YEAR 2 2.1 – What is a computer?

Computing Area	Information Technology
National Curriculum Strands	• Use logical reasoning to predict the behaviour of simple programs • Recognise common uses of information technology beyond school
Skills Progression Points	• Children can explain why they use technology in the classroom, in their homes and in the community • Identify the benefits of using technology, such as creating content and communicating efficiently • Children can identify a computer by knowing that it has inputs, a processor and outputs • Children can identify parts of a computer including what an input and output is
Hardware	Desktop computers / laptops/ tablets
Software/App	https://www.j2e.com/jit5 / Pic Collage app (iPads)
Unit Objective	Pupils learn how to identify a computer's different parts and talk about the role computers play in our society.
Unit Vocabulary	Computer, Input, Output, Invention

YEAR 2 2.2 – Coding & Algorithms

Computing Area	Computer Science
National Curriculum Strands	• 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 or estimate or guess the behaviour of simple programs.
Skills Progression Points	• Use logical reasoning to predict and debug more complex programs • Can create and debug with improved confidence and efficiency • Begin to program using simple block code • Program a robot or software to do a particular task • Be able to explain the order needed to do things to make something happen and to talk about it as an algorithm • Understand what an algorithm is and demonstrate simple linear algorithms
Hardware	Desktop computers / laptops /tablets
Software/App	Code.org, Plus a choice from a selection: Kodable, Coding Safari, Lightbot, CodeMonkeyJr
Unit Objective	Pupils build on their knowledge of what an algorithm is and how we can program computers to use algorithms.
Unit Vocabulary	Sequence, Code, Blocks, Sprites, Repeat, Bug, Debugging

YEAR 2 2.3 - Programming using Scratch Jr

Computing Area	Computer Science
National Curriculum Strands	• 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 or estimate or guess the behaviour of simple programs
Skills Progression Points	• Use logical reasoning to predict and debug more complex programs. • Can create and debug with improved confidence and efficiency. • Begin to program using simple block code. • Program a robot or software to do a particular task. • Be able to explain the order needed to do things to make something happen and to talk about it as an algorithm. • Understand what an algorithm is and demonstrate simple linear algorithms.
Hardware	Tablets
Software/App	Scratch Jr
Unit Objective	To design and create an animation using Scratch Jr.
Unit Vocabulary	Sequence, Code, Blocks, Sprites, Repeat, Bug, Debugging, Tinkering

YEAR 2 2.4 - Using Pictograms, Graphs and Bar Charts

Computing Area	Information Technology
National Curriculum Strands	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content
Skills Progression Points	• To use technology to collect information • Sort different kinds of information and present it to others • To add information into a pictogram and talk about their findings • To talk about the different ways in which data / information can be shown
Hardware	PCs or iPads
Software/App	https://www.j2e.com/jit5
Unit Objective	To collect data as a tally and present it digitally, as a pictogram, graph or bar chart To compare the differences between creating a bar chart on paper vs digitally
Unit Vocabulary	Pictogram, graph, chart, tally, collect, count, data

Note: This unit works best in conjunction with Pictograms/data being taught in Maths. Each stage in this plan could be delivered over 1-2 lessons to reinforce the skills.

YEAR 2 2.5 - Modifying Text & Images

Computing Area	Information Technology
National Curriculum Strands	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content. • Recognise common uses of information technology beyond school • Use technology safely and respectfully, keeping personal information private
Skills Progression Points	• Demonstrate the use of technology responsibly in terms of how we use it and the time we spend using it. • Know how to report inappropriate content or contact online. • Children can explain why they use technology in the classroom, in their homes and in the community. • Use the keyboard on their device to add, delete, edit and format text. • Save and open files on the device they use from a specific file location.
Hardware	Laptops/Desktop PC
Software/App	Microsoft Word or Google Docs, Microsoft PowerPoint or Google Slides
Unit Objective	Pupils look at software they can use to present their work. They will expand on previous skills such as using a keyboard, formatting text and how to use images in their work.
Unit Vocabulary	Text, Bold, Italic, Keyboard

YEAR 2 2.6 - Staying Safe Online

Computing Area	Digital Literacy
National Curriculum Strands	• 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.
Skills Progression Points	• Know how to report inappropriate content or contact online. • Understand the need to keep a password and personal information private. • To consider the impact of sharing personal information online.
Hardware	iPads or PCs
Software/App	Think U Know resources – Jessie and Friends videos
Unit Objective	To understand some of the ways we can keep safe online and who to tell if we encounter any problems.
Unit Vocabulary	Trusted adult, online, personal information, private, public, sharing, password, website, app