



Harrow Lodge Primary School

Computing Long Term Plan 2021-2022



| | Autumn | | Spring | | Summer | |
|---------------|---|---|--|---|--|---|
| EYFS | Me and My Community Mini Mash Beebots Technology in the classroom | Once Upon a Time Mini Mash Beebots Technology in the classroom | Starry Night Mini Mash Beebots Technology in the classroom | Dangerous Dinosaurs Mini Mash Beebots Technology in the classroom | Sunshine and Sunflowers Mini Mash Beebots Technology in the classroom | Big Wide World Mini Mash Beebots Technology in the classroom |
| Year 1 | Online Safety <ul style="list-style-type: none"> Logging in and out. Learning how to open, save and print. Adding pictures and text to work. Grouping and Sorting <ul style="list-style-type: none"> Sorting items on the computer using Grouping activities in Purple Mash. Learning to sort using a range of criteria. | Pictograms <ul style="list-style-type: none"> Representing data in picture forms/pictograms. Making a class pictogram. Lego Builders <ul style="list-style-type: none"> Following instructions and understanding how the order of instructions affects the results. Creating simple instructions on the computer. | Maze Explorers <ul style="list-style-type: none"> Understand how to create a debug a set of instructions (algorithm) Understand the functionality of the direction keys and use them as part of an algorithm. Extending algorithms. | Animated Story Books <ul style="list-style-type: none"> Add animation to a story using the 2Create a Story tool. Adding music and voice recording to a story. Adding backgrounds and copying a pasting pages. Spreadsheets <ul style="list-style-type: none"> Know what a spreadsheet program looks like. | Spreadsheets (continued) <ul style="list-style-type: none"> Enter data into spreadsheet cells. Use 2Calculate image tools to add clipart to cells. Use 2Calculate control tools: lock, move cell, speak and count Coding <ul style="list-style-type: none"> understand what instructions are and predict what might happen when they are followed. Use code to make a computer program. | Coding (continued) <ul style="list-style-type: none"> Understand what object and actions are. Use an event to control an object. Begin to understand how code executes when a program is run. Plan and make a computer program. Technology outside school <ul style="list-style-type: none"> Walk around the local community and find examples of where technology is used. Record examples of technology outside school. |
| Year 2 | Coding <ul style="list-style-type: none"> Creating a computer program using a simple algorithm and understand that algorithms follow a sequence. Understand what different events do in code. Understand the collision detection event. Understand and debug simple programs. | Online Safety <ul style="list-style-type: none"> Introduce Email as a communication tool. Understand how we should talk to others in an online situation. Identify the steps that can be taken to keep personal data and hardware secure. Spreadsheets <ul style="list-style-type: none"> Make a counting machine. Learn to use a spreadsheet for money calculations. Use 2Calculate to collect data and produce a graph. | Questioning <ul style="list-style-type: none"> Learn about data handling tools that can give more information than pictograms. Use 2Question (a binary tree database) to answer questions. Use a database to answer more complex search questions. Use the Search tool to find information. | Effective Searching <ul style="list-style-type: none"> Understand the terminology associated with searching. Create a leaflet to help someone search for information on the Internet. Making Music <ul style="list-style-type: none"> Make music digitally using 2Sequence. Explore, edit and combine sounds. Record and upload environmental sounds into Purple Mash and use these to create tunes. | Creating pictures <ul style="list-style-type: none"> Learn the functions of the 2Paint a Picture tool. Learn about and recreate the Impressionist style of art, pointillist artists, surrealism and eCollage. Learn about the work of Piet Mondrian and recreate the style using the lines template. Learn about the work of William Morris and recreate the style using the patterns template. | Presenting Ideas <ul style="list-style-type: none"> Explore how a story can be presented in different ways. Make a quiz about a story or class topic. Make a fact file on a non-fiction topic. Make a presentation to the class. |

