Joseph Turner Primary School

Computing Skills Progression Map

Computing Curriculum/ Framework Objectives

EYFS Framework

Understanding the World – Technology

30-50 Months

- To know how to operate simple equipment.
- To show an interest in technological toys with knobs or pulleys, or real objects.
- To show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images.
- To know that information can be retrieved from computers.

40-60 Months

- To complete a simple program on a computer.
- To interact with age-appropriate computer software.

ELG

- To recognise that a range of technology is used in places such as homes and schools. To select and use technology for particular purposes.

National Curriculum

Key Stage 1

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions;
- create and debug simple programs;

Key Stage 2

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts;
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output;
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in

• use logical reasoning to predict the behaviour of simple programs; • use technology purposefully to create, organise, store, manipulate and retrieve digital content; • recognise common uses of information technology beyond school; • use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.	algorithms and programs; • understand computer networks including the internet; how they can provide multiple services, such as the world wide web, and the opportunities they offer for communication and collaboration; • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content; • select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information; • use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Intent, Implementation and Impact Statements

Intent
At Joseph Turner Primary School, we aim for our pupils to gain confidence whilst using technology and understand its role in our developing world. We want to model and educate our children on how to use technology positively, responsibly and safely. We want our children to understand the creativity technology can encompass and our broad computing curriculum includes the strands computer science, information technology and digital literacy with online safety an element in all units. Our staff recognise that technology can be used to enhance learning in creative ways and opportunities for children to apply their technological skills across the curriculum are used on a regular. We hope that by the end of key stage 2, children have the independence and confidence to choose the best tool to express their learning.
Implementation

At Joseph Turner, computing is taught weekly using the *'Rising Stars Switched on Computing'* scheme. Each lesson is to be adapted from *Rising Stars* to suit the learners in that class and to ensure technology is taught effectively to meet the needs of our pupils. The *Rising Stars* scheme closely references the 2014 National Curriculum attainment targets to ensure progression and coverage throughout the school. Weekly lessons allow the children to develop depth within their knowledge and skills, discrete opportunities are planned across the curriculum.
Children will use either iPads, Chromebooks or Laptops to complete their computing lesson and software has been closely matched in order for the unit objectives to be achieved effectively. In accordance to our school's feedback policy, children will receive regular feedback throughout their lessons. Evidence of children's learning will be uploaded on to Seesaw, where they will receive more in depth feedback and the progress of the learning journey will be seen.

Impact

The structure of our computing curriculum encourages our children to explore and enjoy technology in a progressive way. Learning is revisited each year to ensure children rehearse and apply their learning whilst learning new skills. We want learners to discuss, share and reflect on computing and understand how this can impact their learning across the curriculum. We look for evidence through reviewing pupil's knowledge and skills digitally on a regular basis through tools like Seesaw.

Computing Skills Overview

The document below has been designed to show how we will cover all of the relevant Computing skills across our school.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science Problem Solving	The pupil can understand algorithms as sequences of instructions in everyday contexts. The pupil can take real-world problems and then plan a sequence of steps to solve these. The problems could be moving a Blue-Bot from one point to another, or making some simple food items like a sandwich, smoothie or overnight oats. (E.g. In 1.1, recognise a set of directions as an algorithm. In 1.2, recognise the steps of a recipe as an algorithm.)	The pupil can understand algorithms as sequences of instructions or sets of rules in everyday contexts. The pupil can recognise that common sequences of instructions or sets of rules can be thought of as algorithms. Examples could include recipes, but might also be procedures or rules in class, spelling rules, simple arithmetic operations or number patterns. (E.g. In 2.1, recognise sets of directions as algorithms. In 2.2, recognise that the rules of a game are an algorithm. In 2.3, think of the steps to	The pupil can explore simulations of physical systems on screen. The pupil can experiment with some on-screen simulations of physical systems, perhaps linked to topics from other curriculum areas, e.g. a ball bouncing on a bat or a car moving around a track. Many computer games include elements of computer simulations. The pupil can discuss what they have learned from using the simulation. The pupil can plan a project. Working with the teacher and, perhaps, other pupils, the pupil can develop an outline	The pupil can develop their own simulation of a simple physical system on screen. The pupil can work with others to plan a project. Given a particular project, the pupil can work as part of a team to plan how to accomplish their goal, breaking the project down into a set of tasks. Examples of projects could include creating an educational game or monitoring the weather.	The pupil can experiment with computer control applications. The pupil can plan a solution to a problem using decomposition. The pupil can take a complex problem, identify component parts, use decomposition to break this problem down and then plan how they can solve the problem by working through the elements they have identified. Projects could include developing a computer game, creating a website or designing a building.	The pupil can design, write and debug their own computer control application. The pupil can solve problems using decomposition, tackling each part separately. The pupil can take a complex problem, identify component parts, use decomposition to break this problem down and then plan how they can solve the problem by working through the elements they have identified. they can then use their plan to solve the original problem.

