Computing KLIPS Progression

AGE RELATED OUTCOMES YEAR GROUP	Texts and images	Sound	Data handling	Digital research
1	On a range of devices: – Develop correct use of the keyboard (e.g. spacebar, backspace, delete, shift (not caps lock) and enter keys). – Add captions to photos and graphics. – Select text appropriately e.g. highlighting or clicking text to select. – Make simple changes to text e.g. colour, style and size. – Select text from word lists (if necessary). – Select appropriate images to add to work. – Word process short texts directly onto the computer (i.e. do not just copy up handwritten work). – Navigate round text in a variety of ways e.g. mouse, arrow keys, touch, when editing work. Use a range of digital devices to capture and save both still and moving images. These could include digital cameras, video cameras, tablets, Refine the use of shape, line and colour to communicate a specific idea or artistic style/effect through various tools including brushes, pens, lines, flood fill, spray and stamps. Talk about their use of graphics package and their choice of tools. Begin to make changes to images e.g. cropping using basic tools in image manipulation software.	Explore a range of electronic music and sound devices and software. Be able to listen to and to select a sound from a bank of pre-recorded sounds. Use sound recorders, both at and away from the computer, to record and playback sounds e.g. voices, instruments, environmental sounds.	Develop classification skills by carrying out sorting activities Use simple graphing software to produce pictograms and other basic tables, charts or graphs. Interpret the graphs, discuss the information contained and answer simple questions. Sort and classify a group of items by asking simple yes / no questions. This may take place away from the computer, e.g. a 'Guess Who' game.	Locate specific, teacher defined, age appropriate websites through a favourites menu and /or by typing a website address (URL) into the address bar in a web browser. Use technology to source, generate and amend ideas e.g. searching a resource such as Espresso for images by a specific artist. Talk about their use of technology and other ways of finding information, e.g. books, asking other people.
2	Save and store work in an appropriate area, and be able to print, retrieve and amend it. Upload images or video from cameras and other digital devices to a computer, or into a document, with support if needed. Create a sequence of images to form a short animation.	Use software to explore and create sound and musical phrases for a purpose. Use basic editing tools to change recorded sounds (speed up, slow down, reverse, echo) to alter the mood or	Use graphing software to enter data and change a graph type, e.g. pictogram to bar chart. Use a branching database program to sort and identify items.	Use and explore appropriate buttons, arrows, menus and hyperlinks to navigate teacher selected web sites, and other sources of stored information. Use key words to search a specific

	Change the content of a project for a specific audience.	atmosphere	Use basic search tools in a prepared database to answer simple questions e.g. how many children have brown hair?	resource for information, e.g. Espresso and other websites, under the guidance and supervision of an adult.
	Begin to add different forms of media together e.g. text and images in blogs or word processing documents.	Use recorded sound files in other software applications.		
	Organise and name files appropriately and accurately.	Be able to save sound files.		Be able to retrieve files from a computer using a search of the computer.
		Be able to share recordings with a known audience.		
3	Use different font sizes, colours and effects to communicate meaning for a given audience.	Use a variety of devices and software to select, playback and record voice and other sounds.	Create frequency diagrams and graphs to answer questions.	Use a range of child friendly search engines to locate different media, e.g. text, images or sound.
	Use various layouts, formatting, graphics and illustrations for different purposes or audiences.		Begin to identify what data should be collected to answer a specific question.	
	Use various software tools to complete a project, problem or task.	Locate and use sound files from online sources, e.g. Audio Networks, and other multimedia resources.		Evaluate different search engines and explain their choices in using these for different opurposes.
	Use page setup to select different page sizes and orientations.		Collect data and enter it into a database under appropriate field headings.	
	Use cut, copy and paste to refine and re-order content.	Select, import and edit existing sound files in sound editing software, e.g., Audacity.		Develop specific key questions and key words to search for information e.g., a question such as 'Where could we go on holiday?' would become a search for 'holiday destinations'.
	Combine and use various software tools to complete a project, problem or task.		Use a database to answer straightforward questions by searching, matching and ordering the contents of a single field.	
	Use appropriate editing tools to ensure their work is clear and error free, e.g. spell checker, thesaurus, find and replace.			Consider the effectiveness of key questions on search results and refine where necessary.
	Images, video and animation -		Based on the data collected, children should raise their own questions and translate them into search criteria that can be used to find answers to specific questions.	
	Acquire, store and retrieve images from cameras, scanners and the internet for a purpose.			
	Select specific areas of an image, copy and paste to make repeating patterns.			
	Be able to resize various elements in a graphics or paint package.			
	Use various tools in paint packages or photomanipulation software to edit/change an image, e.g. applying different special effects.			
	Explore the use of graphics and paint packages to			

