Ashford Oaks Primary School Computing Scheme of Work – Year 6

	Multimedia and Word processing	Digital media	Programming 2 forms/languages	Communication and Collaboration	Data	E-Safety
Year 6	• Select appropriate software for the task/audience • Plan structure and layout of presentation • evaluate and select suitable information and media from a range of electronic resources • organise, refine and present information for a specific audience • Create a range of hyperlinks to produce a non-linear presentation • Through peer assessment and self evaluation, make suitable improvements • choose appropriate techniques to create an effective and well polished presentation considering intended audience. • Discuss and evaluate the presentations and give reasons for the chosen styles and techniques **When word processing children should:** • be able to 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.	**Digital Imagery** • explore all the features of a given video editing or animation package • plan a storyboard for a video or animation to suit a purpose • film, create, edit and refine to ensure quality; present to an audience	**Programming Unit 1: Scratch – Animated Stories/** • Declare variables • Use a range of statements • Use selection algorithms **Programming : Unit 2 Purple Mash – 2 Code** • Review good planning skills. • Design programs using their choice of objects, attributing specific actions to each using their new programming knowledge. • Use variables within a game to keep track of the properties of objects. • Use functions and understand why they are useful in 2Code. • Debug a program and organise the code into tabs. • Organise code into functions and Call functions to eliminate surplus code in the program. LEGO –Ev3 Robots – Use with Lego Mindstorms Education software on old laptops or now on Chromebooks – will send to robots via bluetooth	**Blogging Purple Mash – 2blog** • 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. • Like/follow other blogs • and build up their blog content over the year.	**Database** • to identify a problem which can be solved by collecting data • to identify which data to collect • to collect data in an efficient and accurate way • to organise data by designing fields and records in a database • to interpret data by using a range of searches and graphs • to draw conclusions from data • to use conclusions to solve the original problem • to present findings to a specified audience • to justify reasons for their choices and explain why other methods were not appropriate • Simulation • To identify and enter the correct formulae into cells, modify the data, make predictions of changes and check them • to identify formulae and enter them into a spreadsheet • Copy formulae to create tables of results	**E-Safety** **Online Research** • Children use a range of sources to check the validity of a website. • Children recognise that different viewpoints can be found on the web. They critically evaluate the information they use, and understand some of the potential dangers of not doing so. • Children are aware of the issues of plagiarism, copyright and data protection in relation to their work. • Children select copyright free images and sounds from sources such as the Audio Networks and NEN image gallery. **E-Safety Communication & Collaboration** • Decide which online communication tool is the most appropriate to use for a particular purpose, e.g. email, discussion forums, podcast, or multi-user documents on Fronter. • Discuss issues to do with Social Networking. E.g. giving too much information, people using information online, not knowing who is at the other end of the conversation **E-Safety E-Awareness**

	• make corrections using a range of tools (eg spell check, find and replace) • develop confidence using both hands when typing				• to use a spreadsheet to draw a graphs and answer questions • to change the data and formulae in a spreadsheet to answer 'what if …?' questions and check predictions	• Be aware of the issues surrounding cyberbullying and understanding the impact on an individual of sending or uploading unkind or inappropriate content. • Know that malicious adults use the Internet and attempt to make contact with children and know how to report abuse.

Unit/Project	Statutory requirements/ key skills	Notes	Possible outcomes and activities
Multimedia and word processing	• Select appropriate software for the task/audience • Plan structure and layout of presentation • evaluate and select suitable information and media from a range of electronic resources • organise, refine and present information for a specific audience • Create a range of hyperlinks to produce a non-linear presentation • Through peer assessment and self evaluation, make suitable improvements • choose appropriate techniques to create an effective and well polished presentation considering intended audience. • Discuss and evaluate the presentations and give reasons for the chosen styles and techniques **When word processing children should:** • be able to 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. • make corrections using a range of tools (eg spell check, find and replace) • develop confidence using both hands when typing	Suggested Resources **Multimedia Authoring packages: Powerpoint – Create - Google slides and add pictures, text, WordArt, Video** **Word processing packages: Word** – Word processor/ **Google docs** **Touch Typing Course** – (www.bbc.co.uk/schools/typing) **Touch Typing Course** (www.bbc.co.uk/schools/typing **Typing club** https://www.typingclub.com/login.html children have a log in for this. **GOOGLE CLASSROOM – any google app can be used collaboratively with everyone writing on the same document**	**Plan a presentation including appropriate software, combine from a range of sources, organise and refine to suit purpose and audience** Literacy – create a leaflet about something whilst having a literacy focus, i.e. using a variety of persuasive language within the leaflet. Science – create a document explaining a science concept that another year group could use to learn from. Talks – create a presentation for a talk. World War 2 – create a non-linear presentation about an aspect of WW2.
Digital Imagery	• explore all the features of a given video editing or animation package • plan a storyboard for a video or animation to suit a purpose • film, create, edit and refine to ensure quality; present to an audience	Suggested Resources **Digital camera -** **Windows Movie Maker** - Video editing software which allows ON LAPTOPS ONLY **Purple Mash 2Aimate** – Simple animation program **WeVideo – chromebooks – TBC**	**Plan and produce a video or animation. Evaluate and improve work, aiming at high production standards.**

