

Computing Medium Term Curriculum Map (B)

Differentiation by input see the weekly planning sheet/ -Resources -see the weekly planning from Kapow scheme		Minimum Assessment for Learning strategies for all topics			Online safety lessons included as part of planning distributed based on number of weeks per term	
- Long term memory development strategies= Recapping previous learning at the start of each new topic / Long term memory strategy linked to the objectives on this sheet for each week		Computing Cultural Capital = Have a clear understanding of how to create documents, print, save and retrieve whilst also knowing how to be safe online				
	Autumn term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Ruby Class Reception/Nursery		Computer Systems and Networks-Using a computer LO 1: Keyboards -Learning what a keyboard is and locating relevant keys. LO 2: Logging in and out -Learning to log in and out. LO 3: Mouse control - Learning what a mouse is and developing control when using a mouse. LO 4: Mouse control-clicking - Developing basic mouse skills including moving and clicking and using the online paint tool. LO 5: Mouse control-clicking and dragging -Further developing mouse skills to include the ability to click and drag	Programming 1: All about instructions LO 1: Following instructions - To follow instructions as part of practical activities and games. LO 2: Giving simple instructions - To follow instructions as part of practical activities and games. LO 3: Dressing up instructions - To learn to give simple instructions. LO 4: Debugging Instructions (washing hands) - To follow instructions as part of practical activities and learn to debug when things go wrong. LO 5: Predictions - To predict the outcome of an algorithm.	Computing systems and networks: Exploring hardware. LO 1: Exploring hardware tinker tray - To learn how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary. LO 2: Real world tinker tray - To recognise that a range of technology is used in places such as homes and schools. LO 3: Pictures of play - To learn how to operate a camera and use it to take photos. LO 4: Picture walk : To learn how to operate a camera and use it to take photos around school. LO 5: Class photo album - To learn how to operate a camera and use it to take a selfie to display in the classroom.	Programming 2: Programming Bee-Bots LO 1: Understanding arrows - To understand the meaning of directional arrows. LO 2: Introducing the Bee-Bot - To experiment with programming a Bee-bot. LO 3: Simple Bee-Bot Programming - To experiment with programming a Bee-bot and learn how to give simple commands. LO 4: Understanding Algorithms -To follow an algorithm as part of a game. LO 5: Programming a Bee-Bot - To experiment with programming a Bee-bot and learn how to give simple commands.	Data handling: Introduction to data LO 1: Loose parts play -To understand how to sort and categorise objects. LO 2: Sorting Ourselves -To explain how items have been sorted and categorised. LO 3: Yes or No? - To explain how items have been sorted and categorised. LO 4: Creating a branching database -To explore and understand the concept of branch databases. LO 5: Exploring pictograms -To understand how to represent and read data in a pictogram.
Sapphire Class Year 1/2	Programming – Bee-Bots LO 1: Classroom robots – To create clear instructions to give directions. LO 2: Exploring Bee-Bots – To explore commands through Bee-Bots. LO 3: Programming Bee-Bots – To program a robot using instructions. LO 4: Bee-Bot mazes – To create instructions to solve problems. LO 5: Bee-Bot mystery – To identify and correct errors in instructions. LO 1: What happens when I post online? – To decide which information is safe to share online.	Creating media: Digital imagery LO 1: Planning a photo story – To understand and create a sequence of pictures. LO 2: Taking photos – To take clear photos. LO 3: Editing photos – To edit photos. LO 4: Searching for images – To search for and import images. LO 5: Photo collage – To create a photo collage. LO 2: How do I keep my things safe online? – To practise keeping information safe and private online.	Data handling: Introduction to data LO 1: Zoo data – To show data in different ways. LO 2: Picture data – To use technology to represent data. LO 3: Minibeast hunt – To collect and record data. LO 4: Animal branching databases – To sort data into a branching database. LO 5: Inventions – To design an invention to gather data. LO 3: It's my choice – To recognise when to deny permission online.	Programming: ScratchJr LO 1: Using ScratchJr – To explore a new application. LO 2: Creating an animation – To create an animation. LO 3: Making a musical instrument – To use characters as buttons. LO 4: Programming a joke – To follow an algorithm. LO 5: 'The Three Little Pigs' algorithms – To plan and use code to create an algorithm.	Creating Media: Stop-motion LO 1: What is animation? – To understand what animation is. LO 2: My first animation – To create a stop-motion animation. LO 3: Planning my project – To plan my stop-motion animation. LO 4: Creating my project – To create a stop-motion animation. LO 5: Creating my project – To create a stop-motion animation. LO 4: Is it true? – To recognise that not everything online is true.	Data handling: International Space Station LO 1: Homes in space – To locate features on an interactive map. LO 2: Space bag – To create a digital drawing. LO 3: Warmer, colder – To input data into a spreadsheet. LO 4: Experiments in space – To create algorithms for healthy plant growth. LO 5: Goldilocks planets – To retrieve data from a spreadsheet.
