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**St Mary’s R.C. Primary**





**Computing Progression and End Points**

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|  | **EYFS** | **Year 1/2** | **Year 3/4** | **Year 5/6** |
| Multimedia | **EYFS can tell you about different kinds of information such as pictures, video, text and sound** | **Y1 create, store and retrieve**  **digital content.**  **use a website and a camera**  **record sound and play back.**  **Graphics**  Use ICT to generate ideas for their work. Use various tools such as brushes, pens, rubber, stamps, shapes. Save, retrieve and print work.  **Text**  Use spacebar, backspace, delete, arrow keys, return. Start to use two hands when typing. Word process short texts to present.  **(PurpleMash)**  **Sound recording**  Record sound at and away from a computer. Use software to record sounds. Change sounds recorded. Save, retrieve and edit sounds.  **Video**  Capture photographs and video.  Discuss which photos and videos to keep and which to delete.  Edit photographs with simple filters and effects, crop images  (iPad camera)  **Presentation (2Connect)**  Choose a suitable subject and collect some information. Create a mindmap of this data. Link appropriate bubbles. Present the information to a group. | **Y3 use a range of software for similar purposes**  **collect and present information**  **Y4 select and use software to**  **accomplish given goals**  **Graphics**  Acquire, store and combine images from cameras or the internet for a purpose.  **(Comic Strip Design)**  Use the print screen function to capture an image.  Select certain areas of an image and resize, rotate and invert the image.  Edit pictures using a range of tools in a graphics program.  **(Skitch, Pixlr)**  Add texts and simple images to a picture.  **(Comic Strip Design, Skitch)**  Combine text, images.  **(PurpleMash, Word)**  **Animation**  Plan what they would like to happen in their animation.  Take a series of pictures to form an animation.  Move items within their animation to create movement on playback.  Edit and improve their animation.  **(I Can Animate)**  **Video**  Capture video for a purpose.  Choose which clips to keep and which to discard.  Trim and arrange clips to convey meaning.  Add titles, credits, slide transitions, special effects.  **(iMovie – Trailers)**  **Text**  Get quicker at typing with both hands.  Create a new text aimed at a target audience.  Use a variety of font sizes, styles and colours.  Align text left, right and centre.  **(PurpleMash, Word)**  **Presentation**  Create a title slide and choose a style.  Change the layout of a slide.  Insert a picture/text/graph from the Internet or personal file.  Alter transitions and make decisions about whether they are effective, suitable.  **(PowerPoint)** | **Y6 present the data collected in a way that makes it easy for others to understand**  **Sound Recording**  Collect audio from a variety of resources including own recordings and internet clips.  Create a multi-track recording using effects.  Edit and refine their work to improve outcomes.  (**Garageband)**  **Animation**  Plan a multi-scene animation including characters, scenes, camera angles and special effects.  Use stop –go animation software  with an external camera to shoot animation frames.  Adjust the number of photographs taken and the playback rate to improve the quality of the animation.  Publish their animation and use a movie editing package to edit/refine and add titles.  **(I Can Animate, iMovie)**  **Graphics**  Select appropriate images from the Internet.  Insert images using cut and paste  Combine images for effect.  (**Skitch, Pixlr)**  Bring a still image to life using sound and movement.  **(Morpho Booth)**  **Video**  Storyboard and capture videos for a purpose.  Plan for the use of special effects and transitions.  Trim, arrange and edit audio levels to improve quality of their outcome.  Export their video.  **(iMovie)**  **Presentation**  Work independently to create a multi slide presentation that includes speakers notes.  Use transitions and animations to improve the quality of the presentation.  Include sounds and moving graphics in the slides.  Present to a large group or class using the notes made.  Insert Hyperlinks and video  **(PowerPoint)** |
| Programming | EYFS name items we control in the everyday environment  Use everyday technology  Explore on screen activities – by clicking (cause and effect)  EYFS can make a toy move and make choices about the buttons and icons they press, touch or click | Y1 create a series of instructions  and plan a journey for a programmable toy.  Y2 understand that algorithms are used on digital devices.  write a simple program and test  it.  predict what the outcome of a  simple program will be (logical  reasoning).  understand that programs  require precise instructions  Give commands including straight forwards / backwards / turn one at a time.  Explore what happens when a sequence of instructions is given.  Give a set of simple instructions to follow out a task.  Give a set of instructions to form simple geometric shapes.  Improve/change their sequence of commands.  **(Beebots, Kodable, 2Code)** | Y3 write programs that  accomplish specific goals  design a sequence of  instructions, including  directional instructions  Y4 give an ‘on-screen’ robot  specific instructions that  takes them from A to B  experiment with variables to control models  make an accurate prediction and explain why they believe  something will happen  (linked to programming)  Navigate the programming environment.  Create a background and a sprite for a game.  Add inputs to control their sprite.  Use conditional statements within the program to control the sprite (if…then..)  **(Hopscotch, Sphero, Scratch, Kodable, 2Code)** | Y5 use technology to control  an external device  develop a program that has specific variables identified  analyse and evaluate  information reaching a  conclusion that helps with  future developments  combine sequences of instructions and procedures to turn devices on and off  Y6 write a program that  combines more than one  attribute  develop a sequenced  program that has repetition and variables identified  design algorithms that use  repetition and 2-way selection  Use external triggers and infinite loops to control sprites.  Create and edit variables.  Use conditional statements.  Design their own game including sprites, backgrounds, scoring and/or timers.  Use conditional statements, loops, variables and broadcast messages in the game.  The game finishes when a player wins or loses and they must know they have won or lost.  Evaluate the effectiveness of the game and debug as required.  (Hopscotch, Sphero, Scratch, Kodable) |
