

Digital Competence Framework

Citizenship Through these elements learners will engage with what it means to be a conscientious digital citizen who contributes positively to the digital world around them and who critically evaluates their place within this digital world. They will be prepared for and ready to encounter the positive and negative aspects of being a digital citizen and will develop strategies and tools to aid them as they become independent consumers and producers. **Citizenship**

	RfL routemap	A steps	B steps	C steps	Progression step 1		Progression step 2		Progression step 3			Progression step 4			Progression step 5		
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Elements	Learners have achieved the following.	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Elements
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Identity, image and reputation		Identify an image of themselves, e.g. touch an image of their face on-screen.	Identify images of familiar people, e.g. look at photos of their class group.	Identify their own work/that of others, e.g. show recognition that a piece of work is theirs when viewed on-screen	Distinguish between someone they know and someone they have never met, e.g. this links to personal and social education (PSE)/well-being and would form part of 'Stranger Danger' education.	Recognise that actions have consequences and identify simple rules to keep them safe (offline and online), e.g. classroom rules/charters should incorporate digital and non-digital rules	Understand that some websites ask for information that is private and personal, e.g. identify private and personal information and discuss how to handle requests for private information – not disclosing full name, address, date of birth, school.	Understand that information put online leaves a digital footprint or trail, e.g. explain the meaning of digital footprint and encourage them to think critically about the information they leave online	Understand simple rules for sharing images and data, e.g. understand that photographs cannot be taken of others or shared online without seeking permission first	Understand how to protect themselves from online identity theft, e.g. security symbols such as a padlock, phishing, scam websites	Talk about the impact that the digital content created can have, e.g. think critically about the information shared online; be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online	Explain what metadata of a photograph can include, e.g. date, time and location	Explain how their digital usage is tracked, e.g. know basic data protection laws and how organisations are responsible for the security of collected data	Discuss the benefits and risks of presenting themselves in different ways online, e.g. professionally and personally.	Understand that they have a digital footprint and that this information can be searched, copied and passed on, e.g. know how to check the security configurations of their devices and/or the software they use.	Build a positive reputation in the context of their employment prospects, e.g. use social media responsibly	Explain the ethical issues of corporate encryption, e.g. building in a bypass system	Identity, image and reputation
																		Understand that some devices require a simple password/action to access them, e.g. swipe a device to activate it.

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Interacting and collaborating	Through these elements learners will look at methods of electronic communication and know which are the most effective. Learners will also store data and use collaboration techniques successfully.																	Interacting and collaborating	
	RfL routemap	A steps	B steps	C steps	Progression step 1		Progression step 2			Progression step 3			Progression step 4			Progression step 5			
Elements	Learners have achieved the following.	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Elements	
Communication	Communicates choice to attentive adult, e.g. show through vocalisation or gestures preferred item from choice of two [RfL 37] Expresses preference for items not present via symbolic means [RfL 41]	communicate their own choices for a small selection of objects and interactions, e.g. choose from phone/video chat by selecting appropriate device.	communicate their own choices in a variety of places for a selection of objects and interactions, e.g. choose video/phone/picture to communicate by selecting appropriate device.	use different forms of digital communication, e.g. experience and participate in simple voice, video or text communications.	understand that there are different forms of online communication, e.g. e-mail, messaging, video call.	talk about different forms of online communication, e.g. e-mail, messaging, video call, and their uses.	contribute to a whole-class or group online communication, e.g. e-mail or video call.	send a simple online communication from a single user account, e.g. e-mail (ensuring address is typed accurately) or video call.	exchange simple online communication, e.g. e-mail or video call	exchange online communication with other learners, making use of a growing range of available features, e.g. send e-mails with attachments and change formatting (where device allows).	exchange online communication with other learners, making use of a growing range of available features, e.g. when e-mailing use search function, manage contacts	exchange online communication, making use of available features, e.g. manage folders within e-mail including using reporting features to filter spam and make use of webcams to facilitate video calls	manage and use a growing range of online communication accounts and the features offered within each, e.g. e-mail accounts, messaging accounts, etc.	select and use different online communication tools for specific purposes with higher levels of competence, e.g. set up relevant mail merge using word processing and spreadsheet software; use advanced features of e-mail provider (signature, auto-reply, read receipt, widgets).	select and use different online communication tools for specific purposes with higher levels of competence, e.g. set up relevant mail merge using word processing and spreadsheet software; use advanced features of e-mail provider (signature, auto-reply, read receipt, widgets).	make use of available online communication services for specific purposes, justifying selections made based on their appropriateness for delivery of information.	reflect on choices of online communication solution and comment on how this could be improved to meet aims of tasks.	Communication	