	design and plan an idea. Use a range of devices to capture still and moving images for a purpose. These could include digital cameras, video cameras, iPads, microscopes and webcams. Discuss and evaluate the quality of their own and others' captured images and make decisions whether to keep, delete or change them.			
4	Select and import sounds from other sources, e.g. own recordings, sound effects and music. Select and import graphics from digital cameras, graphics packages and other sources and prepare for use, e.g. cropping, resizing and editing. Use and combine internet services such as those that provide images, sounds, 3D representations and graphic software. Recognise and use key layout and design features, e.g., text boxes, columns and borders. Insert and edit simple tables. Create a range of hyperlinks and produce a non-linear, interactive presentation. Recognise intended audience and suggest improvements to make their work more relevant to that audience. Through self and peer assessment, analyse and evaluate presentations and projects so that suitable improvements can be added to work. *Images, video and animation -* Independently download and save images and video onto a computer. Independently upload images and movies from digital cameras and other devices to a computer and save in a relevant location. Be able to 'resize' images (pixels, resolution, aspect	Use editing tools to refine and improve outcomes and performances. Use recorded sound files in other software applications. Be able to share sound recordings with a wider audience. Use music software to experiment with capturing, repeating and sequencing sound patterns. Use ICT to create and perform sounds or music that would otherwise not be possible in a live situation, e.g., editing a multi-part piece.	Create and use a branching database to organise and analyse information to answer questions. Compare different charts and graphs, e.g., in tables, frequency diagrams, pictograms, bar charts, databases or spreadsheets and understand that different ones are used for different purposes. Select and use the most appropriate method to organise and present data. Use dataloggers to capture, record and analyse data continuously over time, including sound, temperature and light. (Science) Use a data logger to 'snap shot' a series of related but separate readings in the course of an appropriate investigation. (Science)	Use strategies to verify the accuracy and reliability of information, distinguishing between fact and opinion, e.g. cross checking with different websites or books. Use appropriate tools to save and retrieve accessed information, e.g. through the use of favourites, history, copy/paste and save as. Identify and cancel unwanted advertising, pop-ups and potentially malicious downloads by using the task manager function and NOT through buttons on the pop-up window, or the cross in the right hand corner. Know how to temporarily allow useful pop-ups from a website. Develop use of more advanced searching techniques, e.g., searching for a phrase using quotation marks to locate precise information. Choose the most appropriate search engine for a task, e.g., image search, search within a specific site or searching the wider internet.

	ratio and dimensions). Be able to use basic tools in a software package to change images according to purpose. Import music, stills or video into video editing software for a specific project. Arrange, trim and cut clips to create a short film that conveys meaning. Add simple titles, credits and special effects, e.g transitions. Storyboard, then use captured images to create a short animated sequence which communicates a specific idea.			
5	Develop and use criteria to evaluate design and layout of a range of resources including web sites, pages on VLE, online resources and presentations. Evaluate design and layout of a range of resources including web sites, pages on VLE, online resources and presentations. Select suitable text, sounds and graphics from other electronic sources, and import into own work. Create an outline plan for a non-linear presentation; producing a diagram to demonstrate understanding how pages link and the need for clarity. Develop the use of hyperlinks to produce more effective, interactive, non-linear presentations. Use of hyperlinks to produce more effective, interactive, non-linear presentations. Develop consistency across a document - same style of font, colour, body text size, etc.	Independently select and use a variety of devices to record musical and non-musical sounds. Create their own sounds and compositions to add to presentations, animations and films.	Construct, refine and interpret bar charts, scatter graphs, line graphs and pie charts. Discuss how IT enables you to search and sift through large amounts of different types of information and describe the advantages of using the tools Design questions and perform complex searches using key words, to search a large pre-prepared database looking for relationships and patterns, e.g. data on the Internet; census data. Check the reliability of the data; identify and correct inaccuracies. Solve complex enquiries involving selecting, processing and presenting data; drawing conclusions, e.g. is there a relationship between minibeast habitat and diet? Design a data capture form, e.g. a questionnaire or table to collect information to answer a specific question. Search data according to more than one criterion. Present data to a specified audience	Choose to use the internet when appropriate as a tool for independent research, e.g., gathering text, images, videos and sound as resources to use in their own work. Choose the most appropriate search engine for a task, e.g., image search, search within a specific site or searching the wider internet. Use strategies to verify the accuracy and reliability of information, distinguishing between fact and opinion, e.g. cross checking with different websites or books. Identify whether a file has copyright restrictions and can be legally downloaded from the internet then used in their own work. Use appropriate strategies for finding, critically evaluating, validating and verifying information, e.g., using different keywords, skim-reading to check relevance of information, cross checking with different websites or other non ICT resources. Distinguish between fact and opinion

