'facts'. I understand what criteria have to be met before something is a 'fact'. • Can select useful websites from the results of a search. • When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.
<p>Summer Term 2 CS - Computer systems and networks - The internet I understand that the school computers are networked I understand that servers on the Internet are located across the planet</p>	Network, internet, search engine, switches, routers, packets, route	<p>NC Objective: Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Select, use and combine software on a range of digital devices to design & create a range of programs, systems and content to get given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Computer Science Skills:</p> <ul style="list-style-type: none"> • I understand that the school computers are networked and why. • I understand that servers on the Internet are located across the planet

UKS2 Computing Overview

Computing Strand	NC Objective
Digital Literacy 1x lesson per half term	-Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.
Information Technology	-Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
Computer Science	-Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs -Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration

Years 5 and 6 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Autumn Term 1 DL - Self Imagery and Identify Activities: NOS Self Image and Identity Year 5 - Activity 4 Year 6 -Activities 5 and 6</p>	personal, profile, media, gender, inappropriate, publicly, stereotypes, stereotypical	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Be able to maintain a healthy balance of online and offline activities and know that some activities may affect their emotional wellbeing • I can demonstrate reasonable choices about my online identity, depending on context. • I can describe ways in which media can shape ideas about gender and can identify and make judgements about messages about gender roles.
<p>Autumn Term 1 Information Technology: Communication, File Sharing and Collaborating. Activities: Revisit Email and how to send email Look at using email to send documents and share work, (Ref with groups in place in school i.e. Newspaper group). Teach file organisation (folders, naming of files, sorting). Google Docs (Discuss when it is better to have one shared file rather than more than one via email). Collaborative tasks</p>	Email, Inbox, Collaborate, Attachment, Simultaneous, Real-time	<p>NC Objective: select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Year 5/6 Information Technology Key Skills:</p> <ul style="list-style-type: none"> • To be able to share their work from their personal folder to work collaboratively with others. • Be able to select the best program for the task.
<p>Autumn Term 2 DL - Online Relationships Activities: NOS Online Relationships: Year 5: Activities 4 and 6 Year 6: Activity 5</p>	Relationships, limits, streaming, live-stream, responsibility, report, inappropriate	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know how to report concerns online and to describe how to capture bullying content as evidence (e.g. screen grab, URL, profile) to share with others who can help me. • Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. • Know how to reduce the risks posed by using Social Media by managing their friends lists and privacy settings. • I can explain how impulsive and rash communications online may cause problems and understand my responsibilities for the wellbeing in my online social group. • Know that it is irresponsible to share images of friends on-line without their permission. • I can demonstrate ways of reporting problems online for both myself and my friends.
<p>Autumn Term 2 Information Technology: Spreadsheets Activities Manipulate cells and organisation of a spreadsheet. Create a bar graph Manipulate data and create a line graph To use formula for calculations To use spreadsheets to plan and solve a problem (Party organisation)</p>	Key Vocabulary Spreadsheet, Cell, Row, Column, formula, calculate, format, average (mean), insert, ascending, descending, sort, budget	<p>NC Objective: select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Year 5/6 Information Technology Key Skills:</p> <ul style="list-style-type: none"> • Using software know how to add data into a prepared spreadsheet to answer simple questions • Know how to use the main features of office software to produce suitable documents and presentations for an audience • Know how to create a simple formula in a spreadsheet to work out given mathematical tasks such as adding a set of numbers. • I can edit and format difference cells in a spreadsheet. • I can write spreadsheet formula to solve calculations including=sum and other statistical functions and to solve more challenging Maths problems.

