Computer Science Information Technology Digital Literacy including E-Safety

Target Tracker Statements

Year	Autumn	Spring	Summer
Early Years	***I can recognise that a range of technology is used in places such as homes and schools (ELG)*** ***I know how to use a mouse.***	***I can select and use technology for particular purposes (ELG)*** ***I am familiar with the keyboard.***	***I can complete a simple program on a computer.*** ***I can use ICT hardware to interact with age- appropriate computer software***

Further activities which can be used to supplement the curriculum

Communication and Language	Expressive Arts	Literacy	Mathematics	Physical Development	PSED	Understanding the world
Being Imaginative – 2Paint Listening and Attention – 2Simple Speaking - 2Create a story Understanding - 2Go	Being Imaginative – 2Paint a project Exploring and using media – 2Beat, 2Explore, 2Design and make	Reading - Mashcams, 2Create a story, Alphabet slideshow Writing – 2Connect, 2Publish	Numbers – Maths City 1, A fish metric, 2Count Shape, Space and Measure – Maths City 1 & 2, Shapes Pin, 2DIY	Health and Self care - 2Count green grocer	Making relationships – using tablets, PCs and interactive whiteboards. All About Me, Feelings	Self confidence and self awareness - MiniMash

Year 1	*I can tell an adult I trust when I see something unexpected or worrying online.* **I can keep my password private** **I always ask an adult before I go on the internet** **I can log in to the student drive** **I can log in to PurpleMash using a personal login** Unit 1.1 Online Safety & Exploring Purple Mash 6 Weeks Programs – Various *I can recognise how I use technology in my home and at school.* **I can understand what is meant by technology.** Unit 1.9 Technology outside school 2 Weeks Lesson plan on Learning Journey **I can sort and group data.** **I can understand that data can be represented in different ways.** Unit 1.2 Grouping & Sorting 2 Weeks Programs – 2Quiz **I can understand that data can be represented in different ways.** Unit 1.3 Pictograms 3 Weeks Programs – 2Count	I know why it is important for trusted adults to know what I am doing online. I can tell you what my personal information is. *I can use a program to create a simple document* I can create an animated storybook including sound, animation and backgrounds. Unit 1.6 Animated Story Books Weeks – 5 Programs – 2Create A Story *I understand an algorithm is a simple set of instructions.* I know that an algorithm written for a computer to follow is called a program. I know that correcting errors in an algorithm is called debugging. Unit 1.4 Lego Builders 3 Weeks Program– 2DIY	I say well done to my friends when I view their work. I always ask an adult before I go on the internet. I know what these are: clipart, photograph, text, video, and sound. *I can predict the behaviour of a programmed toy* I can understand the function of the direction keys. **I can create and debug an algorithm** Spheros / Beebots Unit 1.5 Maze Explorers 3 Weeks Programs – 2Go **I can explain what coding means.** **I can design and make a simple program using 2Code.** Unit 1.7 Coding 6 Weeks Programs – 2Code **I can use a simple spreadsheet to solve problems** Unit 1.8 Spreadsheets 3 Weeks Programs – 2Calculate

Year 2

I know I need to keep my personal information private
I know when I am playing a game with a real person on the internet.
I can talk about why I should only use the internet for a short amount of time.
I know what an advert looks like on the Internet.
I can describe things that happen on line that I must tell an adult about.

I can recognise how others use technology outside of school
How is technology used differently by others – entertainment / work / email / watching tv on devices
/ communicating with others

I can find, open, edit and save files I am working on I can use a spreadsheet to solve a mathematical puzzle.
Unit 2.3 Spreadsheets
4 Weeks Programs – 2Calculate

I can refine internet searches.
I understand how we talk to others
I understand what a digital footprint is.
Unit 2.2 Online Safety
3 Weeks Programs – Various

I know that some things on the Internet are not true. I know what these are: clipart, photograph, text, video, and sound.
I know that some things on the Internet are not true. I can explain why I need to keep my password private

I can use different software programs and discuss the benefits of their usage
I can construct a binary tree to separate different items.
I can use a database to answer more complex questions.
Unit 2.4 Questioning
5 Weeks Programs – 2Question, 2Investigate

I understand how internet searches work.
Unit 2.5 Effective Searching
3 Weeks Programs – Browser

I can predict the behaviour of a programmed toy, clearly relating each action to part of an algorithm I can create a simple program to perform a task
I can create and debug simple programs
I can find and fix simple bugs in programs
I can understand that programs run by following clear instructions
Spheros / BeeBots escape from a maze

I can create a computer program using simple algoithms
I can debug simple programs
I can predict what objects will do
Unit 2.1 Coding

I can talk about why it is important to be kind and polite online and in real life.
I know pictures on the Internet belong to the person who puts them there
I say well done to my friends when I see their work.
I know that not everyone is who they say they are on the internet.

