Computing

Subject Definitions

KS1 definition:

Computing is using digital technology to create and edit information. Using digital technology to make things happen. Finding out about staying safe in a digital world.

KS2 definition:

Computing is using digital technology to create and edit information. Using digital technology to make things happen. Finding out about staying safe in a digital world.

Long Term Plan

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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	Continuous communication throughout the year—parents inform us of events such as weddings, christenings, birthdays.					
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Year 1	**Online Safety: Owning Your own work and Safe Image Searching** *Twinkl*	**Computing Skills** *Twinkl* **Laptops** **Microsoft Word**	**Online Safety: Staying SMART online and My Personal Information** *Twinkl*	**Dance Party: L1-4** *Mr Andrews (code.org)* **iPads** **Camera/Safari**	**Programming with Scratch Jr** *Twinkl* **iPads** **Scratch Jr**	**Online Safety: Applying knowledge to different situations** *Twinkl*
Year 2	**Online Safety: Digital Footprints and Passwords** *Twinkl and Own Unit*	**What is a computer?** *Mr Andrews (Book Creator)* **iPads** **Book Creator**	**Programming with Scratch: L3-6** *Twinkl* **iPads** **Scratch Online**	**Online Safety: You Be The Judge and Rate and Review** *Twinkl*	**Presentation Skills** *Twinkl* **Laptops** **Microsoft PowerPoint**	**Online Safety: Being Kind Online and Recap** *Twinkl*
Year 3	**Word Processing Skills** *Twinkl* **Laptops** **Microsoft Word**	**Online Safety: What is Cyberbullying? and To Buy or Not To Buy?** *Twinkl*	**Stone Age websites** *Mr Andrews (Canva)* **Laptops** **Google Sites**	**Online Safety: Keep It To Yourself and Emailing** *Twinkl*	**Coding with Scratch: Learning Loops** *Twinkl* **iPads** **Scratch Online**	**Online Safety: Online Communication and Personal Information** *Twinkl and Own Unit*
Year 4	**Online Safety: Cyberbullying and Super Searches** *Twinkl*	**Entering a Digital World** *Mr Andrews (PowerPoint)* **Laptops** **Microsoft PowerPoint**	**Communication and Collaboration** *Twinkl* **Laptops** **Online / Microsoft Word**	**Online Safety: Gaming (ratings) and Too Much Information** *Project Evolve and Twinkl*	**Coding with Scratch: Questions and Quizzes** *Twinkl* **iPads** **Scratch Online**	**Online Safety: The Online Community and Cyber Superheroes** *Twinkl*
Year 5	**Online Safety: Spam! and Perfect Purchases.** *Twinkl and Project Evolve*	**Web Developers** *Mr Andrews* **Laptops**	**Coding with Scratch: Developing Games** *Twinkl* **iPads** **Scratch Online**	**Online Safety: Powerful Password and False Photography** *Twinkl*	**How do computers impact our lives?** *Mr Andrews* **Laptops** **Microsoft PowerPoint**	**Online Safety: Adapting Use Before Sleep** *Project Evolve and BBC Own It*
Year 6	**Spreadsheets** *Twinkl* **Laptops** **Microsoft Excel**	**Online Safety: Cyberbullying and Secure Websites** *Twinkl*	**Coding with Scratch: Animated Stories** *Twinkl* **iPads** **Scratch Online**	**Online Safety: People Online and Boys and Girls Online** *Twinkl*	**Micro:bit** *BBC/Own* **Laptops**	**Online Safety: Update on Updates and SMARTbots** *Project Evolve and Twinkl*

Key Stage One Online Safety

Year 1

Make sure at the start of all online safety lessons, the children know what this term means.

Au1: Understand that work I create is owned by myself. The word copyright means I own it and can choose what I want to happen with it. I must always add my name to work I create. Use the 'safe search' when searching for images. Use key words to find images.

Sp1: Know that being SMART (safe, meet, accept, reliable, tell) online is important. Know that some things online are not safe. Know that I should tell a trusted adult if something I find online upsets me or isn't right. Understand that the online and offline worlds can be similar. Examples of personal information are name, where I live, date of birth and favourite colour. I must keep personal information safe. I should tell a trusted adult if I'm unsure of anything online.

Su2: Recap of all online safety features taught above. Apply my knowledge to different situations. Help other people make the right choices with online safety.
How to become a User Experience designer

Year 2

Make sure at the start of all online safety lessons, the children know what this term means.

