USWORTH COLLIERY
PRIMARY SCHOOL

ICT
KEY SKILLS, KNOWLEDGE & UNDERSTANDING
CURRICULUM COVERAGE

ICT

Year 1	**Programming**
	• Give simple instructions one at a time using left, right, forwards and backwards.
	• Put two instructions together to control a toy.
	• As part of a group, plan, predict and test an algorithm by giving a sequence of instruction.
	• Use a simple on-screen simulations of real life activities.
	Handling Data
	• Enter information into a template to make a graph/ pictogram.
	• Talk about the results shown on a graph to answer simple questions.
	• Create a pictogram by entering data in a graphing package.
	• Use my pictogram to answer simple questions.
	• Sort and classify information on screen by two criteria.
	E-communication
	• Recognise what an email address looks like and can use the @ key to type an email address.
	• Join in sending a class email.
	• Send my own simple message using the internet.
	Key Skills
	• Record my ideas using a keyboard.
	• Make simple sentences on screen, using a word bank
	• Change the colour, size and/or font.
	• Use peripherals to move around my work.
	• Copy and paste a picture from the internet using right click.
	• Save and load content by using single and double click.
	Multimedia Production
	• Combine text & images in simple program.
	• Record a sound and play it back.
	• Use simple paint tools, brushes, colour-fill and palette.
	• Add stamps or clipart to create a scene.
	Using the internet
	• Use pre-chosen sites to find information and answer simple questions.
	• Use activities on the internet to learn something new.
	• Aware that the Internet holds information on web pages.
	E-safety
	• Recognise advertising on websites and learn to ignore it.
	• Follow the school rules when being online and using technology.
	• Know that personal information should not be shared online.
	• Know how to report something bad that I find online.
	• Understand what cyber bullying is and what to do if it happens.

Year 2	**Programming**
	• Use forwards, backwards, up and down within a sequence of instructions.
	• Use repeat in my instructions.
	• Use right angle turns.
	• Complete a simple program and predict what the results will be.
	• Test and change my instructions.
	• Use simulations to investigate a question by making different choices.
	• Know what a sensor is and how they are used in real life.
	Handling Data
	• Understand what a database is.
	• Compare databases on the computer with databases on paper.
	• Enter information into a prepared database and use it to answer questions.
	• Sort and classify information on screen by four criteria (Carroll diagram).
	E-communication
	• Send and reply to messages sent by a safe partner (within school).
	• Follow simple rules when sending messages, including how to keep myself safe.
	Key Skills
	• Type a piece of work (word process) using the return and enter key to leave gaps (line breaks) between sections.
	• Edit my work (insert/delete a word)
	• Highlight text to change its format (B, U, I).
	• Copy and paste pictures and text using right click or HOME.
	• Use the caps lock key to add capital letters.
	• Save and load pieces of work by either going to the correct folder and double clicking or using file. **Multimedia**
	Production
	• Experiment with sound, text, WordArt and pictures within a program (including slideshows).
	• Use the shape tools, flood fill, straight line tools and spray effect to build up pictures and effects.
	• Create a repeating pattern using stamps or copy tool.
	• Insert sounds into a piece of work.
	• Capture still and moving images.
	Using the internet
	• Use shortcuts to open pre-chosen websites and find information to answer simple questions.
	• Use an index and hyperlinks to locate information.
	• Copy and paste information to answer simple questions.
	E-safety
	• Recognise advertising on websites and learn to ignore it.
	• Follow the school rules when being online and using technology.
	• Know that personal information should not be shared online.
	• Know how to report something bad that I find online.
	• Understand what cyber bullying is and what to do if it happens.

Year 3	**Programming**
	• Give a series of instructions to take a programmable object to a location.
	• Use degree turns in my instructions and programs.
	• Write programs to create simple animations and drawings.
	• Test, changes and fix errors in my instructions and programs.
	• Understand the importance of using simulations.
	• Explore the effect of different choices when using a variety of simulations.
	Handling Data
	• Understand what a record and field is.
	• Add records and fields into a prepared database.
	• Sort a database to answer simple questions.
	• Use a branching database to identify objects.
	• Create clearly labelled graphs and use them to present back my findings. **E-communication**
	• Send and reply to messages sent by a safe email partner (within school).
	• Open and save content within messages.
	• Be aware of how to keep safe when using e-communication.
	Key Skills
	• Use the spell checker to edit most spellings.
	• Improve my work by selecting appropriate tools to add emphasis and effect (e.g. centre, font size, font colour and B, U and I).
	• Understand the difference between cut and copy.
	• Use formatting such as bullet points, centre alignment, auto shapes and text boxes to organise my work.
	• Change page set up (portrait and landscape) and can use the print preview.
	• Create folders to organise content.
	Multimedia Production
	• Capture film or images select the ones I wish to use.
	• Use photo editing software to crop photos and add simple effects and filters.
	• Insert still and moving images into different programs.
	• Create pieces of work that show some awareness of an audience.
	Using the internet
	• Use search engines to find and images using a keyword.
	• Use 'Save picture as' to save an image to the computer and insert it into my work.
	• Decide what text to copy into my work.
	• Find relevant information by browsing.
	E-safety
	• Know that websites sometimes include pop-ups that take them away from the main site, including the use of advertising.
	• Understand that the internet contains fact, fiction and opinion and begin to distinguish between them.
	• Understand the need for rules to keep me safe when using technology of when online and can follow my own and the school's rules.
	• Understand the need to keep personal information and recognise that everything I put online can be seen and used by others and cannot be deleted.
	• Understand the need for caution when using an internet search and what to do if I find something bad.
	• Recognise that cyber bullying is unacceptable and the consequences of taking apart in it.
	• Know how to report an incident of cyber bullying.
	• Know the difference between online communication tools used in school and those used at home.

