Computing Whole Year Progression Map 2023-2024 (Computer Science)

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Both Nursery and Reception use a variety of different ways to explore technology and Computer Science through their Continuous Provision in the setting and through using the following resources. **Nursery:** Knowledge Goals: Blue Bots • Using Blue-bots (robots) for simple programming and position/ direction: • To understand and use the vocabulary of forwards, backwards, move etc. • To use and press the buttons forwards and backwards. • To experiment with programming a Blue-bot • To explore and tinker with hardware to develop familiarity and introduce relevant vocabulary • To try to make a floor robot move and can use simple software to make something happen. Knowledge Goals: Technology Table • To explore and tinker with different types of hardware to develop familiarity and introduce relevant vocabulary • To roleplay their own experiences of using technology • To explore and show interest in how things work. • To recognise that a range of technology is used in places such as homes and schools and select and use technology for different purposes **Reception:** Knowledge Goals: Bluebots • Using Blue-bots (robots) for simple programming and position/ direction: • To understand and use the vocabulary of forwards, backwards, move, turn, left and right/ • To use and press the buttons forwards, backwards, left and right. • To experiment with programming a Blue-bot to perform a specific task • To explore and tinker with hardware to develop familiarity and introduce relevant vocabulary • To completes a simple program by using simple software to make something happen	**Algorithms and Programs** -Children can explain what an algorithm and what a program is - Children can give instructions to complete a task -Children can debug an algorithm -Children can predict the outcome of a route-based program to control Bee Bot -Children can write and debug my own route-based program to control Bee Bot **Creating Simple Programs** -Children can understand the importance of sequence when giving instructions -Children can use logical thinking to predict the outcome of an algorithm and a route-based program for a screen turtle -Children can create and debug simple route-based program for a screen turtle -Children know that there is more than one way to solve a problem, but some are more efficient than others -Children can use logical thinking to evaluate their algorithm and route-based program to improve the outcome	**Algorithms and Programs** -Children can give a sequence of commands to complete a specific task -Children can follow a sequence of commands to complete a specific task -Children can predict the movement of the sprite to create a route-based program before they test it out -Children can debug their route-based program during running the program to correct any mistakes -From given route-based programs children can predict the final outcome before running the program -Children can use given code as a scaffold to modify and make their own -Childre can evaluate their algorithms to make judgements on its effectiveness before they create a route-based program to complete a given task -Children can use logical thinking to reverse a route-based program **Amazing Amusement Park- Lego Spike (Computing and DT Unit)** -Children will be introduces to engineering design skills -Children will learn the steps that are involved in defining a problem, brainstorming solutions and testing and refining prototypes to improve their ideas -Children will learn observation skills by gathering information about a problem and modifying a solution to meet others' needs -Children will help a story character by using relevant facts and descriptive details to recount experiences. This will help to develop their collaborative conversation skills.	**Writing a Programs: Block Based Sequences** -Children can put instructions into a sequence -Children know what an algorithm is and can debug code to fix errors -Children can predict the code from a partner's piece of work -Children can use the command tools in Visual to create a simple program -Children can add a delay block in code e.g. wait 2 seconds -Children can change the sprite in Visual and can add a background sprite -Children can add an input to my code e.g. – when a key is pressed. -Children can use the 'glide to x and y' block **Writing a Programs: Drawing Shapes** -Children can predict the outcome of a simple algorithm -Children can write a program that creates simple shapes -Children can add a repeat loop into my written algorithm -Children can write a program that creates simple shapes and can debug their program -Children can write a program that creates repeated shapes on the screen -Children can use a nested loop and explain why they have used a nested loop **Monitoring Devices- Using Microbits (Computing and DT Unit)** -Children use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups - Children generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design -Children apply their understanding of computing to program, monitor and control their products. -Children suggest a feature from the Micro:bit that is suitable for an eCharm -Children write a program that initiates a flashing LED panel, or another pattern, on the Micro:bit when a button is pressed -Children identify errors, if testing is unsuccessful, by comparing their code to a correct example -Children explain the basic functionality of their finished program -Children suggest key features for a pouch, with some consideration for the overall theme and the user. -Children follow basic design requirements using computer-aided design, drawing at least one shape with a text box and bright colours, following a demonstration	**What is Computer Technology?