Computing – Year 1 & 2 – Medium Term Plan
Autumn 1, Unit 1: Online safety year 2

Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: What happens when I post online?	To decide which information is safe to share online. .	- I can explain what online information is. - I can explain what information is safe to share online. - I can recognise that information shared online stays there forever. - I can identify who to talk to if something is shared that makes me feel sad or worried.	Pupils should be taught to: - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour. - Identify a range of ways to report concerns about content and contact.	- consent - offline - online - permission - personal information - sharing online - trusted adult	- A copy of The Three Little Pigs story to be shared with the class. - Whiteboard and pen (one between two). - Link: *Assessment-Computing Y2: Online safety* (optional – see Attention grabber).
Two: How do I keep my things safe online?	To practise keeping information safe and private online.	- I can identify why passwords are used. - I can develop a strong password. - I can classify information as private. - I can explain how to keep information private online.	Pupils should be taught to: - Use technology safely, respectfully and responsibly. - Recognise acceptable/unacceptable behaviour. - Identify a range of ways to report concerns about content and contact.	- password - personal information - private information	- *Scissors (one each).* - *Class whiteboard or flipchart.* - *A box or bag containing three special, personal items, such as a family photo or cuddly toy (see Attention grabber).* - -
Three: It's my choice	To recognise when to deny permission online.	- I can identify what denying permission means.	Pupils should be taught to: - Use technology safely, respectfully and responsibly. - Recognise acceptable/unacceptable behaviour.	- accepting - denying permission - giving permission	- *Audio: Ali's story* (see Attention grabber). - Link: BBC- Places to get help – ***this is an external website and we do not***

		- I can name ways to get help if I feel pressured online. - I can explain why I should deny permission.	- Identify a range of ways to report concerns about content and contact.	- permission - pressure - trusted adult	***have control over its content – please check before showing it to the children.***
Four: Is it true?	To recognise that not everything online is true.	- I can identify whether information is true or false. - I can explain why people may post things online that are not true. - I can check the reliability of online information.	Pupils should be taught to: - Use technology safely, respectfully and responsibly. - Recognise acceptable/unacceptable behaviour. - Identify a range of ways to report concerns about content and contact.	- fake - pop-up - real - reliable - source	- Whiteboards and pens (one each). - Devices with internet access (one between two). - Sticky note (one each). - Link: Kiddle***– this is an external website and we do not have control over its content – please check before showing it to the children.*** - Link: *Assessment-Computing Y2: Online safety* (optional – see Wrapping up).
What does going online mean? Which of these is an online activity? What should you do before you post online? What should you do before sharing content about somebody else online? What makes a strong password?					

Computing – Year 1 & 2 – Medium Term Plan
Spring 1, Unit 2: Computing systems and networks (What is a computer?) and programming (Algorithms and debugging)

Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: Computer parts	To recognise the parts of a computer.	- I can name the key parts of a computer. - I can explain the purpose of different computer parts. - I can explain that a keyboard contains lots of buttons.	Pupils should be taught to: - Use technology purposefully to create, organise, store, manipulate and retrieve digital content. - Recognise common uses of information technology beyond school.	- buttons - computer - desktop - keyboard - laptop - mouse - screen (monitor)	- Laptops or desktop computers (one between two). - Sticky notes (approximately ten per table group). - Link: *Assessment – Computing Y2: What is a computer?* (optional – see Attention grabber). - -
Two: Inputs	To recognise how technology is controlled.	- I can understand that people control technology. - I can understand that technology follows instructions. - I can predict what technology will do.	Pupils should be taught to: - Use logical reasoning to predict the behaviour of simple programs. - Recognise common uses of information technology beyond school.	- device - input - output - robot - technology	

