

Oldswinford CE Primary School
Computing Skills Progression

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science		Express simple algorithms (sequence of instructions) using symbols. Give precise instructions. Show care and precision to avoid errors. Create a simple program. Run, check and change programs. understand what algorithms are	Design simple algorithms using loops, and selection i.e. if statements. Use logical reasoning to predict outcomes. Find and correct errors i.e. debugging, in algorithms. explain how programs execute by following precise and unambiguous instructions debug simple programs	Designs solutions (algorithms) that use repetition and two-way selection i.e. if, then and else. Use diagrams to express solutions. Create programs that implement algorithms to achieve given goals. Declare and assign variables. Use sequence in programs	Use logical reasoning to predict outputs, showing an awareness of inputs. Use post-tested loops e.g. 'until', and a sequence of selection statements in programs, including an if, then and else statement. work with various forms of input work with various forms of output	Design solutions by decomposing a problem and creates a sub-solution for each of these parts (decomposition). Use if and if, then and else statements. Use a variable and relational operators within a loop to govern termination. De-bug programs that accomplish specific goals use repetition in programs control or simulate physical systems	Design, write and debug modular programs using procedures. use logical reasoning to explain how some simple algorithms work use logical reasoning to detect errors in programs explain how computer networks can provide multiple services such as the World Wide Web explain how search results are selected
Information Technology and Data	Publishing	Find, select and import text or a familiar image into appropriate software with some help from the teacher create a simple phrase or sentence to accompany the image	Find and select text and images and use them purposefully organise information (text and images) safely combine text and images to create a document, <i>for example create a simple leaflet</i> consider layout and adjust alignment as appropriate choose appropriate font size and colour spell common and familiar words and use spaces, full stops and some capital letters	Search for text and images from given digital sources, <i>for example from internet sites or shared folders</i> demonstrate an awareness of copyright; can images be used for any purpose retrieve, access, select and import images from a range of given sources, <i>for example from a camera, picture bank, clipart, the internet or their own artwork</i> create text or edit found text, altering its font, size, style and	Demonstrate some awareness of referencing sources and the reliability of information create a document using a template, if appropriate, <i>for example create a leaflet, greetings card, poster or comic strip</i> include a title or subtitles if appropriate combine and position text and images appropriately, showing an awareness of word wrapping scale an image proportionally	Plan and create a document showing an awareness of audience and purpose research, select and retrieve assets, such as text, images, graphs or tables, from a range of sources understand copyright and plagiarism implications of publishing work to the www consider the reliability, accuracy and plausibility of information provide some reference to sources	Create text or edit found text and format it using features such as alignment, justification, bullets, numbering, paragraphs, columns and text wrapping use text boxes and format them appropriately; use features such as colour, borders, bullet points or page numbers to enhance the document Understand how to save and export an image in the appropriate file format. make use of a digital

			check the reliability of information by using more than one source	colour demonstrate an awareness of plagiarism and understand that text belongs to an author	spell frequently used words accurately and use correct punctuation and word spacing	download assets in a suitable format and save, store/organize and retrieve efficiently	spellchecker add appropriate websites to favourites /bookmarks, within a browser and understand that different browsers can be used
	Film Animation	Look at and talk about examples of still images and moving images, for example look at photographs that the teacher has taken or view a short animated film and talk about what they see. Take photographs with a digital camera view photographs on screen and talk about them talk about where images are stored, safely- who can see them	Use suitable software to work with/organise, pre-loaded images or take still images of objects or models distinguish between images of people and objects in terms of e-safety responsibility; gaining permission to reuse and storing safely on the network arrange the images into a sequence (story board), to develop a narrative and record a voiceover if appropriate, for example use Moviemaker to rearrange a sequence of still images or take photographs of an object or person in graduated poses or positions to create an animation know that films and animations containing images of people need to be published to a safe area for an invited audience	Use a storyboard to plan the order of the images required for a simple animation or film use suitable software to produce a simple animation or film using still photographs or self- created images, for example make a film on 'How to Make Pancakes', make an animation on 'Growing a Sunflower', or use an online template to make a 'digital book' retrieve and organise assets; add a narration, sounds or music to the film or animation Know that music, images and sound may be subject to copyright rules. Use copyright free material eg. Audionet; distinguish between acceptable and unacceptable reuse	Be aware of the variety of locations where films and animations are hosted and consider this in terms of safety/intended audience begin to add features such as titles, transitions or effects begin to use moving image language, for example talk about panning, close up and long range shots	Plan, storyboard and produce a short film or animation showing an awareness of audience use moving image language when planning and evaluating, for example annotate the storyboard using appropriate shot sizes such as close-up, mid shot and long shot, and explain decisions using the language of film begin to make editing decisions, for example what to omit and what to include when shooting or editing; use appropriate editing software to construct a short film or animation consider the most appropriate source to host created films/animation; attention to audience and accessibility	Know that music, images and sound may be subject to copyright rules. Use copyright free material eg. Audionet experiment with adding a variety of features such as titles, transitions and effects add appropriate sound effects, music or narration; and organise saved work and export it in an appropriate format such as mp4; be aware of compressed size of files in different formats