Years 5 and 6 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Spring Term 1 DL - Online Reputation Activities: NOS Online Reputation Year 5: Activity 4 Year 6 - Activity 5</p>	<p>Information, celebrity, positive, negative, social-media, profile, reputation, content</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Validate information found through searches by checking more than one source. • Know that some news is 'fake or a hoax.' • Compare information from different websites. Know some sites may show bias and that search results can be manipulated by sponsorship and advertising. • Explain how I am developing an online reputation, which will allow others to form an opinion of me, describe some ways that help build a positive online reputation. • Describe how information about people online can be used by others . • Explain key concepts inc; data, information, fact, opinion, belief, true, false, valid, reliable and evidence. • Use a search engine to find multiple criteria using AND/OR to refine searches
<p>Spring Term 1 Computing Science: Coding Activities: Create a maze game Add consequences for hitting colours and obstacles Add levels to a maze game Add enemy sprites to a maze game To add graphical and sound effects Create own game in the style of ' Flappy Bird'</p>	<p>Key Vocabulary Code, Debug, Pseudocode, sequence, repetition, variables, logic, reasoning, algorithms</p>	<p>NC Objective: Design, write and debug programs to accomplish goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect/correct errors in algorithms and programs Y5/6 Computing Science Skills:</p> <ul style="list-style-type: none"> • Uses loops to achieve goals • Use variables, conditional sentences, external triggers and loops to achieve goals • Use conditional sentences (when/then) to program objects • Use mathematical expressions when constructing conditionals e.g. trigger winning when (If loops >5 then...) • Explain what a program will do and accurately predict the effect of changes. • Modify existing algorithms and code to change the effect of the program. • Make an efficient program using an effective algorithm & techniques
<p>Spring Term 2 DL - Online Bullying Activities: NOS - Online Bullying Activities: Year 5 - Activities 4 and 5. Year 6 - Activity 6 NOS - Managing Online info Activity 3</p>	<p>Bully, bullying, bystander, cyberbullying, empathy, target, upstander</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that hacking or misusing someone else's account is illegal. • Know it is irresponsible to share images of friends without their permission. • Know that it is illegal to post or view 'rude' images of children. • Maintain a healthy balance of online and offline activities and know that some activities may affect their emotional wellbeing. • Know how to report concerns on-line, describe how to capture bullying content as evidence (e.g. screen grab, URL, profile) to share with others who can help me. • Identify a range of ways to report concerns in school/home about online bullying • Explain how impulsive communications online may cause problems, understand my responsibilities for the wellbeing in my online social group.
<p>Spring Term 2 Computer Science: Coding with Micro:bit Activities: Create an algorithm to display a name on a Micro:bit Use loops to create animations Use inputs to trigger outputs Use variables Use conditions to trigger different outcomes (sensors) Generate random numbers and logic as part of a game</p>	<p>Code, Debug, sequence, repetition, variables, logic, reasoning, algorithms</p>	<p>NC Objectives: Design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts. Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Y5/6 Computing Science Skills:</p> <ul style="list-style-type: none"> • Use customisation to change a working program to change its effect • Explain what a program will do and accurately predict the effect of changes. • Modify existing algorithms and code to change the effect of the program. • Make an efficient program by using an effective algorithm and techniques such as loops and procedures. • Use conditional sentences (when/then) to program objects

