Ashford Oaks Computing Overview

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 1	**E-safety** Know they can share information on line; Understand there is a right and wrong way to communicate; Understand need to keep passwords private CEOP Thinkuknow resources, based on Hector's World www.thinkuknow.co.uk/5_7/ (lessons 1 – 5) Unit 1.1 E-safety, Unit 1.9 – Technology outside the classroom Education for a Connected World – see Esafety in Computing folder	**Digital Media** **Graphics** Paint package, shape, line, colour e.g. draw pics for a fairy tale – add pic to 2paintapicture **Data** Use pictograms and interpret data, Use ICT to sort objects into groups Unit 1.2 Sorting Unit1.3 Pictograms	**Multi-media/ word processing/ publishing** Keyboard skills, select images, type caption, record sound to add to work – 2create a story **Music & Sound** Easyspeak microphones –know how to use recording devices. 2beat/ 2explore/ 2 sequence . Unit 2.7 Making Music	**Programming 1** Give instructions to Bee Bots – explore outputs when buttons pressed. Give a sequence of instructions. Debug Unit 1.4 Lego Builders (2DIY) Unit 1.5 Maze Explorers (2Go)	**Programming 2** Using 2code (6 weeks) Unit 1.7 (2Code)	**Communication & Collaboration** **Messaging** – different types of messages – exploring 2blog – purple mash **Typing Skills** 2type Twinkl typing Edclub typing
Year 2	**E-safety** Passwords should be unique. Know that not everyone online is trustworthy iKeepSafe.org www.thinkuknow.co.uk/5_7/ Lesson 1 – 5 (recap from Y1) Unit 2.2 E-safety Education for a Connected World – see Esafety in Computing folder	**Digital Media** **Graphics** Use a range of tools on a paint package to communicate a specific idea; stamps for patterns and designs Unit 2.6 Creating pictures **Animation** Sequence of still images to form short animation. Unit 1.6 Animated story books	**Multi-media/ word processing/ publishing** Type short texts; edit font size, colour, style; save, print and open work; insert/delete using; use different layouts; use some graphics /videos /sounds. 2create a story Unit2.8 Present ideas	**Programming 1** **Coding** Unit 2.1 – 2Code Purple Mash	**Programming 2** Beebots – sequence instructions to include direction and distance; predict and estimate distance/turns Move the turtle – instructions to draw shapes and use right angle turns Improve and change commands - 2go (Purple Mash) **Data** Use a simple graphing package to record information; add labels and numbers; use graphs to create and answer questions. Unit 2.3 Spreadsheets; 2Graph/ 2Count	**Communication & Collaboration** Compare different ways of messaging: blog/email/discussion forum/game sites – advantages and disadvantages – understand difference between an e-mail and a chat in forum or social medial Unit2.5 – effective searching 2Email; 2blog **Data** Branching database – use yes no questions to identify objects Unit2.4 Questioning
Year 3	**E-safety** Difference between fact and opinion; know how to deal with unpleasant communication; know what is personal and private incl passwords; discern when email should or shouldn't be opened; SMART rules "What should you keep Safe?" **Messaging** Use new threads on an email/blog of class stream (google classroom); class quizzes ; surveys and video conferencing Unit 3.5 Email (incl e-safety) 2Blog – Purple Mash Education for a Connected World – see Esafety in Computing folder	**Digital Imagery** **Music & Sound** Independently take photos and videos; sequence, edit and present them; create a simple animation; add/record/save/ retrieve/organise sounds in multimedia software; layer sounds in music composition 2Animate – Purple Mash	**Multi-media/ word processing/ publishing** Evaluate a range of electronic texts; import graphics from cameras & internet; change font and size; recognise text boxes,columns, WordArt, borders; delete insert and replace text using mouse and arrow keys; cut copy and paste between applications; type with more than two fingers Unit 3.4 - 2type Purple Mash	**Programming 1 – Scratch** Introduction to scratch – create background and sprite for animation; change background after a set time; add inputs to control sprite; change position of sprite on screen Twinkl have scratch resources https://scratch.mit.edu/ - can be used directly on chromebooks; chn must be taught how to save files in to team drive.	**Programming 1 – Logo** Write a simple program to create a line drawing; program pen up and pen down; write a program to create a specific shape or pattern Unit 4.5 Logo – Purple Mash Logo	**Data** Choose, print & annotate graphs to answer simple questions e.g. bar charts Unit 3.8 Graphing – Purple Mash 2Graph Collect information in a questionnaire; create record cards to store information; use a database to generate bar charts and graphs; answer questions by searching database Unit 3.6 Branching databases – Purple mash 2Question