	Data	Enter given data in a database or other graphing software produce a graphical representation from given data talk about the type of information that should remain private, for example, full addresses	Collect the data that needs to be analysed, for example use a data collection sheet to collect data linked to topic work enter the collected data into a database or other graphing software produce a graphical representation and make observations; talk about trends	Input their own or given data into a given database or spreadsheet solve simple problems using some of the facilities available in a given database or spreadsheet make observations and draw conclusions, for example, make comments about the data, results/graphs be respectful if personal information is discussed	Show awareness about the quality/source of data, for example, the accuracy of data effects search results identify the type of data that need to remain private and therefore shouldn't be included in data collection	Make predictions and solve problems using a given spreadsheet demonstrate an understanding of what is meant by the terms cell, formulae, rows and columns; use a range of sources, such as catalogues, internet sites, tables or lists, to research the data needed to solve a problem store, manipulate and retrieve data responsibly	understand the need for accurate data entry, including the integrity of the information and the impact inaccurate data entry has on searches Answer simple questions by using SORT or using simple formula.
	Music	Explore and interact with a digital device, for example use control buttons on a CD player. Record in real time,	Open, listen to and select pre-recorded sounds with more independence, Record in real time to capture a voiceover, a musical performance or an activity Save sound files/ recordings, with some help, to a specific location know that sound files have a different file format to other files talk about who the sound files belong to; the person who recorded them or the person who made them	Source audio files from given locations or create their own audio files search for, select and import audio files for use in their own work, for example from a recording device, the internet or a shared network folder	Import or create music/sound clips and carry out simple editing (if appropriate) for use in their own work, for example use Audacity or similar software to crop or repeat using copy and paste, or use Garage Band to create a simple composition using pre-existing loops and/or sound recordings save work and, with teacher help, export/publish it in an appropriate format, for example an audio file such as .mp3, .mp4, a podcast or .wav appreciate that not all sound/music can be	Plan and create a sound or music project using more than one track, showing awareness of audience and purpose experiment with other audio effects, for example alter pitch or tempo	Sequence sound and/or music files and edit them as appropriate, for example create a radio advert, podcast or musical composition linked to a project Organise saved work and export it in an appropriate format such as .mp3, .mp4 or .wav. know that there are advantaged/disadvantages of reusing sound files in certain file formats