Diamond Class Year 3/4	Computing systems and networks 1: Networks LO 1: What is a network? – To recognise what a network is. LO 2: A file's journey – To demonstrate how information moves around a network. LO 3: How a website works – To demonstrate how a website works. LO 4: Routers – To explore the role of a router. LO 5: What is packet data? – To identify the role of packet data LO 1: What happens when I search online? – To describe how to search for information within a wide group of technologies and make a judgement about probable accuracy. LO 2: How do companies encourage us to buy online? – To describe some of the methods used to encourage people to buy things online.	Data handling: Comparison cards databases LO 1: Records, fields and data – To understand the terminology around databases. LO 2: Race against the computer – To compare paper and computerised databases. LO 3: Sorting and filtering – To sort, filter and interpret data. LO 4: Representing data – To represent data in different ways. LO 5: Planning a holiday – To sort data for a purpose. LO 3: Fact, opinion or belief? – To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.	Computing systems and networks 3: Journey inside a computer LO 1: Inputs and outputs – To recognise basic inputs and outputs. LO 2: Building a paper laptop – To identify the components inside a laptop. LO 3: Following instructions – To understand the purpose of computer parts. LO 4: Computer memory – To understand the purpose of computer parts. LO 5: Dismantling a tablet – To decompose a tablet computer. LO 4: What is a bot? – To explain that technology can be designed to act like or impersonate living things.	Computing systems and networks: Collaborative learning LO 1: Teamwork – To understand that software can be used to work online collaboratively. LO 2: Sharing a document – To understand how to contribute to someone else's work effectively. LO 3: Microsoft forms 1 – To understand how to create a digital survey. LO 4: Microsoft forms 2 – To create and share a Microsoft form. LO 5: Shared spreadsheets – To analyse data.	Data handling: Investigating weather LO 1: What is the weather? – To log data taken from online sources in a spreadsheet. LO 2: Weather stations – To design a weather station. LO 3: Extreme weather – To design an automated machine to respond to sensor data. LO 4: Satellites and forecasts – To understand how weather forecasts are made. LO 5: Presenting forecasts – To use tablets to present a weather forecast. LO 5: What is my TechTimetable like? – To explain that technology can be a distraction and identify when I might need to limit the amount of time spent using technology.	Skills showcase: HTML LO 1: What is HTML? – To recognise the role of HTML in a web page. LO 2: Remixing HTML – To change HTML code for a specific purpose. LO 3: HTML unplugged – To recognise the basics of HTML. LO 4: Website hacking – To alter the HTML on a live web page. LO 5: Replacing images – To alter an image on a web page.
Emerald class Year 5/6	Programming - Music LO 1: Tinkering with Scratch -To tinker with Scratch music elements. LO 2: Scratch soundtracks -To create a program that plays music from a given genre. LO 3: Planning a soundtrack -To plan a soundtrack program for a specific film genre. LO 4: Programming a soundtrack -To program a soundtrack for a specific genre in Scratch LO 5: Evaluating a soundtrack -To debug and evaluate a soundtrack program. LO 1: Life online – To describe online issues that give us negative feelings and know how to get help. LO 2: Sharing online – To explore the impact and consequences of sharing online.	Stop-motion animation (option 1) LO 1: Animation explored – To understand what animation is. LO 2: Exploring stop-motion – To understand what stop-motion animation is. LO 3: Planning my stop-motion project – To plan a stop-motion video. LO 4: Stop motion creation – To create a stop-motion animation. LO 5: Editing my stop-motion project – To edit my stop-motion animation. LO 3: Creating a positive online reputation – To know how to create a positive online reputation.	Computing systems and networks: Search engines LO 1: Searching basics – To understand what a search engine is and how to use it. LO 2: Inaccurate information – To be aware that not everything online is true. LO 3: Web quest – To search effectively. LO 4: Information poster – To create an information poster. LO 5: Web crawlers – To understand how search engines work. LO 4: Capturing evidence – To describe how to capture bullying content as evidence.	Data handling: Big Data 1 LO 1: Barcodes – To identify how barcodes and QR codes work. LO 2: Transmitting data – To know how infrared waves transmit data. LO 3: RFID – To recognise how RFID is used. LO 4: Using RFID – To input and analyse real-world data. LO 5: Transport data – To analyse and evaluate data.	Data handling: Big Data 2 LO 1: Transferring data – To explain how data can be safely transferred. LO 2: Data usage – To investigate the data usage of different online activities. LO 3: The internet of Things – To identify how data collection can improve city life. LO 4: Designing a smart school – To design a system for turning a school into a smart school. LO 5: Smart school presentation – To present ideas for turning a school into a smart school. LO 5: Password protection – To manage personal passwords effectively.	Programming: Intro to Python LO 1: Tinkering with Logo – To tinker with a new piece of software. LO 2: Nested loops – To understand nested loops. LO 3: Using Python – To understand basic Python commands. LO 4: Using loops in Python – To use loops when programming. LO 5: Coding Mondrian – To understand the use of random numbers. LO 6: Think before you click – To be aware of strategies that help protect people online.