Middleton Primary and Nursery School

Subject Overview Computing

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
EYFS						
Year 1	**What are the main components in a computer setup?** 1. Create a variety of shapes by using the mouse accurately. 2. Create an accurate representation of a computer system 3. What are the different uses of a computer?	**How can we use a range of tools in a drawing package?** 1. Use a variety of tools in a drawing package. 2. Use the mark making tool accurately.	**How can we make a multimedia presentation?** 1. What are the key functions needed to make a presentation? 2. How do I amend and modify my work?	**How can we make a multimedia presentation?** 3/4. How do I use sound and other tools to enhance my presentation?	**How can we create a simple program that is not reliant on text?** 1. What is an algorithm? 2. Order a series of instructions. 3. Enter instructions and debug any errors. 4. Create a program which uses arrows and numbers, a square and a rectangle.	**How can we use the internet to find something out?** 1. Why are passwords important? 2/3. Navigate a site to find specific information.
Y1 Online safety strands	**Project Evolve lessons** **Privacy and Security** linked to passwords for logins sent home – e.g. purple mash, rocket phonics	**Project Evolve lessons** **Copyright and Ownership** linked to computing sessions in ICT suite – our own names on our work.	**Project Evolve lessons** **Health, Well Being and Lifestyle** linked to using iPads for research in science. **Project Evolve lessons** **Online Relationships and Online Reputation** Safer Internet Day		**Project Evolve lessons** **Self-Image and Identity**	**Project Evolve lessons** **Online Bullying**
Year 2	1. How do we copy and paste icons and images? 2. How do we save our work? 3. Create a representation of the school network on a drawing program.	**How do we structure our data to make it useful?** 1/2. How do I select data and enter it into a table? 3. How can data be used to create a graph?	**How do we use blocks to create a program?** 1. How can I create an algorithm by using instructions? 2. How do I debug my algorithm? 3. How do I sequence my algorithm?	**How do we use blocks to create a program?** 4. How can I spot errors in an algorithm? 5/6. Where and how do I use a loop block?	**How do we use Photostory to create a multimedia presentation?** 1. How do I locate, insert and order images? 2/3. How can I make my work visually appealing?	**How do we use Photostory to create a multimedia presentation?** 4/5. Add motion, sound and modify my slides.
Y2 Online safety strands	**Project Evolve lessons** **Managing Online information** **Copyright and Ownership**	**Project Evolve lessons** **Self-image and Identity** **Online Bullying**	**Project Evolve lessons** **Online Relationships** **Privacy and Security**	**Project Evolve lessons** **Health, Well Being and Lifestyle** **Managing Online Information**		**Project Evolve lessons** **Online Reputation**
Year 3	**What is inside a computer?** 1. What are the main components in a computer? 2/3. Present information about computer components using PowerPoint.	**What inputs and outputs are attached to a computer?** 1/2. Which devices attached to a computer are ‘inputs’ and which are ‘outputs’?	**How do we code using Scratch?** 1. What is the function of different blocks in a program? 2. How can I use the ‘pen’ blocks to create different patterns? 3. How can I use a ‘repeat’ blocks to create an algorithm?	**How do we code using Scratch?** 4. How can the ‘change costume’ block enhance my game? 5. How do blocks work independently to build an algorithm? 6. How can blocks be modified?	**How do we collect specific data from the internet?** 1. What is meant by the term ‘search engine’? 2. What makes an effective website?	**How do we create a database and what are their functions?** 1. How can a database be useful? 2. How do I enter search terms into a database? 3. How can data be represent in a bar chart?

