Text and images

- We will plan and create projects using various layouts, graphics and illustrations, for different purposes and audiences.
- We will manipulate font (size, colours and effect) for audience and purpose.
- We will use layout features (text boxes, columns, borders and tables (insert and edit tables).
- We will select and import sound and images (cropped and resized)
- We will use 'page set up' to select page size and orientation.
- We will use spell check, thesaurus and find and replace.
- Use self and peer evaluation to edit and improve (how do design features meet needs of audience and purpose?)

Sound

- We will select, import and use sound files, from online and save locations, and use in sound editing software.
- We will use music and sound editing software to edit a multi-part piece.
- We will experiment with capturing, repeating and sequencing sound patterns to improve performances.
- We will use a variety of devices and software to select, playback and record voice and other sounds. .
- We will know that copyright exists on most recorded music.

Data handling

Information Technology- Data handling
- We will know there are different types of data: numeric, alphabetic data, alphanumeric.
- We will recognise the advantages and disadvantages of using ICT to sort/organise data (including compare to paper methods)

Databases
- We will create and use branching databases by collective and entering data under fields (using yes/no questions)
- We will decide what data to collect
- We will ask own questions then search, groups and order to answer
- We will understand the vocabulary: file, record, field, sort and search.

Graphs
- We will create graphs to answer questions, selecting the most appropriate method to organise and present

Dataloggers
- We will record data with dataloggers (sound, temperature and light)

Digital research – searching

- We will use key words in search engines to look for text, images and sound.
- We will search within sites and use and use 'image' or 'maps' to narrow search.
- We will evaluate the effectiveness of search engines and their keywords.
- We will verify the reliability of info (e.g. books), know information can be inaccurate because anyone can author on the internet.
- We will use "_" to search for precise information.
- We will use favourites, history, copy and paste.
- Will be able to cancel popups.

Online safety

- We will know what acceptable and responsible online behaviour is.
- We will know what unacceptable behaviour online is, including cyberbullying, and how it affects others.
- We will keep personal information safe (create safe passwords)
- We will know to tell and adult if they come across something inappropriate/offensive/cyberbullying (know to show them what it was)
- We will know the risks of being online (cyberbullying, grooming, arranging to meet someone)
- We will know and understand the schools acceptable use policy.
   We will know what images it is appropriate to share online and what image are not.

Electronic communication

- We will communicate safely in emails, discussion forums or blogs (purposeful contributions and respond)
- We will use webcams/video conferencing as a class.
- We will begin to publish their work to a wider audience, e.g. podcasting tools
- We will investigate the language styles, layout and format of different electronic communications.

Computer networks:

- We will know range of ways they can be used for communication.
- We will know that some forms of electronic communications may be malicious or inappropriate and recognise when an attachment may be unsafe to open.
- email - Log on to an email account, open emails, send replies, add attachments (text, sound and image, open and save attachments, forward e-mails, save as draft, edit draft.

Programming

- We will read a programming sequence using algorithms (instructions)
- We will plan and create programs with inputs, outputs for an audience.
- We will make predictions about algorithms.
- We will test and evaluate programs
- We will detect and debug errors in programs.
- We will use commands to control physical devices (e.g. outputs and sensors: automatic doors, traffic lights, intruder alarms)
- We will understand vocabulary and be able to give examples: inputs, outputs, debug, algorithms.

Simulations and modelling

- We will know simulations represent real and imagined situations
- We will change variables, make and test predictions in models and simulations
- We will use pre-prepared spread sheets (including changing cells) to:
     o   Record data
     o   Make graphs
- Explore number patterns (e.g. multiples)

Possible Cross-curricular links, especially opportunities for English, Mathematics and Computing within teaching:	
English links	• Reading research online, quotation marks, spelling of keywords/web addresses, summarising- ie choosing key words
Mathematics links	• Map reading- co ordinate
Computing links	• N/A
Other links	• History: Dinosaurs to the Stone Age or Geography related.

Possible Experiences including visits/visitors/other:	
Consider what could augment your planning to really enthuse the children in your class: • Teach key skills and then let chn use them to research ad new topic independently. • Gather all research in each lesson on a class web page (create together as you go or a blog) (I have some trial accounts for learner journey if you'd like to make one on there- very easy and fun!)	

Display/Resources:	
Consider what resources could be brought into the classroom and what display work could be completed either before/during or after topic is taught: • Display our research for the topic- including annotations on how we researched.	

