



Usworth Colliery Primary School

ICT Medium Term Plan - Year 5 - Summer



National Curriculum 2014 Attainment Target	Lesson Outcomes	Topic Overview	Useful Resources and Links	Links to Year Group Medium Term Planning	Completion Notes
<p>Use technology safely, respectfully and responsibly; know a range of ways to report concerns and inappropriate behaviour.</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p><u>Pupil Asset Objectives</u></p> <p>Selects, uses and combines a variety of software to accomplish given goals.</p> <p>Selects, uses and combines software on a range of digital devices.</p> <p>Selects, uses and combines internet services in order to answer questions and teach others.</p> <p>Understands the opportunities computer networks offer for communication and collaboration</p> <p>Recognises a range of e-</p>	<p>I understand that copyright exists on most digital content and understand they should not publish other people's pictures or tag them on the internet without permission.</p> <p>I recognise the potential risks of using technology and know how to minimise those risks (including identifying people who can help, minimising the screen, reporting systems both online and in school and creating an online alias).</p> <p>I can use my understanding of the internet and technology to create tips to help others use them safely, including dealing with cyber bullying.</p> <p>I appreciate that everything I put online may be seen and used by others and cannot be deleted.</p> <p>I understand that online environments have security settings, which can be altered, to protect us.</p> <p>I can discuss the positive and negatives of ICT in my own and the lives of others.</p>	<p><u>Mr Arthur and the Smart Crew</u></p> <p>Play association game – rolling PowerPoint of E-Safety/ICT orientated images and words – write down the first thing that comes to your mind when you see it...</p> <p>Can you figure out the anagram? F E Y T A E – S</p> <p>Explore the images in more depth – images of famous ICT entrepreneurs – Steve Jobs, Mark Zuckerberg, Bill Gates, etc...</p> <p>Discuss the positives and negatives of growing ICT use – Mind map on the whiteboard.</p> <p><i>KQ: How do you use the internet?</i> Complete individual mind map.</p> <p><i>If time allows, explore some of the sites mentioned.</i></p> <p><i>Key Question: Imagine all the status-updates that you ever done on Facebook, suddenly became public via a search engine like Google. How would you feel?</i></p> <p>Split into 6 mixed ability groups. Each group discusses one of the Smart Crew scenarios (PDF handout). A nominated writer makes notes on the handout in a coloured pen.</p> <p>Feedback and discuss each scenario – nominated writer to add extra information using a different coloured pen.</p> <p>Explore the format of the Smart Crew videos and recap scenarios discussed.</p> <p>Use the iPads to record their answers, mimicking the layout of the Smart Crew video.</p>	<p>Lesson PowerPoint</p> <p>SMART CREW SENARIOS (PNGs)</p> <p>Kara and the Smart Crew Videos - http://www.childnet.co.uk/resources/the-adventures-of-kara-winston-and-the-smart-crew</p> <p>How to use Moviemaker guide</p> <p>Editing with MovieMaker.wmv</p> <p>Moviemaker</p> <p>iPads</p> <p>Mr Arthur and the Smart Crew Title.wmv</p> <p>E-Safety Scenarios Stills (JPEGs)</p>	<p>PSHE – Staying Safe</p>	



