Computing LTP 2023-2025

Concepts	Computing Systems and networks What is a computer, how do its constituent parts function together as a whole. Understand how networks can be used to retrieve and share information and come with associated risks. Online safety	Programming Creating software to allow computers to solve problems. Being able to comprehend, design, create and evaluate algorithms. The activities involved in planning, creating and evaluating computing artefacts.	Data and information How is data stored, organised and used to represent real world artefacts and scenarios.	Creating media Select and create a range of media including text, images, sounds and video. The activities involved in planning, creating and evaluating computing artefacts.

	AUTUMN		SPRING		SUMMER	
Year R	Barefoot Computing https://www.barefootcomputing.org/earlyyears tie units of work into your own medium term plan 1unit per half term minimum					
Year 1 and Year 2 **Cycle A** **2023-2024**	**Technology Around Us Year 1** Identifying technology. Identifying a computer and its main parts. Creating rules for using technology responsibly	**Digital Painting Year 1** Describing what different freehand tools do. Making careful choices when painting a digital picture. To compare painting a picture on a computer and on paper.	**Digital Photography Year 2** Knowing what devices can be used to take photographs. Describing what makes a good photograph.	**Information Technology Around Us Year 2** Recognising the uses of Information Technology. Identifying IT in the home and beyond school. Understanding how IT helps us. Understanding how to use IT safely.	**Moving a Robot Year 1** Understanding what a given command will do	**Robot Algorithms Year 2** Describing a series of instructions as a sequence. Understanding what happens when we change the order of instructions.

Year 1 and Year 2 Cycle B 2024 -2025	**Grouping data Year 1** Labelling objects. Identifying that objects can be counted. Describing objects in different ways. Comparing groups of objects. Answering questions about groups.	**Pictograms Year 2** Recognising that we can count and compare objects using tally charts. Recognising that objects can be represented as pictures. Recognising that people can be described by attributes.	**Digital Writing Year 1** Understanding that the look of text can be changed. Understanding why certain tools have been used. Comparing writing on a computer with writing on paper.	**Making Music Year 2** Saying how music can make us feel. Identifying that there are patterns in music. Describing how music can be used in different ways. Showing how music is made from a series of notes.	**Programming animations Year 1** Choosing a command for a given purpose. Identifying the effect of changing a value. Understanding that each sprite has its own instructions.	**Programming Quizzes Year 2** Understanding that a series of commands has a start and an outcome. Deciding how a project can be improved.
Year 3 and Year 4 **Cycle A** **2023 -2024**	**Connecting Computers Year 3** Understanding how digital devices function. Understanding how computer networks share information. Recognising the physical components of a network.	**Stop-Frame** **Animation Year 3** Understanding that animation is a sequence of drawings or photographs.	**The Internet Year 4** Understanding how networks connect to other networks. Recognising how networked devices make up the internet. Understanding how websites can be shared via the World Wide Web. Understanding how content can be added and accessed. Evaluating the consequences of unreliable content.	**Audio Editing Year 4** Understanding that sound can be digitally recorded. Evaluating choices	**Sequence in Music Year 3** Identifying that sprites are controlled by commands. Recognising that a sequence of commands can have an order.	**Repetition in Shapes Year 4** Understanding what ‘repeat’ means.

Year 3 and Year 4 Cycle B 2024 -2025	**Branching Databases Year 3** Identifying the object attributes needed to collect relevant data. Understanding why it is helpful for a database to be well structured. Comparing pictograms with branching databases.	**Data Logging Year 4** Understanding that data can be used to answer questions. Understanding that data loggers collect 'data points' from sensors over time.	**Desktop Publishing Year 3** Recognising how text and images convey information. Recognising that text and layout can be edited. Considering how different layouts suit different purposes. Considering the benefits of desktop publishing.	**Repetition in Shapes Year 4** Creating a program in text based language. Modifying a count-controlled loop. Decomposing a program into parts. Creating a program that uses count-controlled loops.	**Events and Actions Year 3** Understanding how a sprite moves.	**Data Logging Year 4** Using a digital device to collect data. Using data to find Information.
Year 5 and Year 6 **Cycle A** **2023 - 2024**	**Sharing Information Year 5** Understanding that computers connect together to form systems. Recognising the role of computer systems in our lives. Understanding how information is transferred over the internet.	**Video Editing Year 5** Recognising video as moving pictures. Identifying digital devices that can record video.	**Internet Communication Year 6** Understanding how search engines select results. Understanding how search results are ranked. Evaluating different methods of online communication.	**Web Page Creation Year 6** Reviewing an existing website. Considering the ownership and use of images. Understanding the implications of linking to content owned by other people.	**Selection in Physical Computing Year 5** Understanding that a loop can stop when a condition is met.	**Variables in Games Year 6** Defining 'variable' as something that is changeable. Evaluating a project

Year 5 and Year 6 Cycle B 2024-2025	**Flat-File Databases Year 5** Comparing paper and computer databases. Understanding how grouping and sorting data helps us answer questions. Understanding that computer programs can be used to compare data visually.	**Spreadsheets Year 6** Identifying questions that can be answered using data. Understanding that formula can be used to produce data.	**Vector Drawing year 5** Understanding that drawing tools can be used for different outcomes. Understanding that vector drawings consist of layers. Evaluating vector drawings.	**3D Modelling Year 6** Using a computer to create and manipulate 3D digital objects. Constructing a digital 3D model of a physical object. Designing a digital model by combining 3D objects. Developing and improving a digital 3D model.	**Selection in Quizzes Year 5** Understanding how selection is used in computer programs. Understanding how selection directs the flow of a program. Evaluating programs.	**Sensing Year 6**