Session	Key Objective from skills listed above (What is it that you want the children to learn?)	Possible Activities including use of Computing and other technologies, and showing at least 3 differentiations	Outcomes/Evidence of what they have learnt (Where will this be found? Will it be in a book? Topic book? Display? Photographic evidence?	Possible extension into homework if appropriate to enhance and deepen learning
1	• We will use key words in search engines to look for text, images • We will evaluate the effectiveness of search engines and their keywords. • Will be able to cancel popup	Remind children of golden ESAFETY rule: TELL AN ADULT if something you find makes you feel uncomfortable (and cover the screen, minimise etc not exit). How do search engines work? Ruff ruffman how search engines work BBC webpage –using a search engine http://www.bbc.co.uk/guides/zt9thyc#z3mbgk7 Discuss pop ups what they are and what to do. Ask chn to research for a specific thing (e.g. stone age: wall paintings) Discuss using key words to search What did you find? What different search engines could we use? Google, bing, Swiggle, safe search kids Discuss how to evaluate the usefulness of each search. LA- with support search on one search engine but type in different key words – verbally evaluate the results (adult scribe findings_ MA- two search engines using different key words and evaluate the results (on paper – write/draw some results and key words used and say whether useful/not/ how useful). HA- several search engines and different key words, chn create a word document/ table including pasted images/website addresses and an evaluation.	HA digital evaluation MA/LA paper evaluation	

			What have we found out? Which keywords helped the most? Specific or general? Which search engines gave you the most relevant data		
2	• We will use key words in search engines to look for text, images and sound. • We will evaluate the effectiveness of search engines and their keywords. • We will search within sites and use and use 'image' or 'maps' to narrow search.		Review what we learnt about key word searches last time. This time use key words to search and also the type of search bar: images, shopping, maps Ask chn to find an image of stone age houses, a map of stone age settlements, what stone age artefacts you can buy and any stone age recordings (remind chn not real as no sound recording then) Model using CTRL C and right click copy on an image to copy and CTRL V to paste. Also teach screen shot and how to CTRL V paste LA with support search for images and maps using search tabs MA as above and also sound files and use CTRL C and V to copy images HA as above and also screen shot webpages and copy website addresses.	Word document /publisher record of maps found, shopping items and screen shot of sound file page	Chn could research topic at home and create a poster of information leaflet.
3	• We will use favourites, history. • We will search within sites • We will verify the reliability of info (e.g. books), know information can be inaccurate because anyone can author on the internet		Should I trust everything I read on the web? BBC video http://www.bbc.co.uk/guides/zt9thyc#zy7v34j With chn search for below websites/ type in web addresses and then favourite each or 2/3 Audionetwork.com (listen/buy sound clips– lots!) Soungle.com (free sound clips– can download) Arkive.org (pics and vids to download– animals, topics etc) Pics4learning (resources) Encyclopaedia: kids Britannica Now ask chn to search within some of these sites to research something specific that can be verified using other means (i.e. books in school on the stone age) e.g. what did stone age people eat? Then ask chn to verify any information they have found in books. LA use kids Britannica and favourite this to search MA use a couple of websites HA use a range of websites. And use history list to find good websites they found last time.	Favourites saved	Show a parent or sibling what you have been learning
4	• We will use "_" to search for precise information		I've got the start of this quote but I have lost the web page and the information " " help me to find it "The oldest stone tool that we have" – search for this in google and you will find the answer by sanawar khan on– this was a great presentation so quote marks stop general information and search for that specific phrase as it is: i.e is you search for star wars I you will get all the star wars stuff but if you search for "Star wars I" you will get only stuff about the first star wars. LA search for both with and without quotation marks and evaluate the difference with support MA as above in a pair HA as above and then can they research the topic and find any times when " " brings up a better/more specific answer	Chn can use " " to search and know when it might be useful.	Show a parent or sibling what you have been learning

5	• ASSESSMENT: can children use all of the above skills to independently research a new topic?	Set chn an assessment research task on a different topic e.g. now research Anne Fine can chn choose and use search engines including tabs (i.e. images/maps)? Can chn choose the right key words or use " " when necessary? Can chn use favourites to return to useful sites and search within them? Can chn evaluate the information they find and corroborate it in real life? Can chn use CTRL C and CTRL V to copy and paste information	Children's movies saved on Pupil Drive/Staff Shared/Teaching Resources	
Search engines: Swiggle safe search kids				

Search engines: Swiggle safe search kids

Websites Audionetwork.com (listen/buy sound clips– lots!) Soungle.com (free sound clips– can download) Arkive.org (pics and vids to download– animals, topics etc) Pics4learning (resources)

Encyclopaedia: kids Britannica