	The pupil can program floor turtles using sequences of instructions to implement an algorithm. The pupil can create a Blue-Bot (or similar) program using a number of steps in order before pressing the Go button. The length of the pupil's programs might increase over the year. (E.g. In 1.1, create a Blue-Bot program, implementing the complete algorithm for their solution.)	taking and editing photographs as an algorithm.) The pupil can program in ScratchJr using sequences of instructions to implement an algorithm. The pupil can create ScratchJr programs using sequences of instruction blocks, perhaps planning these first. The pupil's programs should become longer as the year progresses. (E.g. In 2.1, create a ScratchJr program to move a rocket sprite to another planet, perhaps with sound and animation. In 2.2 understand that computer games in Scratch are made up	plan for a project in computing, involving multiple steps and resources, e.g. creating an animation, filming a video or conducting a survey. In video work, the plan might include identifying a subject; storyboarding the video; sourcing media; recording video; filming; editing; exporting.			

		of precise instructions for the computer to follow)				
Computer Science – Programming	The pupil can give a sequence of instructions to a floor turtle. The pupil can create a Blue-Bot program using a sequence of instructions before running it using the Go button. The length of the pupil's programs might be expected to increase over the course of the year. (E.g. In 1.1, give the Blue-Bot a complete program.)	The pupil can create a simple program on screen, correcting any errors. The pupil can create a simple program on screen (e.g. using ScratchJr) with a particular goal or purpose in mind (e.g. moving a sprite from one place to another). The pupil can debug any errors in their own code. (E.g. In 2.1, create their own program for the rocket sprite in ScratchJr, correcting any errors.)	The pupil can use sequence in programs. In on-screen programming, the pupil's program should include a sequence of commands or blocks in an appropriate order. A typical program could be a simple scripted animation, e.g. telling a joke, a story or explaining an idea taken from elsewhere on the curriculum. The pupil's program might include multiple sprites; instructions could include movement, on-screen text, sound and/or costume changes. The pupil can write a program to produce output on screen. The pupil can create a	The pupil can use sequence and repetition in programs. The pupil's program, typically written in Scratch, or similar, should include sequences of commands or blocks and some repetition. Repetition would typically be for a fixed number of times, but might also include exit conditions (e.g. repeat...until...). Programs might include simple music or a simple game. The pupil can write a program that accepts keyboard input and produces on-screen output. In Scratch (or similar), the pupil can write a program that displays a question, accepts typed input and	The pupil can use sequence, selection and repetition in programs. The pupil's program, typically written in Scratch, or similar, should include sequences of commands or blocks, some repetition and selection. Repetition might include exit conditions (e.g. repeat...until...). Selection would normally be of an if...then or if...then...else type. At this level, expect the pupil to be able to combine repetition with selection. Programs might include a computer game. The pupil can write a program that accepts keyboard and mouse input and produces output on screen and through speakers.	The pupil can use sequence, selection, repetition and variables in programs. The pupil's program should include sequences of commands or blocks, repetition, selection and variables. Repetition might include exit conditions (e.g. repeat...until...) and perhaps a counter-variable for iteration. Selection would normally be of an if...then or if...then...else type. At this level, expect the pupil to be able to combine repetition with selection and variables. The pupil can write a program that accepts inputs other than keyboard and mouse and produces outputs other than screen or speakers.