I can create surrealist art using drawing and clip art.
Unit 2.6 Creating Pictures
5 Weeks Programs – 2PaintAPicture

I can create a tune using sound I have recorded and uploaded.
Unit 2.7 Making Music
3 Weeks Programs – 2Sequence

I can present my ideas in a variety of ways.
Unit 2.8 Presenting Ideas
4 Weeks Programs – Various

5 Weeks Programs – 2Code

Year 3	*I know I need to keep my password and personal information secure.* *I can recognise acceptable and unacceptable behaviour online* **I can use the safety features of websites as well as reporting concerns to an adult.** **I can make good choices about how long I spend online.** *I can understand that programs run by following clear instructions* *I can use a range of input and output devices efficiently* Use terms input / output devices to describe eg mouse, keyboard, monitor printer. *I can produce a simple program that completes a given task* *I can explain how simple algorithms solve a given problem* **I can design and write a program that simulates a physical system** **I can make use of X and Y properties of objects. I can use the repeat command.** Unit 3.1 Coding 6 Weeks Main Programs – 2Code **I can understand how a blog can be used to communicate** **I can evaluate the reliability of websites I can regognise PEGI restrictions** Unit 3.2 Online safety 3 Weeks Programs – Various	**I know I must check who it belongs to before I copy images or text.** **I ask an adult before downloading files and games from the internet.** *I understand that computer networks allow data to be transferred and shared* Understand that files are saved to a central location called a server, which can be accessed from different devices. *I understand that the internet is a large network that enables computers to share information* The internet is a large network of interconnected computers that allows sharing of information. IP addresses are a group of numbers that identify every single computer. URL is a web address that links to a file in an IP addresses. The URL is accessed by clicking, which creates a hyperlink to the file. Hyperlinks may be embedded on webpages, emails, etc. **I can use email safely** **I can attach files to email** Unit 3.5 Email (including email safety) 6 Weeks – Programs – 2Email, 2Connect, 2DIY *I can use a search engine to find web pages* *I understand that not all websites are as reliable as others* *I can make choices on which program is best for a given task* Making good choices about which software is best to use eg. Word, publisher, excel	I know how to communicate safely with others online and use age appropriate websites to do this. I know that some information on the internet is not accurate. I must think carefully before I rely on it. **I can create a branching database** **I can use and debug a branching database** Unit 3.6 Branching Databases 4 weeks Programs 2Question **I can understand what a computer simulation is I can analyse and evaluate a simulation** Unit 3.7 Simulations 3 Weeks Programs – 2Simulate, 2Publish **I can solve an investigation and present the results in graphic form** Unit 3.8 Graphing 2 Weeks Programs – 2Graph	

	I can create pie charts and bar graphs to present information **I can describe a cell location** Unit 3.3 Spreadsheets 3 Weeks Programs – 2Calculate	**I can practise and improve typing skills** Unit 3.4 Touch Typing 4 Weeks Programs – 2Type	

Year 4

I know what to do if I see anything worrying online I can choose a secure password and appropriate screen name when I am using a website

I can use more complicated input devices
Input devices need to be connected to a computer – including wirelessly. Make good choices about which input devices match the task most appropriately including using data loggers.

I understand that some computers on a network serve particular functions, such as controlling printers or sharing files
Explain how the school network works – pupil logins / shared folders / connection to printers. Managed by a server, which is locked away and runs on it's own allowing computers to link to it.
I can use the formula wizard
I can use a spreadsheet for budgeting
Unit 4.3 Spreadsheets
6 Weeks Programs – 2Calculate

I can break programs up into smaller parts
I can use logical thinking to identify and solve potential bugs during coding
I can use other programs as I code
Sphero
I can create a programme that responds to the 'If / Else' command
I can create an algorithm modelling the sequence of a simple event
Unit 4.1 Coding
6 Weeks –Main Programs – 2Code

I can make good choices about how long I spend online.
I respect what other people present on the internet. *I understand that what I say or post on the internet might be copied, shared and stored by others*

I can use different software programs and different types of hardware I can use a range of programs to complete a task
Present information – science experiment / powerpoint / prezzie

I understand how search engines order their search results
Children should search child friendly website only. Eg Google for Kids, Kid Splorer, Kiddle. Keywords will appear on all listed websites. The higher ranked websites are more reliable. Keywords can mean more than one thing (Jaguar could be animal or car) so more than one keyword can refine your search.

I can use text formatting to make a piece of writing fit for purpose
I can use 2Connect to mindmap ideas
Unit 4.4 Writing for different audiences
5 Weeks Programs – 2Email, 2Connect, 2DIY

I can use the language of Logo
I can use Logo instructions to create a picture
Unit 4.5 Logo
4 Weeks Programs – Logo

I comment positively and respectfully online and through text messages.
I can recognise that websites use different methods to advertise products.
I choose websites and games that are appropriate for my age.

