Hollywell Computing Programme

Reception

	Autumn 1	*Autumn 2*	*Spring 1*	*Spring 2*	*Summer 1*	*Summer 2*
R	**Me and My Community**	**Traditions**	**Fantastic Planet**	**Nature Detectives**	**Animal Safari**	**Let's Explore**
	Mini-mash, technology and ICT around the classroom across the curriculum such as CD players, tablets and cameras.					

Year 1

	Childhood		**One Wonderful World**		**School Days**	
1	**Unit 1.1 Online Safety & Exploring Purple Mash** Weeks – 4 • To log in safely. • To learn how to find saved work in the Online Work area and find teacher comments. • To learn how to search Purple	**Unit 1.3 Pictograms** Weeks – 3 • To understand that data can be represented in picture format. • To contribute to a class pictogram. • To use a pictogram to record	**Unit 1.5 Maze Explorers** Weeks – 3 • To understand the functionality of the direction keys. • To understand how to create and debug a set of instructions (algorithm). • To use	**Unit 1.7 Coding** Weeks – 6 • To understand what instructions are and predict what might happen when they are followed. • To use code to make a computer program. • To understand what object and actions are.	**Unit 1.8 Spreadsheets (3 weeks)** • To know what a spreadsheet program looks like. • To locate 2Calculate in Purple Mash. • To enter data into spreadsheet cells. • To use 2Calculate	**Unit 1.6 Animated story books** • To introduce e-books and the 2Create a Story tool. • To add animation to a story. • To add sound to a story, including voice recording and music the children have composed. • To work

	Mash to find resources. • To become familiar with the icons and types of resources available in the Topics section. • To start to add pictures and text to work. • To explore the Tools and Games section of Purple Mash. • To learn how to open, save and print. • To understand the importance of logging out. **Digital Literacy** **Unit 1.2 Grouping & Sorting** **Weeks – 2** • To sort items using a range of criteria. • To sort items on the computer using the 'Grouping' activities in Purple Mash. **Information Technology**	the results of an experiment. **Information Technology** **Unit 1.4 Lego Builders** Weeks – 3 • To compare the effects of adhering strictly to instructions to completing tasks without complete instructions. • To follow and create simple instructions on the computer. • To consider how the order of instructions affects the result. **Information Technology**	the additional direction keys as part of an algorithm. • To understand how to change and extend the algorithm list. • To create a longer algorithm for an activity. • To set challenges for peers. • To access peer challenges set by the teacher as 2Dos. **Computer Science**	• To understand what an event is. • 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 plan and make a computer program. **Computer Science**	image tools to add clipart to cells. • To use 2Calculate control tools: lock, move cell, speak and count. **Information Technology** **Unit 1.9 Technology outside of school** **Information Technology** To walk around the local community and find examples of where technology is used. • To record examples of technology outside school.	on a more complex story, including adding backgrounds and copying and pasting pages. • To share e-books on a class display board. **Information Technology**

Year 2

2	**Bright Lights, Big City** **Tell Us a Tale from the Past**		**Let's Explore the World**		**Movers and Shakers**	
	Unit 2.1 **Coding** Weeks – 5 • To understand what an algorithm is. • To create a computer program using an algorithm. • To create a program using a given design. • To understand the collision detection event. • To understand that algorithms follow a sequence. • To design an algorithm that follows a timed sequence. • To	**Unit 2.2** **Online Safety** Weeks – 3 • To know how to refine searches using the Search tool. • To use digital technology to share work on Purple Mash to communicate and connect with others locally. • To have some knowledge and understanding about sharing more globally on the Internet. • To introduce Email as a communication tool using 2Respond simulations. • To understand how we should talk to others in an online situation. • To open and send simple online communications in the form of email. • To understand that	**Unit 2.4** **Questioning** Weeks – 5 • To learn about data handling tools that can give more information than pictograms. • To use yes/no questions to separate information. • To construct a binary tree to identify items. • To use 2Question (a binary tree database) to answer questions. • To use a database to answer more complex search questions. • To use the Search tool to find information. **Information Technology**	**Unit 2.5** **Effective Searching** Weeks – 3 • To understand the terminology associated with searching. • To gain a better understanding of searching on the Internet. • To create a leaflet to help someone search for information on the Internet. **Digital Literacy**	**Unit 2.6** **Creating Pictures** • To learn the functions of the 2Paint a Picture tool. • To learn about and recreate the Impressionist style of art (Monet, Degas, Renoir). • To recreate Pointillist art and look at the work of pointillist artists such as Seurat. • To learn about the work of Piet Mondrian and recreate the style using the lines template. • To learn about the work of William Morris and recreate the style using the patterns template. • To explore surrealism and eCollage. **Information Technology**	**Unit 2.8** **Presenting Ideas** Weeks – 4 • 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. • To make a presentation to the class. **Information Technology** **Unit 2.7** **Making Music** **Weeks** – 3 • To make music digitally using 2Sequence. • To explore, edit and combine sounds using 2Sequence. • To edit and refine composed music. • To think about how music can be used