| Online | **EYFS** Talk about how to use the internet as a way of finding information online | **Internet research**  Talk about websites they have been on.  Explore a website by clicking on the arrows, menus and hyperlinks.  Emails Recognise an email address.  Find the @ key on the keyboard.  Contribute to a class email.  Open and select to reply to an email as a class. | **Y3 navigate the web to**  **complete simple searches**  **Y4 know how to search for**  **specific information and know which information is useful and which is not**  **Blogging**  Navigate to view their class blog.  Understand that it can be updated from a range of devices.  Comment on their class blog.  **Internet research**  Type in a URL to find a website.  Add websites to a favorites list.  Use a search engine to find a range of media, e.g. images, texts    Think of search terms to use linked with questions they wish to answer.  Talk about the reliability of information on the Internet, e.g. the difference between fact and opinion.  **Emails**  Log into an email account, open, create and send an email. Attach files to an email.  Download and save files from an email.  Email more than one person and reply to all. | **Y5 understand how search results**  **are selected and ranked**  **Y6 be aware that some search**  **engines may provide misleading**  **information**  **Internet Research**  Use advance search functions in Google (quotations).  Understand websites such as Wikipedia are made by users (link to E-Safety).  Use strategies to check the reliability of information (cross check with another source such as books).  Use their knowledge of domain names to aid their judgment of the validity of websites.  Cloud Computing Understand files may be saved off their device in ‘clouds’. Upload/download a file to the cloud on different devices.  **(Trello, PurpleMash)**  Understand about syncing files using cloud computing folders.  **Blogging**  Alter the theme and appearance of their blog, adding background images etc.    Create a new post, save it as a draft and publish it.  Embed photos, hyperlinks and videos into posts.  Reorganise posts and remove posts they no longer want. |
| E-Safety | **EYFS know to tell an adult when something worrying or unexpected happens while they are using the internet**  **Identify simple examples of personal information**  **Know who their trusted adults are to share personal information with** | **Y1 use technology safely.**  **keep personal information**  **private.**  **Y2 know where to go for help if**  **concerned.**  Make decisions about whether or not statements found on the internet are true or not.  Identify devices that can be used to search the Internet.  Identify what things count as personal information.  Identify when inappropriate content is accessed and act appropriately.  Recognise that a variety of devices can be used to connect a number of people.  Consider other people’s feelings on the Internet. | **Y3 use technology respectfully and responsibly**  **Know different ways they can get help if concerned**  **Y4 recognise acceptable and**  **unacceptable behaviour using**  **technology**  Question the ‘validity’ of what they see on the internet.  Use a browser address bar not just search box and shortcuts.  Think before sending and comment on consequences of sending/posting.  Recognise online behaviours that would be unfair.  Recognise social networking sites and social networking features built into other things (such as online games and handheld games consoles)  Make judgments in order to stay safe, whilst communicating with others online.  Tell an adult if anything worries them online.  Identify dangers when presented with scenarios, social networking profiles etc.  Articulate examples of good and bad behaviour online. | **Y5 understand that they have to make choices when using technology and that not everything is true and/or safe**  **Y6 Be increasingly aware of the potential dangers in using aspects of IT and know when to alert someone if feeling uncomfortable**  Judge what sort of privacy settings might be relevant to reducing different risks.  Judge when and when not to answer a question online.  Be a good online citizen and friend. Articulate what constitutes good behaviour online.  Use different sources to double check information found online.  Find ‘report’ and ‘flag’ buttons in commonly used sites and name sources of help (child line, cyber mentors etc) Click-CEOP button and explain to parents what it is for.  Discuss scenarios involving online risk. State the source of information found on the Internet. Act as a role model for younger pupils. |
| Data |  | **Y2 organise, retrieve and**  **manipulate digital content**  Know that images give information.  Say what a pictogram is showing them.  **(2Graph)**  Put data into a program.  Sort objects and pictures into lists or simple tables. **(Practical e.g toys)**  Make a simple Y/N tree diagram to sort information.  Create and search a branching database. | Choose information to put into a data table.  Recognise which information is suitable for their topic.  Design a questionnaire to collect information.  Sort and organize information to use in other ways.  Create and search a branching database.  Use a database to answer simple  **(2investigate, Science)** | Create data collection forms and enter data accurately from these.  Know how to check for and spot inaccurate data.  Know which formulas to use when I want to change my spreadsheet model.  Make graphs from the calculations on my spreadsheet. Sort and filter information.  Understand that changing the numerical data effects a calculation.  (**2Investigate)** |
| Understanding  Technology | **EYFS talk about technology that is used at home and at school**  **Operate simple equipment**  **Use a safe part of the internet to play and learn** | **Y1 talk about some of the IT uses in their own home**  **Y2 know how technology is used in school and outside of school** | **Y3 discern when it is best to**  **use technology and where it adds little or no value**  **understand what computer networks do and how they provide multiple services** |  |