



Computing

EYFS

Through continuous provision Children in EYFS will:

CL – learn new vocabulary and use in different contexts. Ask questions to find out more and check what has been said to them. Articulate their ideas in well-formed sentences. Describe events in some detail. Use talk to work out problems and organise thinking. Explain how things work and why they might happen.

Lit - Following instructions

Number - Numbers on screen

PD - Fine motor control; touch screen chromebook, mouse keys

UTW - Identifying new technology

Continuous provision areas and activities that support learning and skill development that relate to this subject are:

Chromebook area, technology catalogue, instruction text, Magnetic shapes - instructions

Communication and Language	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Expressive Arts	Speaking: Slide shows can be used to initiate discussion about various topics. These slideshows can be found within each topic pin on Minimash. Children can be invited to share their experiences of these topics, talk about what they can see on the slide show and ask or answer relevant questions. Slide shows could be left on the screen during continuous provision to promote independent discussion with peers. Self Regulation: Various resources including slide shows, jigsaws and paint projects on the topic of feelings. Children can discuss the different feelings that they experience, what can make them feel like that as well as any physical responses they might have with that feeling. Managing Self: Within the topic pin, children will find a range of activities, games and stories around the topic of food which can be used as a basis for discussion about the	Comprehension: Slide show of images from popular fairy tales. Children can retell the stories through the images on the slide show, adding in their own narrative details, identifying the key events. You could use 2Create a Story to write simple stories for the children to read based upon the stories they know. Word Reading: Slide shows for all sounds of the alphabet including pictures and sound recordings of words beginning with that sound. Use the slideshows as to teach the sounds for each letter of the alphabet, including recognising the sound in common words. Children can practise saying the words, as well as thinking of their own words beginning with that sound. Children could use 2Create a Story to make their own sound books. Cloze activities and flash cards to help teach and practise phase 2 & 3	Listening, Attention and Understanding: Use the videos in Simple City as a starting point for discussion for various topics. Allow children to respond to what they see with questions and comments. Writing: Paint projects for each letter of the alphabet. Children can practise letter formation as well as drawing pictures of objects or writing words which begin with that letter. Mashcams allow children to put themselves into a role of character. They are able to use their own picture and there is a speech bubble for them to write their speech. Mashcams can be used as useful tool to engage and inspire children to write as they can write as if they are a different character. As well as typing sentences on the computer, the mashcams can be printed off as PDFs for children to write their own simple sentences. Number: Maths City 1 allows children to explore practical everyday maths. Car Race Activities here include matching cars to their correct position and deciding which vehicle will win a race based on their number. There are also activities here on completing a pattern and deciding	Numerical Patterns: The Farm Create sets of animals using numbers 1-10. Children need to put the correct number of animals in the correct field to match the quantity. In Activity 2, children need to match the number digit to the correct quantity. In the final activities, Children need to look closely at finding the correct animal and the correct quantity. There are further activities where children need to complete an animal pattern. Space In the first activity, children need to move the different rockets into the correct space, taking note of the number. The race will begin when they press play. Why do some rockets go faster than other rockets? Which numbers goes the slowest and which number goes the fastest? Children can place the rockets into space and predict which rocket will come first and which will come last, based on their number.	Past and Present: Slideshows of images from the present and past to compare. Children can discuss the differences which they recognise and use a starter for discussion about how other things have changed from the past. Within the topic pins, children will find a range of slide shows, activities and stories around these topics which can be used as a basis for discussion about how these people play a role in our society. People, Culture and Communities: A variety of paint projects allowing children to learn about different cultural celebrations and clothing. These can be used to promote discussion around celebrations that different children are familiar with. The Natural World: Use the paint templates to talk to the children about the	Creating with Materials: A range of painting tools to help children to produce a masterpiece, experimenting with a range of textured paints, effects and colours. Children can change the size of brush and import backgrounds, including photos, to their work. Being Imaginative and Expressive: 2Beat allows children to experiment with beats and rhythms. Let the children experiment with the different instruments, listening to the different types of drums, symbols and other sounds they can choose. Choose the instruments and start with simple 6 or 8 beat tunes, experimenting with volume and speed.
Literacy						
Mathematics						
Physical Development						
PSED						
Understanding the World						