** -Children can explain the difference between hardware and software -Children can explain the difference between an input and an output device -Children can name the internal parts of a computer that make it work -Children know that data stored in the computer's memory are called BITS -Children know that a BIT can either be 1 or 0 -Children know how the RAM helps the CPU to carry out tasks Children know that 8 bits is known as a 1 byte -Children can explain what a pixel is -Children understand how a computer stores the data required to display a black and white image -Children understand binary data and can re-create a binary image following bit data -Children know that coloured images have more data per pixel than a black and white image. **Algorithm to Code** -Children can use the drawing tools to edit sprite costumes and can change costumes of their sprites using a delay command between costume changes -Children can add the music extension block to a scratch file -Children can duplicate and edit sprites using the drawing tools in scratch -Children can create code using different inputs from the Events command blocks to run the programme -Children can reset the position of the sprite ready for the programme to be run again -Children can create a count controlled loop 'repetition' – a sequence of instructions that is repeated a certain number of times - Children can add a continuous/forever loop to their code - Children I can save their work (either to a computer or to their scratch account -Children can create a broadcast message as an input to trigger events and use it in a block of code **Happy Traveller- Lego Spike (Computing and DT Unit)** -Children develop their understanding of Computer Science as they create sequences and loops, decompose problems and improve programs in order to meet specific needs. Children investigate ways of accurately describing the decisions they've made when creating a program -Children carry out fair tasks and develop their ability to generate and debug multiple solutions -Children use relevant facts and descriptive details to recount experiences. This will help them to improve their communication skills.	**Programming- Making Games** -Children can use selection if touching another sprite then…do something -Children can move a sprite with the mouse -Children can use selection – if on the edge bounce block -Children can understand the point in direction tools -Children can use nested loops to make sprites move -Children can make and use a simple variable -Children can create and use a procedure that helps run code over and over, so you don't have to re-write it -Children can make a sprite move by using selection within a nested loop when the arrow key is pressed -Children understand the difference between the x and y axis and effectively use this knowledge to create a falling sprite **Monitoring Devices- Using Microbits (Computing and DT Unit)** -Children use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups -Children generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design -Children apply their understanding of computing to program, monitor and control their products -Children describe what is meant by monitoring devices and provide an example -Children write a program that monitors the ambient temperature and alerts someone when the temperature moves from a specified range. -Children can identify errors (bugs) in the code and ways to fix (debug) them -Children build a variety of brick models to invent Micro:bit case, housing and stand ideas, evaluating the success of their favourite model. -Children explain key pros and cons of virtual modelling vs physical modelling -Children recall and describe the name and use of key tools used in Tinkercad (CAD) software	**The Internet and The World Wide Web** -Children can explain what the internet is and explain what the world wide web is -Children know that information is broken into pieces called packets and travel across networks, taking different routes in order to reach their destination quickly and efficiently -Children know what a web browser is and how it is different to a search engine -Children understand what a web crawler is and how it links to a search engine -Children understand how search engines select and rank results using page ranking processes and algorithms -Children can read the anatomy of a search result to make better choices of the reliability and validity of a web site as an accurate information source -Children know that there are two types of fake news and can explain what they are **Game Design** -Children can use selection if touching another sprite then…do something -Children canan move a sprite with the mouse -Children can use selection – if on the edge bounce block -Children canan understand the point in direction tools -Children can use nested loops to make sprites move -Children can make and use a simple variable -Children can create and use a procedure that helps run code over and over, so they don't have to re-write it -Children can make a sprite move by using selection within a nested loop when the arrow key is pressed -Children can use the conditional If/Else block in their code -Children know that Boolean logic relies on true or false statements and can use this in their code **Amazing Amusement Park- Lego Spike (Computing and DT Unit)** -Children will develop their understanding of energy, energy transfer and collision. -Children will explore ways of using observation skills as they anticipate the outcomes of energy changes during a collision, describe the relationship between energy and speed, and predict how energy moves from one place to another. -Children will their understanding of energy conversion (potential and kinetic) by investigating a solution that converts energy from one form into another, testing the solution to improve and refine its function. -Children will improve their communication skills as they engage in a range of collaborative discussions about energy, energy transfer and collision.

