Westhaven School Curriculum Map for COMPUTING/IT

technology   independence   communication   safety

Whole School Curriculum Intent

The golden thread that permeates our curriculum and our conduct through every school day are the core values which shapes our learners to be:

- safely independent
- confident communicators
- respectful citizens
- resilient learners
- inquisitive thinkers

At Westhaven, English is the heart of our curriculum. We are committed to raising the standards in phonics and early reading of our learners through every curriculum subject.
At Westhaven, we follow the approach to phonics teaching as outlined in the DfE validated programme UNLOCKING LETTERS AND SOUNDS.

Computing Intent: The children learn the computing skills that will set them up for an independent life in our technological world whilst allowing them to be creative.

Further ideas and resources can be found here:
https://projectevolve.co.uk/toolkit/resources/curriculum/computing/ (you will need to set up an account).
Teach Computing Curriculum (you will need to set up an account)
https://www.nspcc.org.uk/keeping-children-safe/online-safety/online-safety-families-children-with-send/
https://anti-bullyingalliance.org.uk/tools-information/all-about-bullying/online-bullying/online-bullying-and-sendisability

Online Safety for Learners with
Special Educational Needs and Disabilities (SEND)

What is different for learners with SEND?

The internet and technology are an integral part of everyday life for children. It is important that we acknowledge the positive opportunities the internet provides for young people with Special Educational Needs and Disabilities (SEND); the accessibility of images and video online make it an excellent learning tool, whilst global connectivity enables children with SEND to socialise and access support.

However, children with SEND are more likely than their peers to experience online issues such as cyberbullying, online grooming and exploitation. Similarly, children with SEND are more likely to have their internet use restricted and therefore have limited opportunities to learn through experience, develop resilience or seek support, which would empower them to use technology safely.

Online safety is a fundamental part of our safeguarding responsibilities and education settings should implement a range of targeted and differentiated strategies to enable learners with SEND to access the internet safely and appropriately.

Key aspects of learning where radicalisation and extremism fit naturally into general teaching about safeguarding include:

- **e-safety and understanding of the online world** (e.g. being careful with personal data; responsible online behaviours; awareness that not everyone on the internet is who they say they are; recognising that not everything published on the internet is true; awareness of common scams; ways to respond to/ report things that are concerning them)

New learning
Revisited learning

Links to Personal Development

Curriculum Statement	Code
Learners can recognise online and offline risks such as criminal and sexual exploitation, domestic abuse, FGM, substance misuse, gang activity, radicalisation and extremism.	CSE
Learners are taught about the dangers of mobiles and social media.	MSM
PSHE / RSE - sexual harrassment, online abuse, sexual violence, safeguarding risks (including online), consent, healthy relationships (online and offline).	SHOA

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
KS1 Cycle A Differentiated National Curriculum	**How Long Does It Last?** Understanding that work we create can be stored forever and copied. This is not done on computers. Emphasise this point with physical work produced by children. **Online Safety** Acceptable Usage Policy **Key Vocab** Digital Footprint Stored Copied Computer Acceptable MSM	**Seeking Permissions** Learning that consent must be given by someone else before we do something with them. **Online safety** Topic relates to consent. **Key Vocab** Consent Permissions SHOA	**Touchscreen** Recognising that where they touch will count as a click. Opening games themselves. **Online Safety** Not leaving important information in public places – clearing up after yourself.. **Key Vocab** Touchscreen Click Games Information Public Tablet MSM	**Taking photos** Children use a tablet to take: - Nature photograph - Landscape photograph - Photo of person (with permission) What app do we need? What button takes a photo. Photos shared with children on IWM to comment on. **Online Safety** T4 – Appropriate photographs – what we can and can not take photos of. T5 – Appropriate apps on an iPad. What can and can they not play on. MSM SHOA **Key Vocab** Camera Photograph Permission Landscape Portrait Appropriate	**Key Vocab** Camera Photograph Permission Landscape Portrait Tablet Apps	**Understanding the world** Using a digital microscope/enlarging photos to see finer details on natural things (plants and animals). **Online safety** Technology we can use safely (iPads, computers, whiteboards, consoles). **Key Vocab** Digital Microscope Photographs Technology Tablet Computers Whiteboards Consoles MSM
KS1 Cycle A National Curriculum	**IT Around Me** What is IT? IT used in school around us. IT in the wider world. Using IT safely. **Online Safety** Acceptable Usage Policy **Key Vocab** Information Technology Computer Whiteboard Consoles Tablets	**Technology Around Me** Identifying technology in the classroom around us. Using technology – naming basic parts of a computer. Switching on and logging off. Using a mouse. Using a keyboard. Using technology responsibly. **Online Safety** Learn that consent must be acquired before we use somebody for our work (photos, writing etc)	**Digital Painting** Making marks on the screen using paint tools. Making choices - choosing appropriate shapes and colours. Compare computer art with real paintings. **Online Safety** Not leaving important information in public places (i.e. the iPads) **Key Vocab** Digital	**Grouping Data** Matching objects to groups. Describing objects Grouping objects - different ways? Number of groups? **Online Safety** Appropriate photographs – what we can and can not take photos of. **Key Vocab** Grouping Data Photographs	**Moving a Robot** (Lego/BeeBots) What do the commands do to the robot? Using directions to navigate the robot. Following routes. **Online Safety** Appropriate apps on an iPad. What can and can they not play on. **Key Vocab** Commands Directions	**Introduction to Animation** (Scratch) Using commands to move a sprite. Joining command blocks together to move the sprite in a sequence. Adding artwork to animation. **Online safety** Technology we can use safely (iPads, computers, whiteboards, consoles). **Key Vocab** Animation