			program that produces output on screen, such as moving sprites or displayed text, e.g. a simple animation program.	responds in an appropriate way to what is typed. This might be used as the basis for a dialogue program or a simple maths game.	In Scratch (or similar), the pupil can create a computer game using the keyboard or mouse for input and the screen and speakers for output.	
Computer Science – Logical Thinking	The pupil can give explanations for what they think a program will do. The pupil can explain to the teacher, and to peers, what they think a program will do. This could be a program they or their peers have written, or it could be a familiar piece of software (including computer games). The pupil could use an audio recorder or video camera to capture their explanations.	The pupil can give logical explanations for what they think a program will do. The pupil can give logical explanations of what a program will do under given circumstances, including some attempt at explaining why it does what it does. The program could be one they have written or it could be a computer game or a familiar piece of software. The pupil could use an audio recorder or a video camera to record their explanations.	The pupil can explain a simple, sequence-based algorithm in their own words. The pupil can give an explanation for a simple algorithm based on a sequence of instructions. The algorithm could be one of their own, or a simple one with which they have been provided. The algorithms could be recorded graphically, e.g. as a storyboard. The pupil can use logical reasoning to detect errors in programs.	The pupil can explain an algorithm using sequence and repetition in their own words. Given an algorithm using both sequence and repetition, the pupil can give a coherent, logically reasoned explanation of what it does and how it works. Repetition is likely to be 'forever' or for a set number of times, although end conditions (e.g. repeat...until...) could be used. The pupil can use logical reasoning to detect and correct errors in programs.	The pupil can explain a rule-based algorithm in their own words. When provided with a rule-based algorithm (e.g. for a computer game), the pupil should be able to explain what it does and how it works, in their own words. The pupil can use logical reasoning to detect errors in algorithms. When given an algorithm for a particular purpose, e.g. a rule-based algorithm for a computer game or a sequence	The pupil can give clear and precise logical explanations of a number of algorithms. Given an algorithm, the pupil can describe what it does and, using logical reasoning, give precise explanations of how it works. Algorithms could be linked to programming projects, but might include a key algorithm such as binary search. The pupil can use logical reasoning to detect and correct errors in algorithms (and programs).

	(E.g. In 1.1, explain what their own or another pupil's program will do before it is run.)	(E.g. In 2.1, give logical explanations for what their own or their peers' programs will do. In 2.2, give logical explanations for what happens in the games.)	The pupil can give well-thought-through reasons for errors they find in programs. Typically, the pupil can find errors by reasoning logically about the program code, but they might also be able to use logical reasoning to identify errors in programs when they are executed. The programs do not have to be written originally by the pupil.	The pupil can give well-thought-through reasons for errors they find in programs and explain how they have fixed these. The pupil can find and correct errors by reasoning logically about the program code; they might also be able to use logical reasoning to identify errors in programs when executed and confirm that they have fixed these by testing the new version of their program. The programs do not have to be written originally by the pupil.	of steps to draw a geometric pattern, the pupil can use logical reasoning to identify possible errors in the algorithm, explaining why they believe the algorithm is incorrect.	When given an algorithm for a particular purpose, e.g. a rule-based algorithm for a smartphone app, the pupil can use logical reasoning to identify possible errors in the algorithm, explaining why they believe the algorithm is incorrect. The pupil can use logical reasoning to suggest possible corrections to the algorithm, explaining why these would correct the bug they identified.
Computer Science – Wider			The pupil can understand that computer networks transmit information in a digital (binary) format. The pupil can explain that any information has to be	The pupil can understand that the Internet transmits information as packets of data. When working online, the pupil can explain that the	The pupil can understand how data routing works on the Internet. The pupil can give a coherent explanation of how data packets are routed from one	The pupil can understand how mobile phone or other networks operate. The pupil can give an explanation of how networks operate: they should know

