



## Beaulieu Village Primary School: Computing Scheme of Work Overview

Our Values:		
Have Courage	Be Kind	Shine
<p><b>Courage is about</b> being honest and standing up for what is right and for what you believe in. Courageous people take brave action when they need to and show the resilience to keep going even when things are tough. We need courage in order to be true to all our values.</p>	<p><b>Kindness is about</b> caring for yourself and for others. Kind people are compassionate, respectful, inclusive and fair. They value one another as individuals, show emotional intelligence and build positive relationships.</p>	<p><b>Shining is about</b> individuality, aspiration and creativity. We recognise and value our own individuality and the individuality of others; we have self-belief; we love learning and aspire to improve and to embrace new and exciting experiences; we value thinking creatively and we celebrate ideas.</p>

At our school we use Purple Mash as our core computing curriculum.

For **internet safety** the school also uses resources from Purple Mash, the school's PHSE 'HeartSmart' scheme, the RSHE statutory requirements for online relationships and internet safety and harm and 'Education for the Connected World'. Internet safety is reviewed and discussed throughout the year. The whole school participates in the worldwide Safer Internet Day every February, where available resources from their website are utilised so that we can follow the annual theme and help deliver the support to enable our children to keep safe online.

### National Curriculum Subject Content

	KS1 Objectives Elm/ Redwood – Y1/2	KS2 Objectives Chestnut / Maple– Y3/4	KS2 Objectives Oak – Y5/6
<b>Computer Science</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li><input type="checkbox"/> create and debug simple programs</li> <li><input type="checkbox"/> use logical reasoning to predict the behaviour of simple programs</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li> <li><input type="checkbox"/> use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li> <li><input type="checkbox"/> use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li> </ul>	

<b>Searching</b>		<input type="checkbox"/> use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
<b>Digital Literacy</b> <i>Multimedia and Data</i>	<input type="checkbox"/> use technology purposefully to create, organise, store, manipulate and retrieve digital content	<input type="checkbox"/> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
<b>Use of Technology</b>	<input type="checkbox"/> recognise common uses of information technology beyond school	<input type="checkbox"/> understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration <input type="checkbox"/> use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
<b>E-Safety / Digital citizenship</b>	<input type="checkbox"/> 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.  <b>February: Safer Internet Day</b> Heart Smart unit: keeping safe	<input type="checkbox"/> use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.  <b>February: Safer Internet Day</b>

<b>E-safety and families</b> supportive resources	<b>Purple Mash: parent advice</b>	Hampshire e-safety resources - <a href="#">Resources</a>	<b>Heartsmart</b>
--	-----------------------------------	--	-------------------

## Willow Class: Year R Overview



The new Early Years Foundation Stage statutory curriculum (September 2021) removed the 'Technology' strand and had not replaced it with any updated guidance. Thus withdrawing the statutory expectation to teach computing within Early Years. However, at Beaulieu, we recognise that computing and technology are still important to Foundation children as we live in a technological world and technology is integrated into the lives of young children. So opportunities are provided throughout the year for children to experience technology and develop skills such as listening, problem-solving, thoughtful questioning, planning, reading, eye-hand coordination and fine-motor skills. We recognise the importance of e-safety and Willow Class take part in the annual Safer Internet Day every February as part of their provision towards internet safety. We introduce the children to the school's scheme of learning, Purple Mash, and begin to teach some specific computing skills.

### **Opportunities to experience technology and develop computing skills include:**

- \*using the interactive whiteboard and paint program on tablets for painting and drawing tools - the children make a picture for a calendar
- \*playing games on the interactive whiteboard
- \*watching a video clip
- \*listening to music
- \*joining in with online music lessons
- \*using Talking Tins when writing
- \*using 'Letter-join' to support letter formation
- \*using torches within role play and reading dens
- \*exploring an old keyboard and mobile phone in role play
- \*use tablets to take photos
- \*making and playing back videos
- \*Safer Internet Day (whole school) February
- \*programming remote control cars and Beebots
- \*using magnifier on the computer

During summer term begin to learn how to log onto Google Chrome and use Mini Mash (via Purple Mash).

