Perryfields Primary PRU Curriculum Overview

Computing

Due to us having mixed age classes we operate a two year cycle with our curriculum. This ensures that over time all the pupils get a full entitlement. To plan the curriculum we use Purple Mash resources. The platform fully meets and goes beyond the requirements of the National Curriculum. We use the planning as a basis for our own planning, but adapt some of the outcomes to meet the specific needs of our children. In addition to the computing curriculum, we prioritize the teaching of online safety. Each half term teachers deliver lesson based around the Education for a Connected World guidelines and regular assemblies also address many of the challenges faced by our young people in the modern age.

The following key drivers underpin our learning and are developed through the school. Our three key drivers for our school curriculum are:

1. **Aspirations** - we want our pupils to **aspire** to be the best version of themselves. We have incredibly **high expectations** and are passionate about ensuring that every pupil is exposed to a range of possibilities to broaden their **aspirations, build their confidence** and deepen their **knowledge** of the world around them.

2. **Communication** - to help our pupils to develop the knowledge and skills necessary to communicate their thoughts, ideas and feelings successfully across the curriculum through a variety of outlets – this includes through the Arts, Sports and Science, Technology, Engineering and Mechanics (STEM).

3. **Learning Powers** - we aim to develop our pupils' learning habits in order to prepare them for a lifetime of learning. Developing our pupils' learning powers is central to everything we do; it is not an addition to our curriculum but underpins the whole learning process.

Years 1 and 2: Cycle 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic Theme	**Online Safety & Exploring Purple Mash**	**Effective Searching** **Lego Builders**	**Technology outside school** **Grouping & Sorting**	**Creating Pictures**	**Spreadsheets** **Coding**	**Coding**
Objectives All pupils should be able to: Target Learning Outcomes:	To log in safely and understand why that is important To learn how to find saved work in the Online Work area. To become familiar with the types of resources available in the Topics section. To explore the Tools area of Purple Mash and to learn about the common icons used in Purple Mash for Save, Print, Open, New	To emphasise the importance of following instructions. To follow and create simple instructions on the computer. To consider how the order of instructions affects the result.	To find and understand examples of where technology is used in the local community To record examples of technology outside school. To sort items using a range of criteria. To sort items on the computer using the 'Grouping' activities in Purple Mash.	To explore 2 Paint A Picture. To recreate pointillist art using the Pointillism template. To look at the work of Piet Mondrian and recreate it using the Lines template. To look at the work of William Morris and recreate it using the Patterns template. To look at some surrealist art and create your own using the eCollage	To understand what a spreadsheet looks like. To add clipart images to a spreadsheet. To use the 'speak' and 'count' tools in 2Calculate to count items.	To understand what instructions are. To use code to make a computer program. To use an event to control an object To begin to understand how code executes when a program is run. To understand what backgrounds and objects are. To make a computer program.

				function in 2Paint A Picture.		
Enrichment						

Years 1 and 2: Cycle 2

	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Topic Theme	**Online Safety** **Maze Explorers**	**Questioning**	**Animated Story Books**	**Making Music**	**Spreadsheets** **Pictograms**	**Presenting Ideas**
Objectives All pupils should be able to: Target Learning Outcomes:	To know how to refine searches using the Search tool. To introduce Email as a communication tool using 2Respond simulations To understand that information put online leaves a digital footprint or trail.	To show that the information provided on pictograms is of limited use beyond answering simple questions To use yes/no questions to separate Information To construct a binary tree to separate different items. Use 2Question (a binary tree) to answer questions	To understand the differences between traditional books and ebooks. To add animation to a picture. To add a sound effect to a picture. To add a background to the story. To use the copy and paste feature to create additional pages	To explore, edit and combine sounds using 2Sequence. To add sounds to a tune to improve it. To create their own tune using the sounds which they have added to the Sounds section	To use some 2Calculate. To use copying, cutting and pasting shortcuts in 2Calculate. To explore the capabilities of a spreadsheet in adding up coins to match the prices of objects Children can create a table of data on a spreadsheet. To understand that data can be	To explore how a story can be presented in different ways To make a quiz about a story or class topic. To make a fact file on a non-fiction topic.

					represented in picture format. To contribute to a class pictogram. To use a pictogram to record the results of an experiment.	

Years 3 and 4: Cycle 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic Theme	**Coding**	**Online Safety** **Spreadsheets**	**Touch Typing**	**Email (including Email safety)**	**Branching Databases**	**Simulations** **Graphing**
Objectives All pupils should be able to: Target Learning Outcomes:	To understand what a flowchart is and how flowcharts are used in computer programming. To be able to select the right type of timer for a purpose. To understand how to use the repeat command. To use coding knowledge to create a range of programs. To design and create an interactive scene.	To know what makes a safe password, how to keep passwords safe and the consequences of giving your passwords away. To consider if what can be read on websites is always true. To learn about the meaning of age restrictions symbols on digital media and devices. To find out how spreadsheet programs can automatically	To learn how to use the home, top and bottom row keys. To practice and improve typing for home, bottom, and top rows. To practice the keys typed with the left hand. To practice the keys typed with the right hand.	To think about the different methods of communication. To open and respond to an email. To learn how to use email safely. To learn how to use email safely. To add an attachment to an email. To explore a simulated email scenario.	To sort objects using just YES/NO questions. To complete a branching database using 2Question. To create a branching database of the children's choice.	To find out what a simulation is and understand the purpose of simulations. To explore a simulation, making choices and discussing their effects. To work through and evaluate a more complex simulation. To enter data into a graph and answer questions. To solve an investigation and present the results in graphic form.

		create graphs from data. To introduce the 'more than', 'less than' and 'equals' tools. To introduce the Advanced mode of 2Calculate.				

