Computing – Year 3 – Medium Term Plan
Autumn 1, Unit 1: Online safety and Programming (Scratch)

Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: Beliefs, opinions and facts on the internet	To understand how the internet can be used to share beliefs, opinions and facts.	- I can understand that not all information on the internet is true. - I can explain the terms belief, opinion and fact. - I can use key phrases within a search engine to produce accurate results.	Pupils should be taught to: - 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. - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	- belief - fact - fake news - hoax - internet - opinion - reliable - search engine	- Devices with internet access (optional – one between two, see Main event). - A3 paper (optional – one between two, see Main event). - Whiteboards and pens (optional – one between two). - Link: *Assessment – Computing Y3: Online safety* (optional – see Attention grabber). - Link: BBC - Spaghetti harvest in Ticino on VideoLink.* - Link: BBC - Is this the best April Fools ever? on VideoLink.* - Link: BBC Bitesize - What are facts and opinions?.* - Link: Kiddle.*
Two: Who should I ask?	To explain what should be done before sharing information online.	- I can recognise why I need to ask for permission. - I can explain who I need to ask permission from before sharing content online. - I can identify how others may feel if I share things online without their permission.	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.	- content - permission - share	- *Audio: Michael's story.* - *Audio: Joel's story.*

Three: When being online makes me upset	To identify the effects that the internet can have on people's feelings.	- I can identify different ways that I use the internet. - I can recognise how different online activities can affect my emotions. - I can identify actions that I can take if something on the internet has upset me.	Pupils should be taught to: - 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. - Use technology safely, respectfully and responsibly. - Recognise acceptable/unacceptable behaviour. - Identify a range of ways to report concerns about content and contact.	- charity - online emotions - organisation	- A3 plain paper (one each). - Crayons, coloured pencils or felt tip pens (a selection per table). - Scissors (one between two). - Glue sticks (one between two). - Link: BBC Own It - Seen something upsetting online?.* - Link: BBC Own It - Places to get help.*
Four: Sharing information	To understand the ways personal information can be shared on the internet.	- I can understand what privacy settings are. - I can recognise that devices can communicate with one another to share personal information. - I can explain what autocomplete is and how to choose the best suggestion.	Pupils should be taught to: - 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. - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	- autocomplete - digital device - internet of things - smart devices	- Whiteboards and pens (one between two). - Plain paper (one each). - Coloured pencils (a selection per table). - Devices with internet access (one between two – see Wrapping up).
Programming One: Tinkering with scratch	To explore a programming application.	- I can identify that Scratch is a coding application. - I can predict what I think different code will do.	Pupils should be taught to: - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	- coding - predict - program - sprite - tinker	- Devices with internet access (one between two). - Link: *Assessment – Computing Y3: Programming: Scratch* (optional – see Attention grabber).

		- I can explore an application independently.			- Link: What is new in Scratch on VideoLink.* - Link: Scratch -
Two: Using Loops	To use repetition (a loop) in a program.	- I can understand and explain what a loop is. - I can recognise when a loop is used. - I can choose an appropriate loop.	Pupils should be taught to: - 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.	- loop - repetition	- Devices with internet access (one between two). - Class set of headphones and splitters (optional). - Link: Scratch: Using loops.
Three: Making Animation	To program an animation.	- I can decompose a project. - I can remix a project. - I can select the correct blocks to achieve my goals.	Pupils should be taught to: - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	- animation - code blocks - decomposition - remixing code	- Link: Scratch: Lost in space remix.* - Link: Scratch* – *Scratch is a project of the Scratch Foundation, in collaboration with the Lifelong Kindergarten Group at the MIT Media Lab. It is available for free at https://scratch.mit.edu.*
Five: Programming a game	To program a game.	- I can explain the purpose of an algorithm. - I can decompose a problem. - I can use an algorithm to code a program.	Pupils should be taught to: - 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.	- algorithm - game	- BBC own it – think before you click link. Whiteboard and pen (one each). - Devices with internet access (one between two). - Link: *Assessment – Computing Y3: Programming: Scratch* (optional – see Wrapping up). - Link: Scratch: Robot bop game.* - Link: Scratch*

What is an algorithm?
What word describes a repeated set of instructions?
What is the correct word for removing or replacing an error or mistake in computer code?
What does remixing code mean?
What describes online content limited to people above a certain age?
What should you never do with personal information?
What are questions only you can answer to keep personal information secure?
What is autocomplete?
What do you call a program that searches web pages using keywords?
What word describes stopping someone from being able to contact you online?
What should you do if you see anything online that makes you sad, scared or afraid?

Computing – Year 4/5 – Medium Term Plan

Spring 1, Unit 2: Computing systems and networks (Journey inside a computer) and computing systems and networks (Networks).

Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: Inputs and outputs	To recognise basic inputs and outputs.	- I can identify some inputs and outputs. - I can recall that a computer follows instructions. - I can explain what the computer is doing.	Pupils should be taught to: - 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. - 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 - data - computer program - input - keyboard - monitor - mouse - output	- A desktop computer (You ideally want a desktop computer to show the children the keyboard, mouse and screen connections.) - A4 paper (one each.)
Two: Building a paper laptop	To identify the components inside a laptop.	- I can recognise a laptop's inputs and outputs. - I can recall that a laptop is made up of many parts. - I can explain the purpose of some parts.	Pupils should be taught to: - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	- CPU - GPU - input - output - RAM - ROM	- Pieces of string to use with the *Activity: Part definitions (*five pieces per child)**.**

Five: Dismantling a tablet	To decompose a tablet computer.	- I can recall that a tablet is a computer. - I can compare similarities and differences across different types of computers. - I can identify the components within a tablet.	Pupils should be taught to: - 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.	- components - CPU - disassemble - GPU - hard drive - RAM - ROM	- Paper laptops from Lesson 2. - Whiteboards and pens (one between two).
Networks One: What is a network?	To recognise what a network is.	- I can explain the purpose of a network. - I can name the key parts of a network. - I can explain the difference between a wired and wireless connection. - I can identify which components can be connected.	Pupils should be taught to: - 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.	- component - network - network map - network switch - router - server - wi-fi - wired - wireless - wireless access points	- A planned route around the school to show the children where the network components are located. - Ball of string or wool. - Clipboards (one between two).
Three: How a website works	To demonstrate how a website works.	- I can recognise that the internet is a network. - I can list the parts of a network needed for a website to work.	Pupils should be taught to: - 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. - 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.	- file - server - the cloud - user - user request - website	- Whiteboards and pens (one each). - A large space, e.g. hall or playground (see Main event). - A tray or box. - PE bibs in three different colours (ten of each colour – optional, see Main event).

		- I can recognise the role of the cloud.			- 10 envelopes. - Link: BBC- Horrible Histories.* - Link: CBBC Newsround.*
Five: What is packet data	To identify the role of packet data. .	- I can recognise that data is transferred across the internet. - I can explain that routers connect to send information. - I can demonstrate that data can be too big to send whole.	Pupils should be taught to: - 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.	- packet data - route - router - server	- Building blocks or cubes (a selection per table). - Scissors (one each). - Stopwatch or timer (one between two). - Link: *Assessment: Computing Y3: Networks* (optional – see Wrapping up). - Link: BBC Bitesize- How the internet works
What is a computing network? What is connected to the school's network? What is a router? What is the role of the server? What is the cloud? A keyboard and a mouse ae what kind of device? What does CPU stand for? Where are files usually stored on a computer? Which one of these is not a portable electronic device?					

Computing – Year 3 – Medium Term Plan
Summer 1, Unit 3: Creating media

Lesson	Learning Objective	Success Criteria	National Curriculum Links	Vocabulary	Resources
One: Planning a book trailer	To plan a book trailer.	- I can describe the purpose of a book trailer. - I can identify the key events in a story. - I can plan a book trailer.	Pupils should be taught to: - 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. - Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	- film - key events - plan - storyboard - trailer	- A selection of books that the children are familiar with. - A video trailer for a children's film of your choice. - Link: The Dark- Book trailer.* - Link: It's a Book- Book trailer.*
Two: Filming	To take photos or videos that tell a story.	- I can frame shots differently to create the effect I want. - I can use digital devices to record video or take photos.	Pupils should be taught to: - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. - 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. - Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.	- film - key events - storyboard - trailer - video - voiceover	- Cameras or tablets. - Children's storyboards from Lesson 1. - Pre-prepared book character images (see Teacher knowledge). - Link: Angles - Tate Kids.* - Link: WeVideo.
Three:	To edit a video.	- I can import videos and photos into film editing software.	Pupils should be taught to: - Design, write and debug programs that accomplish specific goals, including controlling or simulating	- application - edit	- Devices (one each).

Editing the trailer		- I can record sounds using digital devices. - I can add sound effects and music to a video.	physical systems; solve problems by decomposing them into smaller parts. - 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.	- film editing software - graphics - recording - sound effects - time code - video - voiceover	- Paper and pens (one per group). - The children's storyboards from *Lesson 1: Planning a book trailer*. - The children's footage from *Lesson 2: Filming*. - Link: The Dark - trailer video.* - Link: WeVideo.* - Link: WeVideo- Start a project.* - Link: WeVideo- Audio and voice recording.*
Four: Transitions and text	To add text and transitions to a video.	- I can add text to my video. - I can recognise what transitions are in film. - I can incorporate different transitions in my video.	Pupils should be taught to: - Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. - 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.	- cross blur - cross fade - cross zoom - dip to black - directional wipe - transition	- Digital devices with access to WeVideo (one between two). - Whiteboards/pens (one each). - Link: WeVideo.* - Link: WeVideo- Motion and static text.* - Link: WeVideo- Transitions.*
Assessment: What type of film uses still images in a sequence to make a cartoon? What is app shorthand for? What word means to change or amend? Which one of these cannot record video clips? In transitions, what does dip to black mean? What is a voice over?					