	MSM	**Key Vocab** Technology Keyboard Mouse Monitor Consent Responsible SHOA	Important Choices MSM SHOA	SHOA	Appropriate Applications Tablet MSM SHOA	Sprite Commands Sequence Consoles Computers Tablets Whiteboards MSM
KS1 Cycle B Differentiated National Curriculum	**How Do We Know Work Is Ours?** Naming our work so that people know who it belongs to. Not stealing other people's work and claiming it as our own. Not done on computers. **Online Safety** Acceptable Usage Policy **Key Vocab** Stealing Owner Acceptable MSM	**Seeking Permissions** Learning that consent must be given by someone else before we do something with them. **Online safety** Topic relates to consent. **Key Vocab** Permissions Consent SHOA	**Touchscreen** Recognising that where they touch will count as a click. Opening games themselves. **Online safety** Treating technology with respect. Paying for damages. **Key Vocab** Touchscreen Tablet Click Games Respect Damage MSM	**Making Art** Children use tablets to paint. Display art on IWM for children to see. **Online Safety** T4 - Appropriate content to produce. T5 - What can we do with work we produce? **Key Vocab** Paint Tablet Whiteboard Content Producing Artwork SHOA	**Key Vocab** Paint Tablet Whiteboard Producing Artwork Safe	**Making voice recordings.** Using camera/recording devices to record conversations. Playback on IWM for children to hear. **Online Safety** What we say online will stay forever. (keep audio recordings to play back) **Key Vocab** Voice Recording Camera Whiteboard Microphone Online Digital Footprint Audio SHOA
KS1 Cycle B National Curriculum	**Digital Writing** Explore the keyboard. Use the letters and numbers to input text to the screen. Highlighting words to draw attention to part of text. Exploring the tool bar on Google docs - *italics*, **bold**, underlined. **Online Safety**	**Digital Photography** Taking photographs What makes a good photo? Lighting and effects. **Online Safety** Learn that consent must be acquired before we use somebody for our work (photos, writing etc)	**Making Music** How does music make us feel? Rhythms and patterns. Notes and Tempos. Creating digital music. Reviewing and editing songs.	**Pictograms** Counting and comparing. Collecting Data Creating pictograms. Comparing things. **Online Safety** Appropriate content to produce online.	**Robot Algorithms** (Beebots/Lego) Giving instructions. Making predictions. Following mats and routes. Designing algorithm. Debugging. **Online safety**	**An Introduction to Quizzes** (Scratch) Explore Scratch Quizzes Changing designs/choosing designs Designing a quiz program on Scratch. Evaluating created quiz.

	Acceptable Usage Policy **Key Vocab** Keyboard Input Highlight Underline Italics Toolbar Digital MSM	**Key Vocab** Photographs Lighting Effects Consent SHOA	**Online safety** Treating technology with respect. Paying for damages. **Key Vocab** Music Rhythms Patterns Digital Reviewing Editing Respect Technology MSM	**Key Vocab** Pictogram Collecting Data Creating Comparing Appropriate Online SHOA	What can we do with work we produce online? **Key Vocab** Instructions Predictions Design Debug Algorithm Online SHOA	**Online Safety** What we say online will stay forever. **Key Vocab** Quiz Design Debug Programming Online Digital Footprint SHOA
LKS2 Cycle A Differentiated National Curriculum	**Basic skills** Keyboard Mouse Logging in - Magic badge - barcode **Rules for using technology.** **Online Safety** Acceptable Usage Policy **Key Vocab** Keyboard Mouse Password Technology Rules Acceptable MSM	**Making Art** Chromebook Selecting appropriate tools to make marks on a computer application (e.g. Paint) **Online Safety** Term 2 - Digital footprints Term 3 - What information must we keep safe/private? **Key Vocab** Chromebook Art Application Appropriate Digital Footprints Content SHOA	**Key Vocab** Chromebook Art Appropriate Application Private Information SHOA	**Touch Typing** Finger exercises Fine motor-skills practice. Practice typing. Typing their phonics sounds. **Online Safety** Term 4 - Passwords - Why do we use them? Term 5 - Social Media - What are likes? **Key Vocab** Touch Typing Keyboard Keys Passwords Private MSM SHOA	**Key Vocab** Touch Typing Keyboard Keys Social Media Likes MSM SHOA	**Creating Text** Typing names onto a document Teacher opens document. **Online Safety** Avoiding peer-pressure online. **Key Vocab** Document Text Typing Peer-pressure Online SHOA
LKS2 Cycle A National Curriculum	**Connecting Computers** How does a digital device work? How do digital devices help us? How are messages passed on? Connections.	**Animation** Can a picture move? Frame by Frame Photographs - stop motion. Adding audio to animation. **Online Safety**	**Desktop Publishing** Difference between text and images. Editing text - Fonts, colours etc Page orientation and using templates.	**Branching Databases** Yes or no questions Creating groups. Using branching databases. Creating branching databases. **Online Safety**	**Sequence in Music (Scratch)** Confidently using scratch Programming sprites using a sequence of commands. Creating a design. Adding audio to design.	**Events and Actions (Scratch)** Moving sprites. Navigating a maze. Debugging a sequence of movement. **Online Safety**