	understand that different objects have different properties. • To understand what different events do in code. • To understand the function of buttons in a program. • To understand and debug simple programs. **Computer Science**	information put online leaves a digital footprint or trail. • To identify the steps that can be taken to keep personal data and hardware secure. **Digital Literacy** Unit 2.3 **Spreadsheets** Weeks – 4 • To use 2Calculate image, lock, move cell, speak and count tools to make a counting machine. • To learn how to copy and paste in 2Calculate. • To use the totalling tools. • To use a spreadsheet for money calculations. • To use the 2Calculate equals tool to check calculations. • To use 2Calculate to collect data and produce a graph. **Information Technology**				to express feelings and create tunes which depict feelings. • To upload a sound from a bank of sounds into the Sounds section. • To record and upload environmental sounds into Purple Mash. • To use these sounds to create tunes in 2Sequence. **Information Technology**

Year 3

3	**Through the Ages**		**One Planet, Our World and Rocks, Relics and Rumbles**		**Emperors and Empires**
	Unit 3.4 Touch Typing Weeks – 4 • To introduce typing terminology. • To understand the correct way to sit at the keyboard. • To learn how to use the home, top and bottom row keys. • To practise typing with the left and right hand. **Information Technology**	**Unit 3.1 Coding** Weeks – 6 • To understand what a flowchart is and how flowcharts are used in computer programming. • To understand that there are different types of timers and select the right type for purpose. • To understand how to use the repeat command. • To understand the importance of nesting. • To design and create an interactive scene. **Computer Science**	**Unit 3.2** **Online safety** Weeks – 3 • To know what makes a safe password. • To learn methods for keeping passwords safe. • To understand how the Internet can be used in effective communication. • To understand how a blog can be used to communicate with a wider audience. • To consider the truth of the content of websites. • To learn about the meaning of age restrictions symbols on digital media and devices. **Digital Literacy** **Unit 3.3** **Spreadsheets** Weeks – 3 • To use the symbols more than, less than and	**Unit 3.5** **Email (including email safety)** Weeks – 6 To think about different methods of communication. • To open and respond to an email using an address book. • To learn how to use email safely. • To add an attachment to an email. • To explore a simulated email scenario. **Digital Literacy**	**Unit 3.6** **Branching Databases** Weeks – 3 • To sort objects using just 'yes' or 'no' questions. • To complete a branching database using 2Question. • To create a branching database of the children's choice. **Unit 3.8** **Graphing** Weeks – 3 • To enter data into a graph and answer questions. • To solve an investigation and present the results in graphic form. **Information Technology** **Unit 3.7 Simulations** Weeks – 3 • To consider what simulations are. • To explore a simulation. • To analyse and evaluate a simulation.

			equal to, to compare values. • To use 2Calculate to collect data and produce a variety of graphs. • To use the advanced mode of 2Calculate to learn about cell references. **Information Technology**		**Information Technology**

Year 4

4	**Ancient Civilisations**		**Misty Mountain, Winding River**	**Achievers and Inventors**	
	Unit 4.1 **Coding** Weeks – 6 • To begin to understand selection in computer programming. • To understand	**Unit 4.2** **Online safety** Weeks – 4 • To understand how children can protect themselves from online identity theft. • To understand that information put	**Unit 4.3** **Spreadsheets** Weeks – 6 • To format cells as currency, percentage, decimal to different decimal places or fraction. • To use the formula wizard to calculate averages. • To combine tools to make spreadsheet activities such as timed times tables tests. • To use a spreadsheet to model a reallife situation.	**Unit 4.5** **Logo** Weeks – 4 To learn the structure of the coding language of Logo. • To input simple instructions in Logo. • Using 2Logo to create letter shapes. • To use the Repeat function in Logo to create shapes. • To use and build procedures in Logo.	**Unit 4.7** **Effective Search** Weeks – 3 • To locate information on the search results page. • To use search effectively to find out information. • To assess whether

	how an IF statement works. • To understand how to use co-ordinates in computer programming. • To understand the 'repeat until' command. • To understand how an IF/ELSE statement works. • To understand what a variable is in programming. • To use a number variable. • To create a playable game. **Computer Science**	online leaves a digital footprint or trail and that this can aid 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 identify appropriate behaviour when participating or contributing to collaborative online projects for learning. • To identify the positive and negative influences of technology on health and the environment. • To understand the importance of balancing game and screen time with other parts of their lives.	• To add a formula to a cell to automatically make a calculation in that cell. **Information Technology** **Unit 4.4** **Writing for different audiences** Weeks – 5 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. **Information Technology**	**Information Technology** **Unit 4.6** **Animation** Weeks – 3 • To discuss what makes a good animated film or cartoon. • To learn how animations are created by hand. • To find out how animation can be created in a similar way using the computer. • To learn about onion skinning in animation. • To add backgrounds and sounds to animations. • To be introduced to 'stop motion' animation. • To share animation on the class display board and by blogging. **Computer Science**	an information source is true and reliable. **Digital Literacy** **Unit 4.8** **Hardware Investigators** • To understand the different parts that make up a computer. • To recall the different parts that make up a computer. **Computer Science**