Y3 Online safety strands	**Project Evolve lessons** **Self-image and Identity** **Online Reputation**	**Project Evolve lessons** **Online Bullying** **Health Wellbeing and Lifestyle**	**Project Evolve lessons** **Managing Online Information**	**Project Evolve lessons** **Online Relationships**	**Project Evolve lessons** **Privacy and Security**	**Project Evolve lessons** **Copyright and Ownership**
Year 4	**Who are some of the key figures in the history of computing?** 1. Who are some of the key figures in the history of computing? 2. How do I import images using 2DIY?	**How do we know if a website is false?** 1/2. How do I decide if a website offers valid information? 3/4. Read and website for meaning and interpret information.	**How do we use a sequence of selection statements in programs including 'if… then' and 'if… else'?** Scratch	**How do we use variables in a program?** Scratch	**How do inputs and outputs work on sensing devices?** **What is an operating system?** 1/2. What do the terms 'input' and 'output' mean and how are they used by devices? 3/4. What are the functions of an operating system?	**How do computers send images using code?** 1. What is binary and how does it represent information? 2. How can I Use binary to code and decode images? **How can we organise data using branching databases?** 1. How can I organise questions to filter information in a database?
Y4 Online safety strands	**Project Evolve lessons** **Self-image and Identity** **Online Relationships**	**Project Evolve lessons** **Online Bullying** **Health, Wellbeing and Lifestyle**	**Project Evolve lessons** **Managing Online Information**	**Project Evolve lessons** **Online Reputation**	**Project Evolve lessons** **Privacy and Security** **Article 16: Protection of privacy**	**Project Evolve lessons** **Copyright and Ownership**
Year 5	**What is a spreadsheet and how do we get it to work out mathematical problems?** 1. How do I enter data into cells? 2. How do I use formulas for all four operations? 3. How do I copy formula into other cells to enhance my work?	**How can a database be used to find information and spot errors?** 1/2. How can we search a database using two criteria? 3. How can we find errors in a database using graphs?	**How do we create an algorithm that uses repetition and transfer this onto Scratch?** 1/2. How do I complete and follow an algorithm that includes repetition? 3. Recognise and continue patterns in coding.	**How do we plan and create a collecting game on Scratch?** 1. How is a game broken down into parts? 2. How do I program a Sprite to collect using the four arrow keys? 3. How do I add variables and operators to my game? 4. How do I debug my game to ensure it works?	**How are devices connected in a local area network (LAN)** 1. How are the components in the school network connected? 2. Use a range of tools in 2Draw to create a visual representation of the school network.	**How can we use a 3D drawing package to create the image of a house?** 1/2. Use a range of tools in Sketchup. Apply these skills to create a house.
Y5 Online safety strands	**Project Evolve lessons** **How do we keep ourselves safe when using the internet for research?** Using safe searches Copyright and ownership		**Project Evolve lessons** **How do we keep ourselves safe when interacting online?** Safer Internet Day. Making online relationships safe and respectful.	**Project Evolve lessons** **How do we keep our information safe online?** Learning to manage privacy. How to react to problems.		**Project Evolve lessons** **How do other people think of you online?** What image do you present when you are online? What is an online community?
Year 6	**How does the internet work?** 1. How is hardware connected? 2. How do I create a model of the transfer of data? 3. How do search engines work and how can we use them effectively?	**How do computers communicate with each other?**	**How are procedures used in programming?** (4 lessons) Logo and Python	**How do we program a working digital and analogue clock using scratch?** (5 lessons)	**How do we program a working digital and analogue clock using scratch?**	**How do we plan and combine applications to create a presentation?** 1. Make decisions on applications to be used. 2-4. How do I combine work that is created in different programs?

Y6 Online safety strands		**Project Evolve lessons** **Online Bullying** How can we capture evidence of online bullying? How do we report online bullying? **Article 17: Access to information** **Project Evolve lessons** **Managing Online Information** How do search engines work? How can we use search engine technologies effectively? What is the difference between fact and opinion online? What are the terms 'influence', 'manipulation', 'persuasion' and 'persuasive design'? What is the difference between 'misinformation' and 'disinformation'? **Project Evolve lessons** **Copyright and Ownership** How can search tools effectively? I can reference online sources? **Article 17: Access to information**	**Project Evolve lessons** **Online Relationships** Can I explain how explain how sharing something online can have a positive or negative consequence? What does being kind and respectful online look like? How do things shared privately online have unintended consequences? Can I explain how sharing inappropriate images will always have an impact on others? **Article 16: Protection of privacy** **Project Evolve lessons** **Online Reputation** How might people form an opinion about me from my online activity? What is a digital personality and how can it be protected? **Article 16: Protection of privacy**	**Project Evolve lessons** **Self Image and Identity** What strategies can we use to limit the technology on your health? What are the features or persuasive design? What pressures can technologies place on someone? What is age-related content regulated? **RRSA 24 – right to best possible health care**		**Project Evolve lessons** **Self image and identity** Why is it important to challenge and reject inappropriate representations online? How can you get help with issues online? Why is it important to ask until getting necessary help? **Article 8: Identity** **Article 16: Protection of privacy** **Project Evolve lessons** **Privacy and security** How can we manage our passwords effectively? What should you do if your password is shared, lost or stolen? Why is it important to keep apps up to date? How can increase privacy on apps? **Article 16: Protection of privacy**