	Online Safety Acceptable Usage Policy **Key Vocab** Computers Digital Device Network MSM	Digital footprints **Key Vocab** Digital Footprint Animation Photographs Audio SHOA	Copy and paste. **Online Safety** What information must we keep safe/private? **Key Vocab** Text Images Publishing Desktop Fonts Orientation Template Information Copy Paste SHOA	Passwords - Why do we use them? What technology should we use them on? **Key Vocab** Database Creating Passwords MSM	**Online Safety** Social Media - Likes, dislikes, what do we use social media for? **Key Vocab** Sequencing Music Sprites Sequencing Audio Creating Designing Social Media MSM SHOA	Avoiding peer-pressure online **Key Vocab** Navigating Debugging Sequencing Online Peer-pressure SHOA
LKS2 Cycle B Differentiated National Curriculum	**Basic skills** Keyboard Mouse Logging in - Magic badge emoji **Rules for using technology.** **Online Safety** Acceptable Usage Policy **Key Vocab** Keyboard Mouse Password Acceptable Rules MSM	**Stop Motion - IPads** Taking pictures - Touchscreen Uploading to a computer **Online Safety** Term 2 - Stranger danger - Who are strangers? Term 3 - Stranger danger - How might you be contacted? **Key Vocab** Stop Motion Pictures Touchscreen Tablets Computer Upload Strangers Danger SHOA	**Key Vocab** Stop Motion Pictures Touchscreen Tablets Computer Upload Strangers Contact SHOA	**Touch Typing** Finger exercises Fine motor-skills practice. Practice typing. Typing their phonics sounds. **Online Safety** Term 4 - Stranger danger - What must you never share with a stranger? Term 5 - What unsafe behaviours might we see online? **Key Vocab** Touch Typing Keyboard Keys Share Information Strangers Danger SHOA	**Key Vocab** Touch Typing Keyboard Keys Unsafe Behaviour Online SHOA CSE	**Using technology as a resource to support learning** Children to use tools like TTRS, Numbots, audiobooks etc to really explore the usefulness of technology in day to day lives. **Online Safety** How do we report unsafe behaviours? CEOP. **Key Vocab** Technology Audio Resource Unsafe Behaviours CEOP Report SHOA CSE
LKS2 Cycle B National Curriculum	**The Internet** What is the internet? Sharing information/gathering	**Audio Editing** Recording sounds Creating a podcast about an	**Photo Editing** Taking photos. Editing images.	**Data Logging** Answering questions Collecting data	**Repetition in Shapes** (Scratch) Programming a screen turtle	**Repetition in Games** (Scratch) Explore Scratch games.

	information online. Exploring websites. Can you believe what you read? **Online Safety** Acceptable Usage Policy **Key Vocab** Internet Information Online Website Trustworthy MSM	interest. Combining and editing audio. **Online Safety** Stranger danger - Who are strangers? **Key Vocab** Audio Editing Podcast Strangers SHOA	Crop Retouching Photoshop to create fake images. **Online Safety** Stranger danger - How might you be contacted? **Key Vocab** Photographs Cropping Retouching Fake Strangers SHOA	Logging data Analysing data. Using data to answer questions. **Online Safety** Stranger danger - What must you never share with a stranger? **Key Vocab** Data Logging Collecting Analysing Strangers Information SHOA	Patterns and repetition to draw lines. Using loops to create shapes. **Online Safety** What unsafe behaviours might we see online? **Key Vocab** Programming Patterns Repetition Loops Behaviours Online SHOA CSE	Change the Sprites to and other conditions to modify the game. Make our own Scratch games. **Online Safety** How do we report unsafe behaviours? CEOP. **Key Vocab** Sprites Conditions Modifications Game CEOP Reporting SHOA CSE
UKS2 Cycle A Differentiated National Curriculum	**Online Gaming Safety** Age Ratings Stranger Danger Appropriate Time spent on device Logging in with emoji password **Online Safety** Acceptable Usage Policy **Key Vocab** Acceptable Online Gaming Safety Age-Ratings Strangers Password MSM	**Making Videos** Using a camera to record. Uploading to computer. **Online Safety** Term 2 - Where can our information be stored? (social media) Term 3 - The importance of consent before posting/creating something online. **Key Vocab** Videos Camera Recording Uploading Computer Information Storage Social Media SHOA MSM	**Key Vocab** Videos Camera Recording Uploading Computer Consent Posting Creating Online SHOA	**Touch Typing** Finger exercises Fine motor-skills practice. Practice typing. Typing their phonics sounds. **Online Safety** Term 4 - What makes the internet dangerous? Online bullying. Term 5 - What/who can we trust online? Adding friends? **Key Vocab** Touch Typing Keyboard Keys Internet Danger Online Bullying SHOA CSE	**Key Vocab** Touch Typing Keyboard Keys Trust Online Friends SHOA	**Lego Spike** Following online instructions to build a Lego Spike. Creating simple online instructions for the Lego spike. **Online Safety** What must I do if something happens online that upsets me? **Key Vocab** Online Instructions Lego Reporting Unsafe Behaviours SHOA CSE
UKS2 Cycle A National Curriculum	**Sharing Information** What are computer systems?	**Vector Drawing** Using drawing tools to create images.	**Video Editing** What is a video?	**Flat-file Databases** Paper based databases	**Selection in Physical Computing** (Lego/Beebots)	**Selection in Quizzes** (Scratch) Conditions in programming.