| | | | | | | |
|--------|--|--|--|--|--|---|
| Year 3 | <p>Coding</p> <ul style="list-style-type: none"> Understand what a flowchart is and how flowcharts are used in computer programming. Understand that there are different types of timers and how to use the repeat command. Design and create an interactive scene. <p>Online Safety</p> <ul style="list-style-type: none"> Know what makes a safe password and methods for keeping passwords safe. Understand how the Internet can be used in effective communication. | <p>Online Safety (continued)</p> <ul style="list-style-type: none"> Understand how a blog can be used to communicate with a wider audience. Consider the truth of the content of websites. Learn about the meaning of age restrictions symbols on digital media and devices <p>Spreadsheets</p> <ul style="list-style-type: none"> Use the symbols more than, less than and equal to, to compare values. Use 2Calculate to collect data and produce a variety of graphs. | <p>Touch Typing</p> <ul style="list-style-type: none"> Introduce typing terminology. Understand the correct way to sit at the keyboard. Learn how to use the home, top and bottom row keys. Practise typing with the left and right hand. <p>Email</p> <ul style="list-style-type: none"> Explore different methods of communication. Open and respond to an email using an address book. | <p>Email (continued)</p> <ul style="list-style-type: none"> Learn how to use email safely. Add an attachment to an email. <p>Branching Database</p> <ul style="list-style-type: none"> Sort objects using just 'yes' or 'no' questions. Complete a branching database using 2Question. Create a branching database of the children's choice. | <p>Simulations</p> <ul style="list-style-type: none"> Consider what simulations are. Explore, analyse and evaluate a simulation. <p>Graphing</p> <ul style="list-style-type: none"> Enter data into a graph and answer questions. Solve an investigation and present the results in graphic form. | <p>Presenting using Powerpoint</p> <ul style="list-style-type: none"> Understand the uses of PowerPoint. Create a page in a presentation and add media. Add animations to a presentation. Use the skills learnt to design and create an engaging presentation. |
| Year 4 | <p>Coding</p> <ul style="list-style-type: none"> Understand the 'repeat until' command. Understand how an IF/ELSE statement works. Understand what a variable is in programming and how to use co-ordinates. Create a playable game <p>Online Safety</p> <ul style="list-style-type: none"> Understand how children can protect themselves from online identity theft. Identify the risks and benefits of installing software/apps. Understand the term 'plagiarism'. | <p>Online Safety (continued)</p> <ul style="list-style-type: none"> Identify appropriate behaviour when taking part in collaborative online projects for learning. Identify the positive and negative influences of technology on health and the environment. <p>Spreadsheets</p> <ul style="list-style-type: none"> Format cells as currency, percentage, decimal to different decimal places or fraction. Combine tools to make spreadsheet activities such as timed times tables tests. | <p>Spreadsheets (continued)</p> <ul style="list-style-type: none"> Use a spreadsheet to model a real-life situation. Add a formula to a cell to automatically make a calculation in that cell. <p>Logo</p> <ul style="list-style-type: none"> Learn the structure of the coding language of Logo and input simple instructions. Using 2Logo to create letter shapes. | <p>Writing for different audiences</p> <ul style="list-style-type: none"> Explore how font size and style can affect the impact of a text. Produce a news report. Use a simulated scenario to write for a community campaign. <p>Animation</p> <ul style="list-style-type: none"> Discuss what makes a good animated film or cartoon. Learn how animations are created by hand and how animation can be created using the computer. | <p>Animation (continued)</p> <ul style="list-style-type: none"> Add backgrounds and sounds to animations. Use 'stop motion' animation. <p>Effective Search</p> <ul style="list-style-type: none"> Locate information on the search results page. Use search effectively to find out information. Assess whether an information source is true and reliable. | <p>Hardware Investigators</p> <ul style="list-style-type: none"> Understand the different parts that make up a computer. Recall the different parts that make up a computer. <p>Making Music</p> <ul style="list-style-type: none"> Identify and discuss the main elements of music. Understand and experiment with rhythm and tempo. Create a melodic phrase. Electronically compose a piece of music. |