		Stop Frame Animation – Chromebooks **This also links well with the Scratch Planning for Animated stories from Twinkl – savedin computing folder.**	Literacy – Create scenes with multiple camera angles and shot types Topic – Alter a piece of drama to make it appear to be from the past e.g. use green screen and add effects in Movie Maker.
Programming Unit 1: Scratch Planning – Animated Stories	• Create appropriate animations for a story scene • Structure and control the timing of events. • Control when objects need to be visible • Sequence events to create a story narrative. • Add voice sounds to enhance animated story. • Add interactive user features to a scene or story	Scatch Twinkl Planning and resources – Animated Stories – all saved in computing. Any files can be uploaded to google team drive for Y6 an access by all children – then presentations can be used with classes on whiteboard	Link to literacy story making and also to Multimedia unit in computing
LEGO ev3 Robots	• Use the robots and educational software to develop programming skills	Requires robots to built 1 between 2. Lego education software on chromebooks – allows you to learn features and functions step by step	
Programming Unit 2: Purple Mash Y6 Coding Unit	• Create a plan for a program • Debug a program when not going as expected • Explain and use functions in 2code • Explain how functions made it easier to read • Create a program that takes text input from a user and uses it in a program • Be aware of the need to code for all possibilities when using user input. • Follow flowcharts to debug a code • Create flowcharts for algorithym • Create a text based adventure – similar to animated stories	Purple Mash Unit 6.1 Coding Use the Y6 crash course if pupils have not used 2code greatly	Link to literacy story making and also to Multimedia unit in computing
Programming Unit 3: APP Inventor	• *Understand the role of the component designer, block editor, and phone/emulator*	*http://www.appinventor.org/ has lot so videos and advice. There is even a 'Course-in-a-box' section with*	*Topic – Create an information app about a current topic. Include*

OPTIONAL = but interesting to look at if you are feeling enthusiastic or you have HA pupils	• *Create a simple app with button components to enable navigation* • *Add media (sounds and images) to apps and upload them from a computer* • *Test and run apps using App Inventor's live testing* • *Package an app and download them to a phone or tablet.*	*Instructions for creating a simple app* *http://www.appinventor.org/apps/hellopurr/hellopurr.pdf*	*information and images.* *Create a simple quiz app on any curriculum area.*
Communication and Collaboration	**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. • Like/follow other blogs and build up their blog content over the year.	Use blog: **Purple Mash – 2Blog**	Regularly update a blog during a term. Add photos and links to related sites or other blogs.
Communication & Collaboration	• Decide which online communication tool is the most appropriate to use for a particular purpose, e.g. email, discussion forums, podcast, or multi-user documents on Fronter. • Discuss issues to do with Social Networking. E.g. giving too much information, people using information online, not knowing who is at the other end of the conversation	**Google Be Internet Legends – E safety lesson plans** ThinkUKnow Cybercafe Lesson 9: Social Networking – Safe Profiling School email system or communication tools with the learning platform. SMART Rule – Safe, Reliable	This could be taught as a separate Life Skills lesson or as part of another ICT lesson. Refer to the E-SMART rules.
Handling Data Simulation	• To identify and enter the correct formulae into cells, modify the data, make predictions of changes and check them • to identify formulae and enter them into a spreadsheet • Copy formulae to create tables of results • to use a spreadsheet to draw a graphs and answer questions • to change the data and formulae in a spreadsheet to	Suggested Resources **Spreadsheet program e.g. Google Sheets, Excel** – Start to use as a spreadsheet; adding formulas. **Purple Mash Unit 6.3 – Spreadsheets** **Twinkl Planning - Spreadsheets**	**Design and use a spreadsheet to solve a mathematical problem by reviewing rules and variables.** Answer 'what if questions' Create spreadsheet for business plan

	answer 'what if …?' questions and check predictions		
Handling Data : Database	Database • to identify a problem which can be solved by collecting data • to identify which data to collect • to collect data in an efficient and accurate way • to organise data by designing fields and records in a database • to interpret data by using a range of searches and graphs • to draw conclusions from data • to use conclusions to solve the original problem • to present findings to a specified audience • to justify reasons for their choices and explain why other methods were not appropriate	Suggested Resources **Google sheets** **Excel**- Create graphs and spreadsheets **Purple Mash – 2 Investigate** **Purple Mash (Y5) Unit 5.4 Databases**	**Solve a problem by planning and carrying out data collection, by organising and analysing data using a database, and by drawing conclusions and presenting findings to a specific audience** Maths – use data they've collected in maths to create a spreadsheet and graphs/charts and to answer questions. Topic – Create a database about different Rivers around the world and compare. Science – use collected data to answer questions and make charts/graphs. Create a business plan for money making project

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E-Awareness	• Be aware of the issues surrounding cyberbullying and understanding the impact on an individual of sending or uploading unkind or inappropriate content. • Know that malicious adults use the Internet and attempt to make contact with children and know how to report abuse.	School Internet **'Being SMART online'** KS 2 Safer Internet Day Assembly video. **http://www.thinkuknow.co.uk/teachers/** Clair's story from CEOP (11-16) http://www.thinkuknow.co.uk/teachers/ (Summer term – please note teachers need training and support to deliver this).	This could be taught as a separate Life Skills lesson or as part of another ICT lesson. Refer to the E-SMART rules.

		www.thinkuknow.co.uk/8_10/ "Let's fight it together", Cyberbullying section, accompanied by comprehensive teaching resources and video : http://www.digizen.org/ SMART - Reliable	