Computing Whole Year Progression Map 2023-2024 (Information Technology –Handling Data and Multimedia)

EYFS → Year 1 → Year 2 → Year 3 → Year 4 → Year 5 → Year 6

EYFS

Both Nursery and Reception use a variety of different ways to explore technology and Information Technology through their Continuous Provision in the setting and through using the following resources.

Nursery:

Using VR Headsets:
- To understand that we can use the headsets to see 3D things in front of us
- To wear the VR headsets safely and correctly
- To develop familiarity with the headsets and explore the hardware to develop relevant topic vocabulary

Using Learning APPs:
- To touch the screen to open the APP
- To use an APP on a device through touch
- To use an APP for a learning purpose, eg. To recognise phonics sounds, mark making or letter formation
- To show skills in making tools work by pressing parts to achieve effects such as sound, movement or new images.
- To make choices about the buttons and icons they press, touch or click on.

Reception:

Using child- friendly cameras
- To understand that we can use cameras to take photos of something
- To point the camera at a certain position
- To hold the camera still for a few seconds
- To press the button on the camera to take a photo

Using VR Headsets
- To understand that we can use the headsets to see 3D things in front of us, which replicate the real world
- To wear the VR headsets safely and correctly
- To develop familiarity with the headsets and explore the hardware to develop relevant topic vocabulary

Using iPads for apps (Phonics, Maths) and using software to take photos
- To find a relevant app on a tablet or IPAD
- To touch the screen to open the APP
- To be able to use an app on a device through using their finger through touch
- To move objects on a screen and create shapes and text on a screen.
- To understand that we can use cameras to take photos of something
- To know and identify where the camera on a tablet or IPAD is
- To point the camera on a tablet at a certain position
- To hold the camera still for a few seconds
- To press the button on the IPAD or tablet to take a photo
- To show skills in making tools work by pressing parts to achieve effects such as sound, movement or new images.
- To make choices about the buttons and icons they press, touch or click on.
- To use simple programs to interact with age-appropriate computer software and can use technology to show their learning
- To talk about different kinds of information such as pictures, videos, text and sound

Using Yoto player (speaker for listening to stories) and headphones
- To turn on the Yoto Player on the side
- To choose the right disk for the correct story
- To slot the disk into the player on the correct place
- To place the card in the card slot
- Children recognise that a range of technology is used in places such as homes and schools and select and use technology for different purposes.

Year 1

Just Paint and Write-All About Me
-Children can create paint file in JIT
-Children can use the Paint Tools to change colours and texture and fill
-Children can save their work as a file, image or stamp and open, and change their work
-Children can add text to a file and edit it

Collect Photographs and Paint Pictures
-Children can take, upload and edit photographs using a camera, J2E app and My Files
-Children can save and upload photographs to My Files
-Children can select a photo and write about it using JIT5 Write.
-Children can upload photos from the camera roll on an iPad to J2e
-Children can use photographs that my teacher has shared with me

Gather Data and Create Charts
-Children can create and analyse data from a tally chart
-Children add data to a pictogram using data from a tally chart and analyse the data
-Children can add data to a simple bar chart using data from a pictogram and analyse the data
-Children understand about the x and y axis and how this relates to data

Year 2

Ways to Present Information
-Children can access an image saved in My Files
-Children can add a picture to a Write file and add text to it, then editing their text in different ways.
-Children can create several paintings and save them as pictures to use later.
-Children can retrieve my work from My Files in J2e, edit it and save it again
-Children can make a simple animation of a plant growing

Art of Animation
-Children can name and save their work as a JiT Paint file, an image and a stamp
-Children can create several paintings and save them as pictures to use later.
-Children can use the textures and colour wheel to add extra detail to my pictures
-Children can make use of the 'onion skin' effect to add movement to my JiT animation.
-Children know the difference between the duplicate + frame and + add frame when using JiT animate.
-Children can add background images and stamps to my presentation
-Children can create a JiT Paint file and add text to it.
-Children know that a frame is an individual picture and that frames shown in a sequence create an illusion of movement to make an animation.

Collect, Organise and Present Data
-Children can create questions with appropriate multiple-choice answers
-Children can interpret data from a chart
-Children can design a data collection sheet
-Children can create charts from information in a tally table
-Children can use a branching database to sort data and identify mistakes in a branching database

Year 3

QR Codes
-Children know and recognise what a QR code is
-Children know that a QR code stores data that is machine readable that directs a user to the information
-Children know how to create a QR code online
-Childre can scan a QR code and access the information that it links to
-Children can search for appropriate images using Google and save images
-Children can upload an image to J2e and add text boxes, shapes and images to a J2e5 file
-Children can use layers in J2e5
-Children can rename a sound file in J2e5
-Children can record sound in J2e5 and create a QR code that links to my sound recording in J2e
-Children can add a QR code

Organising, Creating and Presenting
-Children can add and edit text to improve its presentation and can adjust its position on the page
-Children can search and upload an appropriate image into my work
-Children can make decisions over colour schemes, combine text and images and work with layers on the page
-Children can use tools to create a digital worksheet that includes objects that are locked or free to move around the page
-Children can add an image as a background and change its transparency to improve the presentation of my work
-Children can take an image using a camera and retrieve a saved image and remove the background of an image
-Children can save their work and retrieve previously saved files and continue working with them
-Children can create a simple stop motion animation
-Children understand about the onion skinning technique and how it is used in animation
-Children know what a GIF is and can upload it into another work file