			converted to numbers before it can travel through computer networks. The pupil should understand that this conversion happens according to an agreed system or code. The pupil can understand that email and videoconferencing are made possible through the Internet. The pupil should know that email messages are sent and received through servers connected to the Internet. The pupil should know that other systems also work through the Internet, but these services may be direct, peer-to-peer connections rather than via servers.	information they send and receive is automatically broken down into packets of data, and that these sometimes take different routes across the Internet. The pupil can understand how the Internet makes the web possible. The pupil can give an explanation of how requests for web pages, and the HTML for those pages, are transmitted via the Internet.	computer to another on a separate network, which is also connected to the Internet. The pupil can understand how web pages are created and transmitted. The pupil can explain how HTML is used to create a web page and how it is transmitted as packets of digital data over the Internet. The pupil should have an awareness of simple HTML tags for marking up a web page.	that information is transmitted digitally, and have some understanding of the network topology involved. The pupil can understand how domain names are converted into IP addresses on the Internet. The pupil can give some explanation of how a domain name is converted into an IP address using the distributed domain name system (DNS) using something similar to a set of phone books. The pupil should show an awareness of the looked-up addresses (DNS records) being copied (cached), and that more local records are used in preference to more authoritative records in most circumstances.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology – Creating Content	The pupil can use digital technology to store and retrieve content. The pupil can use a range of digital technologies to store and access digital content. These might include laptop computers, tablets, smartphones, digital cameras, video cameras and audio recorders. Projects might include videoing one another cooking, developing an eBook or an audiobook, creating a greetings card. (E.g. In 1.2, film and upload a pupil cooking. In 1.3, save their artwork and retrieve it. In 1.4, open their eBook, import images sourced online to their eBook and save. In 1.5, record audio, import it to the computer and save	The pupil can store, organise and retrieve content on digital devices for a given purpose. With a given purpose, the pupil can use a range of digital technologies to retrieve, organise and store digital content. Technologies will typically include laptop computers, tablets and smartphones with access to the Internet, but the pupil might also be expected to use digital cameras, video cameras and audio recorders (or the equivalent apps on a tablet or smartphone). Projects might include digital photography, searching for images online and creating image-based presentation slides. (E.g. In 2.3, review, reject	The pupil can use a range of programs on a computer. The pupil can use a range of software on laptop or tablet computers with some degree of independence. Software might include video editing, diagnostic tools, email clients, videoconferencing (with the teacher or another adult), survey design software, spreadsheets and presentation software. The pupil can design and create content on a computer. The pupil can plan and execute a project in which they use software on a laptop or tablet to create digital content with some degree of independence. For example, they could plan and shoot a video, plan and create a presentation on a given topic	The pupil can use and combine a range of programs on a computer. The pupil can use multiple programs on laptop or tablet computers to achieve particular goals. For example, they might record audio and then use this as samples in a composition; create HTML content in a text editor and preview it in a browser; analyse data in a spreadsheet and then create a presentation to show the results of their analysis. The pupil can design and create content on a computer in response to a given goal. With a given goal, the pupil can plan and execute a project in which they use software on a laptop or tablet to create digital	The pupil can use and combine a range of programs on multiple devices. The pupil can use multiple digital devices (such as tablets and laptops or digital cameras and laptops) to achieve particular goals. The devices might include web servers, allowing them to use cloud-based applications. For example, they might use local media in conjunction with a cloud-based programming platform, such as Scratch; digital cameras and video cameras to capture content to use on an externally hosted website or blog; a digital camera to take photos they could import into 3D design software on a laptop. The pupil can design and create programs on a computer in response to a	The pupil can select, use and combine a range of programs on multiple devices. The pupil can choose for themselves from a range of available programs on laptops, tablets or cloud-based services to achieve particular goals. For example, they might choose which image editors and presentation software to use when making a presentation; which image and audio editors to use when creating media content for an app; which DTP, video editor and website tools to use when developing marking materials for an app. The pupil can design and create systems in response to a given goal. The pupil can plan, design and implement a system with multiple, interrelated

	their work. In 1.6, open, modify, add images to and save their popplets; fill in spreadsheets and Google Forms.) The pupil can create original content using digital technology. The pupil can create their own original digital content using a range of technologies. These might include laptop computers, tablets, smartphones, digital cameras, video cameras and audio recorders. Projects might include videoing one another cooking, developing an eBook or an audiobook, creating a greetings card. Look for some indication of the pupil's creativity in this work. (E.g. In 1.2, film digital video.	and rate the photographs they have taken. In 2.4, retrieve information and images from websites into presentations, and save their work. In 2.5, film a working stop-motion video. In 2.6, use questions to sort and classify objects; take, upload and organise photographs; add information to a map.) The pupil can create and edit original content for a given purpose using digital technology. The pupil can create and edit their own original digital content using a range of technologies. Content-creation technology might include laptop computers, tablets, smartphones with network connections, digital	or plan and then create an online survey.	content with some degree of independence. For example, they could plan and compose original music using sequencing software; plan and create a web page; plan how they could contribute to a shared wiki and then do so; plan and create a presentation about the weather. They should evaluate how effectively they have met the requirements of the original goal.	given goal. The pupil can design a program of their own in response to a given goal and write this in a block-based language such as Scratch. The program need not be complex – a simple game would suffice, but it should be accomplished with a degree of independent working.	components with a given goal in mind.