Communication – classroom task ideas	1. Choose between bubble tube or wind machine. Or choose between an MP3 player and electronic keyboard to make music. Or choose between battery operated toys. 2. Give picture or symbol for wave machine in hydro-pool. Or give picture or symbol for preferred DVD.	1. Press icon symbol or switch to make a choice.	1. Use tablet/device to select from limited number of photos/symbols preferred activity, e.g. music box/vibrating toys. 1. Use interactive white board to select preferred action on a website, e.g. a video clip or audio clip. 1. Choose preferred toy from a selection of battery operated toys, e.g. cars/robots.	1. During video link between classrooms or schools, set up by a teacher, engage in simple conversation or interaction with another learner or adult. 1. Learner observes this process, views the picture in the new location and recognises it is the picture they created.	1. Create a simple picture which they share digitally with another person or location [supported] by an adult.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Communication – Exemplification of tasks	
Collaboration	Shared attention, e.g. looks between adult and digital activity [RfL 40]	turn take with an attentive adult, e.g. activating music maker and switch attention to the adult when it is the adult's turn.	engage in the same digital activity in parallel with a peer, e.g. play a game with remote controlled cars demonstrating awareness of the results of the other person's input.	complete a shared digital activity and be aware of the effect of the input of others, e.g. completing a jigsaw and noticing the other person has put a piece in the wrong place and moving it.	work together with a partner/partners on a piece of digital work.	work together with a partner/partners on a piece of digital work.	collaborate with a partner on a piece of digital work.	use an online collaborative platform to create or edit a file, e.g. word processing, presenting tools, spreadsheets.	use an online collaborative platform to create or edit a file, e.g. word processing, presenting tools, spreadsheets.	manage an online file, adding and responding to comments, e.g. create, share and edit an online file engaging in reflective discussion with teacher and/or peers.	work with others to create an online collaborative project for a specific purpose, sharing and appropriately setting permissions for other group members, e.g. editing, commenting, viewing.	work with others to create an online collaborative project for a specific purpose, sharing and appropriately setting permissions for other group members, e.g. editing, commenting, viewing.	take account of chronological changes made to a file and choose appropriate restore points if needed.	independently select and use online collaboration tools to create a project with others.	independently select and use a range of online collaboration tools to create a project with others, e.g. make use of online technology to share and present ideas to others.	reflect on choices of collaboration solutions and comment on how this could be improved to meet aims of tasks.	reflect on choices of collaboration solutions and comment on how this could be improved to meet aims of tasks.	Collaboration	
Collaboration – classroom task ideas	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Collaboration – Exemplification of tasks	
Storing and sharing				recognise digital work from a previous session.	save work by clicking an icon.	save work by clicking an icon and understand that the work can be retrieved.	save work using a familiar word as a filename, e.g. child's name/keyword, and understand that the work can be retrieved.	save work using an appropriate file name, e.g. child's name and simple title.	save files to a specific location using an appropriate file name, e.g. select a file name that would be searchable at a later date	understand that there are different types of storage, e.g. local, network, online, removable	back up files to a second or third storage device, e.g. removable storage device, network drive (locally or online)	create and share hyperlinks to local, network and online files	track the changes of a document/view the revision history and restore a previous version where appropriate	use appropriate advanced file-management techniques, e.g. tagging, compression.	understand simple encryption and the purpose of encryption, e.g. to send sensitive data more securely	use online services to share appropriate content with a global audience, e.g. uploading content to public websites to share with specific audiences.	use online services to share appropriate content with a global audience, e.g. uploading content to public websites to share with specific audiences.	Storing and sharing	
Storing and sharing – classroom task ideas				Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Classroom task ideas are available on Hwb.	Storing and sharing – Exemplification of tasks

