



# Computing Progression of Skills



**natterhub**  
preparing children to thrive online

## OUR VISION FOR TREWIRGIE INFANTS'SCHOOL

'We care, we help, we succeed'



### OUR MISSION:

- To inspire children to engage in learning, and be valued members of a caring, supportive, and successful school.
- For all our children to develop life- long learning skills; to be independent and creative thinkers and to be socially confident.
- To enable children to be successful through a curriculum that captures their interests, stimulates their ideas, encourages inquisitiveness and critical thinking and meets their needs.

*At Trewirgie Infants' & Nursery School, our aim is to equip children for their future lives in an ever-changing technological world. We ensure that pupils develop the knowledge and skills needed to thrive in a society where technology plays a central role. Computing is taught to foster curiosity, creativity and enthusiasm through a cross-curricular approach and a carefully planned progression of skills.*

*The core of computing is computer science, where pupils learn the principles of information and computation, how digital systems work, and how to apply this through programming. Building on this, pupils use information technology to create programs, systems and a range of digital content. Computing also supports pupils to become digitally literate—able to use technology safely, responsibly and effectively, express themselves, and develop their ideas using information and communication technology. These skills prepare them for the future and enable confident participation in a digital world.*

*Our school uses the Raspberry Pi and Oak National Academy computing curriculum to support teaching across all strands of Computing. This provides a structured, progressive framework where knowledge and skills are built over time. Engaging lessons, including unplugged activities and practical programming, deepen understanding, while cross-curricular opportunities allow pupils to apply their skills in meaningful contexts.*

<b>INTENT</b> (curriculum design, coverage and appropriateness)	<b>IMPLEMENTATION</b> (curriculum delivery, teaching and assessment)	<b>IMPACT</b> (attainment and progress)
<p>At Trewirgie, our goal is to equip children with the skills and knowledge necessary to use technology safely, creatively, and responsibly. As pupils progress through our school, they become increasingly independent in their use of technology, collaborate effectively to solve problems, and develop resilience by learning from mistakes. Technology is an integral part of everyday life and will play a significant role in our pupils' futures. As such, we guide children to use technology in a positive, safe and responsible way. We are committed to developing pupils as creators, not just consumers, and our computing curriculum reflects this through a balanced focus on computer science, information technology and digital literacy.</p> <p>To support this, we follow a structured and progressive computing curriculum developed by the Raspberry Pi Foundation and delivered through Oak National Academy. This curriculum is aligned with the National Curriculum and provides a coherent sequence of learning, ensuring pupils build knowledge and skills over time. It offers engaging, practical lessons, combining unplugged activities with hands-on computing experiences. In addition, we use Natterhub to deliver our e-safety education, enabling pupils to practise and apply essential skills needed to stay safe online.</p> <p>Computing is taught both as a discrete subject and across the wider curriculum. Pupils are exposed to a broad range of applications, devices and software throughout EYFS and KS1. In EYFS, technology is integrated into provision and adult-led activities to support all areas of learning, ensuring that pupils begin to interact with technology in a purposeful and developmentally appropriate way. We recognise the importance of strong cross-curricular links, allowing pupils to apply and reinforce their computing skills in meaningful contexts. Lessons are carefully planned, ensuring full coverage of the 2014 National Curriculum, while building on prior learning and supporting progression.</p>	<p>Across the school, children are encouraged to use hardware and software safely and with clear purpose. They use technology to handle data, record and present their work, support their learning and express their ideas creatively. The promotion of e-safety is a key priority for pupils, staff and parents, underpinning all aspects of computing.</p> <p>At Trewirgie Infants' and Nursery School, our computing curriculum follows a retrieval-based approach, where key concepts are revisited regularly across year groups. This ensures that pupils consolidate and deepen their understanding over time, reducing knowledge loss and strengthening long-term learning.</p> <p>Across KS1, pupils study a structured sequence of units each year, supported by regular e-safety lessons through Natterhub in alternate half terms. The computing units cover key areas such as:</p> <ul style="list-style-type: none"> <li>• Creating Media</li> <li>• Data and Information</li> <li>• Programming</li> <li>• Computing Systems and Networks</li> <li>• Digital Literacy</li> </ul> <p>In addition, pupils have frequent opportunities to apply these skills across other subjects and through the wider curriculum.</p>	<p>By implementing the Raspberry Pi and Oak National Academy computing curriculum, we aim to achieve the following outcomes for our pupils:</p> <ul style="list-style-type: none"> <li>• Pupils develop a secure understanding of the computing curriculum and are able to apply their knowledge across computer science, digital literacy and information technology.</li> <li>• Pupils are able to confidently explain key computing concepts, understand how to stay safe online, and recognise appropriate and inappropriate behaviour in digital environments.</li> <li>• Pupils develop enthusiasm for technology and understand its role and relevance in the wider world.</li> <li>• Pupils enjoy and value computing, recognising its importance in their personal development and future opportunities.</li> <li>• Pupils understand the significance of digital literacy in both everyday life and within the creative, technological and cultural industries.</li> <li>• Pupils are equipped to participate confidently, responsibly and safely in an increasingly digital world.</li> </ul> <p>At Trewirgie Infants' and Nursery School, we are committed to preparing our pupils to thrive in a digital world, developing the creativity, resilience and confidence they need to succeed in the modern era.</p>

