St Bernadette's Catholic Primary School – Long Term Plan Computing Curriculum

	Autumn	Spring	Summer
Year 1	**Digital Painting** • Creating media • Using painting tools • Digital art creation	**Digital Writing** • Creating media • Keyboard/mouse control • Text formatting	**Creating Animations** • Programming (ScratchJr) • Sprites & backgrounds • Simple algorithms
Year 2	**IT in the World** • Computing systems • Identifying IT • Responsible use	**Organising Data** • Data & information • Pictograms • Attributes	**Building Sequences** • Programming (ScratchJr) • Predicting outcomes • Quiz design
Year 3	**Computer Networks** • Computing systems • Network infrastructure • Connecting devices **Stop-Frame Animation** • Creating media • Storyboarding • Frame consistency	**Programming with Sound** • Programming (Scratch intro) • Sequences • Motion/sound blocks **Branching Databases** • Data & information • Yes/no questions • Sorting objects	**Desktop Publishing** • Creating media • Text & images • Page layouts **Events & Actions** • Programming • Sprite movement • Pen blocks
Year 4	**The Internet** • Networks • WWW vs Internet • Evaluating content **Audio Production** • Creating media • Podcasts • Copyright	**Repetition (Logo)** • Programming • Count-controlled loops • Creating patterns **Data Logging** • Data & information • Sensors • Analysing data	**Photo Editing** • Creating media • Image manipulation • Ethical considerations **Repetition Games** • Programming (Scratch) • Infinite loops • Game design
Year 5	**Computer Systems** • Networks • Input/process/output • Search engines **Video Production** • Creating media • Filming techniques • Editing video	**Physical Computing** • Programming (Crumble) • Selection • Conditions **Flat-File Databases** • Data & information • Searching/ordering • Real-world databases	**Vector Graphics** • Creating media • Shapes & lines • Layering/grouping **Selection in Quizzes** • Programming (Scratch) • If…then…else • Quiz evaluation
Year 6	**Communication Online** • Networks • Data packets • Responsible Communication **Web Page Creation** • Creating media • Website design • Copyright	**Variables in Games** • Programming (Scratch) • Storing data • Game development **Spreadsheets** • Data & information • Formulas • Charts	**3D Modelling** • Creating media • 3D space • Design planning **Physical Computing** • Programming (micro: bit) • All 4 constructs • Complex projects

This LTP is based on the **Teach Computing Curriculum** from the National Centre for Computing Education (Raspberry Pi Foundation). It provides a complete, sequential progression of computing skills from Year 1 to Year 6.

Computing Curriculum Structure

The curriculum is organised around **5 key threads** that run through all year groups:

1. **Computing systems and networks**
2. **Creating media**
3. **Programming**
4. **Data and information**
5. **Design and development**

Year 1

Autumn: Digital Painting

Threads: Creating media | Effective use of tools
Key skills: Using painting tools, manipulating digital devices, creating digital art

Spring: Digital Writing

Threads: Creating media | Effective use of tools
Key skills: Keyboard and mouse control, entering/removing text, formatting choices

Summer: Creating Animations in Programs

Threads: Design and development | Programming
Key skills: Introduction to ScratchJr, sprites and backgrounds, programming blocks, simple algorithms

Year 2

Autumn: Information Technology in the World Beyond School

Threads: Computing systems | Networks | Safety and security
Key skills: Identifying IT, recognising IT use in school and beyond, responsible use

Spring: Using IT to Organise and Present Data

Threads: Data and information | Effective use of tools
Key skills: Understanding data, using attributes, creating pictograms and block diagrams

Summer: Building Sequences in Programs

Threads: Design and development | Programming
Key skills: Understanding sequences, predicting outcomes, designing quiz questions in ScratchJr

Year 3

Autumn 1: Computer Networks

Threads: Computing systems | Networks
Key skills: Inputs, processes, outputs, network infrastructure, connecting devices

Autumn 2: Stop-Frame Animation

Threads: Effective use of tools
Key skills: Animation techniques, storyboarding, frame consistency, adding media

Spring 1: Programming Sequences Using Sound

Threads: Design and development | Programming
Key skills: Introduction to Scratch, motion/sound/event blocks, sequencing

Spring 2: Organising Data Using Databases

Threads: Data and information
Key skills: Branching databases, yes/no questions, attributes, sorting objects

Summer 1: Desktop Publishing

Threads: Creating media | Effective use of tools
Key skills: Combining text and images, font choices, page layouts, templates

Summer 2: Events and Actions in Programs

Threads: Programming
Key skills: Events and actions, sprite movement, maze navigation, Pen blocks

Year 4

Autumn 1: The Internet

Threads: Networks | Safety and security
Key skills: Internet as network of networks, World Wide Web, evaluating online content

Autumn 2: Audio Production

Threads: Creating media | Effective use of tools
Key skills: Recording/editing sound, input/output devices, creating podcasts, copyright

Spring 1: Repetition in Programs

Threads: Algorithms and data structures | Programming
Key skills: Text-based programming (Logo), count-controlled loops, creating patterns

Spring 2: Data Logging

Threads: Data and information | Effective use of tools
Key skills: Collecting data, sensors, data sets, logging intervals, analysing data

Summer 1: Photo Editing

Threads: Creating media | Effective use of tools
Key skills: Editing digital images, recolouring, cloning, combining images, ethical considerations

Summer 2: Using Repetition in Programming to Create a Game

Threads: Design and development | Programming
Key skills: Repetition in Scratch, count-controlled vs infinite loops, game design

Year 5

Autumn 1: Introduction to Computer Systems

Threads: Networks
Key skills: Computer systems, information transfer, input/process/output, search engines

Autumn 2: Video Production

Threads: Creating media | Effective use of tools
Key skills: Capturing/editing video, storyboarding, filming techniques, production process

Spring 1: Exploring Selection in Physical Computing

Threads: Programming
Key skills: Crumble microcontroller, conditions, selection, controlling physical outputs

Spring 2: Flat-File Databases

Threads: Data and information | Effective use of tools
Key skills: Organising data, searching/ordering, creating graphs/charts, real-world databases

Summer 1: Introduction to Vector Graphics

Threads: Creating media | Effective use of tools
Key skills: Vector vs raster, shapes and lines, layering, grouping, duplication

Summer 2: Using Selection in Programming to Develop a Quiz

Threads: Algorithms and data structures | Programming
Key skills: If…then…else structure, quiz design, testing and evaluation

Year 6

Autumn 1: Communication and the Internet

Threads: Effective use of tools | Safety and security
Key skills: Data transfer, addressing, data packets, online collaboration, responsible communication

Autumn 2: Web Page Creation

Threads: Creating media | Design and development
Key skills: Website design, layout, navigation, copyright, device compatibility

Spring 1: Using Variables in Programming to Develop a Game

Threads: Programming
Key skills: Variables, storing/changing data, game development, scoreboard simulation

Spring 2: Introduction to Spreadsheets

Threads: Data and information | Effective use of tools
Key skills: Organising data, formatting, formulas, calculations, charts

Summer 1: 3D Modelling

Threads: Creating media | Effective use of tools
Key skills: Working in 3D space, manipulating objects, combining shapes, design planning

Summer 2: Sensing Movement with Physical Computing

Threads: Programming
Key skills: Micro:bit programming, combining all four constructs (sequence, repetition, selection, variables)