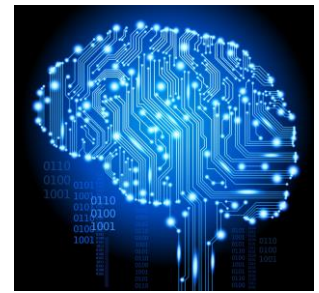




Computing

Learning Journey

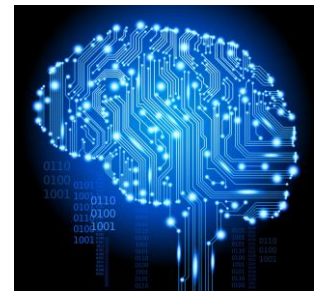


The intent of the Computing Curriculum at Grove Park is...

- For all children leaving Grove Park to be equipped with the computational skills and understanding of the fundamentals of computer science needed for them to be successful in a future that is ever-more dependent on technological understanding. This includes teaching our pupils about the concepts of abstraction, logic, forming algorithms and data representation.
- Place problem solving at the heart of our Computing curriculum, whereby pupils are given repeated practical experiences of writing their own computer programs in order to solve a problem or meet a designated brief.
- To provide a computing curriculum which is rich and challenging for all pupils, providing children an exciting and safe space to be creative within technology, using a range of resources.
- To promote and celebrate Computing as a desirable and viable career option for all children, with an emphasis on girls, through exploring famous role models in computer science, and having talks from relevant people within the school community who are connected to this field.
- To ensure children have the skills required to become responsible, respectful and competent users of data, information and communication technology and use computational thinking beyond the computing curriculum.
- To ensure that children, regardless of background and technology access, are provided with an appropriately challenging curriculum, which aims to address any potential gaps in understanding in order to facilitate confident, competent, creative and safe users of both familiar and unfamiliar forms of information technology.
- To account for the impact of the pandemic and remote learning on our pupils and continue to work hard to close any gaps in knowledge and understanding of the Computing curriculum.
- To ensure that every child at our school is able to achieve to the best of their ability, regardless of social and cultural background, disabilities, EAL and SEN through the provision of resources, such as Purple Mash, and equipment that provides an equal opportunity for pupils to access our curriculum.



Computing Implementation



Using Purple Mash, all year groups will learn about:

- Online Safety and ways to stay safe online both in school and at home
- Coding
- Spreadsheets

This will allow the to build upon their prior knowledge in these topics, supporting them to develop their computer literacy and become confident in the fundamental principles and concepts of computer science.

The other units the children will study are:

- Y1: Grouping & Sorting, Pictograms, Lego Builders, Maze Explorers and Animated Story Books.
- Y2: Questioning, Effective Searching, Creative Pictures, Making Music and Presenting Ideas.
- Y3: Touch Typing, Internet Safety including Email Safety, Branching Databases, Simulations, Graphing and Presenting.
- Y4: Writing for Different Audiences, Logo, Animation, Effective Searching, Hardware Investigation and Making Music.
- Y5: Databases, Game Creation, 3D Modelling, Concept Maps and Word Processing.
- Y6: Blogging, Text Adventures, Networks, Quizzing and Understanding Binary.

The range of topics covered by Purple Mash and taught at Grove Park will allow the children to become responsible, competent, confident and creative users of information and communication technology, ready to be active users and contributors to our ever technological society.

EYFS

Keyboard Skills						
Autumn 1	To find letters of the alphabet on a keyboard			To type numbers on a keyboard		
Half Term						
Hardware Skills						
Autumn 2	To understand why we need clean hands when handling technology.	To understand why it is not sensible to eat and drink when using technology.	To understand why I need to take care with electronic devices and their plugs and wires	To be able to carry a device to a safe location for it to be used.	To identify parts of a Ipad and what they are for.	To understand how to use devices with care.
Christmas Holidays						
Expressive arts						
Spring 1	To draw a picture on a IPad	To make a character speak	To create a story inspired by the Three Little Pigs	To create their own story	To explore using different instruments .	To create and record a tune
Half Term						
Robot skills						
Spring 2	To be able to describe the movement of a toy.	To be able to describe the route taken by a toy, using directions.	To follow directions to make a route for a toy.	To follow instructions for moving a toy.	To make a floor robot move.	To program a route for a floor robot to follow.
Easter Holidays						
E- safety and Privacy Skills						
Summer 1	To be able to explain how work on a computer belongs to me and not to other people	To explain what it means for something to be private.	To be able to talk about how it feels when I am not comfortable with something.	To know who I can go to when I feel worried.	To know how I can be kind to others.	To be able to choose activities that can keep my body healthy.
Half Term						
Logging into Purple Mash						
Summer 2	To identify parts of a computer and what they are for	To be able find the Purple Mash page on a device.	To log into Purple Mash using the shortcut icon.	To log into Purple Mash using my username and password.	To be able to find a 2Do that my teacher has set for me.	
End of the Year						