Databases
-Children can ask appropriate questions to sort data
-Children can use a branching database to identify data
-Children understand what a field and record is in a database
-Children can sort information in a database into order
-Children can use a simple search to find information on one field in a database
-Children can use a complex search to find information from more than one field in a database by using AND OR
-Children can find errors in a database
-Children know why it is important to enter data into a database accurately

Year 4

Multi-Media Fact File
-Children know what multimedia is and know that multimedia makes information more engaging
-Children know the difference between linear and non-linear presentations
-Children can use effective editing tools to present their text clearly and can rearrange layers on their page to improve the design
-Children know that digital images come in different file type -.PNG JPEG
-Children can compare two presentation pages and say why one is better than the other
-When searching on the internet for content to use, children can explain why they need to consider who owns it and whether they have the right to reuse it.
-Children can record their narration as a sound file and add it to an image or text box in J2e5and add text to the image
-Children can embed a YouTube video in their Presentation and can add links to websites, and links to other pages within their presentation

Creating and Interrogating Simple Databases
-Children can understand the differences between a paper based and electronic database
-Children understand why it's important for answers in a database to use the same units and data types
-Children can create appropriate questions to gather useful data that is fit for purpose
-Children can enter data accurately into a database record
-Children can sort and search through information, using more than one criterion, to answer specific questions
-Children can produce charts to compare and interpret data

Year 5

Understanding Infographics
-Children can explain what an infographic is and can make judgements on the design of an infographic to evaluate its effectiveness
-Children understand that colour can impact the design of an infographic due to meanings and associations as well as colour combinations
-Children know that carefully selecting images to convey the right message is important
-Children understand that they should abide by copyright licences if they are to use someone else's image in their own work
-Children can use charts and graphs appropriately to display data
-Children have considered the overall design and limited their use of colour and images so as not to distract from the intention of the infographic
-Children have used a variety of presentation skills such as layering, transparent images, coloured text, filled text boxes and background fills to design their infographic
-Children have carefully chosen interesting and related facts and stats to convey the intended message for their infographic

Computers for Collaboration and Communication
-Children know that the internet allows us to communicate with people all over the world through audio, text and video
-Children can explain what some of the risks are when communicating online with others
-Children know what email is and how to write an email
-Children know what instant or direct messaging is and know that it can be to one person or to many at the same time
-Children know what a wiki is and know the difference between misinformation and disinformation
-Children can suggest suitable strategies to help with spotting fake news when gathering information online
-Children can work collaboratively online to create and present information
-Children can use text boxes, images and hyperlinks to present information
-Children can name some famous men and women that have been instrumental in the development of computers and technology

Creating and Using Spreadsheets to solve problems
-Children know what a cell reference/cell address is
-Children know how to generate lists of numbers using the autofill tool
-Children can create simple formulae to perform calculations in a spreadsheet
-Children can make their formulae more efficient through using the inbuilt formulae functions and cell references
-Children can use column labels appropriately in a spreadsheet
-Children can explain how formulae work in a Spreadsheet and can use a spreadsheet to help solve problems
-Children can use the editing tools to improve the legibility of a spreadsheet table and display decimal places
-Children can present and interpret information in a graph

Year 6

Big Data
-Children explain what big data means
-Children can explain what digital footprints means and evaluate their own digital f
-Children can explain why understanding terms and conditions for online platforms
-Children can give examples of some of the rights companies have when you agree t
-Children can explain what an ethical hacker is and what they do and can explain wh
-Children can explain what website cookies are and can explain why someone would
-Children can explain the pros and cons of accepting cookies
-Children can explain multiple ways in which big data is used for good

AI and Machines
-Children know what misinformation and disinformation means
-Children know that there are two types of fake news and can explain what they ar
-Children understand how Machine Learning and Artificial Intelligence is being used
-Children can explain what Machine Learning and Artificial Intelligence is and how it uses big data
-Children can explain how AI and ML uses big data to benefit others
-Children can create a Smart Classroom using IBM Watson and Machine Learning
-Children can understand the implications and capabilities of AI and ML

Analysing and Interpreting Data using Spreadsheets
-Children can create simple formulae to perform calculations in a spreadsheet
-Children can create formulae to find the min and max scores in a game
-Children understand the importance of expressing formulae correctly
-Children can create formulae to carry out each one of the four basic mathematica
-Children understand which variables to change and can predict what the effect of
-Children can use the editing tools to improve the legibility of a spreadsheet table and display decimal places
-Children can design and create a functional spreadsheet that includes working formulae, to answer a real-life problem
-Children can abstract information fit for purpose and use it in a spreadsheet to m

