



Wokingham LA ICT Schemes of Work

Area of ICT	Year 5 outcome
Multimedia and word processing	Plan a multi-layered presentation, combine from a range of sources, organise and refine to suit purpose and audience
Graphics	Create digital artwork by copying/ pasting within and between photographs
Digital video	Plan a storyboard for a video or animation. Create, edit and refine.
Communicating Collaborating and Publishing	Share ideas using a range of online methods. Develop key skills and ideas about personal safety when using any form of electronic communication
Music and sound	Create radio programme or sonic postcard by combining sounds
Handling data	Search a large (pre-prepared?) database to research information, using a range of search techniques
Research	Search for, interpret, check and question information; use logical inference to identify implausible and irrelevant information; present in a suitable format for a chosen audience
Modelling	Design and use a spread sheet to solve a problem by changing variables.
Control	Plan, carry out and evaluate an investigation using data logging technology. Create and refine a sequence of instructions to control events, using programmed procedures or a flow chart

For further information Please see planning guidance at the end of the schemes of work

These are Medium Term plans and should form the basis of your planning ICT: It is intended that units are not taught in isolation but key areas and skills are taught throughout the year as appropriate with other units and in a cross curricular context. You might want to highlight the schemes as aspects are covered in your short term plans to ensure you have coverage.

NB: Where you see *In order to progress:* is intended for a small more able group

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Further information contact kathy.smedley@wokingham.gov.uk

<p>Year 5: Multimedia This unit can be taught in association with the digital imagery, sound, music, communicating and publishing units</p>		
<p>Level 3: They use editing and formatting techniques to develop and refine their work to improve its quality and presentation</p> <p>Level 4: They create and combine different forms of information, refining and presenting it for a particular purpose, showing an awareness of audience and the need for quality</p>	<p>Level 5: They use ICT to structure, refine and present information in different forms and styles for specific purposes and audiences</p>	
<p>Key Objectives</p> <ul style="list-style-type: none"> To create multi-layered texts, including use of hyperlinks and linked web pages on a Learning Platform within a chosen topic To use ICT, to obtain information related to a presentation To show an awareness of the intended audience Use a variety of DTP/word processing packages to present text To design, create and evaluate their own and others presentations and DTP Develop criteria for evaluating theirs and other presentations Understand the potential of multimedia to inform or persuade <p><i>*See also the Communicating and Publishing unit on using the learning platform. Many of the skills above can be achieved on the learning platform as well.</i></p>	<p>Key Skills</p> <ul style="list-style-type: none"> Develop and use criteria to evaluate the design and layout when evaluating a range of multilayered multimedia, web sites, pages on Learning Platforms, online resources and presentations Understand how pages are linked together and recognise the need for clarity. Produce a diagram to show the links between pages. Create a range of hyperlinks to produce a non-linear presentation Use a multimedia authoring program to organise, refine and present information in different forms for a specific audience Select and import graphics from digital cameras, graphics packages and other sources and prepare it for processing using ICT Select and import sounds from their own recording, create their own effects and music and import from other sources Format and edit work to improve clarity and mood, use a range of tools e.g. cut and paste, justify, insert and replace and format text to indicate relative importance develop consistency across a document, using the same styles of font, colour, size for headings, body text etc throughout a document or a set of web-pages Selecting information to meet the needs of the audience Through peer assessment and self-evaluation evaluate their design and make suitable improvements <p>In Order to Progress further:</p> <ul style="list-style-type: none"> Create a page of sounds which are activated by appropriately named and positioned action buttons 	<p>Outcomes</p> <ul style="list-style-type: none"> Plan a presentation, combine from a range of sources, organise and refine to suit purpose and audience <p>Example Cross Curricular links and outcomes</p> <ul style="list-style-type: none"> <i>On a local intranet children create a presentation about their school for the community justifying their choice of medium and content</i> <i>Create a narrated big book for a younger audience including sound (literacy)</i> <i>Creating a photo-story or play</i> <i>Use had held digital cameras to video a news report based on a current event</i> <i>Create a questionnaire and attach to an email to send to a partner school to obtain information about their locality.</i> <i>Plan and create a presentation on any topic, aimed at any audience</i> <p>Assessment Opportunities:</p> <ul style="list-style-type: none"> Create a presentation using a range of techniques Evaluate one another's presentations.
<p>Suggested Resources: <i>DTP Tools Purple Mash Creative Tools: 2Publish 2Publish Extra, 2Publish Projects, Word, Publisher, Multimedia Authoring Tools: 2 Create a story, 2Create a Super Story, Clicker 4 or 5, Textease, Kar2ouche, PowerPoint</i></p> <p>Other Resources: <i>microphone and digital sound recorder, digital microscope, Web and publishing UniServicy (Learning Platform)</i></p>		

