Unit Aims - In this unit, learners will look at Information Technology at school and beyond e.g. in shops, hospitals and libraries. They will also investigate how Information Technology improves our world.	
Progression of Learning (Prior Learning) - Pupils should already have an understanding of what technology is and where it is used in a school context.	
Progression of Learning (Future Learning) - In Year 3, the children will be introduced to computers connected together as a network.	
Core Computing Knowledge/Skills	Lesson Sequence [Curriculum Time - Minimum 5 hours]
What is Information Technology? - To know and be able to identify examples of computers. - To be able to describe some uses of computers. - To know that a computer is a part of Information Technology.	**What is Information Technology? [Unplugged Lesson]** Vital Vocabulary (Information Technology [IT], computer, technology). Part 1: **Explanation** → *Exploring* (Ask learners what computers they have used or seen in school. Discuss what is common about these devices and ways in which they are different. This could include: features, charging, keyboards, how they switch off, their purpose etc). Part 2: **Structured Discussion** → *Problem solving and collaborating* (Explore the difference between a computer and Information Technology using the 'Odd One Out' activity, on slide 13. Discuss with learners how we can classify whether a device is Information Technology. Ensure that the children understand the criteria to be identified as Information Technology). Part 3: **Journaling** → *Creating and applying* (Complete sorting activity in small groups to apply the children's understanding of the definition of Information Technology) [**Evidence in 'Pupil Computing Journal' on Seesaw**] Part 4: **Reflection Time** → *Sharing and debugging* ('Talk It' Opportunity - Share and justify examples of Information Technology which can be found at home).
Where have we seen Information Technology in the home? - To know and explain the purpose of Information Technology in the home. - To know how to independently open a file. - To know how to move and resize images.	**Where have we seen Information Technology in the home?** Vital Vocabulary (Information Technology [IT]) Part 1: **Explanation** → *Exploring* (Complete retrieval activity based on whether devices are Information Technology, or not. Explore Information Technology devices around the home. Part 2: **Structured Discussion** → *Problem solving and collaborating* (For any devices suggested, children to explore what they are used for and why this is important. Refer to the following prompt questions: What would life be like without it? Would you miss it? What would you do instead?). Part 3: **Journaling** → *Creating and applying* (Children to complete sorting activity independently. **Scaffold** → Support children with dragging and resizing images). [**Save a copy of 'A2 Resource' into Pupil Files on Pupil Share**]. Part 4: **Reflection Time** → *Sharing and debugging* (Encourage children to discuss any further Information Technology devices and where they are used, such as libraries and shops).
Where have we seen Information Technology in the world? - To know examples of Information Technology in the home. - To know the uses of Information Technology and compare different types.	**Where have we seen Information Technology in the world?** Vital Vocabulary (Information Technology [IT], effective) Part 1: **Explanation** → *Exploring* (Building on the children's reflection from the previous lesson, explore types of IT used in the wider world). Part 2: **Structured Discussion** → *Problem solving and collaborating* (Complete formative assessment opportunity, exploring where IT can be found. Please note that IT could be found in any of the locations e.g. a phone in your pocket, a camera to take photographs, barcode readers etc). Part 3: **Journaling** → *Creating and applying* (Complete a sorting activity in small groups comparing where Information Technology can be found. Encourage application of knowledge using the 'Talk about it' words: Where? What? Why? How?). [**Evidence in 'Pupil Computing Journal' on Seesaw**] Part 4: **Reflection Time** → *Sharing and debugging* (Challenge children to think of a job where IT is not used and influence their aspirations by discussing careers which utilise IT).
How does Information Technology improve our world? - To know how Information Technology is used in a shop. - To know that Information Technology can be connected. - To know how Information Technology helps people to improve their lives. [Influence Aspirations - Career link].	**How does Information Technology improve our world? [Unplugged Lesson]** Vital Vocabulary (Information Technology, computer, barcode, scanner, scan). Part 1: **Explanation** → *Exploring* (Retrieve understanding of Information Technology. Explore how Information Technology is used in a Supermarket). Part 2: **Structured Discussion** → *Problem solving and collaborating* (Explore why we use barcodes, why they are useful and how computers can read them quickly - linked to efficiency.). Part 3: **Journaling** → *Creating and applying* ('Drama It' - Provide children with a food activity sheet to create products with pretend barcodes. Work in groups of 3, where child 1 is the customer, child 2 is the barcode scanner and item finder and child 3 is the price finder and adder. Follow the Power Point instructions, explaining how roles 2 and 3 are connected, but done separately. You could also explore different price lists. [**Evidence in 'Pupil Computing Journal' on Seesaw**] Part 4: **Reflection Time** → *Sharing and debugging* (Ask learners to recall the process of scanning a barcode and looking up prices. Ask the following questions: could they complete the jobs quickly? Do they think that a real till would be quicker? How do barcodes help to support efficiency in real shops? Consider the speed, price changes and stock inventory.
How can I use Information Technology safely and responsibly? - To know how to use Information Technology responsibly and safely. - To know how rules and guides can help.	**How can I use Information Technology safely and responsibly? [Additional Online Safety Coverage - Unplugged Lesson]** Vital Vocabulary (Information Technology, safety, responsible). Part 1: **Explanation** → *Exploring* (Pose the question, 'What can we do with IT?' Talk about devices that are classified as Information Technology and what they are used for, recording the children's responses as a class mind-map). Part 2: **Structured Discussion** → *Problem solving and collaborating* (In groups, children to then choose one common piece of IT from home, such as a tablet and discuss rules to be safe and responsible in its use). Part 3: **Journaling** → *Creating and applying* (Children to verbally feedback and create a whole class list of rules). [**Evidence in 'Pupil Computing Journal' on Seesaw**] Part 4: **Reflection Time** → *Sharing and debugging* (Discuss what to do if you ever felt unsafe when using IT, such as speaking to a trusted adult, or using CEOP).
Exit Task and Snapshot Completion	At the end of the unit, provide the children with a picture demonstrating everyday life and ask them to identify the information technology. Discuss the following questions: How do we know that it is IT? What use does it have? How has it improved our world? What would life be like without it?