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Computational thinking is a combination of scientific enquiry, problem-solving and thinking skills. Before learners can use computers to solve problems they must first understand the problem and the methods of solving them. Through these elements learners will understand the importance of data and information literacy; they will explore aspects of collection, representation and analysis. Learners will look at how data and information links into our digital world, and will provide them with essential skills for the modern, dynamic workplace.																		Data and computational thinking
Data and computational thinking	RTL routemap	A steps	B steps	C steps	Progression step 1		Progression step 2			Progression step 3			Progression step 4		Progression step 5		Data and computational thinking	
Elements	Learners have achieved the following.	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	With increasing independence learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Learners are able to:	Elements	
Problem-solving and modelling	Early problem solving – tries new strategy when old one fails [RTL 42]	use a range of appropriate cause and effect devices	use a range of devices to create a desired effect	use a range of devices for different purposes	complete patterns and sequences	control devices by giving them instructions	follow a sequence of steps to solve a problem, e.g. predict and explain what actions are needed to make something happen	explain to others how a designed solution works, e.g. explain a design for a simple playground game and test, correcting any issues that arise	represent a solution symbolically, e.g. the order of waking up through a diagram or flow chart, and find the variables in the solution	demonstrate how part of a solution might need repetition	design simple sequences of instructions (algorithms) including the use of Boolean values (i.e. yes/no/true/false), e.g. within the algorithm demonstrate the correct use of Boolean values giving an either/or response.	demonstrate how programs or processes run by following a sequence of instructions exactly and in order	identify different parts of a process, e.g. variables, loops, case statements and comments	identify patterns and opportunities for re-using code (instructions), e.g. parts of a method or instruction list that can be used to solve similar problems in different situations and/or systems	decompose complex processes and determine the actions of individual parts, e.g. multiple WHILE, FOR and IF in text-based or block-based programming environments	independently create and design models and explain how they represent real-world problems, e.g. selecting and correctly using an appropriate method for illustrating a problem, such as a flow chart or spreadsheet	demonstrate the benefits of using part or whole instructions or methods (functions/procedures) in solving a problem, e.g. compartmentalise sections of a problem and call them when needed.	Problem-solving and modelling
	Initiates actions to achieve desired result, e.g. attempts to gain adult attention to make a request [RTL 43]	copy actions, demonstrating a start and finish	show a growing awareness of sequences and patterns	copy simple patterns and sequences	follow a simple sequence of instructions	listen to and follow a sequence of instructions from others	break down a problem into separate parts to make it easier to understand	predict the outcome of simple sequences of instructions, e.g. predict what will happen if instructions are followed accurately	detect and correct mistakes in sequences of instructions, e.g. identify mistakes in a flow chart that would cause it to fail (debug)	represent a simple solution in a flow chart that contains a looping element, e.g. identify where a repeat or loop may work in a flow chart, for instance traffic lights, and select variables.	demonstrate how an algorithm is useful for representing a solution to a problem through testing	predict process outcome after modifying inputs, e.g. predicting the effect of changing/editing a set of instructions	apply logical reasoning to a problem to formulate a solution, e.g. explain and justify how and why a solution to a problem is suitable	follow given written instructions or flow charts to determine the function or output of a process	follow and develop logical solutions to determine actions and outputs of a program/process, e.g. follow pseudocode or a flow chart to come to an outcome, develop a written sequence of steps that could be followed.			
		remember learned responses over an extended period of time.	follow one-step instructions.	follow two-step instructions.	create one-step instructions and identify the next step.	create verbal instructions	create and record written instructions that others understand and can follow	create a simple solution that tests an idea, e.g. predict what would happen if it went wrong such as the sequence of waking up to go to school.	identify repetitions or loops in a sequence, e.g. identify where to shorten a set of instructions by repeating steps, for instance when learning a new song.	understand that changing instructions can affect or even terminate a process, e.g. moving instructions around in a program could produce unexpected outcomes or cause the program to fail altogether.	modify a given flow chart to change the variables of an algorithm, e.g. add a process or a counter to it that would increment or decrement values.	modify a given flow chart to change rules of an algorithm, e.g. adjust conditions of actions in a flow chart, for instance changing the boundaries of a counter in a loop to change how the program functions	recognise that algorithms are language agnostic	follow and develop logical solutions, e.g. demonstrate how a problem could be solved selecting a suitable method to illustrate	detect and correct simple errors in algorithms, e.g. can identify and correct where a syntax error will occur, for instance missing equal signs, variable names spelled incorrectly.			
