Tanfield Lea - KS1 Computing Curriculum						
Computing Strand	**NC Objectives**					
Digital Literacy	-Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. -Recognise common uses of information technology beyond school					
Information Technology	- Use technology purposefully to create, organise, store, manipulate and retrieve digital content					
Computer Science	- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions - Create and debug simple programs - Use logical reasoning to predict the behaviour of simple programs					
Year Group	**Autumn Term 1**	**Autumn Term 2**	**Spring Term 1**	**Spring Term 2**	**Summer Term 1**	**Summer Term 2**
Year 1	**DL - Media balance and well being** **NOS - Health wellbeing and lifestyle** Activity 1 (Part 1): Rules to keep us safe	**Autumn Term 2** **DL - Cyberbullying** **NOS – Online bullying** Activity 1: Sorting activity	**DL - My digital footprint and identity** **NOS - Online reputation** Activity 1: Personal Information	**DL - Privacy and security** **NOS – Privacy and Security** Activity 1 (Part 1): Super strong passwords	**DL - Relationships and communication** **NOS – Online relationships** Activity 2: Being kind	**DL - News and media literacy** **NOS – Managing online information** Activity 2: Animal facts **NOS – Copyright and ownership** Activity 1 (Part 1): My Work
	IT – Weather report **Activities:** - Use SeeSaw to explain what they know about the Seasons. - To take photos - To create an electronic collage using previous photos. - To create an audio poster about Autumn. - To explain different weather symbols - To create a weather report	**IT - Retell the story of the gunpowder plot** **Activities:** -Order the events of the gunpowder plot on pic collage. - Add speech bubbles to pictures in pic collage. - Upload pictures and use SeeSaw to add audio to the file. - Talk about different objects that Guy Fawkes may have used on puppet pals. - Using Chatterkids, Chn to work in role as Guy Fawkes.	**CS – Programming BeeBots** **Activities:** - Draw a monster using an algorithm - investigate using the BeeBots - To race using the BeeBots - To program the BeeBot using turns - To program the BeeBot to follow algorithms.	**CS – Creating and Debugging Algorithms** **Activities:** - Use the arrow cards to create a simple algorithm - To draw algorithms for the BeeBot to follow. - To debug algorithms	**IT - Paint** **Activities:** - Paint a house - Paint the moon and its craters - Use the shape tool to create a rocket - Paint a picture of the moon landing	**IT – Word Processing** **Activities:** - Play Millie's Keyboard games - Type the alphabet - Label pictures - Type captions for pictures - Type sentences
Year 2	**DL – Media Balance and Well-Being** **NOS – Health wellbeing and lifestyle**	**DL – News and media Literacy** **NOS – Managing online information**	**DL – My Digital Footprint and Identity** **NOS – Online Reputation**	**DL – Privacy and Security** **NOS – Privacy and Security**	**DL – Cyberbullying** **NOS – Online Bullying** Activity 3: Writing area	**DL – Relationships and Communications** **NOS – Online relationships**

	Activity 1 (Part 2): Rules to keep us safe	Activity 5: Navigating a website **NOS – Copyright and ownership** Activity 1 (Part 1 and 2): My Work	Activity 2: My Personal Information	Activity 1 (Part 1, 2 and 3): Super strong passwords		Activity 1: Communicating and email Activity 3: Circle time
	IT – Posters (Pic collage) Activities: - To log on to computer-based programmes independently. -Use the camera and video on an Ipad - Type sentences using capital letters. -Insert images. -Create a poster about Bears using pic collage -Print work from a tablet.	**Digital Literacy – Using the Internet.** **Activities:** - To access the internet - Understand how to stay safe while using the internet - Use a search engine - Identify links - Create a blog post Twitter/seesaw	**IT – Create a PPT presentation.** **Activities:** - Insert new slides - Type and format text using basic punctuation. - Insert images from the internet. - Combine text and graphics - Insert transitions and animations	**CS – To Use Blue Bots to code.** **Activities:** -Build on knowledge from y1 drawing algorithms for the BeeBot to follow. -Create a simple algorithm using the Blue Bot app to move the Blue Bot to the correct destination. - To draw algorithms for the Blue Bot to follow. - To read algorithms and predict the Blue Bots behaviours - To debug algorithms	**IT – Computer art (paint)** **Activities:** - paint the Australian flag using lines/autoshapes - paint an Australian landmark and use this image in publisher to write sentences about it. - use pointillism to paint an Australian animal - Change the shade of colour for effect. - Produce a Picasso style painting	**CS– Coding using Scratch Jr** **Activities:** - To write algorithms to draw basic shapes. - To write algorithms using scratch jr. - To debug algorithms