Au1: Digital means anything to do with computer technology. A digital footprint is information that you leave behind in a digital world. Leaving too many footprints might lead you to danger. Some people might us the information that you leave online. A password can keep personal information safe. Good passwords are hard to guess and have letters and numbers. You shouldn't tell your friends or strangers your password.

Sp2: We can judge websites and decide if they are safe for us to use. Safe websites for children are easy to read, appropriate pictures and no space to talk to strangers. People rate and review different online spaces. Some ratings and reviews can be false. Websites are aimed at certain people or groups of people.

Su2: We should be kind to other people online and offline. If someone continues to be mean online then they are a bully. This is called cyberbullying. Report any mean behaviour to a trusted adult. Recap of all online safety features taught above. Apply my knowledge to different situations. Help other people make the right choices with online safety.
How to become a coder

Lower Key Stage Two Online Safety

Year 3

Make sure at the start of all online safety lessons, the children know what this term means.

Au2: Bullying is repeatedly using words or actions to hurt someone on purpose. Cyberbullying is when someone bullies someone using digital technology. Tell a trusted adult if you think someone is being a cyberbully. Adverts are used to make people buy certain things. Targeted advertising is when companies use your digital footprint to show you certain adverts. Discuss if it is fair that adverts are targeted at children.
How to become a creative technologist

Sp2: A password is something to keep your things safe. We use passwords to stop people seeing our information. Passwords can stop people seeing private information about yourself. A strong password uses letters, numbers and special characters. Privacy settings mean you can control what other people see about you. Emails are a quick and easy way to send information. Some emails are unsafe to open. You should ask a trusted adult before creating an email account.

Su2: Online communities are when people communicate with others around the world instantly. Some people use these places to share negative words. People communicate in online communities by posting words, pictures, videos and gaming. Recap of all online safety features taught above. Apply my knowledge to different situations. Help other people make the right choices with online safety.
How to become a Formula 1 engineer

Year 4

Make sure at the start of all online safety lessons, the children know what this term means.

Au1: Cyberbullying is when someone bullies someone using digital technology. Tell a trusted adult if you think someone is being a cyberbully. People may send hurtful messages online. You should report these to a trusted adult. I can make sure my online messages are kind. A search engine searches the internet to find you information. Some companies pay to make their websites appear higher in search engines. I can safely search for information. I can use tools to help my searches be more accurate.

Sp2: Games have age ratings to keep children safe. Some content has age ratings to keep children safe. I should talk to a trusted adult if I feel pressurised online. I can apply my knowledge to different situations and think about how to stay safe online. Some information such as DOB, address and phone numbers shouldn't be shared online. Only create accounts for sites and apps you're old enough to use. Tell a trusted adult if you see personal information online in a profile.
I get paid to fight monsters

Su2: A digital citizen is someone who is part of an online or digital community. We are all responsible for our own actions both offline and online. Being a good digital citizen helps keep people safe online. All of us are responsible for staying safe online. Recap of all online safety features taught above. Apply my knowledge to different situations.
How to become a Pay Per Click trainer

Upper Key Stage Two Online Safety

Year 5

Make sure at the start of all online safety lessons, the children know what this term means.

Au1: Spam emails are emails that are sent to many people and are sometimes called junk emails. They often have adverts or false claims in them. Spam emails are very frustrating. Spam emails can lead to giving away personal information to strangers. The subject line in spam emails often tells you you've won something or an amazing deal. Do not open spam emails and tell a trusted adult about them. In-app purchases are features or items that you can buy within a mobile game or application. Loot boxes are in game boxes that have a range of good and not so good items in them. You often pay for them with real money. Always ask permission before making any in-app purchases.

Sp2: A password is something to keep your things safe. We use passwords to stop people seeing our information. Passwords can stop people seeing private information about yourself. A strong password uses upper and lower case letters, numbers and special characters. Use different strong passwords for different accounts. Sometimes people edit photos online. These can be easy and hard to spot. Always let people know if you've made changes to photos. Don't edit photos to make yourself like someone else. Be yourself!
How to become a graphics designer

Su2: Using screens before bedtime can wake you up and stimulate your brain. Using calming and meditation can help relax before bedtime. Spending too much time on screens is bad for your health. Online gaming, social media and videos can become addictive. Recap of all online safety features taught above. Apply my knowledge to different situations.
How to become a professional gamer

Year 6

Make sure at the start of all online safety lessons, the children know what this term means.