		Digital Literacy			

Year 5

5	**Invasions**		**Waste Not, Want Not**	**Groundbreaking Greeks**	
	Unit 5.5 Game Creator Weeks – 5 • To plan a game. • To design and create the game environment.	**Unit 5.4 Databases** Weeks – 4 • To learn how to search for information in a database. • To contribute to a class database. • To create a	**Unit 5.1 Coding** Weeks – 6 • To begin to simplify code. • To create a playable game. • To understand what a simulation is. • To program a simulation using 2Code. • To know what decomposition and abstraction are in computer science. • To a take a real-life situation, decompose it and think about the level of abstraction. • • To understand how to use friction in code.	**Unit 5.3 Spreadsheets** Weeks – 6 • 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 a spreadsheet to model a reallife problem. • To use formulae to calculate area and perimeter	**Unit 5.6 3D Modelling** Weeks – 4 • To be introduced to 2Design and Make and the skills of computer aided design. • To explore the effect of moving points

	• To design and create the game quest. • To finish and share the game. • To self and peer evaluate. **Computer Science**	database around a chosen topic. **Information Technology**	To begin to understand what a function is and how functions work in code. • To understand what the different variables types are and how they are used differently. • To understand how to create a string. • To understand what concatenation is and how it works. **Computer Science** **Unit 5.7 Concept Maps** Weeks – 4 • To understand the need for visual representation when generating and discussing complex ideas. • To understand the uses of a 'concept map'. • To understand and use the correct vocabulary when creating a concept map. • To create a concept map. • To understand how a concept map can be used to retell stories and information. • To create a collaborative concept map and present this to an audience. **Information Technology**	of shapes. • To create formulae that use text variables. • To use a spreadsheet to help plan a school cake sale. **Information Technology** **Unit 5.2** **Online safety** Weeks • To gain a greater understanding of the impact that sharing digital content can have. • To review sources of support when using technology and children's responsibility to one another in their online behaviour. • To know how to maintain secure passwords. • To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this. • To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. • To learn about how to reference sources in their work. • • To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information. To ensure reliability through using different methods of communication. **Digital Literacy**	when designing. • To design a 3D Model to fit certain criteria. • To refine and print a model. **Computer Science**

Year 6

6	**How Has War Shaped Our Future?**	**This is Our World**	**We Are All Equal**
	Unit 6.1 **Coding** Weeks – 6 • To design a playable game with a timer and a score. • To plan and use selection and variables. • To understand how the launch command works. • To use functions and understand why they are useful. • To understand how functions are created and called. • To use flowcharts to create and	**Unit 6.4** **Blogging** Weeks – 5 • To identify the purpose of writing a blog. • To identify the features of a successful blog. • To plan the theme and content for a blog. • To understand how to write a blog and a blog post. • To consider the effect upon the audience of changing the visual properties of the blog. • To understand how to contribute to an existing blog. • To understand how	**Unit 6.6** **Networks** • To learn about what the Internet consists of. • To find out what a LAN and a WAN are. • To find out how the Internet is accessed in school. • To research and find out about the age of the Internet. • To think about what the future might hold. **Computer Science** **Unit 6.7** **Quizzing**

	debug code. • To create a simulation of a room in which devices can be controlled. • To understand how user input can be used in a program. • To understand how 2Code can be used to make a text-adventure game. **Computer Science** **Unit 6.2** **Online safety** Weeks – 2 • To identify benefits and risks of mobile devices broadcasting the location of the user/device. • To identify secure sites by looking for privacy seals of approval. • To identify the benefits and risks of giving personal information. • To review the meaning of a digital footprint. • To have a clear idea of appropriate online behaviour. • To begin to understand how information online can persist. • To understand the importance of balancing game and screen time with other parts of their lives. • To identify the positive and negative influences of technology on health and the environment. **Digital Literacy** **Unit 6.3 Spreadsheets** Weeks – 5 • To use a spreadsheet to investigate the probability of the results of	and why blog posts are approved by the teacher. • To understand the importance of commenting on blogs. **Digital Literacy** **Unit 6.5** **Text Adventures** Weeks – 5 • To find out what a text adventure is. • To use 2Connect to plan a story adventure. • To make a story-based 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. **Information Technology**	Weeks – 6 • 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 make a quiz to test your teachers or parents. **Information Technology**

	throwing many dice. • To use a spreadsheet to calculate the discount and final prices in a 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 charity day to maximise the money donated to charity. **Information Technology**		