	How to use the internet as a search tool. Selecting appropriate search results. How are search results ranked/influenced? **Online Safety** Acceptable Usage Policy **Key Vocab** Computer Systems Internet Ranking Influence MSM	Layers and objects. Manipulating objects (orientation and size). Creating a vector drawing. **Online Safety** Where can our information be stored? (social media) **Key Vocab** Vectors Layers Objects Manipulating Orientation Size Information Social Media SHOA MSM	Filming techniques Using storyboards. Planning and filming a video. Importing and editing a video. **Online Safety** The importance of consent before posting/creating something online. **Key Vocab** Video Filming Storyboards Planning Importing Editing Consent Online SHOA MSM	Computer databases Using databases. Comparing data visually. Databases in real life. **Online Safety** What makes the internet dangerous? Catfishing + Online bullying **Key Vocab** Database Computer Comparing Internet Catfish Cyber-bullying SHOA CSE MSM	Designing an algorithm and describing what it will do to the model. Testing and debugging algorithm. Inputs and outputs. **Online Safety** What/who can we trust online? Adding friends? **Key Vocab** Design Algorithm Model Testing Debugging Trust Inputs Outputs Friends SHOA MSM	Selecting outcomes to create a program. Asking questions. Planning a quiz. Testing a quiz **Online Safety** What must I do if something happens online that upsets me? **Key Vocab** Conditions Programming Questions Planning Designing Testing Reporting SHOA CSE
UKS2 Cycle B Differentiated National Curriculum	**TikTok / Youtube / App Safety** What to avoid Can we believe everything? Privacy Settings What are they? How do we check/change them? How long should we spend on the apps? Logging in with emoji password **Online Safety** Acceptable Usage Policy **Key Vocab** TikTok Youtube Apps Trust Privacy	**Browsing the Internet - Researching** **Awareness** **Online safety** What is on the internet? Be careful what you search for. **Key Vocab** Browsing Internet Research MSM SHOA CSE	**Touch Typing** Finger exercises Fine motor-skills practice. Practice typing. Typing their phonics sounds. **Online Safety** Pop-ups on websites - what are they? **Key Vocab** Touch Typing Keyboard Keys Pop-ups Websites SHOA MSM	**Google Apps - Exploring + Manipulating** Google Documents **Online Safety** Term 4 - Digital Footprint - What you post/create online will be there forever. Term 5 - Stranger Danger online - Why might people message you? **Key Vocab** Google Documents Drive Digital Footprint Text Font Colour Size Insert Image SHOA	**Key Vocab** Google Documents Drive Text Font Colour Size Insert Image Strangers Danger	**Google Docs** Writing a story/extended piece on Google Docs. No research required. **Online Safety** Stranger danger online - What to do if approached. **Key Vocab** Google Documents Drive Story Strangers Danger Reporting SHOA MSM CSE