Au2: Cyberbullying is the use of electronic communication to bully a person, typically by sending messages of an intimidating or threatening nature. Tell a trusted adult if you think someone is being a cyberbully. People may send hurtful messages online. You should report these to a trusted adult. I can make sure my online messages are kind. I can apply my knowledge to different situations. If a site is secure it means that any information you put into it is safe: it can't be seen by anyone else. https:// the 's' stands for secure. Some logos can tell you if a website is secure. I should use secure websites.
Life as a Cyber Security apprentice

Sp2: We communicate online because it is sometimes easier, cheaper, help make new friends, game and to get advice. Personal information should be kept private. People can use your personal information in a negative way. If you're worried, tell a trusted adult or call Childline on 0800 1111. The media play a powerful role in shaping ideas about boys and girls. A stereotype is a well-known idea or image of a group of people, that is held by several people. Stereotypes can make people feel sad about themselves.

Su2: Keeping software up to date is important. It helps fix security issues, fix bugs and get new features. Use auto-update to keep software up to date. If an app asks for an update – complete this request. Continue to use other online safety tools alongside keeping software updated. Know that being SMART (safe, meet, accept, reliable, tell) online is important. Recap of all online safety features taught above. Apply my knowledge to different situations.
How to become a clinical photographer

Pre School (Birth to 5: Understanding the World)

Au1:

Continuous communication throughout the year—parents inform us of events such as holidays, visits and trips. We encourage sharing on Tapestry and then adults will talk with the children about these events. During the year, walks around the school building and grounds happen and children begin to use language linked to this.

Nursery (Birth to 5: Understanding the World)

Au1:

Continuous communication throughout the year—parents inform us of events such as holidays, visits and trips. We encourage sharing on Tapestry and then adults will talk with the children about these events. During the year, walks around the school building and grounds happen and children begin to use language linked to this. Comic Relief – look at other countries. Children look at logos from business in the local area.

Reception

Maple

Continuous communication throughout the year—parents inform us of events such as weddings, christenings, birthdays. Children are encouraged to remember this and talk about it with adults as and when it is appropriate. Focus on language around the past.

Year 1

Au2: Identify and label the monitor, keyboard, mouse/trackpad, computer unit. Use a trackpad and buttons. Use the alphabet, numbers, space bar and enter keys on a keyboard. Log onto a laptop. Open an application and change the size of the window. Save a file. Find a file. Open a file. Log off and shutdown a laptop. Create a simple Word document.

Sp2: Explain how technology is used outside of school. Take photos using an iPad. Video a friend talking about how to keep healthy using technology. Use coding blocks to: Create a character in Dance Party. Make the character move and change. Add music to your party. Understand an event makes something happen.

Su1: Unplugged coding – begin with getting children to write their name - simple set of instructions for something practical. Share about the order and what would happen if wrong order. Open application on iPad. Use ScratchJr to program a character. Make a character shrink and grow. Make characters move at different speeds and distance. Use simple repeat to create a sequence. Make a simple sequence with instructions.

Year 2

Au2: Use Pixabay to find images that link to the topic. Create a new digital book and insert a page in Book Creator. Use screenshot to save image and insert into Book Creator. Add text and change fonts. Change the background/layout to a comic style. *Understand a computer helps in daily life. Can complete jobs quicker than us. That computers have changed over time. The first computers were very slow and big. Input devices are mouse, keyboards etc. Output devices are monitors, printers etc. A robot performs tasks to help us.*

Sp1: Unplugged coding – begin with getting children to make a sandwich and note down the steps needed. Share about the order and what would happen if wrong order. Open application on iPad. Understand what a Sprite is. Make an algorithm to make Sprite move. Add sound to a Sprite. Use simple repeat command to make a Sprite repeat a movement. Use the Green Flag to begin a sequence. Change the backdrop. Add more Sprites.

Su1: Create a new folder. Use the split windows function. Use caps lock to make capital letters. Insert new slide in PowerPoint. Insert textbox onto slide. Resize the textbox. Change font size and colour. Insert an image and resize. Use copy and paste for an image. Reorder slides. Print a document or part of a document. Save a file. Find a file. Open a file. Log off and shutdown a laptop. *Understand what a presentation is.*

Year 3

Au1: Use the Print Screen to create a screenshot. Use the snipping tool to create a screenshot. Use shift and caps lock to change the case of text. Use the align buttons to align text. Use bullet points and numbering buttons. Begin to use keyboard shortcuts (cut, copy, paste). Create and format text boxes and shape boxes.