Years 5 and 6 Cycle A

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Summer Term 1 DL - Health, Well-being and Lifestyle Activities: NOS - Health, Well-being and Lifestyle Year 5 - Activity 3 Year 6 - Activity 4</p>	<p>Addict(ed / ion), explanation, Content, Age-Restricted, PEGI, Suitability, Classification</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Be able to maintain a healthy balance of online and offline activities and know that some activities may affect their emotional wellbeing • Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. • Know how to reduce the risks posed by using Social Media by managing their friends lists and privacy settings. • I can explain the importance of self-regulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents). • I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.
<p>Summer Term 1 Information Technology - Film Making Activities: Prepare a script for a video. To check appropriate digital content To film short video clips To film interviews To edit and sequence video clips to create a short documentary. To evaluate and improve video clips.</p>	<p>Documentary, film, production, pre-production, post-production, improvise, location, prop, copyright, source, shot, frame, import, export, screening</p>	<p>NC Objective: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Y5/6 Information Technology Skills:</p> <ul style="list-style-type: none"> • to create and sequence a video, add sound effects, transitions and title/subtitles. • Know how to validate information found through searches by checking more than one source. • To be able to use two or more programmes to create a final piece of work. (eg, edit a picture before inserting into a document).
<p>Summer Term 2 DL - Privacy and Security Activities: NOS - Privacy and security Year 5 Activity 2 Year 6 Activity 4</p>	<p>Advertising, clickbait, headline, curiosity gap</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. • Know how to reduce the risks posed by using Social Media by managing their friends lists and privacy settings. • Know how to report concerns on-line • I can create and use strong and secure passwords and use them for a range of online services. • I can explain what app permissions are and I can describe simple ways to increase privacy on apps and services that provide privacy settings.
<p>Summer Term 2 Information Technology: Activities: Plan collaboratively to prepare a bedroom design. Share documents within a group. To choose appropriate Microsoft Office programs to complete various elements of a bedroom design project (floor plans, device design, advertising etc) To present and evaluate final bedroom designs.</p>	<p>Key Vocabulary Research, Plan, Design, Create, Promote, Evaluate, Present</p>	<p>NC Objective: Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Y5/6 Information Technology Skills:</p> <ul style="list-style-type: none"> • To be able to share their work from their personal folder to work collaboratively with others. • Be able to select the best program for the task. • Know how to use the main features of office software to produce suitable documents and presentations for an audience. • Know how to use software to create an effective poster or leaflet. • Independently, prepare an effective presentation to show their learning to others which includes some elements of timing or sequence • Know how to edit a picture. • To be able to use two or more programmes to create a final piece of work. (eg, edit a picture before inserting into a document).

Years 5 and 6 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
Autumn Term 1 DL - Self Imagery and Identify Activities: NOS Self Image and Identity Year 5 - Activity 4 Year 6 -Activities 5 and 6	Personal, profile, media, gender, inappropriate, publicly, stereotypes, stereotypical	NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Y5/6 Digital Literacy Key Skills: <ul style="list-style-type: none"> • Be able to maintain a healthy balance of online and offline activities and know that some activities may affect their emotional wellbeing • I can demonstrate reasonable choices about my online identity, depending on context. • I can describe ways in which media can shape ideas about gender and can identify and make judgements about messages about gender roles.
Autumn Term 1 Computer Science What is the Internet / How the Internet Works Activities: Explore how 'The Internet' and Web Pages are different but often confused. Explore how the Internet connects many things. Explore how information is sent around the world in packets To understand internet search engines and how they work Explore sharing information online (DL link)	Key Vocabulary Internet, World Wide Web, Browser, Online, Network, Communicate, Data, Packets, Device, Search Engine, Spider Search, Rank	NC Objective: -Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Y5/6 Computer Science Skills: <ul style="list-style-type: none"> • I understand how we view web pages on the Internet • I use search technologies effectively and appreciate how pages are ranked • I understand that web spiders index the web for search engines • I understand that servers on the Internet are located across the planet • I understand how email is sent across the Internet • I understand how the Internet enables us to collaborate • I understand that the school computers are networked and why. • I understand the difference between the Internet and the World Wide Web (WWW)
Autumn Term 2 DL - Online Relationships Activities: NOS Online Relationships: Year 5: Activities 4 and 6 Year 6: Activity 5	Relationships, limits, streaming, live-stream, responsibility, report, inappropriate	NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Y5/6 Digital Literacy Key Skills: <ul style="list-style-type: none"> • Know how to report concerns on-line • Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. • Know how to reduce the risks posed by using Social Media by managing their friends lists and privacy settings. • I can explain how impulsive and rash communications online may cause problems and understand my responsibilities for the wellbeing in my online social group. • Know that it is irresponsible to share images of friends on-line without their permission. • I can demonstrate ways of reporting problems online for both myself and my friends.
Autumn Term 2 Information Technology PowerPoint Presentations Activities: Revisit Office Suite basics - Complete a slide with text, images, sound, transitions, hyperlinks. Use hyperlinks to create a non-linear presentation. To plan an interactive story book / non-fiction text Create and edit a non-linear text.	Key Words: Microsoft Office, PowerPoint, Transitions, Hyperlinks, Non-Linear, Fiction, Non-Fiction, Interactive.	NC Objective: select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information. Year 5/6 Information Technology Key Skills: <ul style="list-style-type: none"> • Be able to select the best program for the task. • Know how to use the main features of office software to produce suitable documents and presentations for an audience. • Know how to use software to create an effective poster or leaflet. • Independently, prepare an effective presentation to show their learning to others which includes some elements of timing or sequence. • Know how to edit a picture