## Willow Class: Year R overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Computing Key skills &amp; Knowledge</b>	<ul style="list-style-type: none"> <li>*Technology Around Us</li> <li>*Photography</li> </ul>	<ul style="list-style-type: none"> <li>*Robots</li> <li>*Drawing skills</li> <li>*Sounds</li> </ul>	<ul style="list-style-type: none"> <li>*Robots</li> <li>*Safety and Privacy</li> <li>*Drawing skills</li> </ul>	<ul style="list-style-type: none"> <li>*Mouse and Trackpad Skills</li> <li>*Keyboard Skills</li> <li>*Safety and Privacy</li> <li>*Hardware</li> </ul>	<ul style="list-style-type: none"> <li>*Using Purple Mash with an Individual Login</li> <li>*Mouse and Trackpad Skills</li> <li>*Keyboard Skills</li> <li>*Photography</li> <li>*Sounds</li> </ul>	<ul style="list-style-type: none"> <li>*Sounds</li> <li>*Mouse and Trackpad Skills</li> <li>*Keyboard Skills</li> <li>*Using Purple Mash with an Individual Login</li> <li>*Technology Around Us</li> </ul>
<p><b>*Technology Around Us - A selection of role-play ideas for including technology in play (throughout the year) e.g. phones, keyboards, washing machine, microwave, electronic scales, microphone, bar code readers in shop and till, car washes, petrol pump, etc</b></p>						
<b>Key learning activities</b>	<p><b>Recognising the use of technology within the classroom</b> through adult modelling / discussion</p> <ul style="list-style-type: none"> <li>-interactive whiteboard as a teaching tool - videos, words, images, etc</li> <li>-tablet to take photos of the children - share baby photos / photos of children in the class /photos showing emotions</li> <li>-magnifier on the laptop modelled</li> </ul> <p><b>Joining in with dance and movement shown on the iwb</b></p> <p style="text-align: center;"><b>CKS</b></p>	<p><b>Remote Control cars</b></p> <p><b>Christmas songs on the iwb</b></p> <p><b>Christmas calendar picture</b> -Use the interactive whiteboard ) and paint program on tablets for painting and drawing tools and to create their own pictures ( EAD link) -gross motor control (Christmas gift)</p> <p style="text-align: center;"><b>CKS</b></p>	<p><b>Safer Internet Day</b> (whole school) – February</p> <ul style="list-style-type: none"> <li>-recognising that children can say 'no' when online</li> <li>-beginning to be aware that we have individual passwords</li> <li>-introducing the term Internet</li> </ul> <p><b>Beebots</b> - entering simple code to instruct floor robot to move to objects for Goldilocks and the Three Bears</p> <p><b>Drawing bear pictures on iwb (and tablets)</b> - Goldilocks and the three bears</p> <ul style="list-style-type: none"> <li>-Could add labels using the pen tool</li> </ul> <p style="text-align: center;"><b>CKS</b></p>	<p><b>Learning to log onto Purple Mash and locate Mini Mash,</b> and using the password (with support if needed to locate keys on the keyboard for own name) – encouraging children to say why we need a password.</p> <p><b>Exploring Mini Mash</b> – using two fingers / hands to control the touchpad or a plugged in mouse</p> <p><b>Exploring the farm and farm animals on Mini Mash using 'Simple City'</b></p> <p>Using Simple City to visit, explore and discuss the different places on the map.</p> <div style="text-align: center;">  <p><b>CKS</b></p> </div>	<p><b>Use the Mashcam to choose a character – add speech bubbles – write and record words and play them back.</b></p> <p><b>Continue to learn to log onto Chromebooks and Mini Mash</b> (with support) - Explore 'Minibeast' folder in Mini Mash with increasing independence - grab and drop objects on the screen</p> <p>Through adult direction, <b>use the Internet to research photos and captions about Queen Elizabeth II</b></p> <p><b>Learn to save and exit work in individual named folder in Mini Mash</b> - Mashcam / Paint projects</p> <p style="text-align: center;"><b>CKS</b></p>	<p><b>Logging onto the laptops and Mini Mash with increasing independence</b></p> <p><b>Using 2beat to create music</b> – on Chromebooks and tablets – making decisions</p> <div style="text-align: center;">  </div> <p><b>Technology used in the wider world - through role play lined to people who help us,</b> e.g fire service, police, doctors, refuse collector, car wash, petrol pump</p> <p><b>Save and retrieve work from individual folders in Mini Mash</b></p> <p style="text-align: center;"><b>CKS</b></p>

## Redwood - Year 1 & 2 Overview

Theme Key:	
	Coding and Computational thinking
	Spreadsheets
	Internet and Email
	Art and Design
	Music
	Databases and graphing
	Writing and Presenting
	Communication and networks

In Year 1 and 2 coding, the lessons need to be taught in sequence as each lesson introduces skills that are consolidated and developed in the next lesson. Therefore, it is proposed to teach coding for 11 weeks in Cycle A and none in Cycle B. It is also beneficial for all children to recap unit 1.1 in both cycles as this introduces children new to the class with key skills needed to make the most of Purple Mash.

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
YEAR 1 & 2 - CYCLE A	Unit 1.1 Online Safety & Exploring Purple Mash Weeks - 4 Programs - Various				Unit 2.5 Effective Searching Weeks - 3 Programs - Browser			Unit 1.4 Lego Builders Weeks - 3 Programs - 2DIY			Unit 1.9 Technology outside school Weeks - 2 Programs - Various			Unit 1.2 Grouping & Sorting Weeks - 2 Programs - 2DIY			Unit 2.6 Creating Pictures Weeks - 5 Programs - 2PaintAPicture				Unit 1.8 Spreadsheets Weeks - 3 Programs - 2Calculate			Unit 1.7 Coding Weeks - 6 Programs - 2Code				Unit 2.1 Coding Weeks - 5 Programs - 2Code					
YEAR 1 & 2 - CYCLE B	Unit 1.1 Online Safety & Exploring Purple Mash Weeks - 4 Programs - Various				Unit 1.5 Maze Explorers Weeks - 3 Programs - 2Go			Unit 2.4 Questioning Weeks - 5 Programs - 2Question, 2Investigate					Unit 2.2 Online Safety Weeks - 2 Programs - Various		Unit 1.6 Animated Story Books Weeks - 5 Programs - 2Create A Story				Unit 2.7 Making Music Weeks - 3 Programs - 2Sequence		Unit 2.3 Spreadsheets Weeks - 4 Programs - 2Calculate				Unit 1.3 Pictograms Weeks - 3 Programs - 2Count			Unit 2.8 Presenting Ideas Weeks - 4 Programs - Various					