Year 5 Digital Imagery		
<p>Level 3: They use editing and formatting techniques to develop and refine their work to improve its quality and presentation</p> <p>Level 4: They create and combine different forms of information, refining and presenting it for a particular purpose, showing an awareness of audience and the need for quality</p>		<p>Level 5: They use ICT to structure, refine and present information in different forms and styles for specific purposes and audiences They assess the use of ICT in their work and are able to reflect critically in order to make improvements in subsequent work. They use appropriate evaluation criteria to critically evaluate the fitness for purpose of their work as it progresses</p>
Learning Objectives	Key Skills What the children will do	Outcomes
•	•	•
<p>Suggested Resources: Graphics software Dazzle, 2Paint a Picture, Purple Mash: 2Paint, 2Animate, 2design and Make, 2 Publish Extra, CAD packages: 2design and make Google sketch Up 2Draw, Image editing Photo simple, Picassa, Microsoft Picture Manager, http://www.picnik.com/ , http://aviary.com/ Microscope Animation: 2Animate, Pivot stick animator, Powerpoint, Publishing : UniServity Learning Platform present their graphics through desktop publishing, multimedia and movie editing software: Microsoft Photostory Video Manipulation and Editing Microsoft Movie Maker</p>		

Year 5 Communicating Collaborating and Publishing		
Level 4 <i>Use editing and formatting techniques to develop and refine work</i> <i>Communicate and exchange information and ideas with others collaborating to develop and improve work</i> <i>Understand benefits of online communication</i> <i>Manage some of the risks associated with digital environment</i>		Level 5 <i>Exchange information and ideas with others in a variety of ways, including using digital communications</i> <i>Use ICT safely and responsibly</i>
Learning Objectives	Key Skills – what the children will do	Outcomes
•	•	•
		•
Suggested Resources - <i>easy mail, grid club – Becta e-safety website, Uniservity Learning Platform blog, Wiki , forum tools, Podcast, Other Free web apps to try and some to embed: Web 2.0 Primary Pad Wallwisher, Dappleboard, Prezi, Doodle, Glogster.Edu</i>		



Year 5 Music and Sound		
<p>Level 3: They use editing and formatting techniques to develop and refine their work to improve its quality and presentation.</p> <p>Level 4: They create and combine different forms of information, refining and presenting it for a particular purpose, showing an awareness of audience and the need for quality.</p>		<p>Level 5 They use ICT to structure, refine and present information in different forms and styles for specific purposes and audiences.</p>
Learning Objectives:	Key Skills: What the children will do	Outcomes
•		•
		•
		•
<p>Suggested Resources: <i>Music composition software</i> e.g. Black Cat Compose, Compose World, Notate, 2simple music toolkit, Online tools: Purple Mash 2Sequence, BBC Making tracks web site, Aviary Music creator ROC Sound Manipulation: Audacity (free) Podium, Myna from Aviary.com online audio editor Sound Capture Microphone and digital sound recorder; electronic Multimedia software to record sound straight into (eg. 2Create a super Story, Kar2ouche, PowerPoint, UniServity, Photostory Sound resources www.findsounds.com, Espresso, http://audio.lgfl.org.uk</p>		