Year 2 Computing – Autumn 1

Computer Systems and Networks – IT Around Us.

Our Rainbow Promises:

Encourage Resilience and perseverance
Develop Articulate learners
Influence aspirations
Nurture curiosity
Instil British and Christian Values
Provide Opportunities to build upon knowledge and skills
Promote Wellbeing and Health

Unit Specific National Curriculum Coverage:

- 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; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

Lesson Part:	Transferable Concept(s):
1. Exploration 	→ Exploring
2. Structured Discussion 	→ Problem solving and collaborating
3. Journaling 	→ Creating and applying
4. Reflection Time (Computational Thinking) 	→ Sharing and debugging

Across the academic year, these transferable concepts are **revisited** within the context of a '**spiral curriculum**' to develop **computational thinking and creativity**.

Cross-Curricular Links:

Design Technology – Food packaging.

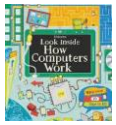
Education for a Connected World Links (Online Safety):

Health, well-being and lifestyle:
- I can identify rules that help keep us safe and healthy in and beyond the home when using technology.
- I can give some simple examples.

Teaching Resources:

Outline of lesson resources from '**Teach Computing Curriculum**' [T.C.C] (provided by the National Centre for Computing Education).

Wider Reading Opportunities:



R	Our bespoke approach to teaching and learning uses open-ended tasks, aimed to encourage resilience, perseverance and computational thinking.
A	Opportunities to use and apply carefully selected vital vocabulary within structured discussions (part 2 of the lesson sequence). Oracy Link [Speak It] – 'Talk It' through structured discussion activities.
I	The opportunity to become a Digital Leader and explicit links to Computing-based careers, to encourage active participants in a digital world.
N	Using a range of information technology, to encourage real-world computational thinking and creativity.
B	Christian Values: Friendship, respect, creativity, perseverance. British Values: Mutual respect, Rule of Law, Individual Liberty. SMSC embedded throughout.
O	Knowledge and skills are progressively sequenced; refer to unit planning overleaf and wider progression document(s).
W	National Online Safety units are taught each half-term through our Parish Spirit Curriculum. This is supported by regular retrieval and reinforcement within our Computing Curriculum offer, linked to the Education for a Connected World Framework (see above).

Vital Vocabulary:

technology
computer
Information Technology
safety
responsible
effective
barcode
scanner
scan