Problem-solving and modelling – classroom task ideas	1. Adjusts gestures in front of movement sensing technology. 1. Tries pressing other switches/buttons on music player to make music play. 2. Presses switch at the correct time to achieve a desired result in a simple computer program.	1. Use a range of digital appliances in cookery sessions, e.g. microwave/oven. 2. Start and stop playing an instrument along with a music track/musician playing. 3. Activate a sound effect at the appropriate point in a familiar story read by an adult.	1. Press different buttons/icons on an interactive screen to activate desired effect. 2. Repeatedly press screen to turn pages on an interactive story. 3. Follow simple instructions to move in a gymnastic session, e.g. jump, roll, star.	1. Activate music/lights/aromas in a sensory room. Or use a blender, microwave or digital scales in a cookery session. 2. Make a fruit kebabs following a simple visual sequence. 3. Follow simple instructions to switch on a bubble tube and change its colour. 3. Follow simple instructions to play a video and increase the volume.	1. Complete the final steps in a sequence of getting dressed or making toast. 2. Follow picture or symbol sequence to make a simple snack. 3. When following instructions to make a sandwich adjust spreading of the butter to cover the whole slice. 4. Give single instruction to programmable toy, observe what has happened and then decide what instruction to give to move to the next given destination. 4. (Barefoot) Creating patterns. Learners look for patterns, complete sequences and create their own patterns to develop their understanding of simple algorithms.	Control a floor robot, programmable toy, or a microwave when cooking. 1. SEND Bee-Bot Basics activity. Learners learn to create short sequences of instructions to begin to control a floor robot. 2. Follow verbal instructions from others to get to hidden treasure in a pirates game. 2. Follow verbal instructions from others to recreate a constructed model. 3. Create and record instructions for others to follow in a mini beast hunt. 4. (Barefoot) River crossing activity. Learners solve the traditional problem of a farmer trying to get a chicken, a fox and corn across a river by acting it out. Developing their logical reasoning skills.	1. Explain the game and rules to others including win/lose conditions. 1. (Barefoot) World map logic activity Learners use logical reasoning to explain their predictions before programming and testing their commands to see if they are correct. 2. Predicting what will happen when a set of instructions on how to care for a plant is followed. 2. (Barefoot) Spelling rules activity Learners explore graphemes for a particular phoneme (its spelling rules) using logical reasoning to predict the rules. 3. Create instructions to make a sandwich. What would happen if the spread was on the outside of the bread? 3. (Barefoot) Bee-Bot Basics: Programming using Bee-Bots. Learners design and solve challenges using a programmable toy.	1. Make a flowchart for brushing teeth, preparing breakfast. 1. (Barefoot) Sharing sweets activity Learners will work out a simple algorithm, a set of instructions on how to share objects, and compares the similarities and differences between them. 2. Give a set of instructions in the wrong order, e.g. watering a plant, melting chocolate or sequencing a story in the wrong order. 2. (Barefoot) Ships and crystal flowers activity Learners learn about repetition (loops) by creating programs to draw patterns made of simple shapes (using scratch) An unplugged activity where learners create handclapping, hand tutting or hand jive sequences of movements. Learners will detect and correct a set of instructions.	1. Model a variety of simple scenarios involving the preparation of food/drinks that includes repetition, where instructions for making a sandwich for one person adapts to making sandwiches for four people. 2. Could observe a set of traffic lights and note down the pattern of the lights and then different states (e.g. red light on for 15 seconds) using timer variable for seconds. This could then be modelled in a flow chart. 2. (Barefoot) Logical number sequences activity Learners explain the rules for a number sequence and predict what comes next. Learners learn about repetition (loops) by creating programs to draw patterns made of simple shapes (using scratch)	1. An example of a task here would be twenty questions using yes/no answers to reasonably deduce what object someone is thinking of, such as the game 'Guess Who?'. More able learners could model this in a programming language that gives a potential answer at the end after entering yes/no values. 2. Explore a flowchart which examines the effect of global warming with inputs such as the amount of carbon dioxide produced, deforestation, etc., and modify the inputs and variable values. Languages Come to a conclusion of what country you are in by looking at a flowchart that asks questions as inputs on things like currency, landmarks, travel times to get there, etc.	Physical education/Dance Look at a sequence of steps for a dance or performance and identify different parts of it. What would the performance look like in the order were changed around? Physical education Look at sport movements and explain how small changes can affect overall movement. Geography Explore a flowchart which examines the effect of global warming with inputs such as the amount of carbon dioxide produced, deforestation, etc., and modify the inputs and variable values. Languages Come to a conclusion of what country you are in by looking at a flowchart that asks questions as inputs on things like currency, landmarks, travel times to get there, etc.	