Years 5 and 6 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Spring Term 1 DL - Online Reputation Activities: NOS Online Reputation Year 5: Activity 4 Year 6 - Activity 6</p>	<p>Information, celebrity, positive, negative, social-media, profile, reputation, content</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Validate information found via searches by checking more than one source. • Know that some news is 'fake or a hoax.' • Compare information from different websites and know that some sites may show bias and that search results can be manipulated by sponsorship and advertising. • Explain how I am developing an online reputation, which will allow other people to form an opinion of me, and to describe some simple ways that help build a positive online reputation. • Describe ways that information about people online can be used by others to make judgements about an individual. • Explain key concepts including: data, information, fact, opinion, belief, true, false, valid, reliable and evidence. • Effectively use a search engine to find multiple criteria using AND/OR to refine searches
<p>Spring Term 1 Information Technology Spreadsheets Activities: Enter data into a spreadsheet and perform calculations. Enter data into a football league table. Use formula to calculate. Sort data by given criteria. Enter data. Auto calculate. Sort. Find the mean (Average) Use spreadsheets to solve mathematical (pocket money) problems. Design a spreadsheet of their own for a specific purpose (party planning, holiday budget, sports tables etc)</p>	<p>Spreadsheet, Cell, Row, Column, formula, calculate, format, average (mean), edit, insert, ascending, descending, sort, budget</p>	<p>NC Objective: select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Y5/6 Digital Information Technology Skills:</p> <ul style="list-style-type: none"> • Using software know how to add data into a prepared spreadsheet to answer simple questions • Use the main features of office software to produce suitable documents and presentations for an audience • Create a simple formula in a spreadsheet to work out given mathematical tasks such as adding a set of numbers. • Edit and format difference cells in a spreadsheet. • Write spreadsheet formula to solve calculations including=sum and other statistical functions and to solve more challenging maths problems.
<p>Spring Term 2 DL - Online Bullying Activities: NOS - Online Bullying Activities: Year 5 - Activities 4 and 5. Year 6 - Activity 6 NOS - Managing Online info Activity 3</p>	<p>Bully, bullying, bystander, cyberbullying, empathy, target, upstander</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know that hacking or misusing someone else's account is illegal. • Know it is irresponsible to share images of friends without their permission. • Know it is illegal to post or view 'rude' images of children. • Maintain a healthy balance of online and offline activities and know that some activities may affect their emotional wellbeing. • Know how to report concerns on-line and describe how to capture bullying content as evidence (e.g. screen grab, URL, profile) to share with others who can help me. • Identify ways to report concerns both in school and at home about online bullying • Explain how impulsive and rash communications online may cause problems and understand my responsibilities for the wellbeing in my online social group.
<p>Spring Term 2 Computer Science Website Design and Creation Activities: Evaluate and compare existing websites Design a website Create simple website pages Add additional website pages Embed features to a webpage using HTML code.</p>	<p>Evaluate, Compare, Design, Effective, Interface, Security, HTML, Embed</p>	<p>NC Objective: -Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</p> <p>Web creation and use is explicitly linked with</p> <p>Digital Literacy - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p> <p>Y5/6 Digital Information Technology Skills:</p> <ul style="list-style-type: none"> • I understand what HTML is and know a range of HTML tags • I can remix and create a webpage using HTML • Know how to validate information found through searches by checking more than one source. (DL) • Compare information from different websites and know some sites show bias (DL)