Year 1

Autumn 1	Unit 1.1 - Online Safety and Exploring Purple Mash					
	Safe log-ins	Navigating My Work Area			My Mash Topics	
Half Term						
Autumn 2	Unit 1.2 – Grouping & Sorting		Unit 1.3 - Pictograms			
	Sorting away from the computer	Sorting on the computer	Data in pictures	Class pictograms	Recording results	Consolidation
Christmas Holidays						
Spring 1	Unit 1.4 – Lego Builders			Unit 1.5 – Maze Explorers		
	Following instructions	Following and creating simple instructions on a computer	To consider how the order of instructions affects the result	Challenges 1 & 2	Challenges 3 & 4	Challenges 5 & 6
Half Term						
Spring 2	Unit 1.6 – Animated Story Books					
	Drawing and creating	Animation	Sounds and more!	Making a story	Copy and paste	Consolidation
Easter Holidays						
Summer 1	Unit 1.7 - Coding					
	Instructions	Objects and actions	Events	When code executes	Setting the scene	Using a plan
Half Term						
Summer 2	Unit 1.8 - Spreadsheets			Unit 1.9 – Technology outside school		
	Introduction to spreadsheets	Adding images to spreadsheets and using the image toolbox	Using the 'speak' and 'count' tools in 2Calculate to count items	What is technology?	Technology outside school	Consolidation
End of the Year						

Year 2

<u>Autumn 1</u>	Unit 2.2 – Online Safety			Unit 2.3 - Spreadsheets		
	To know how to refine searches and to share work safely	Introduce email as a communications tool and to send simple communications	To understand what a digital footprint is and how to stay safe online	To review prior use of spreadsheets	To use copy and pasting totaling tools	To use a spreadsheet to add amounts
<u>Half Term</u>						
<u>Autumn 2</u>	Unit 2.1 - Coding					
	To understand what an algorithm is	To compare objects, use a button object, use a repeat command and timer command	To know what debugging means and to debug simple programs	To create programs using different objects with limited behaviours	To apply my coding knowledge to create a more complex program	
<u>Christmas Holidays</u>						
<u>Spring 1</u>	Unit 2.4 - Questioning					
	To show that information on a pictogram is limited	To use YES or NO questions to separate information	To construct a binary tree to separate items	To use 2Question (a binary tree) to answer questions	To use a database to answer more complex questions and use a search tool	
<u>Half Term</u>						
<u>Spring 2</u>	Unit 2.6 Creating Pictures					
	To be introduced to 2Paint A Picture	To recreate a pointillist piece of artwork on 2Paint	To recreate a Mondrian piece of work using Lines template	To recreate a William Morris piece of work using Patterns template	To explore surrealism on eCollage	
<u>Easter Holidays</u>						
<u>Summer 1</u>	Unit 2.5 – Effective Searching			Unit 2.7 – Music Making		
	To understand terminology associated to searching	To gain a better understanding about searching the internet	To create a leaflet to help someone searching the internet	To be introduced to making music digitally on 2sequence	To add sounds to a tune they've already created to change it	To upload a sound from a sound bank and record
<u>Half Term</u>						
<u>Summer 2</u>	Unit 2.8 – Presenting Ideas					
	To explore how a story can be presented	To make a quiz about a story	To make a fact file on a non-fiction topic	To make a presentation to the class		
<u>End of the Year</u>						

Year 3

Autumn 1	Unit 3.2 – Online Safety					Unit 3.3 - Spreadsheets		
	Safety in numbers	Fact or fiction?		Appropriate content & ratings	Creating pie charts and bar graphs	Using more than and spin button tools	Advanced mode and cell addresses	
Half Term								
Autumn 2	Unit 3.1 - Coding							
	Using flowcharts	Using timers	Using repeat	Code, test and debug	Design an interactive scene	Making an interactive scene		
Christmas Holidays								
Spring 1	Unit 3.7 - Simulations			Unit 3.8 - Graphing				
	What are simulations?	Exploring simulations	Analysing & evaluating a simulation	Introducing 2Graph	Using 2Graph to solve an investigation			
Half Term								
Spring 2	Unit 3.5 - Email							
	Communication	Composing emails	Email safety pt1	Email safety pt2	Attachments	Email simulations		
Easter Holidays								
Summer 1	Unit 3.4 Touch Typing				Unit 3.6 – Branching Databases			
	Home, top and bottom row keys	Home, top and bottom row keys	Left keys	Right keys	Introducing databases	Branching databases		
Half Term								
Summer 2	Unit 3.6 – Branching Databases		Unit 3.9 Presenting on Google Slides					
	Creating a branch database	Creating a branch database	Making a presentation from a blank page	Adding media	Adding shapes and lines	Adding animation	Create a presentation	
End of the Year								