| | | | | | | |
|--------|---|---|---|---|--|--|
| Year 5 | <p>Coding</p> <ul style="list-style-type: none"> • Create a playable game. • Program a simulation using 2Code. • Use decomposition to make a plan of a real-life situation. • Understand what a function is and how functions work in code. • Understand how to create a string. <p>Online Safety</p> <ul style="list-style-type: none"> • Understand the impact that sharing digital content can have. • Understand children’s responsibility to one another in their online behaviour. | <p>Online Safety (continued)</p> <ul style="list-style-type: none"> • Know how to maintain secure passwords. • Be aware of appropriate/inappropriate text, photographs and videos and the impact of sharing these online. • Learn about how to reference sources in their work. <p>Spreadsheets</p> <ul style="list-style-type: none"> • Use formulae within a spreadsheet to convert measurements of length and distance. • Use the count tool to answer hypotheses about common letters in use. • Use a spreadsheet to model a real-life problem. | <p>Spreadsheets (continued)</p> <ul style="list-style-type: none"> • Use formulae to calculate area and perimeter of shapes. • Use a spreadsheet to help plan a school cake sale. <p>Databases</p> <ul style="list-style-type: none"> • Learn how to search for information in a database. • Contribute to a class database. • Create a database around a chosen topic | <p>3D Modelling</p> <ul style="list-style-type: none"> • Use 2Design and Make to design a 3D Model to fit certain criteria. • Explore the effect of moving points when designing. • Refine and print a model. <p>Game Creator</p> <ul style="list-style-type: none"> • Plan a game. • Design and create the game environment. • Design and create the game quest. • Share and evaluate the game. | <p>Concept Maps</p> <ul style="list-style-type: none"> • Understand the uses of a 'concept map'. • Understand and use the correct vocabulary when creating a concept map. • Understand how a concept map can be used to retell stories and information. • Create a collaborative concept map and present this to an audience. | <p>Word Processing</p> <ul style="list-style-type: none"> • Know what a word processing tool is for. • Add and edit images to a word document. • Change the look of text within a document. • Use tables within MS Word to present information. • Consider page layout including heading and columns. |
| Year 6 | <p>Coding</p> <ul style="list-style-type: none"> • Design a playable game with a timer and a score. • Understand how the launch command works. • Use flowcharts to create and debug code. • Use 2Code to make a text-adventure game. <p>Online Safety</p> <ul style="list-style-type: none"> • Identify benefits and risks of mobile devices broadcasting the location of the user/device and of giving out personal information. • Have a clear idea of appropriate online behaviour. | <p>Online Safety(continued)</p> <ul style="list-style-type: none"> • Understand the importance of balancing game and screen time with other parts of their lives. • Identify the positive and negative influences of technology on health and the environment. <p>Spreadsheets</p> <ul style="list-style-type: none"> • Create a variety of spreadsheets related to probability and using the formula wizard. • Use a spreadsheet to model a real-life situation and come up with solutions. | <p>Blogging</p> <ul style="list-style-type: none"> • Identify the purpose and features of a blog. • Understand how to write a blog and a blog post. • Consider the effect upon the audience of changing the visual properties of the blog. • Understand how to contribute to an existing blog. <p>Text Adventures</p> <ul style="list-style-type: none"> • Find out what a text adventure is. • Use 2Connect to plan a story adventure. | <p>Text Adventures (continued)</p> <ul style="list-style-type: none"> • Make a story-based adventure using 2Create a Story. • Use written plans to code a map based adventure in 2Code <p>Networks</p> <ul style="list-style-type: none"> • Learn about what the Internet consists of. • Find out what a LAN and a WAN are. • Find out how the Internet is accessed in school. | <p>Quizzing</p> <ul style="list-style-type: none"> • Create a picture-based quiz for young children. • Make a quiz that requires the player to search a database. • Make a quiz to test your teachers or parents. <p>Understanding Binary</p> <ul style="list-style-type: none"> • Examine how whole numbers are used to represent data in digital systems. • Understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics. | <p>Spreadsheets</p> <ul style="list-style-type: none"> • Navigate and enter data into cells. • Introduce some basic data formulae in Excel for percentages, averages and max and min numbers. • Use a spreadsheet to model a real-life situation. • Create a variety of graphs in Excel. • Apply spreadsheet skills to solving problems. |