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<p>threats and can share advice on how to avoid and combat them.</p> <p>Appreciates copyright and can take measures to ensure it isn't broken.</p> <p>Recognises the positives and negatives of ICT.</p>	<p>I can use a range of presentation applications.</p> <p>I can capture and create sounds, images and video.</p> <p>I can make a multimedia presentations that contain: sound; animation or video and/or hyperlinks.</p> <p>I can use appropriate software to plan, create, edit and present my work to a selected audience.</p>	<p>Pupils are allowed to find a quieter location i.e. corridor.</p> <p>Copy footage over on to the Shared Drive (remember to rename).</p> <p>Demo how to edit footage together in Moviemaker using drag and Drop – trim and add titles.</p> <p>Edit together a full film using title sequence, stills of the questions and footage of the answers.</p> <p>Higher ability to add effects and transitions (lower ability to focus on trimming footage).</p>			
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<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Recognise common uses of information technology beyond school (Key Stage 1 objective carried into Key Stage 2).</p> <p>Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.</p> <p><u>Pupil Asset Objectives</u></p> <p>Designs and create programs that accomplish specific goals.</p> <p>Solves problems by decomposing them into smaller parts and using logical reasoning.</p> <p>Works with variables</p> <p>Uses logical reasoning to explain how some simple algorithms work</p> <p>Selects, uses and combines a variety of software to accomplish given goals.</p> <p>Selects, uses and combines software on a range of digital devices.</p>	<p>I can write programs to control hardware and avatars.</p> <p>I can combine a range of sensors, inputs and outputs to control devices and trigger events.</p> <p>I can identify how sensors are used in the real world.</p> <p>I can use IF commands within my programs.</p> <p>I can explain how an algorithm works.</p> <p>I can use keyboard shortcuts to copy and paste images and text.</p> <p>I understand the role of the clipboard when copying, pasting and cutting.</p>	<p><u>Programming NXT Robots (Mission to the Milky Way)</u></p> <p>Explore the robots. <i>Key Question: What sensors can you spot?</i></p> <p>Demonstrate that each input and output can be given a different letter/number.</p> <p><i>Key Question: What is the difference between an input and an output?</i> – Use NXT to demonstrate.</p> <p>Use the guide provided to write a program that will allow the robot to move backwards and forwards in response to obstructions.</p> <p><i>Alter the program (given in the guide) to reflect the ports that we have assigned for each input and output.</i></p> <p><i>Higher ability to add in an instruction to start the program when a certain decibel level is reached.</i></p> <p><i>Key Question: What else can you do with the NXT robot?</i> Explore the device further and discuss how the other sensors and outputs could be used (use CLC examples to illustrate these points).</p> <p><u>Write up</u></p> <p>Discuss what is happening at each stage of our programming – focus on assigning letters to their specific output and input (use a table on the whiteboard).</p> <p>Print screen the completed program (paste using control + V) and explain how it works (again make specific reference to inputs and outputs – decided as a class).</p> <p><i>Lower ability to be provided with a writing frame to use as a prompt.</i></p> <p>Watch “The Magic of Control” and discuss the use of sensors both within and outside of school.</p>	<p>Lego NXT robots</p> <p>Microsoft Word</p> <p>Explaining our Lego program.docx (writing frame)</p> <p>The Magic of Control.wmv</p> <p>Programming our robot guide.docx</p>	<p>Science: Space</p>	
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<p>Recognises the positives and negatives of ICT.</p>					
<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>	<p>I can use a range of presentation applications.</p> <p>I can make a multimedia presentations that contain: sound; animation or video and/or hyperlinks.</p> <p>I can incorporate graphics where appropriate, using the most effective text wrapping formats.</p> <p>I can use keyboard shortcuts to</p>	<p>Labelling the Solar System – Links with Literacy Work</p> <p>Insert an image of the solar system into PowerPoint and label the earth by adding a text box and arrows (reformatting).</p> <p>Remove hyper-link</p> <p>Watch the planets song by storybots.</p>	<p>Lesson PowerPoint</p> <p>Our Solar System.ppt</p> <p>Microsoft PowerPoint</p> <p>Transparent Planets</p>	<p>Science: Space</p>	



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<p><u>Pupil Asset Objectives</u></p> <p>Selects, uses and combines a variety of software to accomplish given goals.</p> <p>Selects, uses and combines software on a range of digital devices.</p> <p>Selects, uses and combines internet services in order to answer questions and teach others.</p>	<p>copy and paste images and text.</p> <p>I can use CTRL to select multiple items</p> <p>I understand the role of the clipboard when copying, pasting and cutting.</p> <p>I have some understanding of the safe zone and usually consider it when creating documents, particularly desktop publishing.</p> <p>I can remove hyperlinks from words and images to make them easier to reorganise and manipulate.</p>	<p>Label the rest of the planets in a consistent style by using CTRL to select multiple items.</p> <p>Higher ability to add animations.</p> <p>Lower ability to use a pre-prepared PowerPoint with image and Earth label already preloaded.</p> <p><i>Key Question: What is the clipboard? What is the safe zone? Discussion</i></p> <p>Save as an appropriate name.</p> <p>Export as animation (WMV).</p>	<p>(PNGs)</p> <p>The Planets Song - www.youtube.com/watch?v=ZHAqT4hXnMw</p>		
<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Use search technologies effectively, appreciate how results are selected and ranked and be discerning in evaluating digital content.</p> <p><u>Pupil Asset Objectives</u></p>	<p>I can use a search engine using keyword searches and Boolean operators.</p> <p>I can use a range of presentation applications.</p> <p>I can capture and create sounds, images and video (including posters, podcasts/audio streams).</p> <p>I can use a layered editing program to create collages and transparent images.</p>	<p><u>Turning ourselves into Astronauts</u></p> <p>Use google images to source a planet background and save using right click.</p> <p>Pupils turn themselves into an astronaut by completing the following steps:</p> <p>Load a background into Paint.net.</p> <p>Load a space suite png with opaque visor.</p> <p>Use edit and select all, then cut and paste the suite as a new layer on top of the background.</p> <p>Resize and rotate the suit.</p> <p>Load a photo and use the lasso tool to cut out the head.</p> <p>Cut and paste the head as a new layer in the background image.</p> <p>Resize and reposition the head onto the helmet of the suit.</p>	<p>Creating an Astronaut instructional video.wmv</p> <p>Moon1.jpg</p> <p>Moon2.jpg</p> <p>Google Images</p> <p>Paint.net</p> <p>Photos of children</p> <p>SpaceSuit.png</p>	<p>Science: Space</p>	



