



Subject Knowledge Plan – Computing V2 2023



This plan details the knowledge to be acquired over the key stages. Reception children will access information, experiences and make links through their continuous provision. Year 1 children will focus on acquiring basic skills and knowledge. Year 2 children will continue with progression of basic skills and be supported to recall knowledge and make conceptual links.

National Curriculum Objectives:

- To 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 the behaviour of simple programs.
- 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.

Local context:

Children will have regular access to technology in school; laptops and iPads.

Autumn 1 Transition 2 weeks & Farms 5 weeks	Spring 1 Knights & Castles 6 weeks	Summer 1 The Sea 6 weeks
<p>Year 1 - Unit 1.1 Online Safety and Exploring Purple Mash</p> <p>Log in safely and understand why it is important. Search Purple Mash for resources. Learn how to navigate 'My Work Area' Become familiar with resources, tools and games in Purple Mash.</p> <p>Year 2 – Unit 2.2 Online Safety Unit 2.5 Effective Searching</p> <p>Refine searches using the search tool. Use the display boards to share work electronically. Understand that email is a tool for communication. Open and send simple online communications. Understand that information we put online leaves a digital footprint. Identify steps that can be taken to protect our personal data and hardware. Gain a better understanding of searching the internet. Create a leaflet to help someone search on the internet.</p> <p>EYFS Links</p>	<p>Year 1 - Unit 1.9 Technology Outside School Unit 1.2 Grouping & Sorting</p> <p>Sort items using a range of criteria. Sort items using 'Grouping' activities. Identify examples of where technology is used in the local community. Record examples of technology outside of school.</p> <p>Year 2 – Unit 2.6 Creating Pictures</p> <p>Explore 2 Paint A Picture. Recreate work of impressionist artists using the Impressionism template. Recreate work of pointillist artists using the Pointillism template. Recreate work of Piet Mondrian using the Lines template. Recreate work of William Morris using the Patterns template. Create own surrealist art using the eCollage function.</p> <p>EYFS Links</p>	<p>Year 1 - Unit 1.3 Pictograms Unit 1.8 Spreadsheets</p> <p>Understand that data can be represented in picture format. Contribute to class pictograms. Use a pictogram to record results. Navigate and enter data into a spreadsheet. Add clipart images to a spreadsheet. Use 'move cell', 'lock', 'speak' and 'count' tools.</p> <p>Year 2 – Unit 2.3 Spreadsheets</p> <p>Use simple 2 Calculate tools. Copy, cut and paste shortcuts in 2 Calculate. Use totalling tools and solve simple problems. Use spreadsheets to add up coins to match prices of objects. Add and edit data in a table layout. Use data to manually create a block graph.</p> <p>EYFS Links</p>

<p>Autumn 2</p> <p>Fire Fire! 5 weeks & Christmas 2 weeks</p>	<p>Spring 2</p> <p>Africa 6 weeks inc. Easter</p>	<p>Summer 2</p> <p>Journeys 6 weeks & Transition 2 weeks</p>
<p>Year 1 - Unit 1.4 Lego Builders Unit 1.5 Maze Explorers Understand the importance of following instructions. Follow and create simple instructions on the computer. Consider how the order of instructions affects the end result. Understand and use direction keys to complete challenges. Create and debug a set of instructions. Use additional direction keys. Change and extend an algorithm list.</p> <p>Year 2 – Unit 2.4 Questioning Show that information on a pictogram is of limited use beyond simple questions. Use yes/no questions to separate information. Construct a binary tree to separate items. Use 2 Question (binary tree)to answer questions.</p> <p>EYFS Links</p>	<p>Year 1 - Unit 1.6 Animated Story Books Explore the tools of '2 Create a Story'. Add animation to a picture. Add sound effects, voice recordings and created music to a picture. Add a background to a story.</p> <p>Year 2 – Unit 2.7 Making Music Unit 2.8 Presenting Ideas Explore, edit and combine sounds using 2 Sequence. Add sounds to a tune to improve it. Create tunes which depict feelings. Upload sounds from a sound bank. Record and upload own sounds. Create tunes using the sounds added. Make a quiz about a story or class book. Make a fact file on a non-fiction topic. Present to the class.</p> <p>EYFS Links</p>	<p>Year 1 - Unit 1.7 Coding Predict what will happen when instructions are followed. Use code to make a computer program. Understand what objects and actions are. Understand what an event is and use it to control an object. Use backgrounds and use scale. Plan simple computer programs.</p> <p>Year 2 – Unit 2.1 Coding Create a computer program using an algorithm. Use the collision detection event. Use an algorithm which follows a timed sequence. Understand what different events do in code. Understand and debug simple programs.</p> <p>EYFS Links</p>
<p>Continuous Provision: MINI MASH ON IPADS available in Reception e.g. reading and writing, numbers and counting- has activities for the children. Pupils all have log-in cards to be able to access Purple Mash at home.</p>		
<p>British Values: Mutual Tolerance Pupils learn that technology allows us to connect with people across the whole world from different communities, cultures, faiths and beliefs. Pupils are supported to develop their understanding and tolerance. Respectful Attitudes Pupils learn that they will come across a wide range of views whilst accessing information on the internet and that we should respect them. Democracy Pupils learn to understand and be considerate to the views of other internet users. Pupils are encouraged to take into account the views of others as well as sharing their thoughts and opinions. The Rule of Law Pupils are taught about the rules of computer use linked to the internet and social media. They are taught what is acceptable to post and share. Pupils understand the rules to keep themselves and others safe when using the computers and the internet. Individual Liberty Pupils explore the freedom of the internet and use it in a respectful and thoughtful way. E-Safety days educate children on their rights and personal freedoms as well as supporting them to recognise how to do this safely.</p>		