Physical education Identify parts of a performance that could be extracted and inserted into a separate sequence. Explain what the possibilities and outcomes are of modifying a performance. Drama/Media Set pieces in film production, sequence sets and acts in the filming process so filming can be done in location order rather than chronological order. Food technology Large scale food production and flowcharts. Recipes large or small scale seeing similarities and differences with the two recipes and could apply numerical quantitative reasoning, i.e. proportional, linear. Geography Using visual evidence such as water features on a map, determine where a country is	Physical education Examine repetition and recursion in dance moves and in musical scores. Food technology Break down individual parts of a recipe and determine what each part does. Follow a recipe to a successful outcome. Religious education Create flowcharts to show sequence of possible events in making moral choices, to investigate alternative history what if, e.g. decisions made during the First World War, etc. Languages Produce a set of instructions to direct someone to a location (left, right, straight on, etc.) This can then be turned into using different languages to describe one function of a robot, e.g. forward, back, turn left, repeat, etc., in different languages. Mathematics Dry-run an algorithm as part of an application in	Music Detect and correct errors in musical scores. Compose a musical piece that requires a number of specific components. Physical education Produce a sequence of dance steps that when put together and performed would last a specific duration. Food technology Develop a costing for a meal and scale it up for multiple diners. What are the options for different types of the same ingredient? What would be the outcome on monetary cost/health in choosing alternatives? Justify choices. Geography Develop a model of population statistics over time. What is the impact of increases/decreases in population density? Justify using code, rules or data sets in report writing.	Food technology Investigate the possible different procedures of a drinks vending machine that allow it to vend a variety of drinks from the same machine. Geography Immigration management, what are the key stages in the dealing with mass immigration? What stages work well and why? Could you reuse these in other models? Languages Write a report on the justification of writing code to analyse data, etc. Part of evaluation in Welsh Bac investigation or science experiment write-up. Mathematics Justify using code, rules or data sets in report writing.	Problem-solving and modelling – Exemplification of tasks		
Data and information literacy	Intentional exploration of the environment, e.g. tactile exploration of different environments [RTL 27]	explore and match objects from a choice of two by copying an adult.	match identical objects or pictures independently	match non-identical objects or pictures	gather data using objects	begin to interpret information/data by making direct comparisons, e.g. different to another set	collate and group given data using simple words, e.g. sort pictures/words	collect and organise data into groups, e.g. gather data by voting or sorting and represent in pictures, objects or drawings	collect data, enter and begin to analyse in given formats, e.g. tables, charts, databases and spreadsheets.	begin to create data sets and extract information from them with tables, charts, spreadsheets and databases.	create, explore and analyse data sets, highlighting relationships within them, e.g. using tables, charts, spreadsheets and databases.	construct, refine and interrogate data sets to test or support an investigation.	search through large data sets and identify trends where appropriate.	use data to explain and add validity to conclusion and where possible modify conclusion and/or hypothesis.	use appropriate programs to produce statistical evidence based on their own collected data/identified scenario, and justify reasoning.	Data and information literacy		
			understand that one item can be represented by another means, e.g. familiar object to a photograph of that object.	identify items that do not belong to a set	recognise that there are different types of data, e.g. sort and/or match objects/photographs/symbols	classify objects using one criterion	classify an object using more than one criterion, e.g. labelling group/set	extract information from simple tables and graphs, e.g. answer questions on table graph	record data collected in a variety of suitable formats, e.g. lists, tables, block graphs and pictograms.	record data collected in a variety of suitable formats, e.g. lists, tables, block graphs and pictograms.	record data collected in a variety of suitable formats, e.g. lists, tables, block graphs and pictograms.	extract information from simple tables and graphs, e.g. answer questions on table graph	search through large data sets and identify trends where appropriate.	use data to explain and add validity to conclusion and where possible modify conclusion and/or hypothesis.	use appropriate programs to produce statistical evidence based on their own collected data/identified scenario, and justify reasoning.			