Year 4	**E-safety** Know how to use online search engines safely. Safesearch; using search criteria; aware of need to check and evaluate information; use email appropriately; follow the Be SMART online rules, keep info and passwords safe and secure Education for a Connected World – see Esafety in Computing folder KnowIT All Activity 3 (The SMART Adventure) Unit 4.7 Effective Search – Purple Mash Unit4.2 Online Safety – Purple Mash **Communication & Collaboration** Use different online communication methods: blog/online discussion/survey/quiz/ google classroom Explore advantages and disadvantages of these; discuss different uses of language on different platforms. When it's OK to use 'text' language. 2Blog; 2Email – Purple Mash Google Classroom	**Multi-media/ word processing/ publishing** Evaluate a range of multimedia tools- recognise features of layout & design; create a multimedia presentation and choose different text styles to suit audience. Select and import graphics from cameras and camera tool on chromebooks; cut; paste and save images from websites; import sounds or recordings where appropriate. Evaluate work throughout the process. Use more than two fingers when typing text. Hold two hands over different halves of keyboard. Google classroom: slides/docs Powerpoint, publisher Unit 4.4. Writing for different audiences – Purple Mash	**Graphics (Digital Art)** Import a photograph into a computer package and explore visual effects that can be added; create patterns and montages; select areas to manipulate and give different effects. Unit 4.6 Animation – 2Animate 2Paint – Purple Mash (can import a background picture to work on **Graphs** Introduce basic features of spreadsheets. Regular opportunities to enter data into a graphing package and use it to create a range of graphs, and to interpret data across all subjects To compare how different graphs can be used for different purposes. (Can be covered in a range of subjects) Google Sheets/Microsoft Excel Purple Mash 2Graph & 2Calculate	**Programming 1- Scratch** Create a simple game. Navigate the Scratch programming environment. Create a background and sprite for a game. Add inputs to control their sprite. Use conditional statements (if… then) within their game. **Programming 2- Kodu** Navigate the Kodu macro environment using keyboard and mouse. Create a 3D digital world for a game with land, water and scenery. Add a sprite and program it to navigate 3D world with inputs Program their sprite to navigate their 3D world with an input. Use if…then statements to give characters behaviours. Unit4.1 Coding – Purple Mash/ Crash course coding – both use 2code but can cover all the relevant objectives above	**Branching databases** search a branching database create and use a branching database to organise, reorganise and analyse information; compare the use of graphing software, branching database and card-based database for organising and interpreting data; explore some real-life examples of branching databases, such as keys for animal identification. 2question – Purple Mash **** could be replaced with more focus on basic spreadsheet knowledge and understanding**** Branching databases could be done through science on computers e.g. purple mash 2question	**Music & sound** listen to a variety of radio programmes, evaluating their style; write a script for a radio programme plan and record audio for a radio program, eg interview, news broadcast, advert, cookery programme evaluate and re-record (maybe editing); maybe publish work online as a podcast (This could be covered through any audio based/oracy project or through anything with a sound focus)

Year 5	**E-safety** Carry out refined web searches; evaluate and refine search results; know that some information may be biased; check validity of websites. Develop strateiges for dealing with pop-ups; understand copyright infringement; acknowledge the sources they have used in their work; explore and understand their rights (GDPR) and the need to respect the rights of others. Education for a Connected World – see Esafety in Computing folder ThinkUKnow Cybercafe – Lesson 5	**Multi-media/ word processing/ publishing** Plan a presentation; combine from a range of sources; organise and refine to suit a specific audience; create hyperlinks for a non-linear presentation; use peer assessment, collaborative working and self-evaluation to make improvements; Format text to indicate relative