## Chestnut - Year 3 & 4 Overview

Review/ introduce 'Acceptable use agreement for KS2' in Autumn 1

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
YEAR 3 & 4 CYCLE A	Coding  Number of Weeks – 6 Main Programs – 2Code See table below for breakdown						Unit 3.2 Online safety  Weeks – 3 Programs – Various			Unit 3.3 Spreadsheets  Weeks – 3 Programs – 2Calculate			Unit 3.4 Touch Typing  Weeks – 4 Programs – 2Type				Unit 3.5 Email (including email safety)  Weeks – 6 Programs – 2Email, 2Connect, 2DIY					Unit 3.6 Branching Databases  Weeks – 4 Programs – 2Question			Unit 3.7 Simulations  Weeks – 3 Programs – 2Simulate, 2Publish			Unit 3.8 Graphing  Weeks – 3 Programs – 2Graph					
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
YEAR 3 & 4 CYCLE B	Coding  Number of Weeks – 6 Main Programs – 2Code See table below for breakdown						Unit 4.2 Online safety  Weeks – 4 Programs – Various			Unit 4.3 Spreadsheets  Weeks – 6 Programs – 2Calculate					Unit 4.4 Writing for different audiences  Weeks – 5 Programs – 2Email, 2Connect, 2DIY				Unit 4.5 Logo  Weeks – 4 Programs – Logo		Unit 4.6 Animation  Weeks – 3 Programs – 2Animate		Unit 4.7 Effective Search  Weeks – 3 Programs – Browser		Unit 4.8 Hardware Investigators  Weeks – 2								

### Coding Breakdown

<b>YEAR 3 &amp; 4 CYCLE A</b>	Review previous coding – Year 3, Lesson 1	Simulating a physical system – Year 3, Lesson 2	Making a timer – Year 4, Lesson 4	Debugging – Year 3, Lesson 6	Making a control simulation – Year 4, Lesson 5	Decomposition and Abstraction – Year 4, Lesson 6
<b>YEAR 3 &amp; 4 CYCLE B</b>	Review previous coding, Y4, lesson 1	Introducing 'if' statements – Year 3, Lesson 4	'if/else' statements – Year 4, Lesson 2	Repetition – Year 3, Lesson 5	Repeat until - Year 4, Lesson 3	Variables – Year 3, Lesson 4

# Oak - Year 5 & 6 Overview

Review/ introduce 'Acceptable use agreement for KS2' in Autumn 1

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
YEAR 5 & 6 CYCLE A*	Unit 5.1 Coding						Unit 5.2 Online safety			Unit 5.3 Spreadsheets					Unit 5.4 Databases			Unit 5.5 Game Creator			Unit 5.6 3D Modelling			Unit 5.7 Concept Maps								
	Number of Weeks – 6						Weeks – 3			Weeks – 5					Weeks – 4			Weeks – 5			Weeks – 4			Weeks – 4								
	Main Programs – 2Code						Programs - Various			Programs – 2Calculate					Programs – 2Question, 2Investigate			Programs – 2DIY 3D			Programs – 2Design and Make			Programs – 2Connect								
Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
YEAR 5 & 6 CYCLE B*	Unit 6.1 Coding						Unit 6.2 Online safety			Unit 6.3 Spreadsheets					Unit 6.4 Blogging			Unit 6.5 Text Adventures			Unit 6.6 Networks			Unit 6.7 Quizzing								
	Number of Weeks – 6						Weeks – 3			Weeks – 5					Weeks – 5			Weeks – 5			Weeks – 3			Weeks – 6								
	Main Programs – 2Code						Programs - Various			Programs – 2Calculate					Programs – 2Blog			Programs – 2Code, 2Connect			Programs – 2Quiz, 2DIY, Text Toolkit, 2Investigate											

\* There is an optional unit 6.8 – Understanding Binary that can be used in addition to the above units. It is a four week unit.

## Coding Breakdown

YEAR 5 & 6 CYCLE A	Review Previous coding – Year 5 Lesson 1	Simulating a physical system – Year 5 Lesson 2	Creating a game with a score and timer – Year 5 Lessons 4 and 5		The Launch Command – Year 5 Lesson 6	Using User Input – Year 6, Lesson 4
YEAR 5 & 6 CYCLE B	Designing and writing a more complex program – Year 6 Lessons 1 and 2		Introducing text variables – Year 5 Lesson 3	Introducing Functions – Year 6 Lesson 3	Flowcharts and control simulations – Year 6, Lesson 5	Text Adventure – Year 6 Lesson 6