Key Skills, Knowledge and Understanding

Year 4	**Programming**
	- Write programs to create simple animations and patterns.
	- Make turns by different degrees.
	- Predict the outcome of my instructions and programs.
	- Use inputs and outputs when writing simple programs.
	- Use a loop within my programs.
	- Control simple devices by giving instructions.
	- Explore the effects of changing variables in a simulation and when controlling things.
	Handling Data
	- A simple spreadsheet model, enter data, highlight it and make clearly labelled graphs.
	- Use and recognise 'cells', 'rows' and 'columns' effectively when handling data.
	- Sort and search a database to answer simple questions.
	- Sort and classify information on screen by more than two criteria (Venn diagram).
	E-communication
	- Appreciate the benefits of ICT to send messages and to communicate.
	- Contribute to a class blog.
	Key Skills
	- Use formatting such as bullet points or numbers, auto shapes and text boxes to reposition and organise my work.
	- Right click for suggested spellings when correcting my work.
	- Add borders and alter shading and colour fill on auto shapes, word art and excel cells.
	- Insert page numbers.
	- Recognise the need for a good page design.
	- With help, reformat text boxes and images to make them fit for purpose (square, tight, in front, behind) and allow overlapping and rotation.
	- Choose the most appropriate page layout and document type for presenting my work.
	- Begin to understand the difference between save and save as.
	Multimedia Production
	- Review and delete unwanted images.
	- Combine text, images and sounds in different programs to target a familiar audience.
	- Manipulate sound when using recording software by altering the pitch and tempo.
	- Know that sounds exist in different formats.
	- Capture images (and other media) using different methods.
	- Create a multimedia presentation that teaches others something that I have learnt.
	- Review, adds to and edit my work to make my message clearer.
	Using the internet
	- Use a search engine to find a specific website.
	- Decide which text to copy and paste into a document.
	- Use tabbed browsing to open two or more pages.
	- Consider who wrote the information I find and how this affects if I trust it or not (bias).
	E-safety
	- Know that websites sometimes include pop-ups that take them away from the main site, including the use of advertising.
	- Understand that the internet contains fact, fiction and opinion and begin to distinguish between them.
	- Understand the need for rules to keep me safe when using technology of when online and can follow my own and the school's rules.
	- Understand the need to keep personal information and recognise that everything I put online can be seen and used by others and cannot be deleted.
	- Understand the need for caution when using an internet search and what to do if I find something bad.
	- Recognise that cyber bullying is unacceptable and the consequences of taking apart in it.
	- Know how to report an incident of cyber bullying.
	- Know the difference between online communication tools used in school and those used at home.

Key Skills, Knowledge and Understanding

Year 5 & Year 6	**Programming** • Write programs to control hardware and avatars. • Create variables. • Combine a range of sensors, inputs and outputs to control devices and trigger events. • Identify how sensors are used in the real world. • Use IF commands within my programs. • Use a repeat forever loop within my commands. • Consider how an algorithm works and outline any changes I have made. **Handling Data** • Create a range of appropriate graphs and tables and use them as part of another piece of work. • Create a formula in a spreadsheet and then check for accuracy and plausibility. • Identify where databases are used inside school. **E-communication** • Use messaging to communicate with others. • Be aware of different forms of e-communication and how they can be used inside and outside of school, including social networking. **Key Skills** • Incorporate graphics where appropriate, using the most effective text wrapping formats. • Use the spell checker and thesaurus by right clicking. • Use keyboard shortcuts to copy and paste images and text. • Use the Shift key to add punctuation and/or symbols. • Understand the safe zone and usually consider it when creating documents, particularly desktop publishing. • Remove hyperlinks from words and images to make them easier to reorganise and manipulate. • Create my own spreadsheet model and tables by reformatting cells using the border, fill, merge options. **Understanding Networks** • Begin to understand the role servers play when using ICT safely. • Understand that the outcome of internet searches at home will differ at school and home. • Map a simple network and appreciate the role of different elements. **Multimedia Production** • Use a range of presentation applications. • Make a multimedia presentations that contain: sound; animation or video and hyperlinks. • Create transparent images using a layered editing program & save them in an appropriate format. • Use appropriate software to plan, create, edit and present my work to a selected audience. • Consider the effect of angles and filters when altering images. **Using the internet** • Understand how search engines function. • Compare the results of different searches and modify my search strategies to gain better results. • Using tabbed browsing, copy and paste, download and save information following simple lines of enquiry. • Check the validity and accuracy of different sources by considering a range of information. **E-safety** • Recognise that information on the internet may not be accurate or reliable and may be used for bias, manipulation or persuasion. • Understand that copyright exists on most digital content and can reference information sources. • Know several solutions if I discover something malicious or inappropriate. • Recognise the potential risks of using technology and understand how to minimise those risks and create tips to help others use them safely. • Appreciate that everything I put online may be seen and used by others and cannot be deleted. • Understand that online environments have security settings, which can be altered, to protect the user • Understand the potential risk of providing personal information online and understand methods which others may use to obtain it.

Key Skills, Knowledge and Understanding

	- Recognise various techniques that malicious adults may use to contact children online and recognise that it is unsafe to meet unknown people.
	- Discuss the positive and negatives of ICT in my own and the lives of others.
	- Understand benefits of developing an alias when publicly using the internet.

Key Skills, Knowledge and Understanding