Use logical reasoning to explain how increasingly complex algorithms work to ensure a program's efficiency
Eg, data loggers – linked to science,cameras, web cams? Explain how input is transferred from the device to the computer (memory card, wire)

I can create a simple animation
I can explore stop motion animation
Unit 4.6 Animation
3 Weeks Programs – 2Animate

I can structure search queries to locate specific information
I can assess whether an information source is true and reliable.
Unit 4.7 Effective Search
3 Weeks Programs – Browser

I understand the different parts that make up a computer
Unit 4.8 Hardware Investigators 2 Weeks

I can identify the risks and benefits of installing software including apps.
I understand that copying someone else's work is called plagiarism.
Unit 4.2 Online safety
4 Weeks Programs – Various

Year 5

I keep my password and personal information private.
I can discuss appropriate and inappropriate use of the internet.
I support my friends to protect themselves and make good choices online.
I can explain why I need to protect my computer or device from harm.

Begin to use internet services to share and transfer data to a third party. Understand that information can be shared using the Internet eg, blogs, email, instant messaging, video chat (link to E-Safety). Share ideas of cloud stage, instant file sharing and web based applications eg PurpleMash. Save game created below onto the PurpleMash display board for others to play.
Unit 5.5 Game Creator
5 Weeks Programs – 2DIY 3D
I can create a playable, competitive game I can create a program to inform others Unit 5.1 Coding
6 Weeks Main Programs – 2Code

I can understand the advantages and disadvantages, permissions and purposes of altering an image digitally
Unit 5.2 Online safety
3 Weeks Programs - Various

I can create a formula in a spreadsheet
I can use text variables to perform calculations
Unit 5.3 Spreadsheets
6 Weeks Programs – 2Calculate

I can explain why I need to protect myself and my friends, and the best way to do this including reporting my concerns to a friend.
I know anything I share online can be seen and used by others. The way I use the internet demonstrates I respect the people I share it with.
I know that a website has an author who is targeting an audience.

I can search for information on a database I can create a database
Unit 5.4 Databases
5 Weeks Programs – 2Question, 2Investigate

Independently select and use appropriate software for a task
Independently select, use and combine a variety of software to design and create content for a given audience
Use filters in search technologies effectively and appreciates how results are selected and ranked
Make advanced searches using the dash key and discuss how results are presented. Select program to present information for others to access. (Animal project)

Design, write and test simple programs that follow a sequence of instructions or allow a set of instructions to be repeated
Design write and test simple programs with opportunities for selection, where a particular result will happen based on actions or situations controlled by the user
Use logical reasoning to explain how increasingly complex algorithms work to

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I know that some people publish inaccurate information on the internet.
I understand how to choose online content for my age group I know which resources on the internet I can download and use.

I can explore different viewpoints in 3d modelling I can explore the possibilities of 3d modelling.
Unit 5.6 3D Modelling
4 Weeks Programs – 2Design and Make

I can create a concept map
Unit 5.7 Concept Maps
4 Weeks Programs – 2Connect

ensure a program's efficiency
Spheros

Year 6

I know how to report concerns to an adult in and out of school.
I can choose a secure password for different purposes.
I can explain the consequences of spending too much time online or on a game.

I understand how computers are able to communicate and share information
I can use and combine services on the internet to share information
I can use more than one piece of software to complete a task

I can combine software and hardware to solve real life problems
I can break code up into related instructions, making debugging easier and quicker
I can store and retrieve variables in a program
I can use loops, variables and IF statements to alter the way my programs run
I can use logical thinking to identify and solve potential bugs during coding
Spheros

I can identify the benefits and risks of mobile devices I can understand the importance of balancing screen time
Unit 6.2 Online safety
3 Weeks Programs - Various

I can use software to help me analyse and present data and information
I can explore probability

I protect my computer or device from harm online.
I can recognise trustworthy sources of information on the internet
I can use a broad range of resources online to find exactly what I'm looking for
I can explain the consequences of sharing too much of myself online.
I can explain the consequences to myself and others for not communicating kindly and respectfully.
I can identify the features of successful blog writing I can understand the importance of commeting on blogs
Unit 6.4 Blogging
5 Weeks Programs – 2Blog

I can create a story based adventure
I can code a map based text adventure
Unit 6.5 Text Adventures
5 Weeks Programs – 2Code, 2Connect

I know that using unreliable information will mislead people.
I know that websites can use my data to make money and target their advertising.
I always acknowledge the source of materials I use in my work.
I ask my friends before I use things I created in my work.

I can understand what a LAN and WAN are
I can consider what the future might hold for IT
Unit 6.6 Networks
3 Weeks
I can use variables within a game
I can create a simulation of a room in which devices can controlled
Unit 6.1 Coding
6 Weeks Main Programs – 2Code

I can design a program for a given audience

I can create a picture quiz for young children
Unit 6.7 Quizzing
6 Weeks Programs – 2Quiz, 2DIY, Text Toolkit, 2Investigate