	In 1.3, create an original painting. In 1.4, create an eBook including images and original text. In 1.5, create and record original digital audio. In 1.6, create data tables and trees.)	cameras, video cameras and audio recorders, although editing is likely to take place on laptops or tablets. Projects might include digital photography, creating image-based presentation slides, composing an email and creating simple charts. Look for some indication of the pupil's creativity in this work and evidence that they have edited content. (E.g. In 2.3, take and edit original digital photographs. In 2.4, create and edit their own presentation. In 2.5, film and edit a stop-motion video. In 2.6, take and edit photographs and create and edit charts.)				

Information Technology – Searching			The pupil can search for information within a single site. The pupil can use browser-specific tools (e.g. the Find command) and site-specific tools (such as the search tools for Wikipedia or YouTube) to locate particular information on a web page or within a website. The pupil can understand that search engines select pages according to keywords found in the content. When using search engines, the pupil should demonstrate their understanding that the pages shown include the keywords they have specified. The pupil can use this knowledge by thinking of good keywords appropriate for what they are searching.	The pupil can use a standard search engine to find information. The pupil can use a common search engine (such as Google with safe search mode locked in place) effectively, to search for particular information on the web, such as answers to questions they identify in a research project. The pupil can understand that search engines rank pages according to relevance. The pupil can demonstrate their understanding that search engine results are ranked according to relevance, and that normally the top results on the first page are likely to be those most relevant to their query. If the pupil is unable to find	The pupil can use filters to make more effective use of a standard search engine. The pupil can use a common search engine (such as Google with safe search mode locked in place) effectively, to search for particular information on the web, such as answers to questions they identify in a research project. They should use built-in search tools to filter their results, such as by time, location or reading level. The pupil can understand that search engines use a cached copy of the crawled web to select and rank results. The pupil can explain how a search engine creates an index from a cached copy of	The pupil can make use of a range of search engines appropriate to finding information that is required. The pupil can show that they can use effectively a range of different search technologies, including alternatives to Google (such as Bing or Yahoo) and site-specific search engines (such as those for the App Store or Google Play). E.g. They could demonstrate how they would use a range of search engines when researching available smartphone apps for a particular purpose. The pupil can appreciate that search engines rank pages based on the number and quality of in-bound links. The pupil can demonstrate some awareness of the Page

				good results on the first page, expect them to reconsider their keywords rather than looking at further pages of results.	the web and uses this to select and rank results. The pupil might also show an awareness of the Page Rank algorithm in which results are ranked according to the number and quality of in-bound links.	Rank algorithm, explaining that the quality of a page is determined largely on the basis of the number and quality of links pointing to that page in the engine's cached copy of the web, and that quality is itself determined recursively through Page Rank.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy – E-Safety	The pupil can keep themselves safe while using digital technology. The pupil can understand that they need to keep safe when using digital technology. For example, they should know to use filtered Safe Search when looking for images on the web and that they should close the lid of a laptop (or	The pupil can keep safe and show respect to others while using digital technology. The pupil should know that they need to keep themselves safe when using digital technology. E.g. They should know to use filtered SafeSearch when looking for images on the web and that they should close the lid of a laptop (or similar action) if	The pupil can use digital technology safely and show respect for others when working online. The pupil should know that they need to keep themselves safe when using digital technology. For example, they should show respect for others when filming and should not normally post videos online. If responding to online surveys,	The pupil can demonstrate that they can act responsibly when using computers. The pupil can act responsibly when using computers. For example, they should act responsibly when developing computer games or prototype products. They should behave responsibly when using sampled music or creating a composition. They should	The pupil can demonstrate that they can act responsibly when using the Internet. The pupil can act responsibly when using the Internet. For example, they should act responsibly when participating in an online community, such as the Scratch community, if permitted to do so. They should demonstrate that they	The pupil can show that they can think through the consequences of their actions when using digital technology. The pupil can discuss likely and potential consequences of their actions when using digital technology in a range of contexts. Contexts might include developing smartphone apps; using online project management tools; collecting