Years 3 and 4: Cycle 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic Theme	**Coding**	**Online Safety**	**Spreadsheets**	**Writing for different audiences**	**Animations** **Effective searching**	**Hardware Investigators** **Making Music**
Objectives All pupils should be able to: Target Learning Outcomes:	To create a simple computer program To understand how an IF statement works. o understand how to use co-ordinates in computer programming To understand the Repeat until command. To understand what a variable is in programming. To create a playable game.	To understand how children can protect themselves from online identity theft. To identify the risks and benefits of installing software including apps. To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. To understand the importance of balancing game and screen time	To explore how the numbers entered into cells can be set to either currency or decimal. To explore the use of the timer, random number and spin button tools. To use the line graphing tool in 2Calculate with appropriate data. To use 2Calculate to create a model of a real-life situation. To use the functions of allocating	To explore how font size and style can affect the impact of a text. To use a simulated scenario to produce a news report. To use a simulated scenario to write for a community campaign. To input simple instructions in 2Logo To use 2Logo to create letter shapes. To use the Repeat command in 2Logo	To learn how animations are created by hand. To add backgrounds and sounds to animations. Introducing ‘stop motion’ animation. To locate information on the search results page. To use search effectively to find out information. To assess whether an information source is true and reliable.	To understand the different parts that make up a desktop computer. To recall the different parts that make up a computer. To identify and discuss the main elements of music: Pulse, Rhythm, Tempo, Pitch, Texture To understand and experiment with rhythm and tempo. To create a melodic phrase.

		with other parts of their lives.	value to images in 2Calculate to make a resource to teach place value.	to create shapes. To use and build procedures in 2Logo.		To compose a piece of electronic music.

Years 5 and 6: Cycle 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic Theme	**Coding**	**Online Safety**	**Spreadsheets**	**Databases**	**Game Creator**	**Modelling** **Concept Maps**
Objectives All pupils should be able to:	To begin to be able to simplify code. To program a simulation using 2Code. To know what decomposition and abstraction are in Computer Science. To begin to understand what a function is and how functions work in code. To understand how to create a string.	To gain a greater understanding of the impact that sharing To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online.	To use formulae within a spreadsheet to convert measurements of length and distance. To use the count tool to answer hypotheses about common letters in use. To use formulae to calculate area and perimeter of shapes. To create formulae that use text variables.	To learn how to search for information in a database. To contribute to a class database. To create a database around a chosen topic.	To Introduce the 2DIY 3D tool. To design the game environment. To design the game quest to make it a playable game. To finish and share the game.	To be introduced to the 2Design and Make tool. To explore the effect of moving points when designing. To design a 3D model to fit certain criteria. To refine and print a model.

Target Learning Outcomes:	To understand what concatenation is and how it works.		To use a spreadsheet to help plan a school cake sale.			

Years 5 and 6: Cycle 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic Theme	**Coding** **Online Safety**	**Blogging**	**Text Adventures**	**Quizzing**	**Spreadsheets**	**Networks**
Objectives All pupils should be able to: Target Learning Outcomes:	To design a playable game with a timer and a score. To use functions and understand why they are useful. To use flowcharts to test and debug a program. To understand how user input can be used in a program. To understand how 2Code can be used to make a text-based adventure game. To identify benefits and risks of	To identify the features of successful blog writing. To understand how to write a blog and a blog post. To understand the importance of commenting on blogs. To understand how and why blog posts and comments are approved by the teacher.	To find out what a text-based adventure game is and to explore an example made in 2Create a Story. To use 2Connect plans for a story adventure to make the adventure using 2Create a Story. To introduce an alternative model for a text adventure which has a less sequential narrative. To use written plans to code a map-based adventure in 2Code	To create a picture-based quiz for young children. To learn how to use the question types within 2Quiz. To explore the grammar quizzes. To make a quiz that requires the player to search a database.	To use a spreadsheet to investigate the probability of the results of throwing many dice. To use a spreadsheet to calculate the discount and final prices in a sale. Create a formula to help work out the prices of items in the sale. To use a spreadsheet to plan how to spend pocket money and the effect of saving money. To use a spreadsheet to plan a school	To discover what the children know about the Internet. To find out what a LAN and WAN are. To think about what the future might hold.

	mobile devices broadcasting the location of the user/device, e.g., apps accessing location. To have a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour. To identify the positive and negative influences of technology on health and the environment.				charity day to maximise the money donated to charity.	