	Passwords Acceptable MSM			MSM	SHOA CSE MSM	
UKS2 Cycle B **National Curriculum**	**Communication** Internet addresses – what do they do? Accessing and using shared files for collaborative work. How do we communicate? **Online Safety** Acceptable Usage Policy **Key Vocab** Internet Address Files Shared Collaborative Communication MSM	**3D Modelling** (Tinkercad) 3D shapes. Adding 3D shapes to designs. Making a name badge online. **Online safety** What is on the internet? Be careful what you search for. **Key Vocab** 3D Modelling Design Internet MSM SHOA CSE	**Web Page Creation** What makes a good website? Copyright. Creating hyperlinks Page layout. **Online Safety** Pop-ups on websites – what to do. **Key Vocab** Website Copyright Hyperlinks Layout Pop-ups MSM SHOA	**Spreadsheets** What is a spreadsheet? Modifying spreadsheets. Formulas on spreadsheets. Presenting data. **Online Safety** Digital Footprint – What you post/create online will be there forever. **Key Vocab** Spreadsheet Modifications Formula Presenting Digital Footprint MSM SHOA	**Variables in Games** (Scratch) What are variables? Improving a Scratch game. Designing a Scratch game. Sharing our games. **Online Safety** Stranger Danger online – Why might people message you? **Key Vocab** Variables Improving Designing Strangers MSM SHOA CSE	**Sensing** (Lego) Input, process and output. Creating programmes. Using sensors for input (Lego colour identification) **Online Safety** Stranger danger online – What to do if approached. **Key Vocab** Input Process Output Programmes Sensors Strangers Reporting MSM SHOA CSE
KS3 Cycle A **Differentiated National Curriculum**	**Staying safe online** Logging into the computer with an actual password What information must be kept private. Privacy Settings. How our identities can be copied. **Online Safety** Acceptable Usage Policy **Key Vocab** Password Private Privacy Settings Information	**Navigating the Web** Useful websites/apps. **Online safety** Trusted websites **Key Vocab** Websites Navigating Trusted Apps MSM SHOA	**Setting up an email** Usernames Passwords **Online Safety** Sensible Usernames – the info will be there for life. **Key Vocab** Email Usernames Passwords Sensible Digital Footprints MSM	**Google Apps – Exploring + Manipulating** Google Sheets **Online Safety** Appropriate/inappropriate things to send friends/people (nudes and sexting) **Key Vocab** Google Sheets Appropriate Inappropriate Nudes Sexting Friends	**Google Spreadsheets** Writing lists. Calculating costs (formula) **Online Safety** Term 5 – Digital Footprints – What happens online will always be there – how might this affect future employment? Term 6 – Spam emails – what not to do. **Key Vocab** Spreadsheets Google Calculating Formula Digital Footprints Future SHOA	**Key Vocab** Spreadsheets Google Calculating Formula Spam Emails MSM

	Identities Copy Acceptable MSM			CSE SHOA	MSM	
KS3 Cycle A National Curriculum	**Collaborating Online – Respectfully** Creating a memorable and secure password. Locating important documents Respectful emails How should we communicate online with peers? Presentations on cyberbullying. What is it? **Online Safety** Acceptable Usage Policy **Key Vocab** Respect Password Document Online Communication Peers Cyberbullying MSM	**Cybersecurity** Explain the difference between data and information. The Data Protection Act. Implement strategies to minimise the risk of data being compromised through human error. Define hacking in the context of cyber security. List the common malware threats. Compare security threats against probability and the potential impact to organisations **Online safety** Topic relates to online safety. **Key Vocab** Cybersecurity Data Information Implementation Error Hacking Malware Security Threat MSM	**Modelling Data – Spreadsheets** Exploring spreadsheets Explain the difference between data and information. Primary and secondary sources of data. Using spreadsheets to sort and filter data. **Online Safety** Sensible Usernames - the info will be there for life. Future employer consideration. **Key Vocab** Spreadsheets Data Information Primary Secondary Filter Username MSM SHOA	**Developing For the Web** (Google Sites / w3schools) What is HTML? Use it to structure static web pages. Display images within a web page. What is CSS? Use it to style static web pages. Describe what a "search engine" is and how they work. Complete a functioning website. **Online Safety** Appropriate/inappropriate things to send friends/people (nudes and sexting) - The Law **Key Vocab** Website Search Engine Functional Nude Sexting MSM SHOA CSE	**Mobile App Development** (Appsheet) Identify when a problem needs breaking down into smaller parts. Use user input in an event-driven programming environment Use variables in an event-driven programming environment. Use a block-based programming language to create a sequence. **Online Safety** Digital Footprints - What happens online will always be there - how might this affect future employment? **Key Vocab** Input Event Programming Digital Footprints MSM SHOA	**Using Media – Gaining Support For a Cause** Identify the key features of a word processor Appropriate images for a context Research sources to support your course and then analyse source credibility. Constructing a blog to support your cause. **Online Safety** Spam emails - what not to do. How can we avoid them? **Key Vocab** Processor Images Context Credibility Blog Emails Spam MSM
KS3 Cycle B Differentiated National Curriculum	**Staying safe online** Logging into the computer with an actual password What information must be	**Google** Images News Shop	**Safe use of a mobile phone** App guidelines What can we say via text/social media? Important phone numbers to know! What we must not do (nudes/sexting/photography without		**Online Shopping** Creating online accounts Reliable websites vs Scams Keeping bank details private	