Year 5 Finding Things Out: Research Analyse information and ask questions using complex searches		
<p>Level 3: Pupils search for and use information from a range of sources and make judgements about its usefulness when following straightforward lines of enquiry</p> <p>Level 4: Pupils refine searches to find, select and use information, questioning its reliability</p> <p>Level 4: They interpret their findings, question plausibility and recognise that poor-quality information leads to unreliable results</p> <p>Level 5: They use ICT to organise, store and retrieve information using logical and appropriate structures</p>		
Learning objectives	Key Skills: what the children will do	Outcomes
<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> 	<ul style="list-style-type: none">
<p>Suggested Resources: <i>The Internet; cached content eg Espresso, links page set up by teacher child-friendly search engines eg www.gogooligans.com and www.factmonster.com; search engines for sounds, eg www.findsounds.com</i></p>		

Year 5: Finding Things Out: Handling Data		
<p>Level 3: They collect, record and organise data to answer questions and present findings</p> <p>Level 4: Pupils understand the need for collecting information in a format that is suitable for processing</p> <p>Level 4: They interpret their findings, question plausibility and recognise that poor-quality information leads to unreliable results</p> <p>Level 5: They use ICT to organise, store and retrieve information using logical and appropriate structures</p>		
Learning objectives	Key Skills: what the children will do	Outcomes
<ul style="list-style-type: none"> Understand that different programs create graphs in different ways, and that they each have suitable uses To be able to create different types of graphs and charts and use them to interpret and answer a specific questions Understand that information found is not always helpful in answering questions Understand that information held on databases may contain errors and that this can affect results Recognise the consequences of data not being accurate, relate to outside world (E.g. Police / doctors / banks/ school database) Understand there are different ways in finding anomalies in data; graphs, sorting, searching Discuss how ICT enables you to search and sift through large amounts of different types of information and describe the advantages of using the tools and the need for accuracy 	<p>Graphing</p> <ul style="list-style-type: none"> Determine the data needed to answer a set of related questions; select and organise relevant information Use frequency tables; construct pictograms, bar graphs and line graphs that represent the frequencies of events and changes over time; use the ICT to present and highlight features that lead to further questions <p>Databases</p> <ul style="list-style-type: none"> Use the Survey tool in the learning platform to develop a database and collect data Design questions using key words, to search a large pre-prepared database If adding to a database recognise the need for accuracy and how this will effect the information and answers to questions Make queries using and/or to search data when looking for relationships and patterns in data (complex searches) Search using search terms greater and less than Modify a search pattern in order to find specific information Check for accuracy by checking data, using different views, search tools, and graphing. Be able to recognise and correct the data Use graphs to provide supporting evidence for their conclusions 	<ul style="list-style-type: none"> Understand how ICT enables you to search and sift through large amounts of different types of information and describe the advantages of using the tools. Understand that data is only good if it is put in accurately, describe what happens if data isn't accurate and consider possible consequences Search a large pre-prepared database to research information, using a range of search techniques <p>Example Cross Curricular links and outcomes</p> <ul style="list-style-type: none"> <i>Search a large pre-prepared database of Victorian census data to draw conclusions about differences in lifestyles then and now</i> <i>Search a large pre-prepared database of the planets and stars to compare them according to a range of criteria</i> <i>Children create a simple database to record responses from parents/grandparents or carers about: what games they played in the playground? What luxury items they had? Where they travelled for holidays and how they travelled to these places? They compare this with today's experiences.</i> <i>Children record and analyse the results of an experiment stretching elastic bands</i> <p>Assessment Opportunities</p> <ul style="list-style-type: none"> Children search a large database to answer questions, they use search tools, filters and graphs to illustrate their answers. They are able to refine searches to find the correct information. They talk about importance of accuracy when inputting data.
<p>Suggested resources: Database Software, eg. 2Investigate, Textease database, Information Workshop, MangoData, UniServity Survey tool Graphing Software Purple Mash 2Count, 2Graph, Excel, RM Starting Graph; Textease Spreadsheet, 2Calculate. Branching database: 2Question, FlexiTree, Textease Branch</p>		