	turn over a tablet) and alert an adult if they come across unsuitable content. (E.g. In 1.3 and 1.4, close their laptop (or turn over their tablet) and tell a teacher if they find inappropriate images.) The pupil can understand that information on the Internet can be seen by others. The pupil should be aware that information stored on the web or transmitted via the Internet is available to other people. E.g. They should know that the images they find online can be found by others too, and that the queries they type in can be seen by those who run the search engine they use and the school's	they find inappropriate images. They should know to respect others' rights, including privacy and intellectual property when using computers, so should not look at someone else's work or copy it without permission and acknowledgement. They should observe age restrictions on computer games. (E.g. In 2.2, observe age restrictions when playing games out of school. In 2.3, ask before taking photos of others. In 2.4, know what to do if they encounter inappropriate content; acknowledge the source of information they use. In 2.6, know not to post	they should do so anonymously, thinking carefully about information they give out. The pupil can recognise unacceptable behaviour when using digital technology. The pupil can identify what would be unacceptable or inappropriate behaviour when using digital technology in a range of contexts. For example, they should know what would be unacceptable when using online communities, such as the Scratch website, or when shooting or publishing video. They should know what would be unacceptable use of the Command prompt, email or online survey tools. Know who to talk to about concerns and inappropriate behaviour in school.	show responsibility when creating or remixing online content, including observing copyright and any terms and conditions. They should contribute positively to a shared wiki. The pupil can understand the difference between acceptable and unacceptable behaviours when using digital technology. The pupil can discuss the difference between acceptable and unacceptable behaviours when using digital technology in a range of contexts. Contexts could include the Scratch website, or other online communities; the use of others' original content, such as music samples or web pages; wikis, including Wikipedia.	understand the importance of encrypted (HTTPS) connections when browsing the web and of using strong passwords to protect their identity online. They should act responsibly when creating, editing or commenting on web pages or blog posts. The pupil can discuss the consequences of particular behaviours when using digital technology. The pupil can discuss the likely or possible consequences of particular behaviours when using digital technology in a range of contexts. Contexts could include the Scratch website, or other online communities; using cryptography and passwords; creating websites or writing blog posts.	information for market research; posting original content online. The pupil can identify principles underpinning acceptable use of digital technologies. The pupil can identify some principles underpinning acceptable behaviour when using technologies in a range of contexts. Contexts could include smartphone or tablet use; the use of online project management tools; online surveys and recording of interviews; creating and sharing digital content. Know a range of ways to report concerns and inappropriate behaviour in a variety of contexts. Pupils should know how to report inappropriate behaviour when using technology in school: preferably this will be to