Computing Whole Year Progression Map 2023-2024 (Online Safety and Digital Literacy)

Tool Kits Map (8 Topics)

Self-Image and Identity

Online Relationships

Online Reputation

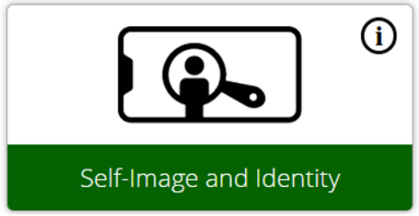
Online Bullying

Managing Online Information

Health, Well-being and Lifestyle

Privacy and Security

Copyright and Ownership



Progression against National Curriculum objectives

EYFS → Year 1 → Year 2 → Year 3 → Year 4 → Year 5 → Year 6

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can recognise, online or offline, that anyone can say 'no' - 'please stop' - 'I'll tell' - 'I'll ask' to somebody who makes them feel sad, uncomfortable, embarrassed or upset. Self-Image and Identity **I understand the importance of asking for help from an adult when using the internet.** **I know to always speak to an adult if I see something I am unsure of online.**	I can recognise that there may be people online who could make someone feel sad, embarrassed or upset. Self-Image and Identity If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust and how they can help. Self-Image and Identity	I can explain how other people may look and act differently online and offline. Self-Image and Identity I can give examples of issues online that might make someone feel sad, worried, uncomfortable or frightened; I can give examples of how they might get help. Self-Image and Identity	I can explain what is meant by the term 'identity'. Self-Image and Identity I can explain how people can represent themselves in different ways online Self-Image and Identity I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why. Self-Image and Identity	I can explain how my online identity can be different to my offline identity. Self-Image and Identity I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them. Self-Image and Identity I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this. Self-Image and Identity	I can explain how identity online can be copied, modified or altered. Self-Image and Identity I can demonstrate how to make responsible choices about having an online identity, depending on context. Self-Image and Identity	I can identify and critically evaluate online content relating to gender, race, religion, disability, culture and other groups, and explain why it is important to challenge and reject inappropriate representations online. Self-Image and Identity I can describe issues online that could make anyone feel sad, worried, uncomfortable or frightened. I know and can give examples of how to get help, both on and offline. Self-Image and Identity I can explain the importance of asking until I get the help needed. Self-Image and Identity

Progression against National Curriculum objectives(Toolkits)

EYFS → Year 1 → Year 2 → Year 3 → Year 4 → Year 5 → Year 6

EYFS

I can recognise some ways in which the internet can be used to communicate.

Online Relationships

I can give examples of how I (might) use technology to communicate with people I know

Online Relationships

I understand the importance of asking for help from an adult when using the internet.

I know to always speak to an adult if I see something I am unsure of online.

Year 1

I can give examples of when I should ask permission to do something online and explain why this is important.

Online Relationships

I can use the internet with adult support to communicate with people I know (e.g. video call apps or services).

Online Relationships

I can explain why it is important to be considerate and kind to people online and to respect their choices.

Online Relationships

I can explain why things one person finds funny or sad online may not always be seen in the same way by others.

Online Relationships

Year 2

I can give examples of how someone might use technology to communicate with others they don't also know offline and explain why this might be risky. (e.g. email, online gaming, a pen-pal in another school / country).

Online Relationships

I can explain who I should ask before sharing things about myself or others online.

Online Relationships

I can describe different ways to ask for, give, or deny my permission online and can identify who can help me if I am not sure.

Online Relationships

I can explain why I have a right to say 'no' or 'I will have to ask someone'. I can explain who can help me if I feel under pressure to agree to something I am unsure about or don't want to do.

Online Relationships

Year 3

I can explain the importance of giving and gaining permission before sharing things online; how the principles of sharing online is the same as sharing offline e.g. sharing images and videos.

Online Relationships

I can describe ways people who have similar likes and interests can get together online.

Online Relationships

I can explain what it means to 'know someone' online and why this might be different from knowing someone offline.

Online Relationships

I can explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with.

Online Relationships

I can explain why someone may change their mind about trusting anyone with something if they feel nervous, uncomfortable or worried.

Online Relationships

I can explain how someone's feelings can be hurt by what is said or written online.

Online Relationships

Year 4

I can describe strategies for safe and fun experiences in a range of online social environments (e.g. livestreaming, gaming platforms)

Online Relationships

I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.

