

Computing Medium Term Curriculum Map

Differentiation by input see the weekly planning sheet/ -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		-Resources -see the weekly planning from Kapow scheme Minimum Assessment for Learning strategies for all topics Computing Cultural Capital = Have a clear understanding of how to create documents, print, save and retrieve whilst also knowing how to be safe online		Online safety lessons included as part of planning distributed based on number of weeks per term		
	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	Improving Mouse Skills – Computing systems and networks LO 1: Logging in -To log in to a computer and access a website. LO 2: Click and drag skills -To develop mouse skills LO 3: Drawing shapes -To use mouse skills to draw and edit shapes. LO 4: Drawing a story -To draw a scene from a story using digital tools. LO 5: Self-Portrait -To create a self-portrait using digital techniques. LO 1: Using the internet safely - To recognise what the internet is and how to use it safely. LO 2: Online emotions - To identify how people’s feelings and emotions can be affected by online content.	Algorithms Unplugged - Programming LO 1: What is an algorithm? -To understand what an algorithm is. LO 2: Algorithm Pictures -To follow instructions precisely to carry out an action. LO 3: Virtual assistants -To understand that computers and devices around us use inputs and outputs. LO 4: Step by Step - To understand and be able to explain what decomposition is. LO 5: Debugging Direction -To know how to debug an algorithm. LO 3: Always be kind and considerate - To recognise how to treat others, both online and in person.	Rocket to the Moon – Skills Showcase LO 1: Rocket Materials -To recognise that digital content can be represented in many forms. LO 2: Rocket design -To design a rocket using a graphics editing programme LO 3: Rocket building instructions -To sequence a set of instructions LO 4: Making a rocket -To build a rocket. LO 5: Rocket launching -To test a design and record data. LO 6: Review and evaluate. LO 4 : Posting and sharing online - To recognise the importance of being careful when posting and sharing online.	What is a computer – Computing systems and networks LO 1: Computer parts -To recognise the parts of a computer. LO 2: Inputs -To recognise how technology is controlled. LO 3: Technology safari -To recognise technology LO 4: Invention -To create a design for an invention LO 5: Real-world role play -To understand the role of computers.	Algorithms and debugging - Programming LO 1: Dinosaur algorithm -To decompose a game to predict the algorithms that are used. LO 2: Machine Learning -To understand that computers can use algorithms to make predictions. LO 3: Through the maze -To plan algorithms that will solve problems LO 4: Making Maps -To understand what abstraction is LO 5: Unplugged debugging -To understand what debugging is LO 5: How much time should we spend on technology? - To discuss ways to balance time spent online and offline.	Word processing – Computing systems and networks LO 1: Getting to know the keyboard -To begin to learn to touch type. LO 2: Getting started with word processing -To understand how to use a word processor LO 3: Newspaper writer -To understand how to add images to a text document LO 4: Poetry book -To create a poetry book using sources from the internet LO 5: Digital writer -To create a digital piece of writing.
Diamond Class Year 3/4	Emailing – Computing systems and networks LO 1: Communicating with technology -To understand how we communicate with technology LO 2: Sending an email -To understand what emails are and how to send one. LO 3: Adding attachments -To know how to create an email with an attachment. LO 4: Be kind online -To understand the importance of being kind online. LO 5: Fake emails -To recognise when an email is not genuine. LO 1: Beliefs, opinions and facts on the internet - To understand how the internet can be used to share beliefs, opinions and facts. LO 2: Who should I ask? - To explain what should be done before sharing information online.	Programming: Scratch - Programming LO 1: Tinkering with Scratch -To explore a programming application LO 2: Using loops -To use repetition to loop in a program. LO 3: Making an animation -To program an animation LO 4: Storytelling -To program a story. LO 5: Programming a game -To program a game LO 3: When being online makes me upset - To identify the effects that the internet can have on people’s feelings.	Video Trailers – Creating Media LO 1: Planning a book trailer -To plan a book trailer LO 2: Filming - To take photos or videos that can tell a story. LO 3: Editing the trailer - To edit a video LO 4: Transitions and text -To add text and transitions to a video LO 5: Video review -To evaluate video editing. LO 4 : Sharing of information - To understand the ways personal information can be shared on the internet.	Website Design – Creating Media LO 1: Getting to know Microsoft Sway -To explore the features of Microsoft Sway LO 2: Book review webpage -To plan content for a collaborative webpage LO 3: Adding features -To create an engaging webpage LO 4: Planning my website - To plan and create a website LO 5: Creating my website -To create and evaluate a website.	Further coding with Scratch - Programming LO 1: Scratch reminder -To recall the key features of scratch LO 2: Identifying what code does -To understand how a scratch game works by using decomposition to identify key features. LO 3: Introduction to variables -To recognise what a variable is. LO 4: Making a variable -To understand how to make a variable in scratch. LO 5: Times tables project -To create a quiz using variables. LO 5: Rules of social media platforms - To understand the rules for social media platforms.	Computational Thinking – Programming 2 LO 1: What is computational thinking -To understand that computational thinking is made up of four strands. LO 2: Decomposition -To understand what decomposition is and how to apply it to solve problems. LO 3: Abstraction and pattern recognition -To understand what pattern recognition and abstraction mean. LO 4: Algorithm design -To understand how to create an algorithm and what it can be used for. LO 5: Apply computational thinking -To combine computational thinking to solve a problem.
Emerald class Year 5/6	Microbit-Programming LO 1: Tinkering with BBC Microbit -To tinker with a new piece of software. LO 2: Programming an animation -To program an animation LO 3: Polling program -To recognise coding structures. LO 4: Programming a pedometer -To create a program for a specific task LO 5: Programming a scoreboard -To create a program LO 1: Online protection - To understand how apps can access personal information and how to alter the permissions. LO 2: Online communication - To be aware of the positive and negative aspects of online communication.	Mars Rover 1 – Data Handling LO 1: Mars Rover -To identify how and why data is collected from space. LO 2: Binary Code -To read and calculate numbers using binary code. LO 3: Computer Architecture -To identify the computer architecture of the Mars Rover LO 4: Using binary-numbers -To use simple operations to calculate bit patterns. LO 5: Using binary-text - to represent binary as a text. LO 3: Online reputation - To understand how online information can be used to form judgements.	Mars Rover 2 – Skills showcase LO 1: Pixels -To recognise how bit patterns represent images as pixels LO 2: Compressing Images -To explain how the data for digital images can be compressed. LO 3: Fetch, decode and execute -To identify the fetch, decode, execute cycle. LO 4: Tinkering with CAD -To create a safe online profile and tinker with 3D software. LO 5: TinkerCAD tutorials -To modify the design of a 3D object using CAD software. LO 4 : Online bullying -To discover ways to overcome bullying.	Bletchley Park – Computing Systems and Networks LO 1: Secret Codes -To understand there are many different types of secret codes LO 2: Brute force hacking -To understand the importance of having a secure password. LO 3: Bletchley Park -To understand the importance of Bletchley Park to the World War II effort LO 4: Computing heroes - To research historical figures that contributed to technological advances in computing. LO 5: Computing heroes - To research and present information about historical figures in computing.	Computing systems and networks: Exploring AI LO 1: What is AI? LO 2: AI and Text LO 3: AI through images LO 4: Coding AI LO 5: Ethics and AI LO 5: Online health - To understand how technology can affect health and wellbeing.	Inventing a Product – Skills Showcase LO 1: Invention design -To design an electronic product LO 2: Coding and debugging -To code and debug a program LO 3: Computer Aided Design (CAD) -To use CAD to design a product LO 4: My product’s website -To create a website. LO 5: Video advert -To create and edit a video