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<p>Select, use and combine a variety of software (including internet services) on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p> <p>Recognise common uses of information technology beyond school (Key Stage 1 objective carried into Key Stage 2).</p>	<p>I can reformat and colour cells to make my spreadsheet more user friendly.</p> <p>I can create a formula in a spreadsheet</p> <p>I can check my formulas to ensure <i>accuracy and plausibility</i>.</p> <p>I can create my own spreadsheet model and tables by reformatting cells using the border, fill</p>	<p><u>Creating a Space Calculator in Excel</u></p> <p>Enter with the Mass and Weight song playing. <i>Key Question: What standard units do we use to measure weight?</i></p> <p><i>Key Question: What is weight measured in?</i> Revisit the lyrics of the song (watch – video embedded into PowerPoint). Introduce the difference between Mass and Weight via lesson PowerPoint.</p> <p>Discuss key terms – What does usability mean? What does accuracy mean?</p> <p><i>Key Question: What is a spreadsheet model?</i> Introduce key term via PowerPoint.</p> <p>Follow teacher demo in order to view page breaks and zoom out (ready to reformat at their own pace).</p> <p>Using instructional guide or video pups create a spreadsheet model by completing the following steps:</p>	<p>Microsoft Excel</p> <p>Mass vs Weight.mp3</p> <p>Lesson PowerPoints</p> <p>Making a space calculator.wmv</p> <p>Space JPEGs</p> <p>Calculating our weight on different plants handouts (differentiated)</p> <p>Online Space Calculator 1 - http://www.exploratori</p>	<p>Overall science topic for Spring Second ½ term - Space</p>	



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<p><u>Pupil Asset Objectives</u></p> <p>Selects, uses and combines a variety of software to accomplish given goals.</p> <p>Selects, uses and combines software on a range of digital devices.</p> <p>Selects, uses and combines internet services in order to answer questions and teach others.</p> <p>Designs and creates systems to achieve a specific goal.</p> <p>Check systems for accuracy and plausibility.</p> <p>Analyses and evaluates data.</p> <p>Recognises the positives and negatives of ICT.</p>	<p>and merge options.</p>	<ul style="list-style-type: none"> • Add your title & change font and size. • Merge top line then centre. • Add a table (including a table border) and list their planets – <i>Differentiated lists</i>. • Resize cells and change font (and size). • Add an entry box for the weight – <i>Discuss which standard unit to use – link back to discussion in the introduction.</i> • Change the table border and text colour to white by selecting with the left button. • Use the fill tool to turn the spreadsheet background to black • Add images of each planet using INSERT then resize. <p>Adding Formulas</p> <p>Revisit parachute experiment – completed as a science class. <i>Key question: Did we use any formulas in this spreadsheet? Reiterate the difference between formulas and functions.</i></p> <p>Teacher to demo how to write a spreadsheet formula using Mars as an example.</p> <p>Use handouts to complete formulas - <i>Lower ability to complete formulas for Mercury, Venus and Mars. Higher ability to complete formulas for all the planets.</i></p> <p><i>Extension – Can you find the formula to work out your weight on Pluto? Why hasn't Pluto been included on your lists?</i></p> <p><i>Key Question: How can we check our formulas for accuracy? Link with cross referencing in Website Trust Profiles.</i></p> <p>Use internet favorites to compare the results from their spreadsheet to those of</p>	<p>um.edu/ronh/weight/.</p> <p>Online space Calculator 2 -</p> <p>http://www.amblesideprimary.com/ambleweb/planetweight/planet.htm</p>		
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