Online Relationships

I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts feelings and beliefs.

Online Relationships

Year 5

I can give examples of technology-specific forms of communication (e.g. emojis, memes and GIFs).

Online Relationships

I can explain 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 / our fault.

Online Relationships

I can describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups).

Online Relationships

Year 6

I can explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this.

Online Relationships

I can describe how to be kind and show respect for others online including the importance of respecting boundaries regarding what is shared about them online and how to support them if others do not.

Online Relationships

I can describe how things shared privately online can have unintended consequences for others. e.g. screen-grabs.

Online Relationships

I can explain how sharing something online may have an impact either positively or negatively

Online Relationships

		I can identify who can help me if something happens online without my consent. Online Relationships I can explain how it may make others feel if I do not ask their permission or ignore their answers before sharing something about them online. Online Relationships I can explain why I should always ask a trusted adult before clicking 'yes', 'agree' or 'accept' online Online Relationships			I can explain how someone can get help if they are having problems and identify when to tell a trusted adult. Online Relationships I can demonstrate how to support others (including those who are having difficulties) online. Online Relationships	

Progression against National Curriculum objectives(Toolkits)

EYFS → Year 1 → Year 2 → Year 3 → Year 4 → Year 5 → Year 6

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can identify ways that I can put information on the internet. Online Reputation **I understand the importance of asking for help from an adult when using the internet.** **I know to always speak to an adult if I see something I am unsure of online.**	I can recognise that information can stay online and could be copied. Online Reputation I can describe what information I should not put online without asking a trusted adult first. Online Reputation	I can explain how information put online about someone can last for a long time. Online Reputation I can describe how anyone's online information could be seen by others. Online Reputation I know who to talk to if something has been put online without consent or if it is incorrect. Online Reputation	I can explain how to search for information about others online Online Reputation I can give examples of what anyone may or may not be willing to share about themselves online. I can explain the need to be careful before sharing anything personal. Online Reputation I can explain who someone can ask if they are unsure about putting something online. Online Reputation	I can describe how to find out information about others by searching online. Online Reputation I can explain ways that some of the information about anyone online could have been created, copied or shared by others. Online Reputation	I can search for information about an individual online and summarise the information found. Online Reputation I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect Online Reputation	I can explain the ways in which anyone can develop a positive online reputation. Online Reputation I can explain strategies anyone can use to protect their 'digital personality' and online reputation, including degrees of anonymity. Online Reputation

Progression against National Curriculum objectives(Toolkits)

EYFS → Year 1 → Year 2 → Year 3 → Year 4 → Year 5 → Year 6

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can describe ways that some people can be unkind online. Online Bullying	I can describe how to behave online in ways that do not upset others and can give examples. Online Bullying	I can explain what bullying is, how people may bully others and how bullying can make someone feel. Online Bullying	I can describe appropriate ways to behave towards other people online and why this is important. Online Bullying	I can recognise when someone is upset, hurt or angry online. Online Bullying	I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences. Online Bullying	I can describe how to capture bullying content as evidence (e.g screen-grab, URL, profile) to share with others who can help me. Online Bullying
I can offer examples of how this can make others feel Online Bullying		I can explain why anyone who experiences bullying is not to blame Online Bullying	I can give examples of how bullying behaviour could appear online and how someone can get support. Online Bullying	I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat). Online Bullying	I can explain how to block abusive users. Online Bullying	I can explain how someone would report online bullying in different contexts. Online Bullying
I understand the importance of asking for help from an adult when using the internet. **I know to always speak to an adult if I see something I am unsure of online.**		I can talk about how anyone experiencing bullying can get help. Online Bullying		I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation). Online Bullying	I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying. Online Bullying I can describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix). Online Bullying I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult. Online Bullying I can identify a range of ways to report concerns and access support both in school and at home about online bullying. Online Bullying	

Managing Online Information

Progression against National Curriculum objectives(Toolkits)

EYFS → Year 1 → Year 2 → Year 3 → Year 4 → Year 5 → Year 6

EYFS

I can talk about how to use the internet as a way of finding information online.

Managing Online Information

I can identify devices I could use to access information on the internet.

Managing Online Information

I understand the importance of asking for help from an adult when using the internet.

I know to always speak to an adult if I see something I am unsure of online.

Year 1

I can give simple examples of how to find information using digital technologies, e.g. search engines, voice activated searching.

Managing Online Information

I know / understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe / a joke.

Managing Online Information

I know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened.

Managing Online Information

Year 2

I can use simple keywords in search engines

Managing Online Information

I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).

