Computing Progression of Skills

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|  | ***Year 1*** | ***Year 2*** | ***Year 3*** | ***Year 4*** | ***Year 5*** | ***Year 6*** |
| ***On the Doorstep*** | **Digital Galleries (Information Technology):**Create a simple animation with moving characters and voice recordingsUse a camera to capture images which are in focusSelect options to change the appearance of digital contentApply edits to digital content to achieve a particular effectCreate digital galleries using images and textUse photo editing tools to crop images | Embed all skills taught so far across the curriculum | **Movies****(Information Technology):**Create and edit a video/animation combining text, images and musicPlan a movie with a script that has a beginning, middle and end and combines text, music and imagesExplore augmented reality and capture images and videosExplore green screen technology and capture and edit videos | **Presentations****(Information Technology):**Combine text (fonts, colours, backgrounds), images, voice recordings and videos to create a presentationCreate a presentation with slides with animations and transition effectsUsing photo editing tools to improve the quality of imagesCreate and edit a video by combining text, images and musicUse a keyboard accurately with two hands to type and format documentsWhen searching on the internet for content to use, explain why you need to consider who owns it and whether you have the right to reuse it | **Games****(Computer Science):**Use commands, loops, selections, debugging and variables to design and build a gameExperiment with different codes to test each element of a game until a desired outcome is reachedMake predictions on what will happen in a program when inputs are changedTest, debug and improve programsMake changes to digital content to animate characters in the gameUse creative tools to create a marketing campaign for a gameIdentify the pros and cons of different gamesDescribe common systems that regulate age-related content (e.g. PEGI, BBFC, parental warnings) and describe their purpose | **Websites****(Information Technology):**Work independently on a topic to build and create a website with pages, titles, images, videos and textRecognise the audience when designing and creating an app/websiteCreate variables in spreadsheets and understand their role in a programEdit videos, graphics and documents independently to create a websiteFormat a digital document to present ideasDesign a suitable brand for a business and promote itCreate a spreadsheet with formulas for profit and loss of a businessDesign and build a web page and share it onlineCombine text and images to create eye-catching social media advertsCreate a video for a marketing campaign and make improvements following feedback |
| ***Down the Road*** | **Programming Mini Topic****(Computer Science):**Create simple programs using beebotsDesign and create ‘unplugged’ programs for others to playPredict the outcomes of a program | **Digital Books****(Information Technology)**Create digital books combining text, images, and soundsType words in a speech bubble using a keyboardCombine text and images to create a video presentationEdit video content to improve itCollect images by capturing screenshots and editing themPresent information on a topic using images, text boxes and voice recordingsType words correctly using a keyboardCreate a contents page**History of Computersc****(Computer Science):**Identify, name and explain the functions of the main components of a computerInvestigate how computers have changed over the yearsName and compare common input/output devicesIdentify and describe uses of technology beyond schoolExplain how robots can be controlled | **Stop-Motion Animations****(Information Technology):**Plan a simple animation using a storyboardTake a series of pictures and combine them to form an animationAdd text, graphics and sound effects to improve an animation using editing ToolsCreate an animation with moving characters/objects, keeping the camera steady, using 'onion skinning’Combine animated characters and voice recordings for particular effects | **Programming Games****(Computer Science):**Create a program using a range of events/inputs to control what happensWork with various forms of input/outputWrite programs that accomplish specific goalsUse selection in algorithms and programs, i.e. if… then…Use logical reasoning to write simple algorithms explaining the sequence commands should run inCreate programs including repeat commandsSolve problems by decomposing into smaller partsDebug programs so they run correctlyReview a game and make improvements by debuggingUnderstand why it’s important to know your audience when designing gamesDescribe ways technology can affect healthExplain the importance of self-regulating the use of technology | **Stop-Motion Animations****(Information Technology):**Plan and create a video by combining images, text, music and different layoutsPlan a multi-scene animation including characters, scenes, camera angles and effectsEdit a stop-go animation to improve the quality of the animation using ‘onion skinning’ featuresCreate title and credits screens by combining colours and textEdit/refine a movie to add special effects, text, sound effects, graphics and backing track | **Presentations****(Information Technology):**Plan a digital resource to teach a specific audience something newMake choices on the best digital software available to present my ideasWork independently to combine a range of tools (text, video, graphics, images) to present ideas clearly for an audience to followWork independently to create a presentation that includes graphics, images and moviesDeliver a presentation to an audience using digital tools |