Tanfield Lea - KS2 Computing Curriculum						
Computing Strand	**NC Objectives**					
Digital Literacy	-Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.					
Information Technology	-Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content -Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information					
Computer Science	-Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs -Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration					
Year Group	**Autumn Term 1**	**Autumn Term 2**	**Spring Term 1**	**Spring Term 2**	**Summer Term 1**	**Summer Term 2**
LKS2 Cycle A	**DL - Media balance and well being** **NOS – Health wellbeing and lifestyle**	**DL – Cyberbullying** **NOS – Online bullying** Activity 1: Anti-bullying pledge	**DL - My digital footprint and identity** **NOS – Online reputation** Activity 1: Celebrity bodyguards	**DL - Privacy and security** **NOS – Privacy and Security** Activity 1: Private information	**DL - News and media literacy** **NOS – Managing online information** Activity 1: Search engines	**DL - Relationships and communication** **NOS – Online relationships** Activity 2: Emojis and acronyms

	Activity 1: Health and Safety Reports				**NOS – Copyright and ownership** Activity 1: Ownership	
	CS - Understanding how to use our Computer Network **Activities:** To access computer-based programs independently. To use technology safely and respectfully. (passwords and screen shots.) To select, use and combine a selection of software.	**CS – Coding using Scratch 'The Iron Man'** **Activities:** To sequence simple code using scratch To know how to create your own sprite, make it move and talk. To fulfil a series of challenges using scratch. To understand the process of debugging. To add sounds to your code and use repetition to achieve different outcomes. To plan and create a short animation	**IT – Collect, devise and construct a database using applications across the curriculum. Science branching database.** **Activities:** Identify and interpret databases Devise and construct a branching database linked to scientific study. (classification of insects and plants)	**IT – Create a meaningful document (Cartoon Strip)** **Activities:** Use images from a children's book (saved in the shared area) and copy these into Publisher document to combine with text to create a cartoon strip	**IT – Select and combine a variety of software to create a presentation** **Activities:** Plan, design and create a power point presentation based on key facts from the Spring Term Two topic, Tommy Armstrong. Insert photographs from the Educational visit, saved in the shared area.	**IT: Communication via Email** **DL: Relationships and Communication** **Activities:** Using the RM unify email addresses to send and receive emails that pose questions to other members of the class and the year group.
LKS2 Cycle B	**DL – Media Balance and Well-Being** **NOS – Health wellbeing and lifestyle** Activity 2 (Part 1): Screen time	**DL – Cyberbullying** **NOS – Online bullying** Activity 2: Story writing crossroads	**DL – My Digital Footprint and Identity** **NOS – Online reputation** Activity 2: Celebrity Judgement	**DL – Privacy and Security** **NOS – Privacy and Security** Activity 3: Passwords (Step 1-3)	**DL – News and media Literacy** **NOS – Managing online information** Activity 2: Random Questions **NOS – Copyright and ownership** Activity 2: Be information wise	**DL – Relationships and Communications** **NOS – Online relationships** Activity 3: Online friends
	IT/CS: Applying my knowledge of digital art to coding to create new sprites. **Activities:** Use Scratch to create an animation of the 3 Billy Goats Gruff that includes digital art produced	**IT: Use and combine digital devices as a digital citizen** **DL: My Digital Footprint and Identity** **Activities:** Use iPads to plan, create and present an online safety video.	**IT: Animation** **Activities:** Create an animation sequence using Puppet Pals combining animation and sound. (Based on Dragons)	**IT: Data Handling: Collect, devise and construct databases using applications across the Curriculum.** **Activities:** Use excel to sort statistics and create graphs and charts. (Big Maths/Spelling scores)	**IT - Creating a meaningful document combining text and pictures.** **Activities:** Use Publisher to word process an innovated story based on Shirley Hughes, 'Dogger'.	**IT - Create a digital news broadcast about the Death of King Tut.** **Activities:** Linked to English, the children plan, create, record, edit and produce a short news broadcast relating to the Death of King Tut. The broadcast will