Managing Online Information

I can explain what voice activated searching is and how it might be used, and know it is not a real person (e.g. Alexa, Google Now, Siri).

Managing Online Information

I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'

Managing Online Information

Year 3

I can demonstrate how to use key phrases in search engines to gather accurate information online.

Managing Online Information

I can explain what autocomplete is and how to choose the best suggestion.

Managing Online Information

I can explain how the internet can be used to sell and buy things

Managing Online Information

I can explain the difference between a 'belief', an 'opinion' and a 'fact. and can give examples of how and where they might be shared online, e.g. in videos, memes, posts, news stories etc.

Managing Online Information

Year 4

I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.

Managing Online Information

I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).

Managing Online Information

I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.

Managing Online Information

Year 5

I can explain the benefits and limitations of using different types of search technologies e.g. voice-activation search engine. I can explain how some technology can limit the information I am presented with.

Managing Online Information

I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be 'sceptical'.

Managing Online Information

I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results.

Managing Online Information

I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence.

Managing Online Information

I can identify ways the internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads

Managing Online Information

I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers).

Managing Online Information

Year 6

I can explain how search engines work and how results are selected and ranked.

Managing Online Information

I can explain how to use search technologies effectively.

Managing Online Information

I can describe how some online information can be opinion and can offer examples.

Managing Online Information

I can explain how and why some people may present 'opinions' as 'facts'; why the popularity of an opinion or the personalities of those promoting it does not necessarily make it true, fair or perhaps even legal.

Managing Online Information

I can demonstrate how to analyse and evaluate the validity of 'facts' and information and I can explain why using these strategies are important.

Managing Online Information

I understand the concept of persuasive design and how it can be used to influences peoples' choices.

Managing Online Information

		I can explain why some information I find online may not be real or true. Managing Online Information	I can explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed). Managing Online Information I can describe and demonstrate how we can get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened. Managing Online Information	I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true. Managing Online Information I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be. Managing Online Information I can explain what is meant by fake news e.g. why some people will create stories or alter photographs and put them online to pretend something is true when it isn't. Managing Online Information	I can explain what is meant by the term 'stereotype', how 'stereotypes' are amplified and reinforced online, and why accepting 'stereotypes' may influence how people think about others. Managing Online Information I can describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful Managing Online Information I can explain what is meant by a 'hoax'. I can explain why someone would need to think carefully before they share. Managing Online Information	I can define the terms 'influence', 'manipulation' and 'persuasion' and explain how someone might encounter these online (e.g. advertising and 'ad targeting' and targeting for fake news). Managing Online Information I can explain how companies and news providers target people with online news stories they are more likely to engage with and how to recognise this. Managing Online Information I can describe the difference between online misinformation and dis-information Managing Online Information I can explain why information that is on a large number of sites may still be inaccurate or untrue. I can assess how this might happen (e.g. the sharing of misinformation or disinformation). Managing Online Information I can identify, flag and report inappropriate content. Managing Online Information

Health, Well-being and Lifestyle

Progression against National Curriculum objectives(Toolkits)

EYFS → Year 1 → Year 2 → Year 3 → Year 4 → Year 5 → Year 6

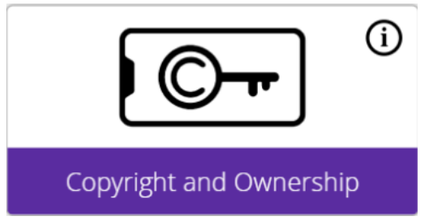
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can identify rules that help keep us safe and healthy in and beyond the home when using technology Health, Well-being and Lifestyle	I can explain rules to keep myself safe when using technology both in and beyond the home. Health, Well-being and Lifestyle	I can explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the home environment. Health, Well-being and Lifestyle	I can explain why spending too much time using technology can sometimes have a negative impact on anyone; I can give some examples of both positive and negative activities where it is easy to spend a lot of time engaged Health, Well-being and Lifestyle	I can explain how using technology can be a distraction from other things, in both a positive and negative way. Health, Well-being and Lifestyle	I can describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively. Health, Well-being and Lifestyle	I can describe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose. Health, Well-being and Lifestyle
I can give some simple examples of these rules Health, Well-being and Lifestyle		I can say how those rules / guides can help anyone accessing online technologies Health, Well-being and Lifestyle	I can explain why some online activities have age restrictions, why it is important to follow them and know who I can talk to if others pressure me to watch or do something online that makes me feel uncomfortable (e.g. age restricted gaming or web sites). Health, Well-being and Lifestyle	I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time. Health, Well-being and Lifestyle	I can describe some strategies, tips or advice to promote health and wellbeing with regards to technology. Health, Well-being and Lifestyle .	I recognise and can discuss the pressures that technology can place on someone and how / when they could manage this. Health, Well-being and Lifestyle
I understand the importance of asking for help from an adult when using the internet. **I know to always speak to an adult if I see something I am unsure of online.**					I can explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing. Health, Well-being and Lifestyle	I recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals. Health, Well-being and Lifestyle
						I can assess and action different strategies to limit the impact of technology on health (e.g. night-shift mode, regular breaks, correct posture, sleep, diet and exercise). Health, Well-being and Lifestyle
						I can recognise features of persuasive design and how they are used to keep users engaged (current and future use). Health, Well-being and Lifestyle