Five: Real-world role play	To understand the role of computers.	- I can explain where computers are used. - I can suggest what their job is. - I can understand that computers work together.	Pupils should be taught to: - Recognise common uses of information technology beyond school. - Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	- computer - digital recorder - role - scanner - system - technology - till - video	- 10 whiteboards and pens. - 5 devices with video capabilities - 5 clipboards
Programming One: Dinosaur algorithm	To decompose a game to predict the algorithms that are used.	- I can understand what the terms decomposition and algorithm mean. - I can decompose a game to predict algorithms. - I can plan algorithms for a more complex game.	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.	- algorithm - decomposition - predict	- Link: *Assessment – Computing Y2: Algorithms and debugging* (optional – see Attention grabber). - Link: BBC Bitesize - All about algorithms.* - Link: Scratch: Dinosaur move*
Two: Machine learning	To understand that computers can use algorithms to make predictions (machine learning).	- I can explain what an algorithm is. - I can explain that computers use algorithms to make predictions. - I can write a clear and precise algorithm.	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.	- algorithm - artificial intelligence - data - key features	- Whiteboards and pens (one each). - Building blocks (a selection between two). - Devices with internet access (optional – one between two, see Attention grabber). - Devices for taking photos (optional – one between two, see Main event).

					- Link: Google Quick, Draw!.* - Link: Google Quick, Draw! - the data.* - Link: How Google Quick, Draw! works on VideoLink.* - Link: Google Quick, Draw! - crocodile.*
Four: Making maps	To understand what abstraction is.	- I can explain what abstraction is. - I can give an example of when abstraction might be useful.	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.	- abstraction - key features - unnecessary	- *Presentation: 3, 2, 1.* - *Presentation: Abstraction.* - *Presentation: Making maps.* - A3 plain paper (one each). - Colouring pencils (a selection per table). - Printed photographs of key places around the school, e.g. hall, playground, field or classroom (one between two). - Link: Google Earth* (see Teacher knowledge). - Link: Transport for London - London Tube map*. - Link: What do they know - Geographically accurate London Tube map*.
Five: Unplugged debugging	To understand what debugging is.	- I can understand the meaning of the word debugging.	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.	- packet data - route - router - server	- *Presentation: Speak like an expert.* - *Presentation: Unplugged debugging.*

		- I can listen to my peer's verbal instructions. - I can perform a task by following step-by-step instructions.	- Create and debug simple programs. - Use logical reasoning to predict the behaviour of simple programs.		- *Presentation: Building a robot.* - A set of six building blocks (one identical set each and one for the teacher). - A partition wall, such as a piece of cardboard or whiteboard (one between two). - Link: *Assessment – Computing Y2: Algorithms and debugging* (optional – see Wrapping up). - Link: BBC Bitesize - What are computer bugs?
What is an algorithm? What does decomposition mean? What repeat (loop) could be used for this algorithm? Debug this algorithm. Which steps are in the wrong order? What three things do all laptops and desktop computers have? What is input? What is output?					

Computing – Year 1 & 2– Medium Term Plan
Summer 1, Unit 3: Programming 2 (scratch jr)

Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: Using ScratchJr	To explore a new application.	- I can predict what something new will do. - I can explore something independently. - I can explain what I found using ScratchJr.	Pupils should be taught to: - Use logical reasoning to predict the behaviour of simple programs. - Create and debug simple programs.	- block - code - ScratchJr	- Devices (ideally one each). - Link: ScratchJr
Two: Creating an animation	To create an animation.	- I can use the programming blocks for a purpose. - I can recognise a loop in programming. - I can use my programming skills to represent an animal moving.	Pupils should be taught to: - Use logical reasoning to predict the behaviour of simple programs. - Create and debug simple programs.	- animation - code - loop - repeat	- Devices (ideally one each). - Link: ScratchJr
Four: To follow an algorithm	To follow an algorithm.	- I can use an algorithm to help with my programming. - I can sequence the blocks appropriately. - I can explain what each block in the program does.	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. - Use logical reasoning to predict the behaviour of simple programs. - Create and debug simple programs.	- algorithm - block - code - loop - sequence	- Devices (ideally one each). - Suitable age-appropriate jokes (optional). - A pre-prepared program in ScratchJr (see Teacher knowledge). - Link: ScratchJr
Five: The three little pigs' algorithms	To plan and use code to create an algorithm.	- I can explain what an algorithm is. - I can choose the code to match my algorithm.	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.	- algorithm - code - program	- Access to a device (one each). - Pre-prepared first part of 'The Three Little Pigs'

		- I can use an algorithm to write a computer program.			story in ScratchJr (see Teacher knowledge). - Link: ScratchJr
Assessment: What is an algorithm? What are these called? What do the blue blocks control? What will this code do?					