	kept private. Privacy Settings How information about people online can be incorrect. **Online Safety** Acceptable Usage Policy **Key Vocab** Password Privacy Settings Information Misleading Acceptable MSM	**Online safety** Can we trust everything we see online? **Key Vocab** Google Images News Shop Trust Online MSM SHOA	permission) **Online Safety** Covered across the two terms. **Key Vocab** Mobile Phone Guidelines Text Social Media Emergency Number Permissions Nudes MSM SHOA	**Key Vocab** Mobile Phone Guidelines Text Social Media Emergency Number Permissions Nudes MSM SHOA	**Online Safety** Term 5 – Trustworthy sites - spotting if they are legit or not. Term 6 – Keeping important details safe - Bank details. Not responding to emails etc. **Key Vocab** Online Account Shopping Private Scams Details Trustworthy Websites MSM SHOA	**Key Vocab** Online Account Shopping Private Details Scams Emails Safe MSM SHOA
KS3 Cycle B National Curriculum	**Data Science** Define "data science". Recognise examples of where large data sets are used in daily life. Define the terms 'correlation' and 'outliers' in relation to data trends. Describe the need for data cleansing and utilise data cleansing on a set of data. Solve a problem by implementing steps of the investigative cycle on a data set. **Online Safety** Acceptable Usage Policy **Key Vocab** Data Science Data Sets Correlation Outliers Cleansing Implementation Investigation	**Media – Animations (Canva)** Add, move, and delete keyframes to make basic animations. Use edit mode and extrude. Use proportional editing. Use the knife tool. Create a stop motion. **Online safety** Can we trust everything we see online? **Key Vocab** Animations Add Move Delete Keyframe Edit Extrude Proportional Trust MSM SHOA	**Media – Vector Graphics (Canva)** Draw basic shapes. Manipulate individual objects. Combine paths by using operations (union, difference, intersection). Combine multiple tools and techniques to create a vector graphic design. Explain what vector graphics are. **Online Safety** App guidelines/age restrictions. **Key Vocab** Vectors Manipulation Union Difference Intersection Tools Guidelines Restrictions MSM	**Physical Computing (Lego Spike)** Use some programmable technology to create functioning programs using the built in input and output devices. Write programs that communicate with other devices by sending and receiving messages wirelessly. Evaluate design. **Online Safety** Safe use of a mobile - what not to send (nudes/sexting). What might happen if you do? **Key Vocab** Programming Functioning Input Output Communication Wireless Evaluation Mobile Nudes Sexting Consequence	**Representations** Recall that representations are used to store, communicate, and process information. Recall that characters can be represented as sequences of symbols and list examples of character coding schemes. Explain what binary digits (bits) are, in terms of familiar symbols such as digits or letters. Become familiar with bytes and the prefixes used for measuring representation size, such as 'kilo-', 'mega-', 'giga-' and 'tera-'. **Online Safety** Trustworthy sites - spotting if they are legit or not. **Key Vocab** Representations Store Communication Processing Characters	**Representations** Describe how digital images are composed of individual elements. Recall that the colour of each picture element is represented using a sequence of binary digits. Define key terms such as 'pixels', 'resolution', and 'colour depth'. Explain the function of microphones and speakers as components that capture and generate sound. Perform basic image editing tasks using appropriate software and combine them in order to solve more complex problems requiring image manipulation. Calculate representation size for a given digital sound, given its attributes. **Online Safety** Keeping important details safe

	MSM		SHOA	MSM SHOA	**Sequences** **Symbols** **Coding** **Binary** **Kilo** **Mega** **Giga** **Tera** **Trust** **Websites** MSM SHOA	**- Bank details. Not responding to emails etc.** **Key Vocab** Digital Image Elements Binary Pixels Resolution Colour Depth Microphone Speaker Editing Manipulating Passwords Emails MSM SHOA
KS3 Cycle C Differentiated National Curriculum	**Safe internet use.** Logging into the computer with an actual password Acceptable and unacceptable things to do. What type of thing to avoid (clickbait/popups) **Online Safety** Acceptable Usage Policy **Key Vocab** Internet Password Acceptable Unacceptable Clickbait Pop-ups MSM	**The Internet as a research tool** Using Google effectively. Filtering websites to find most appropriate. **Online Safety** Term 2 - Being careful what you search for. Sometimes, unpleasant things might appear. Term 3 - What can we do if we see something unpleasant? Tell an adult. **Key Vocab** Google Internet Research Filtering Appropriate Unpleasant Careful MSM SHOA CSE	**Key Vocab** Google Internet Filtering Research Appropriate Reporting Unsafe MSM SHOA CSE	**Google Apps - Exploring + Manipulating** Google Slides **Online Safety** Term 4 - Online bullying. How do we avoid it? Term 5 - Pressure online - What might it look like? **Key Vocab** Google Slideshow Background Images Insert Text Font Colour Online Bullying MSM SHOA	**Key Vocab** Google Slideshow Background Images Insert Text Font Colour Pressure MSM SHOA CSE	**Research project** Internet as a research tool Slides to present. **Online Safety** Consequences to negative online behaviour - The law. **Key Vocab** Research Slideshow Internet Google Consequences The Law Negative Behaviours MSM SHOA CSE
KS3 Cycle C National Curriculum	**Computing Systems** What is a computing system?	**Networks From Semaphores to the Internet**	**Programming Essentials Part 1** (Scratch/microbit)	**Programming Essentials Part 2** (Scratch/microbit)	**Introduction to Python Programming** (Python - W3schools.com)	**Python Programming with Sequences of Data** (Python)

