Curriculum Coherence – Year 2 Computing

Term 1	Online Safety and Safer Searches and Digital Footprint www.childnet.com Digiduck stories Programming: Extending algorithms Coding Unit 2.1

Values: Respect, understanding, kindness, responsibility

Prior Learning: Y1 Know their trusted adults and when ask for help and guidance. Passwords are kept private. What coding means
To use clear instructions in the correct order. To clear the memory before inputting new instructions. I can describe what actions I will need to do to make something happen and begin to use the word algorithm. I can begin to predict what will happen for a short sequence of instructions.

INTENT	IMPLEMENTATION	IMPACT
KNOWLEDGE *-Learn how to stay safe online* To know how to refine searches using the Search tool. • To know how to share work electronically using the display boards. • To use digital technology to share work on Purple Mash to communicate and connect with others locally. • To have some knowledge and understanding about sharing more globally on the Internet. To introduce Email as a communication tool using 2Respond simulations. • To understand how we talk to others when they are not there in front of us. • To open and send simple online communications in the form of email. To understand that information put online leaves a digital footprint or trail. • To begin to think critically about the information they leave online. • To identify the steps that can be taken to keep personal data and hardware secure. Autumn 2 *-Learn how to plan, create, code and evaluate a project of their own* *- Learn to read and understand different code and algorithms* *- Explore different blocks and commands and how they achieve different goals and effects.* *- Understand the importance of designing and planning to create an effective project* **CORE VOCABULARY** Log in/out, username, password, browser, pop ups, strangers, safe, meet, reliable, report Tinker, coding language, algorithm, sequence, project,	**ACTIVITIES** all resources can be found on the unit main page. From here, they can be set as 2Dos by clicking on the icon. Use the links below to preview the resources; right-click on the link and 'open in new tab' so you do not lose this page. Try the 2Respond activities Barnaby Bear and Celebrations to be aware of the responses the children will need to make. The activities can be found within the 2Email Tool. Details of mails can be found in the 2Respond Email Contents. • Set the 'Celebrations' activity as a 2Do for the children. • Digital Footprint Slideshow. • Digital Footprint Quiz, set this as a 2Do for the class Autumn 2 **Lesson 1 - I will know an algorithm is** – chn will understand what an algorithm is and how it gives the computer an instruction. Chn will then tinker and experiment with their own algorithms. **Lesson 2 – I will understand 'repeat' and 'timers'** – Chn will use repeat and timer commands to build into their own algorithms whilst using within readymade code. **Lesson 3 – I will debug** – Chn understand the term debug and run simple debugging process to test simple algorithms and programs. **Lesson 4 – I will use different object types** – Chn use different objects within their programs testing them and predicting what will happen when they add different blocks and objects. **Lesson 5 – I will design and test -** Chn plan and design their own programs to achieve a specific goal then test to see if they work and evaluate to improve or debug. **Key Questions** How can we stay safe online?	**OUTCOMES** **PUPILS will know** Children can use the search facility to refine searches on Purple Mash by year group and subject. • Children can share the work they have created to a display board. • Children understand that the teacher approves work before it is displayed. • Children are beginning to understand how things can be shared electronically for others to see both on Purple Mash and the Internet. Children know that Email is a form of digital communication. • Children understand how 2Repond can teach them how to use email. • Children can open and send an email to a 2Respond character. • Children have discussed their own experiences and understanding of what email is used for. • Children have discussed what makes us feel happy and what makes us feel sad. -What an algorithm is and how they are used to give instructions to complete a task -how to problem solve and add improvements to their project Children can explain what a digital footprint is. • Children can give examples of things that they would not want to be in their digital footprint. Autumn 2 **Will be able to** -create simple projects and edit and evaluate them to debug and correct errors - Talk through code use different code blocks and commands such as 'repeat' and 'timers' **will understand** I can use evaluate the effectiveness of my own and others' animations Know how to add further advancements and detail to their projects. **NC OBJECTIVES:** Key stage 1 Pupils should be taught to: ♣ 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

