Gorse Hill Primary School

Computing: Skills Progression

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|  | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| **E-Safety** | * Can identify what personal information is and understand that they should keep this private online * Can consider other people’s feelings on the internet * Can recognise a variety of devices that connect users with other people (Xbox, PSP, Phones etc.) * Know where to go for help and support if they have concerns | | * Can identify a number of online dangers * Can question the ‘validity’ of what they see on the internet * Can recognise appropriate and inappropriate online behaviours * Know where to go for help and support if they have concerns * Can use technology safely, respectfully and responsibly | | * Can explore options for privacy levels in a range of online settings (e.g. online gaming, social media) * Can clearly identify levels of online risk * Can identify and appropriately use social networking sites/features, making good judgements * Can use technology safely, respectfully and responsibly | |
| **Generic Skills** | Can print work using the Print icon  Can use both hands on the keyboard  Can load programs with support  Can save work with support  Can retrieve work with support  Can talk about how they are using ICT  Can start to use appropriate ICT vocabulary | Can load programs independently  Can save work independently  Can retrieve work independently  Can plan what they are going to do  Can edit their work  Can practise keyboard skills using both hands, try to use more than two fingers, and try to use the thumb on the spacebar  Can explain their work and how they have used  ICT  Can annotate their work samples using prompts  Can use appropriate ICT vocabulary | Can use a range of ICT equipment and software with support  Can create and name new folders, with  support  Can print work using the drop down menu  Can make changes to their work  Can consolidate keyboard skills  Can highlight/select items  Can use cut, copy and paste  Can explain their work and how they have  used ICT | Can choose an appropriate program, with support.  Can create and name new folders, independently  Can use Print Preview  Can understand that work can be saved in different places e.g.  network, writeable CD ROM, Pen Drive, Cloud storage  Can plan what they are going to do and evaluate the results  Can describe their work and explain how and why they have used ICT | Can choose an appropriate program to perform a task  Can understand and use the hierarchical file system  Can combine information from various sources  Can describe and discuss their work and explain how and why they have used ICT | Can choose and combine the use of appropriate ICT tools to complete a task  Can critically evaluate the fitness for purpose of work as it progresses.  Can annotate their work samples using prompt questions |
| **Information Technology** | Recognise uses of technology in their homes and in their community  Understand that there are online tools that can help them create and communicate | Begin to understand there are a variety of sources of information and begin to recognise the differences  Begin to understand what the Internet is and the purposes that it is used for  Understand the different types of content on websites and that some things may not be true or accurate | Save work on the school network, on the Internet and on individual devices  Talk about the parts of a computer  Use appropriate tools to collaborate on-line  Use appropriate tools to communicate on-line  Use simple search tools and find appropriate websites  Talk about the owner of information online | Talk about the school network & the different resources they can access, including the Internet  Frame questions & identify key words to search for information on the Internet  Consider reliability of information & ways it may influence you  Check who the owner is before copying photos, clipart or text | Identify different parts of computing devices.  Identify different parts of the Internet  Choose appropriate tools for communication and collaboration and use them responsibly  Use effective strategies to search with appropriate search engines  Talk about the different elements on web pages  Find out who the information presented on a webpage belongs to. | Describe different services provided by the Internet & how information moves around the Internet  Describe different parts of a computing device & how it connects to the Internet.  Connect a computing device to a keyboard, mouse or printer  Identify appropriate forms of online communication for different audiences.  Use search engines as part of an effective research strategy  Describe how search results are selected & ranked  Acknowledge who resources belong to that they have found on the internet |
| **Digital Literacy** | Record their own voices and play back to an audience  Use a video or stills camera to record an activity  Create sounds and simple music phrases using ICT tools  Add text and images to a template document using an image & word bank  Use index fingers (left and right hand) on a keyboard to build words & sentences  Know when & how to use the space bar (thumbs) to make spaces between words  Take photographs, video and record sound to record learning experiences  Look at how data is representing digitally  Contribute to and interpret a pictogram | Use an increasing variety of tools and effects in paint programs and talk about their choices  Use templates to make electronic books individually and in pairs  Explore the effects of sound and music in animation and video  Create own documents, adding text and images  Use keyboard to enter text (index fingers left & right hand)  Know when and how to use the return/ enter key.  Use shift & caps lock to enter capital letters. Use delete & backspace buttons to correct text.  Create sentences, save & edit later  Take and save photographs, video & record sound to capture learning  Use microscopes or other devices to capture and save magnified images  Ask questions and consider how they will collect information  Collect data, generate graphs and charts to find answers  Save & retrieve the data to show to others  Create paper/ object decision trees & explore a branching database  Investigate different types of digital data e.g. online encyclopaedias | Explore & begin to evaluate the use of multimedia to enhance communication  Create & begin to edit presentation documents & text, experimenting with fonts, size, colour, alignment for emphasis & effect  Use a range of effects in art programs including brush sizes, repeats, reflections  Explore the use of video, animation & green screening  Use ICT tools to create musical phrases  Amend text & save changes.  