				and display findings in other software, e.g. through presentation software.	and make informed choices about the sources of online information used to inform their work. Apply their knowledge of the meaning of domain names and common website extensions, e.g., .co.uk, .com, .ac, .sch .org, .gov, .net, to support the validation process.
6	Make effective use of transitions and animations in presentations. Consider their appropriateness and overall effect on the audience. Independently select, process and import images, video and sounds from a variety of sources to enhance work. Format and edit work to improve clarity and purpose using a range of tools, e.g. cut and paste, justify, tabs, insert and replace. Through peer and self assessment, evaluate presentations and make improvements. Make use of transitions and special effects in video editing software, understanding the effect on the audience. Export images, presentations and movies in formats appropriate for the purpose and use them in multimedia presentations. Plan and create a short animated sequence to communicate a specific idea, using a storyboard and timeline. Design and create a short animated sequence.	Independently select, edit, manipulate and combine sound files from a range of sources to create a composition which could be broadcast for a specific purpose and audience, e.g. a soundbyte or podcast. Upload and download projects to other devices and online space e.g. VLE, blog or website, collaborating and communicating with audiences in locations beyond school. Use ICT to produce music or sound effects for a specific purpose, considering the impact on the audience, e.g. length, style, genre.	Compare different charts and graphs, e.g., in tables, frequency diagrams, pictograms, bar charts, databases or spreadsheets and understand that different ones are used for different purposes. Select and use the most appropriate method to organise present, analyse and interpret data. Use a datalogger's settings to log data over a chosen time span (Science) Use a range of sensors including in a variety of situations in the course of scientific investigations. (Science) Use a datalogger to make and record accurate measurements or observations and produce graphical information to answer questions and solve simple problems. (Science) Be able to design experiments which require use of dataloggers, recognising what measurements will be needed, how many repeats and the most appropriate means of recording data. (Science)	Use more advanced searching techniques (e.g. Boolean and relational operators). Be able to create and use folders within lists of book-marks or favourites to organise content. Apply their knowledge of what to do and who to tell if they discover something inappropriate or offensive on a website, at home and in school. Develop skills to question where web content might originate from and understand that this gives clues to its authenticity and reliability, e.g., by looking at web address, author, contact us sections, linked pages. Use acquired search skills to question where web content might originate from and understand that this gives clues to its authenticity and reliability, e.g., by looking at web address, author, contact us sections, linked pages. Identify how copyright restrictions can affect how a file can be used in their own work, e.g., those produced under Creative Commons Licensing.

Computing KLIPS Progression

AGE RELATED OUTCOMES YEAR GROUP	Online safety	Electronic communication	Programming	Simulations & modelling
1	Use technology safely. Keep personal information safe. Use technology respectfully.	Contribute to a blog, journal or forum on the school's VLE. Talk openly about their use of online communication in school and at home.	Give and follow commands (one at a time) to navigate other children and programmable toys around a course or a familiar journey, including straight and turning movements. Plan, generate and follow a sequence of instructions (actual and on-screen) to make something happen; or complete a given task or problem to create a simple program.	Explore simulations of real and virtual environments e.g. BBC science clips, virtual plants and pets. Discuss use of simulations and compare with reality, e.g. a simulation of a science experiment.
2	Use technology safely. Keep personal information safe. Recognise situations involving content and contact that are not safe, (e.g. In emails, text messages, videos) and know where to go for help. Minimise screen, turn off the monitor, or use back buttons to return to the home page if anything inappropriate appears on the screen. Recognise common uses of information technology beyond school.	Contribute ideas to class and group emails. Send an email, using a subject heading, to a known member of the school community e.g. another class teacher, bursar. Open and reply to an email from a known person. Develop an awareness of appropriate language to use in email and other forms of digital communication such as blogs. Begin to use webcams and /or video conferencing as a class, if appropriate and available, with external providers, another class or school.	Explore and create sequences of commands/instructions in a variety of programs/devices. Make predictions and describe the effects when creating programs and controlling devices. Identify errors in instructions. Use logical reasoning to predict what will happen in simple programs	Make informed choices when exploring what happens in a simulation. Talk about the rules found in simulations.
3	Use technology responsibly. Know what to do and who to tell if they discover something inappropriate or offensive on a	Log on to an email account, open emails, create and send appropriate replies. Forward an e-mail. Save an e-mail in draft format and then return and edit prior to sending.	Write programs that accomplish specific goals. Read what a sequence in a program does.	Explore the effects of changing variables in models and simulations, asking 'What if?' questions. Make and test predictions.