importance; cut and paste between apps; delete/insert/replace text to improve clarity; use tools to make corrections (spell check, find and replace); develop further confidence typing with both hands	**Digital Imagery** **Music & Sound** Plan a story board for a video or animation; create, edit and refine. Use different camera angles; select and edit sounds, text, movie clips and other effects; import sounds and layer them in editing; know how to save work in a web compatible format Purple Mash 2animate Purple Mash 2sequence Stop Frame Animation - Chromebook	**Modelling & Simulation** Design and use a spreadsheet to solve a problem by changing variables. Enter formulaue using all four operations into a spreadsheet; use SUM to total a range of cells; change data in a spreadsheet to answer 'What if..? questions Purple Mash Unit 5.3 Spreadsheets Twinkl Planning – Y6 Spreadsheets Google Sheets/ Microsoft Excel **Data Handling** Use data logging technology wthin maths or science LEGO Mindstorms robots can have data sensors attached to them and then be linked to computers.	**Programming 1- Purple Mash 2Code/ Scratch** Create a game with story sections and levels e.g. guide a story character through different problems in a story. Design sprites, backgrounds, scoring/and or timers; use conditional statements, loops; variables and broadcast messages; game finishes when player wins or loses; evaluate and debug. **Programming 2- Kodu** Create a user controlled sprite in a game linked to topic; create automated sprites and peripheral characters; use timers, health monitors and power ups.	**Communication & Collaboration** Use advanced search functions in appropriate search engine e.g. use quotations in google search. – Linking to safety – use knowledge of domain names to aid judegement of validity of websites. Understand how cloud computing, such as google, works. Be able to upload and download from google mydrive/ team drive; understand what file syncing is, explore communcivation features within google classroom e.g. the class stream; google hangouts Google Chromebooks
Year 6	**Blogging – Purple Mash 2Blog** Set up a class blog – this would be good to set up at the beginning of the year so that the children can use throughout the year. Be able to alter theme/ appearance of blog; create posts; save drafts then publish; know how to embed photos/ hyperlinks/videos Reorganise and remove posts Like/comment/follow other posts; use blogs safely and appropriately – link to e-safety	**Multi-media/ word processing/ publishing** Build on skills from Year 5 to create an effective and well-polished presentation for a specific audience including non-linear hyperlinks. When word processing, use various display features to communicate to an audience: e.g. fact/definition boxes, annotated illustration, leaflet layout; delete/insert and replace text to improve clarity and mood. Google slides/ Microsoft Powerpoint	**Digital Imagery** Build on skills and experience from Year 5, plan and create a video or animation' Focus on refining and improving, using a range of features within the chosen package. Purple Mash 2animate Stop Frame Animation – Chromebook App	**Programming 1 – Scratch** Create an animated story. Could be linked to the digital imagery unit and stretched over the terms. Structure and control timing of events; control when objects need to be visible; add voice sounds to enhance story; add interactive user features Twinkl- Scratch Planning – Animated stories **OR** **Programmaing 2 – 2Code – Purple Mash** Create an animated story that takes text input from a user and uses it to program; follow flowcharts to debug Purple Mash coding 6.1 2Code	**E-safety** Use a range of strategies to identify validity of a website; explore and understand plaigurism, copyright and data protection; know how to select copyright free resources; social media do's and don'ts; cyberbullying; impact of sending/ uploading inappropriate content; know how to report abuse. Education for a Connected World – see Esafety in Computing folder Google BeInternetLegends	**Databases** E.g. create a database about Rivers around the world. Collect data efficiently to create a database; design fields and records in a database; use a range of searches and graphs to interpret data; draw conclusions from data Purple Mash 2Investigate **Spreadsheets (Simulation)** Build on skills from Y5: identify and enter correct formulae into cells; copy formulae to create tables of results; Use spreadsheets to create graphs and answer questions Change data/ formulae to answer 'What if questions Twinkl Planning – Y6 Spreadsheets Google Sheets/ Microsoft Excel Purple Mash 6.3 Spreadsheets