Year 4

Autumn 1	Unit 4.2 – Online Safety				Unit 4.7 – Effective Search			
	Going phishing	Beware malware	Plagiarism	Healthy screen-time	Using a search engine	Use search effectively to answer questions	Reliable information sources	
Half Term								
Autumn 2	Unit 4.1 - Coding							
	Design, code, test and debug	IF statements	Co-ordinates	Repeat until and IF/ELSE statements	Number variables	Making a playable game		
Christmas Holidays								
Spring 1	Unit 4.3 - Spreadsheets							
	Formula wizard and formatting cells	Using the timer and spin buttons	Line graphs	Using a spreadsheet for budgeting	Exploring place value with a spreadsheet			
Half Term								
Spring 2	Unit 4.4 – Writing for different audiences					Unit 4.6 - Animation		
	Font styles	Producing a news report	Producing a news report	Writing for a campaign	Writing for a campaign	Animating an object		
Easter Holidays								
Summer 1	Unit 4.6 - Animation		Unit 4.5 - Logo					
	2Animate Tools	Stop motion animation	Introducing 2Logo	Creating letters using 2Logo	Using the 'repeat' command in 2Logo	Using procedures		
Half Term								
Summer 2	Unit 4.8 – Hardware Investigators		4.9 – Making Music					
	Hardware	Parts of a Computer	Understanding music	Rhythm and tempo	Melody and pitch	Creating music		
End of the Year								

Year 5

Autumn 1	Unit 5.2 – Online Safety			Unit 5.4 - Databases				
	Responsibilities & support when online	Protecting privacy	Citing sources & reliability	Searching a database	Creating a class database	Creating a topic database	Creating a topic database	
Half Term								
Autumn 2	Unit 5.8 – Word Processing							
	Making a document from a blank page	Inserting images: considering copywrite	Editing images	Adding the text	Finishing touches	Sharing files	Presenting information using tables	Writing a letter using a template
Christmas Holidays								
Spring 1	Unit 5.1 - Coding							
	Coding efficiently	Simulating a physical system	Decomposition & abstraction	Friction & functions	Friction & functions	Introducing strings		
Half Term								
Spring 2	Unit 5.3 - Spreadsheets							
	Conversions of measurements	The count tool	Formulae including the advanced mode	Using text variables to perform calculations	Event planning with a spreadsheet			
Easter Holidays								
Summer 1	Unit 5.5 – Game Creator					Unit 5.6 – 3D Modelling		
	Setting the scene	Creating the game environment	The game quest	Finishing & sharing	Evaluation	Introducing 2Design & Make		
Half Term								
Summer 2	Unit 5.6 – 3D Modelling			Unit 5.7 – Concept Maps				
	Moving points	Designing for a purpose	Printing & making	Introducing a concept map	Using 2Connect	2Connect Story Mode	Collaborative concept maps	
End of the Year								

Year 6

Autumn 1	Unit 6.2 – Online Safety			Unit 6.5 – Text Adventures				
	Message in a game	Online behaviour	Screen time	What is a text adventure? Planning a story adventure	Making a story-based adventure game	Introducing map-based text adventures	Coding a map-based text adventure	
Half Term								
Autumn 2	Unit 6.9 – Spreadsheets							
	What is a spreadsheet?	Basic calculations	Modelling	Organising data	Advanced formulae & big data	Charts & graphics	Using a spreadsheet to plan a cake sale	Using a spreadsheet to solve problems
Christmas Holidays								
Spring 1	Unit 6.1 - Coding							
	Designing & making a more complex program	Designing & making a more complex program	Using functions	Flowcharts & control simulations	User input	Using text-based adventures		
Half Term								
Spring 2	Unit 6.7 - Quizzing							
	Introducing 2DIY	Using 2Quiz	Using 2Quiz	Exploring Grammar Quizzes	A database quiz	Are you smarter than a 10/11 year old?		
Easter Holidays								
Summer 1	Unit 6.3 - Spreadsheets			SATs Week	Unit 6.6 - Networks			
	Exploring probability	Creating a computational model	Use a spreadsheet to plan pocket money spending		The World Wide Web and internet	Our school network and internet		
Half Term								
Summer 2	Unit 6.4 Blogging				Unit 6.8 – Understanding Binary			
	What is a blog?	Planning a blog	Writing a blog	Sharing posts & commenting	What is binary?	Counting in binary	Converting from decimal binary & game states	
End of the Year								