					copied, edited and reused		
	Presenting	Enter text and insert an image or sound into appropriate presentation software present this to the class, talking about it with the teacher's help	Create a simple presentation add text and images or sounds select and use a simple transition show their presentation to the group or class with the teacher's help Talk about where to save these presentations, for example, on the school network or a web site. Does this affect how the audience accesses the materials?	Create a presentation, for example design a PowerPoint presentation or website understand that where content is hosted affects who can view the content make use of layouts if available search for text, images or sounds from given digital sources such as the internet or shared folders create text or edit found text	Combine selected images and sounds with text on a suitable background alter the font, size, style and/or colour of text scale images proportionally select and use one or more appropriate transitions demonstrate some awareness of referencing sources and plagiarism Independently show their presentation to the group or class.	Research and select assets, such as text, still or moving images and sounds, from a range of sources download assets in a suitable format, save effectively and consider file size select and use an appropriate template to present 'information' for a given audience or purpose, for example create a PowerPoint presentation, Prezi or website adjust layout as required create text and format it using a range of features such as text boxes, images, borders, bullets and numbering	Use transitions or an appropriate method of navigation provide some reference to sources demonstrate an awareness that not all sources are reliable and consideration must be given to the source and integrity of information add appropriate websites to favourites/bookmarks using more than one browser deliver their presentation to the group or class
	Images	Explore a paint package using tools such as the pencil, paintbrush and stamp tool create a simple picture and save it within the software	Begin to use tools with more control use a wider range of tools, for example fill, shape and special effects use a range of colours appropriately Know the difference between created pictures (with an art package) and digital images. Discuss who owns these images and	Access, select and import images from a range of given sources such as a camera, the internet, clipart and/or their own artwork scanned by the teacher, scaling the images proportionally know that permission is needed before certain images are taken, changed and shared	Understand that images of people need to be transferred from digital devices and stored securely. Identify associated dangers create a graphic using appropriate tools and tool options such as size, colour, pencil, paintbrush, paint, fill, special effect,	Create digital artwork, which may include their own artwork or scanned images, photos, or stills from a film, for a given audience or purpose edit images to enhance them, <i>for example by applying filters, adjusting contrast or resizing</i>	Consider how images can be used to cause harm or distress to the subject Understand how to save and export an image in the appropriate file format.

			how they can be reused		wallpaper and/or repeat options make adjustments to improve work		
Digital Literacy and E-safety	Safe Communication and Network Skills (Including Online Communication and Collaboration Online Publishing / Digital Citizenship in Year 6)	Find content from the world wide web using a web browser. use software, under the control of the teacher to create, store and edit digital content using appropriate file and folder names talk about use of technology in school and talk about work and make changes to improve it	Navigate the web and can carry out simple web searches to collect digital content. use of computers safely and responsibly, show an awareness for the quality of digital content collected Use a variety of software to manipulate and present digital content: and information share experiences of technology in school and beyond the classroom talk about work and make improvements to solutions based on feedback received	Collect, organise and present data and information in digital content create digital content to achieve a given goal through combining software packages and internet services to communicate with a wider audience	Create digital content to achieve a given goal through combining software packages know the difference between the internet and internet service e.g. world wide web show an awareness of, and use a range of internet services	Make judgements about digital content when evaluating and repurposing it for a given audience know the audience when designing and creating digital content	Use the cc facilities when sending an e-mail and discuss when these are to be used Develop their search skills so that they can find an e-mail that may have been stored or deleted Demonstrate safe practice in selecting and uploading appropriate images, text, sound and video report any suspicions (Think You Know REPORT ABUSE page) Use criteria to evaluate the quality of solutions and identify improvements, making some refinements to the solution, and future solutions use search engines, select, combine and use internet services

	Online Communication	Talk about the web sites used at home and school; (focus on the chat/communication facilities within these sites, for example, some sites have a chat facility)	Identify and talk about the most appropriate devices to communicate in a given situation, for example using an ipad for 'facetime' with a known friend identify the dangers of communicating on line	Communicate online with others and collaborate where appropriate, for example contribute to an online discussion responding to prompts/postings and/or send and respond to emails using acceptable and appropriate online behaviour	Show an awareness that every site has terms and conditions of use and that misuse has implications know how to report abuse	Navigate through an environment to locate and access specific materials contribute to an online activity or project and, where appropriate, collaborate with others using acceptable and appropriate online behaviour, for example participate in a collaborative project with a school in another area or country or create a simple online workspace such as a wiki or blog	Share work or resources by using email to send attachments or uploading to an online environment
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