			1.4 Lego builders 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.	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 on a more complex story, including adding backgrounds and copying and pasting pages. • To share e-books on a class display board.		1.9 Technology outside of the school To walk around the local community and find examples of where technology is used. • To record examples of technology outside school.
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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 2 Computer Science Digital Literacy Information Technology	2.1 Online Safety 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 information put online leaves a digital footprint or trail. • To identify the steps that can be taken to keep personal data and hardware secure.	2.7 Making Music 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 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.	2.8 Presenting Ideas 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.	2.2 Spreadsheets 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.	2.4 Questioning 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.	2.2 Coding 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 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.
	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.					2.5 Effective searching 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.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	3.2 Online Safety	3.1 Coding	3.5 Email	3.6 Branching Databases	3.8 Graphing	3.3 Spreadsheets
	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.	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.	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.	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.	To enter data into a graph and answer questions. • To solve an investigation and present the results in graphic form	To use the symbols more than, less than and 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.
	Computer Science					
	Digital Literacy					
	Information Technology					
	3.4 Typing				3.7 Simulations	
	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.				To consider what simulations are. • To explore a simulation. • To analyse and evaluate a simulation	

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 4	4.2 Online Safety To understand how children can protect themselves from online identity theft. • To understand that information put 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.	4.6 Animation To discuss what makes a good animated film or cartoon. • To learn how animations are created by hand. • To find out how 2Animate 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.	4.7 Effective Searching 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.	4.1 Coding To begin to understand selection in computer programming. • To understand 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.	4.3 Spreadsheets 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. • To add a formula to a cell to automatically make a calculation in that cell.	4.4 Writing for different Audiences 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.
	4.8 Hardware Investigators To understand the different parts that make up a computer. • To recall the different parts that make up a computer.		4.5 Logo 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.			

Year 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Computer Science Digital Literacy Information Technology	5.2 Online Safety 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.	5.7 Concept Maps 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.	5.3 Spreadsheets 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 of shapes. • To create formulae that use text variables. • To use a spreadsheet to help plan a school cake sale.	5.6 3D Modelling To be introduced to 2Design and Make and the skills of computer aided design. • To explore the effect of moving points when designing. • To design a 3D Model to fit certain criteria. • To refine and print a model.	5.4 Databases To learn how to search for information in a database. • To contribute to a class database. • To create a database around a chosen topic.	5.5 Game Creator To plan a game. • To design and create the game environment. • To design and create the game quest. • To finish and share the game. • To self and peer evaluate.
	5.1 Coding 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			5.8 Google Docs To know what a word processing tool is for. • To add and edit images to a word document. • • To know how to use word wrap with images and text. To change the look of text within a document. • To add features to a document to enhance its look and usability. • To use the sharing capabilities in Google		

	the level of abstraction. • To understand how to use friction in code • 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.			Docs • To use tables within to present information. • To introduce children to templates		
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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 6 Computer Science Digital Literacy Information Technology	6.2 Online Safety • 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.	6.1 Coding • 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 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.	6.3 Spreadsheets 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. • 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.	6.5 Text Adventures 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 mapbased adventure in 2Code.	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.	6.7 Quizzing 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.
	6.4 Blogging 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 and why blog posts are approved by the teacher. • To understand the importance of commenting on blogs.					6.8 Binary • To examine how whole numbers are used as the basis for representing all types of data in digital systems. • To recognise that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits, which is why they are called digital systems). • To understand that binary represents numbers using 1s and 0s and these represent the on and off electrical states respectively in hardware and robotics.