stage, button, background, run, blocks, edit, debug, repeat, sprite, background, action, **HIGH LEVEL VOCABULARLY** Personal information, trustworthy, concerns, NSPCC, abuse, unreliable Games, apps, chat Design mode, nesting, properties, when clicked, collison detection, event, object, scene, text, key pressed, predict, scale, sound, test, timer	Who can we talk to if we have a problem? Who are my trusted adults? Why do we need to code? What does coding tell a computer? How can I make something happen? What is an algorithm? What is a timer-after command? What is an event? How can I fix my algorithm? What makes a good algorithm?	♣ recognise common uses of information technology beyond school ♣ 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

READING OPPORTUNITIES Detective Digiduck Digiduck's Big Decision Digiduck's Famous Friend Smartie The Penguin: The first version of story covers the following 3 themes; 1.Pop ups and in app purchasing 2. Inappropriate websites for older children 3. Cyberbullying The second version of the story covers the following 3 themes; 1. Upsetting images 2. Unreliable information **3.** Talking to strangers online	**CHALLENGE:** Creat a Online Safety rules poster identifying the rules after listening to each story. That they use to inform Year 1 children. Think of own passwords using criteria. Coding- Children can explain and give examples that an algorithm is a set of instructions to complete a specific task. They can create complex and logical algorithms of several steps that accomplish the aim of the task that can be easily utilized to create executable code. **SUPPORT:** Re-enact a digiduck story and sequence the story using story cards. With support identify the rules learnt from the story. Provide password scaffolds. Coding – With support, children can create a simple one step program that achieves a specific purpose. With support, children can identify and correct errors.	**NEXT STEPS IN LEARNING** Scratch Junior Programming (Year 2 Summer Term) Programming Selection and variables (Year 3 Autumn Term) Scratch Programming (Year 4 Autumn Term) Chn will progress from Scratch Jnr (iPads) to Scratch (PC/Laptop) **LINKS TO Curriculum Areas** <u>Year 2:</u> Spring 2 – What helps us to stay safe? Health and Well-being. How not everything they see online is true or trustworthy and that people can pretend to be someone they are not. Summer 2 – What jobs do people do? Living in the wider world. How people use the internet and digital devices in their jobs and everyday life. Life Learning – Ant-bullying week November 2021. Online bullying Maths – directional and positional language English – instruction writing for a purpose systematically & fiction planning writing/edit and improving.

SKILLS • Creating a safe password • Not to share personal information • How to report concerns Evaluate content and own work • Use blocks and algorithms for different effects	**ASSESSMENT OPPORTUNITIES:** Can the chn create a safe password? Can the chn tell you how they keep safe online? Do you know what to do if a stranger asked them for personal information? Can they explain that an algorithm is a set of instructions? Can they plan an algorithm including collision	**PREPARATION FOR ADULTHOOD:** Chn will know how to keep themselves safe online Chn will know how to create safe passwords Chn will know how to keep personal information private Chn will know how to report concerns about online content Chn will follow systematical steps in using online technologies and develop problem solving skills to solve problems and develop critical thinking

Save work regularly to revisit	detection, timer-after commands & object buttons?	
Evaluate own coding projects	Can they explain what debug means?	
	Can they debug simple programs?	

SMSC

Spiritual –By understanding the advantages and limitations of ICT. The power of technology in making the world a smaller place. Knowing what decisions to make to keep yourself safe online.

Moral –By considering the benefits and potential dangers of the online world e.g. campaigns for charities and injustice as a force for good. Cyberbullying as a danger. Limiting your time online for your well-being.

Social – Promoting the ways to stay safe when using online services and social media. Discussing the impact of ICT on the ways people communicate. Playing with others online to develop your social skills.

Cultural - Promoting an understanding of the history and wonder of technology. Communicating with different regions, countries and cultures.