Years 5 and 6 Cycle B

Topic	Key Vocabulary	Key Knowledge/ Skills
<p>Summer Term 1 DL - Health, Well-being and Lifestyle Activities: NOS - Health, Well-being and Lifestyle Year 5 - Activity 3 Year 6 - Activity 4</p>	<p>Addict(ed / ion), explanation, Content, Age-Restricted, PEGI, Suitability, Classification</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Maintain a healthy balance of online and offline activities. Know that some activities may affect their emotional wellbeing • Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. • Reduce risks posed by using Social Media, managing friends lists & privacy settings. • Explain the importance of self-regulating my use of technology; I can demonstrate the strategies I use to do this (e.g. monitoring my time online, avoiding accidents). • Describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose.
<p>Summer Term 1 Computer Science Coding with Scratch Activities: Create a bat and ball game Make own sprites (bat and ball) Make a moving ball Control the bat (movement) Make advanced bat and ball game (block obstacles) Code a calculator game (using variables and formula) Create a splat game Create an animated scene using 'broadcast' and 'receive' messages.</p>	<p>Code, Debug, Pseudocode, sequence, repetition, variables, logic, reasoning, algorithms</p>	<p>NC Objective: design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts Y5/6 Computer Science Skills:</p> <ul style="list-style-type: none"> • Use sequence, selection and repetition in programs; work with variables and various forms of input and output • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • Use customisation to change a working program to change its effect for instance • Uses loops to achieve goals • Uses variables, conditional sentences, external triggers & loops to achieve goals • Use conditional sentences (when/then) to program objects • Explain what a program will do and accurately predict the effect of changes. • Modify existing algorithms and code to change the effect of the program. • Make an efficient program by using an effective algorithm and techniques such as loops and procedures
<p>Summer Term 2 DL - Privacy and Security Activities: NOS - Privacy and security Year 5 Activity 2 Year 6 Activity 4</p>	<p>Advertising, clickbait, headline, curiosity gap</p>	<p>NC Objective: Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. Y5/6 Digital Literacy Key Skills:</p> <ul style="list-style-type: none"> • Know the risks posed to them by using Social Media, including understanding that people may not be who they say they are. • Reduce the risks posed by using Social Media by managing friends lists & privacy • Know how to report concerns on-line • Create and use strong and secure passwords & use them for online services. • Explain what app permissions are and I can describe simple ways to increase privacy on apps and services that provide privacy settings.
<p>Summer Term 2 Computing Science: Coding - Kodu Activities: Investigate the Kodu environment Use When and Do instructions. Use tools to add landscape and features in Kodu I can deconstruct code and work out its purpose Program a character to move round a track and achieve a goal Program a character to follow an automatic path.</p>	<p>Code, Debug, Pseudocode, sequence, repetition, variables, logic, reasoning, algorithms, environment, deconstruct, path</p>	<p>NC Objective: Design, write and debug programs that accomplish specific goals; including controlling or simulating physical systems and solving problems by decomposing them into smaller parts . Use sequence, selection and repetition in programs; work with variables and various forms of input and output. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs Y5/6 Computing Science Skills:</p> <ul style="list-style-type: none"> • Uses loops to achieve goals • Uses variables, conditional sentences, external triggers and loops to achieve goals • Use conditional sentences (when/then) to program objects • Use mathematical expressions when constructing conditionals e.g. trigger winning when (If loops >5 then...) • Explain what a program will do and accurately predict the effect of changes. • Modify existing algorithms and code to change the effect of the program. • Make an efficient program by using an effective algorithm and techniques such as loops and procedures