Use individual fingers to input text & use shift key to type characters  Amend text by highlighting & using select/ delete & copy/ paste  Look at own work & consider how it can be improved for effectiveness  Find out information from a pre-prepared database, asking straightforward questions  Contribute towards a database  Construct and use a branching database  Record data in a variety of ways  Present data for others  Use a data logger to monitor changes and talk about the outcomes seen | Explore how multimedia can create atmosphere & appeal to different audiences  Be confident in creating & modifying text & presentation documents to achieve a specific purpose  Use art programs & online tools to modify photos for a specific purpose using a range of effects  Explore the use of video, animation, & green screening for a specific audience  Use ICT tools to create music phrases for a specific purpose  Use a keyboard effectively, including the use of keyboard shortcuts  Use font sizes & effects such as bullet points appropriately  Know how to use a spell check  Look at their own, and a friend’s work & provide feedback that is constructive & specific  Plan and create a database to answer questions  Identify different types of data  Ask questions carrying out simple searches on a database  Identify inaccurate data  Present data in appropriate format for an audience  Use a data logger to record and compare individual readings. | Select an appropriate ICT or online tool to create and share ideas.  Explore the effects of multimedia (photos, video, sound) in a presentation or video and show how they can be modified  Develop skills using transitions and hyperlinks to enhance the stricture of presentations  Use a wide range of effects in art programs and online tools, discussing the choices made and their effectiveness  Know how to use text and video editing tools in programs to refine their work  Use online tools to create and share presentations and films  Collect and record information using spreadsheets and databases  Carry out complex searches (e.g. using and/or; ≤ / ≥)  Solve problems and present answers using data tools  Analyse information and question data  Identify poor quality data  Select appropriate use of a data logger for an investigation and interpret the findings | Identify the purpose for selecting an appropriate online tool  Discuss audience, atmosphere and structure of a presentation or video  Collect information and media from a range of sources (considering copyright issues) into a presentation for a specific audience  Use sound, images, text, transitions, hyperlinks and HTML code effectively in presentations  Store presentations and videos online where they can be accessed by themselves and shared with others  Evaluate the effectiveness of their own work and the work of others  Use the whole data process – generate, process, interpret, store, and present information – realising the need for accuracy and checking plausibility  Select appropriate data tool  Identify and present results  Interrogate a database, refining searches to provide answers to questions  Plan investigations using the outcomes from a data logger to show findings |
| **Computer Science** | Physically follow & give each other instructions to move around  Explore outcomes when buttons are pressed in sequences on a robot  Begin to use software to create movement & patterns on a screen  Begin to identify an algorithm to achieve a specific purpose  Execute a program on a floor robot to achieve an algorithm  Use the word debug to correct any mistakes when programming a floor robot  Begin to predict what will happen for a short sequence of instructions in a program | Physically follow and give each other forward, backward & turn (right-angle) instructions  Articulate an algorithm to achieve a purpose  Plan and enter a sequence of instructions to achieve an algorithm, with a robot specifying distance & turn and drawing a trail  Explore outcomes when giving instructions in a simple Logo program  Watch a Logo program execute & debug any problems  Predict what will happen & test results  Talk about similarities & differences between floor robots and logo on screen | Plan & enter a sequence of instructions on a robot specifying distance & turn to achieve specific outcomes, debug the sequence where necessary  Test & improve / debug programmed sequences.  Begin to type logo commands to achieve outcomes.  Explore outcomes when giving sequences of instructions in Logo software  Use repeat to achieve solutions to tasks  Solve open-ended problems with a floor robot & Logo including creating simple regular polygons, making sounds & planning movements such as a dance  Create an algorithm to tell a joke or a simple story  Sequence pre-written lines of programming into order  Talk about algorithms planned by others & identify any problems & the expected outcome | Create & edit procedures typing logo commands including pen up, pen down & changing the trail of the turtle  Solve open-ended problems with a floor robot, Logo & other software using efficient procedures to create shapes & letters  Experience a variety of resources to extend knowledge & understanding  of programming.  Create an algorithm & a program that will use a simple selection command for a game  Begin to correct errors (debug) as they program devices & actions on screen, & identify bugs in programs written by others  Use an algorithm to sequence more complex programming into order  Link the use of algorithms to solve problems to work in Maths, Science & DT. | Explore procedures using repeat to achieve solutions to problems with Logo & a floor robot  Talk about procedures as parts of a program  Refine procedures to improve efficiency  Use a variable to replace number of sides in a regular shape  Explore instructions to control software or hardware with an input & using if... then... commands  Explore a computer model to control a physical system  Change inputs on a model to achieve different outputs  Refine & extend a program  Identify difficulties & articulate a solution for errors in a program  Group commands as a procedure to achieve a specific outcome within a program  Write down the steps required (an algorithm) to achieve the outcome that is wanted and refer to this when programming. | Record in some detail the steps (the algorithm) that are required to achieve an outcome & refer to this when programming  Predict the outputs for the steps in an algorithm  Increase confidence in the process to plan, program, test & review a program  Write a program which follows an algorithm to solve a problem for a floor robot or other model  Write a program which follows an algorithm to achieve a planned outcome for appropriate programming software  Control on screen mimics & physical devices using one or more input & predict the outputs  Understand how sensors can be used to measure input in order to activate a procedure or sequence & talk about applications in society  Create variables to provide a score/trigger an action in a game  Link errors in a program to problems in the original algorithm |