	The function of hardware components. How hardware components work together to execute programs. Describe the NOT, AND, and OR logical operators, and how they are used to form logical expressions **Online Safety** Acceptable Usage Policy **Key Vocab** Computer System Function Hardware Software Execute Logical Operator Logical Expressions MSM	Defining computer networks. Hardware needed to connect devices to networks. Comparing wired and wireless networks. Difference between the internet and the World Wide Web. Services provided online. **Online Safety** Being careful what you search for. Sometimes, unpleasant things might appear. **Key Vocab** Computer Networks Hardware Device Internet World Wide Web Search MSM SHOA CSE	Compare how humans and computers understand instruction. Sequence and variables Condition as true/false Create conditions that use comparison operators (>,<,=) and logic operators (and/or/not). **Online Safety** What can we do if we see something unpleasant? Tell an adult + reporting via appropriate means (CEOP) **Key Vocab** Instructions Sequencing Variables Conditions Operators True False Reporting CEOP MSM SHOA CSE	Define a subroutine as a group of instructions that will run when called by the main program or other subroutines Define iteration and how it can be used in a program. Use appropriate constructs to solve a programming problem. **Online Safety** Online bullying. How do we avoid it? Who do we report it to? **Key Vocab** Subroutine Instructions Programming Iteration Cyberbullying Reporting MSM SHOA	Describe algorithms and programs and how they differ. Write simple Python programs. Use logic expressions and binary to control the flow of program execution. Use Boolean variables. Combine iteration and selection to control the flow of program execution. **Online Safety** Pressure online - What might it look like? **Key Vocab** Programming Algorithms Iteration Variables Expressions Execution MSM SHOA CSE	Write programs that display messages, receive keyboard input, and use simple arithmetic expressions in assignment statements. Use iteration (while statements) to control the flow of program execution. Combine key programming language features to develop solutions to meaningful problems. Apply all of the skills covered in this unit in a program. **Online Safety** Consequences to negative online behaviour - The law. **Key Vocab** Programming Data Sequencing Arithmetic Expression Application Consequences MSM SHOA CSE
Year 10 Entry Level 2	**IT USer Fundamentals**			**Online Basics**		

	Why do we shut down and log out of devices? How do we use our emails and passwords to log in? Why do we need to use different devices? What programs can we use on our device? Is one device better for this than others?	Where do we store our files? Why is it important to organise files correctly? How do we use It safely and securely? Why do we need to keep information secure?	How do we keep information secure? What would happen if everyone had access to all the hardware and software in school? What can I do if there's a problem? Where can I get help on It problems?	How can I start and shutdown applications and what would happen if I didn't? How do I use online software and how to do this safely and responsibility? What is an online browser? How can I use an online browser?	How can I use an online browser? What information do I need? How can I tell if something is reliable or not?	How do I send an email? How do I attach things onto an email? What can I attach to emails and why would I want to do it? How do I respond to emails I have read? How do I write an appropriate email to colleagues or friends?
	Online safety AUP MSM	**Online safety** Consequences to negative online behaviour - The law. MSM SHOA CSE	**Online safety** What can we do if we see something unpleasant? Tell an adult + reporting via appropriate means (CEOP). MSM SHOA CSE	**Online safety** Be careful what you search for. Sometimes, unpleasant things might appear. MSM SHOA CSE	**Online safety** Pressure online - What might it look like? MSM SHOA CSE	**Online safety** App guidelines/age restrictions. MSM SHOA
Year 10 Entry Level 3	Improving Productivity using IT		Internet Fundamentals		Using Email	

	What's the point in IT? Will IT make this easier? What tasks can IT aid us to complete things easier and quicker? What is copyright and why does it impact IT?	Why is it a good idea to get into routines and good habits using IT? Can we complete tasks which have been planned for us using IT? Was this a good use of IT, what were the positives or negatives and what would we do differently next time?	How can I access the internet? How can I use the internet to search and locate appropriate information? What can I do to make it easier to find something? How can I use G-Suite effectively to manage and download my files? I can use communicative information from the internet (podcast, text, images, blogs and instant messages)	I can send links and webpages and be able to fill-in and submit web forms; ratings, reviews, recommendations; wikis, discussion forums; interactive sites; using the correct 'netiquette'. What can be threatened online and how can I reduce the risk of these threats? What can I do to take precautions when working online? How can I keep my personal information secure?	How do I send an email? How do I attach things onto an email? What can I attach to emails and why would I want to do it? How do I respond to emails I have read? How do I write an appropriate email to colleagues or friends? How do I store contact information and contact groups?	Why should I follow guidelines when emailing? When should I read and respond to emails and who needs to see it? How do I organise emails? How do I deal with email problems? (Message size, junk, SPAM, viruses)
	Online safety AUP MSM	**Online safety** Pressure online - What might it look like? MSM SHOA CSE	**Online safety** What can we do if we see something unpleasant/have a concern? Tell an adult + reporting via appropriate means (CEOP). MSM SHOA CSE	**Online safety** Being careful what you search for. Sometimes, unpleasant things might appear. MSM SHOA CSE	**Online safety** Consequences to negative online behaviour - The law. MSM SHOA CSE	**Online safety** App guidelines/age restrictions. MSM SHOA
Year 11 Entry Level 2	**Presentation Software**		**Audio and Video Software**			**Online safety**
	What is presentation software, what is it used and why? How can we retrieve, and organise information into a presentation thinking about copyright constraints? How can I save this	How can I format slides to add Bullets, numbering, line spacing, alignment, colour, fonts, size, backgrounds, animation, sound and transition schemes, etc? What do I need to do to present my presentation?	What do I need to make digital video/audio files? How do I use software to create a video with audio on and what files do I need to use? How can I edit individual pieces of information so that I can produce a sequence?	How can I acknowledge copyright law when using video and Audio information? How can I play my video and audio sequence and what can I use to play it on?		Passwords + Usernames Who/what can we trust online Online Bullying Website Pop-ups Spam Emails Trustworthy sites. Keeping details safe. MSM