Year 5: Developing ideas and making things happen: Control Refine instructions to improve the efficiency (procedure) of the instructions they have created		
<p>Level 3: They use sequences of instructions to control devices and achieve specific outcomes</p> <p>Level 4: They plan, test and refine sequences of instructions</p> <p>Level 4: They capture data using sensors to support investigations</p> <p>Level 5: They explore the effects of changing the variables in ICT-based model</p>		
Learning objectives	Key Skills: what the children will do	Outcomes
•	•	•
		•
<p>Suggested resources: <i>Data logger with graphing software dataharvest Easy Sense Q, Flowol (with Control box and models, maybe including home made models), Scratch (free Download)</i></p>		

Year 5: Developing ideas and making things happen: Modelling and Simulations Spreadsheets		
Level 3: They answer questions when using ICT models and simulations		
Level 4: They develop simple ICT-based models to explore patterns and relationships, and make predictions about the consequences of their decisions		
Level 5: They explore the effects of changing the variables in an ICT-based model		
Learning objectives	Key Skills: what the children will do	Outcomes
<ul style="list-style-type: none"> • Know spreadsheets can carry out a range of calculations and functions • Understand one element of the spreadsheet can be changed and this can have effects on the other calculations • Once set up spreadsheets can automate functions to make it easier to test variables e.g. when planning a budget you can change number of items and see the immediate total cost • If functions or calculations are not set up accurately this will effect results • To know how to enter formulae into a spreadsheet into cells, • Understand that computers can calculate costs and are useful when prices change. • To change data in a spreadsheet to answer "what if...?" questions 	<p>**Spread sheet modelling (Longer Unit) Enter labels and numbers into a spreadsheet</p> <ul style="list-style-type: none"> • Enter formulae into a spreadsheet and modify the data, (simple calculations + -/ X total) • Make predictions and changes and check results • Use 'SUM' to calculate the total of a set of numbers in a range of cells • Change data in a spreadsheet to answer 'what if...?' questions and check predictions • Discuss how a spreadsheet with formulas can allow quick changes and enable them to test their ideas • Create and use a spreadsheet to create costings which are within budget • To consider appropriate layout and design of their information and data <p>In order to progress further</p> <ul style="list-style-type: none"> • Discuss how using formula can enable them to test different variables 	<ul style="list-style-type: none"> • Use ICT based models to explore variables to solve problems • Design and use a spreadsheet to solve a problem by changing variables <p>Example Cross Curricular links and outcomes</p> <ul style="list-style-type: none"> • <i>Use a spreadsheet to calculate the cost of ingredients for biscuits, answering questions about price or quantity changes</i> • <i>Create a spreadsheet to investigate suitable field sizes to keep the most livestock e.g. how many pieces of fence are needed to contain a variable number of cows?</i> • <i>Create a spreadsheet to model costs of a school outing, trip or party</i> • <i>Create a spreadsheet to discover the cheapest way to buy crisps (multipacks or singly) or which size of drinks containers is cheaper, or whether a 3 for 2 deal is better or worse than a percentage discount; use graphs to illustrate</i> • <i>Explore the effect of changing variables in Logo programming</i> • <i>Use computer simulations to explore the effects of changing variables, linked to other subjects</i> <p>Assessment opportunities</p> <ul style="list-style-type: none"> • Create a budgetary spreadsheet that calculates totals and costs. • Use a spreadsheet to change variables • Discuss how they use the spreadsheet formulae to change different variables and manipulate costs
<p>Suggested resources: spread sheet program Excel, 2Calculate, computer simulations</p>		

Planning Guidance

ICT Capability

The most important aspect of the plans is that each area of ICT should build up to an outcome, which can be celebrated and evaluated as a finished product. As the diagram shows, skills teaching is only one part of ICT Capability: the others are working towards a purpose, and the concepts of why ICT is being used, and why this particular area of ICT is useful.

The nine areas of ICT

All nine areas should be covered during the year. However, they do not need to be taught in the same way, and it is not expected that you will teach a single area of ICT in one term. Some lend themselves well to being covered through other subjects. Some benefit from a block of teaching, either two or three lessons a week for a couple of weeks, or even a whole day devoted to them. Some are the opposite, benefiting from regular revisiting through single cross-curricular lessons throughout the year. Others are somewhere in between. You may wish to revisit an area later in the year through a different topic area: as long as you have time to cover the full curriculum, this would be excellent for children's deeper understanding.