Privacy and Security

Progression against National Curriculum objectives(Toolkits)

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location). Privacy and Security	I can explain that passwords are used to protect information, accounts and devices. Privacy and Security	I can explain how passwords can be used to protect information, accounts and devices. Privacy and Security	I can describe simple strategies for creating and keeping passwords private. Privacy and Security	I can describe strategies for keeping personal information private, depending on context. Privacy and Security	I can explain what a strong password is and demonstrate how to create one. Privacy and Security	I can describe effective ways people can manage passwords (e.g. storing them securely or saving them in the browser). Privacy and Security
I can describe who would be trustworthy to share this information with; I can explain why they are trusted. Privacy and Security	I can recognise more detailed examples of information that is personal to someone (e.g where someone lives and goes to school, family names). Privacy and Security	I can explain and give examples of what is meant by 'private' and 'keeping things private'. Privacy and Security	I can give reasons why someone should only share information with people they choose to and can trust. I can explain that if they are not sure or feel pressured then they should tell a trusted adult. Privacy and Security	I can explain that internet use is never fully private and is monitored, e.g. adult supervision. Privacy and Security	I can explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. Privacy and Security	I can describe ways in which some online content targets people to gain money or information illegally; I can describe strategies to help me identify such content (e.g. scams, phishing). Privacy and Security
I understand the importance of asking for help from an adult when using the internet. **I know to always speak to an adult if I see something I am unsure of online.**	I can explain why it is important to always ask a trusted adult before sharing any personal information online, belonging to myself or others. Privacy and Security	I can describe and explain some rules for keeping personal information private (e.g. creating and protecting passwords). Privacy and Security	I can describe how connected devices can collect and share anyone's information with others. Privacy and Security	I can describe how 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. Privacy and Security	I can explain what app permissions are and can give some examples. Privacy and Security	I can explain what to do if a password is shared, lost or stolen. Privacy and Security
		I can explain how some people may have devices in their homes connected to the internet and give examples (e.g. lights, fridges, toys, televisions). Privacy and Security		I know what the digital age of consent is and the impact this has on online services asking for consent. Privacy and Security		I know that online services have terms and conditions that govern their use. Privacy and Security

						I can describe how and why people should keep their software and apps up to date, e.g. auto updates. Privacy and Security I can describe simple ways to increase privacy on apps and services that provide privacy settings. Privacy and Security



Progression against National Curriculum objectives(Toolkits)

EYFS → Year 1 → Year 2 → Year 3 → Year 4 → Year 5 → Year 6

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
I know that work I create belongs to me. Copyright and Ownership	I can explain why work I create using technology belongs to me Copyright and Ownership	I can recognise that content on the internet may belong to other people. Copyright and Ownership	I can explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause. Copyright and Ownership	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. Copyright and Ownership	I can assess and justify when it is acceptable to use the work of others Copyright and Ownership	I can demonstrate the use of search tools to find and access online content which can be reused by others. Copyright and Ownership
I can name my work so that others know it belongs to me. Copyright and Ownership	I can say why it belongs to me (e.g. 'I designed it' or 'I filmed it"). Copyright and Ownership	I can describe why other people's work belongs to them Copyright and Ownership		I can give some simple examples of content which I must not use without permission from the owner, e.g. videos, music, images. Copyright and Ownership	I can give examples of content that is permitted to be reused and know how this content can be found online. Copyright and Ownership	I can demonstrate how to make references to and acknowledge sources I have used from the internet. Copyright and Ownership
I understand the importance of asking for help from an adult when using the internet. **I know to always speak to an adult if I see something I am unsure of online.**	I can save my work under a suitable title or name so that others know it belongs to me (e.g. filename, name on content). Copyright and Ownership					
	I understand that work created by others does not belong to me even if I save a copy Copyright and Ownership					