	presentation to be easily accessible to continue working on it? How do I Drag and drop, find, replace, undo/redo, size, crop and position objects; wrap text, add lines and simple shapes to edit my presentation?	Can I check for spelling, grammar and edit the orientation, layout, slide order, text alignment and formatting?	What can I do if I encounter a problem?			SHOA
	Online safety AUP MSM	**Online safety** Appropriate/inappropriate things to send friends/people (nudes and sexting) - The Law MSM SHOA CSE	**Online safety** Digital Footprints - What happens online will always be there - how might this affect future employment? MSM SHOA	**Online safety** Stranger Danger online - Why might people message you? MSM SHOA CSE	**Online safety** Learn that consent must be acquired before we use somebody. MSM SHOA CSE	
Year 11 Entry Level 3	**Presentation Software**		**Audio and Video Software**		**Imaging Software**	
	What is presentation software, what is it used and why? How can we retrieve, and organise information into a presentation thinking about copyright constraints? How can I save this presentation to be easily accessible to continue working on it? What do I need to do to make sure my presentation adheres to local guidelines? How do I select a template and theme for my slides?	How do I Drag and drop, find, replace, undo/redo, size, crop and position objects; wrap text, add lines and simple shapes to edit my presentation? How can I format slides to add Bullets, numbering, line spacing, alignment, colour, fonts, size, backgrounds, animation, sound and transition schemes, etc? What do I need to do to present my presentation? Can I check for spelling, grammar and edit the orientation, layout, slide order, text alignment and formatting?	What do I need to make digital video/audio files? How do I use software to create a video with audio on and what files do I need to use? Are there different software's available? How can I edit individual pieces of information so that I can produce a sequence?	What can I do if I encounter a problem? How can I acknowledge copyright law when using video and Audio information? How can I play my video and audio sequence and what can I use to play it on?	What images can I use to create something new? What is the best image format we can use? How can we adhere to copyright law? How can we export and store our work currently and safely? How can we use the correct tools and software to create, manipulate and edit?	**Online safety** Passwords + Usernames Who/what can we trust online Online Bullying Website Pop-ups Spam Emails Trustworthy sites. Keeping details safe. MSM SHOA
	Online safety AUP	**Online safety** Appropriate/inappropriate	**Online safety** Digital Footprints - What	**Online safety** Stranger Danger online - Why	**Online safety** Learn that consent must be	

	MSM	things to send friends/people (nudes and sexting) - The Law MSM SHOA CSE	happens online will always be there - how might this affect future employment? MSM SHOA	might people message you? MSM SHOA CSE	acquired before we use somebody. MSM SHOA CSE	
W6 Cycle A (0.5 a week)	**What can we believe online?** Logging in to a device Search terms Trustworthy sites AUP MSM	**Social Media** Stranger danger Consent Sensible Usernames Appropriate/innaporiate things to send. MSM	**Online Banking** Keeping details safe Who/what can you trust What a good password looks like. MSM		**Online Shopping** Spam emails Pop-ups Logging into an app. Trustworth sites. Logging into an app MSM	
10 minutes a week	**Basic Skills** Touch typing Session	**Basic Skills** Touch typing Session	**Basic Skills** Touch typing Session	**Basic Skills** Touch typing Session	**Basic Skills** Touch typing Session	**Basic Skills** Touch typing Session
W6 Cycle B (0.5 a week)	**What can we believe online?** Logging in to a device Search terms Trustworthy sites AUP MSM		**Social Media** Stranger danger Consent Sensible Usernames MSM		**Online Banking** Keeping details safe Who/what can you trust What a good password looks like. MSM	**Online Shopping** Spam emails Pop-ups Logging into an app MSM
10 minutes a week	**Basic Skills** Touch typing Session	**Basic Skills** Touch typing Session	**Basic Skills** Touch typing	**Basic Skills** Touch Typing	**Basic Skills** Touch Typing	**Basic Skills** Touch typing Session

Qualification

WJEC PATHWAYS QUALIFICATIONS FOR IT USERS