Data and information literacy – classroom task ideas	1. Outdoors – explore piles of leaves, sand, pebbles. 1. Indoors – explore touch or sound activated musical toys.	1. Match animals on a farm or pairs of socks or forks in a cutlery drawer.	1. Match foods in a supermarket to photographs on a shopping list.	1. Find and put collection of cups all in the same cupboard. 2. Separate sets of objects, e.g. pigs/not pigs lions/not lions when playing with toy farm/zoo. 2. (Barefoot) Sorting objects activity Learners sort objects according to their features and develop their ability to spot patterns.	1. Learners go outdoors to collect different leaves to sort. 2. Sort picture cards of animals or toy animals. 3. Sort clothes into prelabelled sets of summer/winter.	1. Sorting vegetables and fruit into groups giving reasons for their groupings. 2. Outdoor education – on a nature walk collect items and select, e.g. all the plants. 2. (Barefoot) Pattern unplugged activity: Elephants, Cats and Cars Learners work on spotting patterns in sets of pictures and think of general statements to describe similarities and differences.	1. and 2. Answer a simple enquiry: What type of pet is most/least popular in class? Use information collected in a tally chart to create a block graph. 3. Input data into a software package, such as Jit.	1. Database Search and sort a given and online database following a simple line of enquiry, e.g. deciding which data needs collecting and giving reasons for sorting. Spreadsheet Use a spreadsheet to store and interrogate information, e.g. add information to a spreadsheet, discuss the information and begin to answer specific questions. Spreadsheet Create a graph using a spreadsheet.	1. Database Create a simple database, e.g. identifying records, fields, etc., using prepared software. Perform simple searches and extract information on branching databases, e.g. simple search on branching databases to answer questions and check statements. Add and amend records in databases, e.g. fields. Spreadsheet Perform searches on larger databases and online databases. Add information to a given	1. Database Interrogate a database using search and sort filters, e.g. sorting on a particular field or record. Create a database, e.g. collect, prepare and create a database ensuring accuracy of entry and editing mistakes. Perform simple manipulations of a database, e.g. adding field. Perform searches on larger databases and online databases. Spreadsheet	1. Database Create and organise a database with a variety of fields to record results. Search using two or more criteria for a specific purpose. Add and remove data fields to improve quality. Use the results from searches and represent the information appropriately, e.g. carry out relevant searches using =, >, <, >=, <= and represent searched information in relation to task. Spreadsheet	1. Database Check validity of data entered. Carry out searches on multiple fields, e.g. AND, OR, NOT. Spreadsheet Use of complex formulae and formatting, e.g. IF, and Conditional formatting. Present output results in a variety of formats (screen and paper).	1. Database Construct frequency tables for a given set of data, grouped where appropriate. Perform wildcard search, e.g. *, ?, . Perform complex searches related to natural language queries designed by the learners. Spreadsheet Construct frequency tables. Use decision functions, e.g. IF, Vlookup, COUNTIF and multiple IF.	1. Database Design and use appropriate apparatus to capture large data sets such as scientific equipment and data loggers. Spreadsheet Produce complex formulae to allow data manipulation and calculation for selected tasks. Spreadsheet Construct frequency tables. Use more than one function in a spreadsheet. Spreadsheet Construct custom rules or Macros to validate and/or verify data.	1. Database Produce reports, pictures, audio to represent data suitable for task and audience. Create rules to perform a task. Spreadsheet Produce complex formulae to allow data manipulation and calculation for selected tasks. Spreadsheet Use more than one function in a spreadsheet. Spreadsheet Construct custom rules or Macros to validate and/or verify data.	1. Database Create a database with relevant information and develop input forms. Create appropriate output forms/reports to display relevant information. Produce queries based on multiple search criteria. Know the benefits and limitations of storing information in a flat file structure. Spreadsheet Create custom rules or Macros to validate and/or verify data.	Data and information literacy – Exemplification of tasks	

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