Sp1: Selecting and inserting pictures. Add text and change the font and colour. Add hyperlinks to external sites. Change the layout of a page and edit the background. Create a gallery of images. Create a short video and add to website. Use the preview function within Canva. Check and edit text and images.

Su1: Write simple algorithms using coding blocks. Use the 'keyboard keys' to begin a sequence. Use the Events block. Use the loop function to repeat an action. Use a repeat function for a sequence of instructions. Use forever loop to make something happen all the time. Use a repeat until to make something repeat until you want it stopped. Create a simple catching game using the loops function.

Year 4

Au1: Use keyboard shortcuts (cut, copy, paste, print, save, open). Create a presentation with slides with animations and transition effects. Use font sizes and effects. Edit digital content to improve it according to feedback. Create an imaginary character using an avatar tool creator. Add thought bubbles to PowerPoint and use spellcheck. Use cut, copy and paste (including keyboard shortcuts). *Explain how my online identity can be different to the identity presented in real life and describe the right decisions about how to interact with others and how others perceive us. Recognise the need to be careful before sharing anything online and only with people you can trust. Understand and give reasons why strong passwords are important and describe simple strategies for creating and keeping passwords private. Understand the different types of social media platforms and how they are used for communication. Explain why you need to think carefully about how content you post might affect others, their feelings and how it may affect how others feel about them (their reputation). Explain what bullying is and can describe how people may bully others.*

Sp1: Compose an email. Add a subject. Add an attachment to an email. *Understand what communication is. Email is a way if sending an electronic message to someone. Explore collaboration online.*

Su1: Unplugged coding – Lesson 2 resources folder has a good unplugged sheet. Write algorithms using coding blocks. Begin to use the sensing block to ask a question. Use the If, Then, Else functions. Use the Operators blocks. Duplicate the blocks. Create and change a backdrop. Change the Sprite colour and costume. Add effects and sounds to a Sprite. Use a variable block. Use touching and sensing blocks.

Upper Key Stage Two Progression - skills

Year 5

Au2: Create a Google site. Design Google site – style, font, images (resize and crop), header, footer, text, links. Add pages to the site and publish changes. Upload Google docs to the site (forms, slides, sheets and charts). Upload files to the Google site from the computer/laptop. Preview and publish the site. Use search tool throughout the unit to find content and acknowledge sources that have been used from the internet.

Sp1: Recap Year 4 Sprite changes. Write simple algorithms using coding blocks. Use the 'When…' block with the backdrop sequence. Use the sensing block to ask a question. Use the If, Then, Else functions. Use the Operators blocks. Use the wait blocks. Use the Repeat Until linked with the or block. Use the co-ordinates function with the 'go to' blocks. Use the Change and Else functions.

Su1: Insert textbox onto slide. Change font size and colour. Add an animation to the text. Insert an image and resize. Use copy and paste for an image. Insert shapes/arrows to create a timeline slide. Ensure that the fonts and titles match. Add transitions between slides. Take a screenshot and add to a slide using the snipping tool shortcut (Windows logo+shift+S). Insert bullet points (and change the bullet style) to give key facts on a slide. Insert a table onto a slide and edit the design to match PowerPoint. Use keyboard shortcuts (cut, copy, paste, print, save, open). Recap: Reorder slides. Save a file. Find a file. Open a file. Recap - *what a presentation is.*

Year 6

Au1: Enter and edit text and numbers in cells and use the SUM formula. Use formatting tools – cell colour and borders. Order data using the Sort function. Produce a graph to present data. Use the total and average functions. Merge cells. Duplicate formulas over multiple cells.

Sp1: Write simple algorithms using coding blocks. Use the Costume Change and Repeat block to show animation. Use the Glide and Sound block to create movement. Use the Broadcast Message block and Receive Broadcast Message block. Combine Broadcasts in code to sequence actions.   Use the Show and Hide blocks. Create a story sequence using the above coding.

Su1: Create a MicroBit project. Display icons relevant to the project by coding LED lights. Code the 'button pressed' input block to make the Microbit perform a command. Code the 'shake' input block to make the Microbit perform a command. Code a loop to make illustrations run longer on the LEDs with fewer instructions. Code the Microbit to have two or more different outputs depending on the input. Code a sensor input to detect when movement happens on or around the Microbit. Code a variable to track step count. Code 'if then else' instructions to further understanding of variable outputs and inputs. Code two Microbits to communicate on the same radio wavelength. Code a Microbit to read and respond to magnetic readings. Evaluate success of a project. Evaluate fairness of a project.