	website, at home and in school. Know the school's rules for keeping safe online and be able to apply these beyond school.	Attach different files to emails, e.g. text document, sound file or image. Open and save attachments to an appropriate place. Select an email recipient from a class address book.	Work with various forms of input. Work with various forms of output. Use logical reasoning to predict outputs. Create programs that implement algorithms to achieve specific goals. Debug programs that accomplish specific goals through self and peer assessment. Use sequence, repetition and selection in programs. Plan, test and evaluate programs that solve specific problems using a screen turtle or other programmable devices.	
4	To create appropriate passwords. Keep passwords and personal data safe. Recognise acceptable behaviour. Recognise unacceptable behaviour. Be able to create a 'secure' password, e.g. combination of letters, symbols and numbers in accordance with the school's eSafety policies and procedures /AUP.	Use a range of digital tools to communicate, e.g. contributing to chats and/or discussion forums, in school's VLE, blog or text messages, making purposeful contributions to respond to another pupil's question or comment. Investigate the different styles of language, layout and format of different electronic communications and how these vary depending on the audience. Continue to use webcams and /or video conferencing as a class, if appropriate and available, e.g. with external providers, another class or school, or abroad as part of a wider topic.	Design programs, showing skills needed to plan and implement a task/problem that accomplish specific goals. Design programs showing appropriate planning and implementing skills. Use sequences of commands to control physical devices using outputs. Demonstrate and develop a sense of audience when appropriate. Use and debug programs to control physical devices Note real or screen simulations could be used.	Use a pre-prepared spreadsheet to record data to answer questions and produce graphs. Use a pre-prepared spreadsheet to explore simple number patterns, e.g. multiples. Change the contents of cells in a pre-prepared spreadsheet and explore the consequences.

	Understand the need for certain rules of conduct particularly when using live forms of communication, e.g. chats and forums in the school's VLE, taking turns to speak when video conferencing.	Begin to publish their work to a wider audience, e.g. using VLE or podcasting tools.	Use logical reasoning to detect and correct errors in programs.	
5	Locate and respond appropriately to the terms and conditions on websites. Identify unsuitable posts (e.g. on blogs, a forum …) pertaining to content and conduct. Identify inappropriate and unacceptable behaviour when analysing resources such as videos, text-based scenarios and electronic communications. Understand the need to respect privacy of other individuals, e.g., through using bcc function on an email, not uploading/using images or personal information without permission.	Evaluate the effectiveness of a variety of digital communication tools for communicating and collaborating. Understand the potential benefits and risks of digital communication and that methods will vary according to purpose.	Use repetition* and selection* in programs. Use variables* in programs. Design and create programs using decomposition. Design programs to accomplish specific tasks or goals.	Explore the effects of changing variables in models and simulations in order to solve a problem. Make and test predictions. Enter formulae into a pre-prepared spreadsheet - explore the effects of changing variables. Develop simple spreadsheet models to investigate a real life problem.

6	Understand that they should not publish other peoples' pictures/tag them without permission.	Independently, and with regard for eSafety, select and use appropriate communication tools to solve problems by collaborating and communicating with others within and beyond school, e.g., email, discussion forums, blogs, wikis, text messages and other digital communication tools.	Use logical reasoning to develop systematic strategies that can be used to debug algorithms and programs.	Create simple spreadsheet models to investigate a real life problem.
	Know that content, e.g., photographs and videos, put online are very difficult to remove		Use procedures in programs..	Identify and enter the correct formulae into cells. Make predictions of the outcome of changing variables.
	Continue to develop the skills to identify risks involved with contact, content and their own conduct whilst online.	Make use of webcams and /or video conferencing, if appropriate and available, e.g., to exchange ideas and collaborate on projects with external providers, another class or school, or abroad.	Design, test and refine programs to control robots or floor turtles taking account of purpose and needs.	
	Use electronic communication and collaboration tools safely.		Use programming software to create simulations.	
		Extend online publishing to a more global audience, e.g. creating and publishing web pages, blog and podcasting.		