| ***Over the Water*** | **Digital Posters** **(Information Technology):**Create posters by adding images to frames, editing text by changing font style, colour and sizeCreate images with different layers by placing one image on top of anotherCombine words and images to create word artType words correctly using a keyboardCollect images by capturing screenshots and editing themExplore augmented reality and capture images | **Programming With Debugging****(Computer Science):**Create simple programs using digital softwareDebug an error in a simple algorithmUnderstand that instructions in an algorithm need to be precise and unambiguousUse logical reasoning to predict the behaviour of simple programsUse simple repeats in programsUse basic selections in programs and explain using the language if … thenUnderstand basic programming techniques | **Photo Editing Presentations****(Information Technology):**Use a camera accurately to capture interesting perspectivesApply edits to digital content to achieve a particular effect and save them as both images and videosCreate a presentation with slidesSelect options to change the appearance of digital content and explore tools to edit itCombine images and text for different effects | Embed all skills taught so far across the curriculum | **Apps****(Information Technology):**Work independently on a topic to build and create an app with pages, titles, images, videos and textUse wire-frames to plan the build for an appWork collaboratively, using various tools independently for use in an app designRecognise my audience when designing and creating an appDesign and build an app and share it onlineAssess and justify when it is acceptable to use the work of others and give examples of content that is permitted to be reusedDemonstrate the use of search tools to find and access online content which can be reused by others | **Games****(Computer Science):**Use selections and procedures in programs to draw shapes, patterns and picturesCreate more complex programs including commands, debugging, loops, repeats, selections, variables and proceduresCreate simple variables and understand their role in a programUse logical reasoning to detect and correct errors in algorithmsUse editing tools to label digital images |
| ***Thread throughout the curriculum*** | **Digital Literacy Mini Topic****(Digital Literacy):**Explain how other people’s identity online can be different to their identity in real lifeGive examples of issues online that might make me feel sad, worried, uncomfortable or frightened and give examples of how I might get helpRecognise that information about me can stay online for a long time and could be copiedDescribe what information should not be put online without asking a trusted adult firstExplain rules to keep us safe when we are using technology both in and beyond the home and give examplesRecognise examples of information that is personal to me and what information not to put online | **Digital Literacy Mini Topic****(Digital Literacy):**Explain why it is important to be considerate and kind to people online in ways that do not upset othersGive examples of bullying behaviour, how it could look online and how it can make someone feelTalk about how someone can/would get help about being bullied online or offlineDescribe and demonstrate how to get help from a trusted adult if I find content that makes me feel uncomfortableExplain how devices can connect to the internet and list some of those devicesNavigate a webpage | **Digital Literacy Mini Topic****(Digital Literacy):**Understand how the internet works, including how it is structured and that data travels alongDescribe ways people who have similar likes and interests can get together onlineDescribe how to search for information within a wide group of technologies (e.g. social media, image sites, video sites)Explain what autocomplete is and how to choose the best suggestionUse search engines effectively and narrow search results downExplain why lots of people sharing the same opinions or beliefs online does not make those opinions or beliefs trueAnalyse information and have ways to check its credibilityBe skeptical of things I find online such as fauxtography | **Digital Literacy Mini Topic****(Digital Literacy):**Explain why you need to think carefully about how content you post might affect others, their feelings and how it may affect how others feel about them (their reputation)Recognise the need to be careful before sharing anything online and only with people you can trustExplain what bullying is and describe how people may bully othersDescribe rules about how to behave online and how to follow themUnderstand the different types of social media platforms and how they are used for communicationUnderstand and give reasons why strong passwords are important and describe simple strategies for creating and keeping passwords private | **Digital Literacy Mini Topic****(Digital Literacy):**Understand about e-commerce - what it is and its impactInvestigate the services offered by the internetUnderstand about different types of robotics and how they can impact our livesUnderstand about the advancements in technology and the impact this has had on societyDescribe the impact of technology on societyDescribe some simple ways that help build a positive online reputationUnderstand that there are many positives and negatives to using social media | **Digital Literacy Mini Topic****(Digital Literacy):**Describe ways in which media can shape ideas about gender and identify messages about gender roles and make judgments based on themDescribe issues online that might make me or others feel sad, worried, uncomfortable or frightened.Explain how impulsive and rash communications online may cause problemsDescribe how to get help for someone that is being bullied online and assess when to do or say something or tell someoneIdentify a range of ways to report concerns about online bullying both in school and at homeExplain why information that is on a large number of sites may still be inaccurate or untrue, assess how this might happenCreate and use strong and secure passwords and use different ones for a range of online services.Describe ways in which some online content targets people to gain money or information illegallyExplain how identify online can be copied, modified or altered |