How much time you can give to ICT will depend on the resources available in your school as well as how well you manage to embed ICT into the rest of the curriculum. What weighting to give to the nine areas will depend on the children's prior learning and on your own professional judgement, but here is a suggested guide to weighting in Year 5:

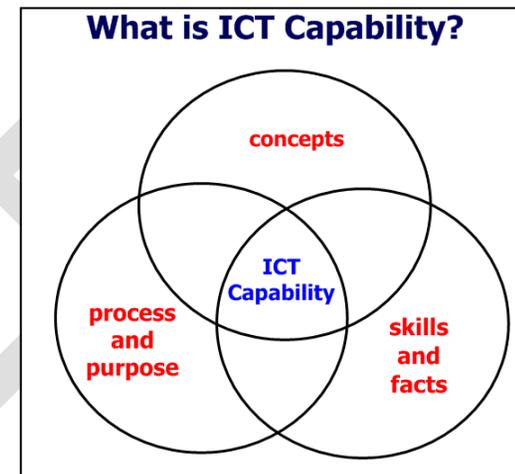
Major units (4-5 hours): Digital video, Modelling, Music and sound

Minor units (2-3 hours) followed by revisiting: Multimedia DTP, Communication Collaborating and Publishing; Control; graphics, Handling data

Short sessions, revisited throughout year: Graphics;; Research;

Cross-curricular planning

When planning an ICT outcome, try to choose one which covers objectives in at least one other subject. This is the key to finding sufficient time in the day: if your work is both Literacy and ICT, you can teach two subjects in one slot, and if it covers Geography objectives as well, so much the better! Doing this, you may need to teach some lessons discretely and some lessons together, such as doing some exploration and skills work before the Literacy unit, and maybe finding some ICT time for finishing off, after the Literacy has moved on. Revisiting areas of ICT covered previously is also an excellent way of embedding into other subjects: if you have taught a short unit on using a paint package, the children will be ready for a Mathematics lesson using 2D shapes to draw a picture. Of course, some areas of ICT are very simple and will not need skills teaching beforehand: using an online simulation is an example of this.



Planning across the year

If you know your topics for the year, it is a good idea to use the blank planner below to draft your ideas for when you will cover the areas of ICT as near as possible to the start of the year. You can then amend it as you go through, but it is a way of avoiding leaving the “tricky” bits to the end of the year when they might just get forgotten.

Planning a unit of work

Here is a suggested order of thinking when planning a unit of work:

- What outcome are we aiming for, and what other subjects will it cover?
- What do I want it to look like for the more able, average ability and less able children?
- What concepts do they need to understand? (see column 1 of the plans)
- What skills do they need to be taught, or to discover by exploration? (see column 2 of the plans)
- What resources (software, peripherals) do we need?
- How long will it take, and can I use other subjects’ lessons?

Differentiation and assessment

It is important for all children to learn to the best of their ability. While it is beneficial for more able children to support the less able, using this too much can mean that the less able child never gets a turn (so learns little), while the more able child is held back. You will certainly want to vary how you seat the children, but if you need to seat the children in pairs, you may wish to consider similar-ability pairings.

Differentiation Needs to take place: The level descriptors at the top of each plan will act as a guide when deciding what children at different levels need to do.

LAPS: [Lower Achieving Pupils](#) less able children could be given a simpler task, or use the same package but be taught fewer skills or scaffold their learning through the use of templates.

MAPS: [Middle Achieving Pupils](#) HAPS: Children will be working at the expected level

HAPS: [Higher Achieving Pupils](#) more able can spend more time in self- and peer-assessment, planning, evaluating and improving their work.

Wokingham LA Year 5 ICT Medium Term Planning

	Term 1		Term 2		Term 3	
Multimedia and word processing						
Graphics						
Communication Collaboration and Publishing						
Music and sound						
Handling Data						
Research						
Modelling						
Control						