	network. (E.g. In 1.2, 1.3, 1.4 and 1.6, know that some personal information and images should be kept private, and understand what should not be posted online. In 1.3 and 1.4, realise that the images they search for can be seen by others.) The pupil can understand what to do if they see disturbing content online at home or at school. The pupil should know to close their laptop lid or turn their tablet over if they find content, such as inappropriate images, which might disturb them or other pupils. They should know to tell their teacher or their parents/carers if this happens.	images with metadata to the open web.) The pupil can understand that they should not share personal information online. The pupil should understand that personal information should be kept private: it should not be posted online to a public audience and should only be shared privately with those who they (or their parents) would trust. E.g. The pupil should recognise that photos they take in school should not normally be posted to the open web. They should know that photos taken with smartphones often contain hidden information about where the photo was taken. (E.g. In 2.2 and 2.6, know that photos of themselves or	Pupils should know to report inappropriate behaviour when using technology in school to their teacher, the network manager or another trusted adult, and that they can discuss any concerns they have with their teacher or other trusted adults in school. The pupil can decide whether a web page is relevant for a given purpose or question. The pupil can form a judgement about whether a web page is appropriate for finding out the answer to a question they have or for a given purpose. The pupil can use email and videoconferencing in class.	Know who to talk to about concerns and inappropriate behaviour at home or in school. Pupils should know to report inappropriate behaviour when using technology in school to their teacher, the network manager or another trusted adult, and that they can discuss any concerns they have with their teacher or other trusted adults in school. They should also know that any concerns over, or inappropriate behaviour with, digital technology at home can be discussed with their parents, with you or with another trusted adult. The pupil can decide whether digital content is relevant for a given purpose or question. The pupil can form a	Know how to report concerns and inappropriate behaviour in a range of contexts. Pupils should know how to report inappropriate behaviour when using technology in school: preferably this will be to their teacher, the network manager or another trusted adult. They should know how to report any concerns over inappropriate behaviour with digital technology at home. Preferably this would be through discussion with their parents, with you or with another trusted adult. Pupils should also know how to report inappropriate behaviour to those running websites which they regularly use, and to Childline, CEOP or to the police.	their teacher, the network manager or another trusted adult. They should know how to report any concerns over, or inappropriate behaviour with, digital technology at home. Preferably this would be through discussion with their parents, with you or with another trusted adult. Pupils should also know how to report inappropriate behaviour to those running websites which they regularly use, and to Childline, CEOP or the police. Pupils should know that illegal content or activities can be reported to CEOP or the police. The pupil can form an opinion about the effectiveness of digital content. Taking into account the intended audience and purpose of the content, the pupil can form a judgement as to, and

	(E.g. In 1.3 and 1.4, know to close their laptop lid or turn their tablet over and tell a teacher or their parents/carers if they find inappropriate images.)	other people should not normally be uploaded to the open web. In 2.6, know that photos can contain metadata revealing where they were taken.) The pupil can understand what to do if they have concerns about content or contact online. The pupil should know to close their laptop lid or turn their tablet over if they find content, such as inappropriate images, which might disturb them or other pupils; if someone they don't trust contacts them online; if someone makes inappropriate contact online. They should know to tell their teacher or their parents/carers if this happens, and be aware that they could talk to another trusted adult or to Childline		judgement about whether a web page, such as a Wikipedia article, or other digital content is appropriate for finding out the answer to a question they have or for a given purpose. The pupil can work collaboratively with classmates on a shared wiki. The pupil can work collaboratively with their peers on a shared project, such as a class wiki, making useful contributions and providing feedback to others.	The pupil can decide whether digital content is reliable and unbiased. The pupil can discuss whether particular content (such as a web page, other pupils' pages or blog posts) is reliable and whether it has been written from a neutral point of view. They should be able to spot some examples of bias in digital content. The pupil can work collaboratively with classmates on a class website or blog. The pupil can work productively and positively with others when developing a shared website or contributing to a class blog.	provide reasons for, the extent to which they consider digital content to be effective. The content might be media resources or marketing materials. The pupil can use online tools to plan and carry out a collaborative project. The pupil can make use of an online tool to plan and carry out a collaborative project.

		about this. (E.g. In 2.4, know to close their laptop lid or turn their tablet over and tell a teacher, their parents/carers, another trusted adult or an agency such as Childline if they find inappropriate content.)				
Digital Literacy – Using IT beyond School	The pupil can show an awareness of how IT is used for communication beyond school. The pupil can mention some of the ways in which IT is used to communicate beyond school. E.g. They might know that some people use social media such as Facebook, email, video calls or online greetings to say happy birthday to their friends.	The pupil can show an awareness of how IT is used for a range of purposes beyond school. The pupil can name a number of purposes for which IT is used beyond school. The pupil might know that adults can share work and discuss ideas in online communities; that photos can be taken, edited and shared easily using digital technology; that the web is made up of information				

	(E.g. In 1.6 recognise online collaboration tools such as Google Forms and the Google Suite.)	shared by people and organisations; that people use email for a range of purposes and in a variety of contexts; that scientists use computers when collecting and analysing data. (E.g. In 2.1 and 2.2, recognise that people can share work and discuss ideas using online communities. In 2.3, recognise that people take, edit and share photographs using digital technology. In 2.4, recognise that people publish useful information on the web. In 2.5, recognise that videos can be edited digitally to great effect. In 2.6, recognise that scientists use a range of digital technologies when				

		collecting and analysing data.)				