	Sprites, movement and sound.					include news studio, roving reported and eye witness statements.
UKS2 Cycle A	**DL – Self Imagery and Identify** **NOS Self Image and Identity** Year 5 – Activity 4 Year 6 –Activities 5 and 6	**DL – Online Relationships** **NOS Online Relationships:** Year 5: Activities 4 and 6 Year 6: Activity 5	**DL – Online Reputation** **NOS Online Reputation** Year 5: Activity 4 Year 6 – Activity 5	**DL – Online Bullying** **NOS – Online Bullying Activities:** Year 5 – Activities 4 and 5. Year 6 – Activity 6 NOS – Managing Online info Activity 3	**DL – Health, Well-being and Lifestyle** **NOS – Heath, Well-being and Lifestyle** Year 5 – Activity 3 Year 6 – Activity 4	**DL – Privacy and Security** **NOS – Privacy and security** Year 5 Activity 2 Year 6 Activity 4
	Information Technology: Communication, File Sharing and Collaborating. **Activities:** -Revisit Email and how to send email -Look at using email to send documents and share work, (Ref with groups in place in school i.e. Newspaper group). -Teach file organisation (folders, naming of files, sorting). -Google Docs (Discuss when it is better to have one shared file rather than more than one via email). -Collaborative tasks	**Information Technology: Spreadsheets** **Activities:** -Manipulate cells and organisation of a spreadsheet. -Create a bar graph -Manipulate data and create a line graph -To use formula for calculations -To use spreadsheets to plan and solve a problem (Party organisation)	**Computing Science: Coding** **Activities:** -Create a maze game Add consequences for hitting colours and obstacles -Add levels to a maze game -Add enemy sprites to a maze game -To add graphical and sound effects -Create own game in the style of ' Flappy Bird'	**Computer Science: Lego Robotics** **Activities:** -Build and Lego EV3 robot -Code a robot to move forwards and backwards. -Transfer code from an ipad to and EV3 block. -Code a robot to turn or pivot. -Build additional parts to achieve specific goals, solve problems. -Code a robot to deliver objects to a specific point. -Add sensors to robots -Use sensors to code a robot to respond in a chosen way. -Code robots to solve specific goals.	**Information Technology – Film Making** **Activities:** -Prepare a script for a video. -To check appropriate digital content -To film short video clips -To film interviews -To edit and sequence video clips to create a short documentary. -To evaluate and improve video clips.	**Information Technology: Plan collaboratively to prepare a bedroom design.** **Activities:** -Share documents within a group. -To choose appropriate Microsoft Office programs to complete various elements of a bedroom design project (floor plans, device design, advertising etc) -To present and evaluate final bedroom designs.
UKS2 Cycle B	**DL – Self Imagery and Identify** **NOS Self Image and Identity** Year 5 – Activity 4 Year 6 –Activities 5 and 6	**DL – Online Relationships** **NOS Online Relationships:** Year 5: Activities 4 and 6 Year 6: Activity 5	**DL – Online Reputation** **NOS Online Reputation** Year 5: Activity 4 Year 6 – Activity 6	**DL – Online Bullying** **NOS – Online Bullying Activities:** Year 5 – Activities 4 and 5. Year 6 – Activity 6 NOS – Managing Online info Activity 3	**DL – Health, Well-being and Lifestyle** **NOS – Heath, Well-being and Lifestyle** Year 5 – Activity 3 Year 6 – Activity 4	**DL – Privacy and Security** **NOS – Privacy and security** Year 5 Activity 2 Year 6 Activity 4
	Computer Science - What is the Internet / How the Internet Works **Activities:**	**Information Technology - PowerPoint Presentations** **Activities:**	**Information Technology - Spreadsheets** **Activities:**	**Computer Science - Website Design and Creation** **Activities:**	**Computer Science - Coding with Scratch** **Activities:** -Create a bat and ball game	**Computing Science: Coding - Kodu** **Activities:**

	-Explore how 'The Internet' and Web Pages are different but often confused. -Explore how the Internet connects many things. -Explore how information is sent around the word in packets -To understand internet search engines and how they work -Explore sharing information online (DL link)	-Revisit Office Suite basics – Complete a slide with text, images, sound, transitions, hyperlinks. -Use hyperlinks to create a non-linear presentation. -To plan an interactive story book / non-fiction text -Create and edit a non-linear text.	-Enter data into a spreadsheet and perform calculations. -Enter data into a football league table. Use formula to calculate. Sort data by given criteria. -Enter data. Auto calculate. Sort. Find the mean (Average) -Use spreadsheets to solve mathematical (pocket money) problems. -Design a spreadsheet of their own for a specific purpose (party planning, holiday budget, sports tables etc)	-Evaluate and compare existing websites -Design a website -Create simple website pages -Add additional website pages -Embed features to a webpage using HTML code.	-Make own sprites (bat and ball) -Make a moving ball -Control the bat(movement) -Make advanced bat and ball game (block obstacles) -Code a calculator game (using variables and formula) -Create a splat game -Create an animated scene using 'broadcast' and 'recieve' messages.	-Investigate the Kodu environment -Use When and Do instructions. -Use tools to add landscape and features in Kodu -I can deconstruct code and work out its purpose -Program a character to move round a track and achieve a goal -Program a character to follow an automatic path.