## Computing: Year overview 2026-2027

### Year 1

	Autumn	Spring	Summer
Teach computing/ Raspberry Pi	Creating media - Digital painting	Digital Writing	Creating animations in programs
Natterhub Program 4	<p><b>1 Year 1 Balance It: Lesson 1 - Rockin' Rules</b> To identify, follow and understand why we need rules around screen time.</p> <p><b>2 Year 1 Chat It: Lesson 1 - My Online Avatar</b> To understand the function of avatars.</p> <p><b>3 Year 1 Feel It: Lesson 1 - Villains in Our Fairy Tales</b> To describe ways that some people can be unkind online.</p> <p><b>4 Year 1 Question It: Lesson 1 - Internet Quest</b> To identify devices that use the internet and use them to find information.</p>	<p><b>Year 1 Learn It: Lesson 1 - My Wonderful Work</b> To understand that we have ownership of the work we create.</p> <p><b>2 Year 1 Mind It: Lesson 1 - My Online Profile</b> To understand what an online profile is.</p> <p><b>3 Year 1 Secure It: Lesson 2 - Why I Should Check Before I Share</b> To be aware of information that should or shouldn't be shared online.</p> <p><b>4 Year 1 Think It: Lesson 1 - Goodies and Baddies</b> To gain an understanding of what makes someone good or bad.</p>	<p><b>Year 1 Balance It: Lesson 2 - Sensible Screen Use</b> To learn when it is a good time to use screens.</p> <p><b>2 Year 1 Chat It: Lesson 3 - Online Communication vs Face-to-Face Communication</b> To understand that emojis can be an effective way to communicate online.</p> <p><b>3 Year 1 Feel It: Lesson 2 - Be Kind and Caring</b> To understand how being unkind to someone can make them feel.</p> <p><b>4 Year 1 Question It: Lesson 3 - Super Searchers</b> To know how to use search engines efficiently and safely.</p>
	Autumn	Spring	Summer

### Year 2

3 Computing

	Autumn	Spring	Summer
Teach computing/ Raspberry Pi	Information technology in the world beyond the school.	Using IT to organise and present data	Building sequences in programs
Natterhub Program 4	<p><b>Year 2 Balance It: Lesson 1 - Devices and Screen Time</b> To understand why online and offline time need to be balanced.</p> <p><b>2 Year 2 Chat It: Lesson 1 - Kind Communication</b> To understand how to communicate kindly online.</p> <p><b>3 Year 2 Feel It: Lesson 2 - Sticks and Stones</b> To understand the effect our words and actions can have on others.</p> <p><b>4 Year 2 Question It: Lesson 1 - Online Navigators</b> To use keywords in search engines and demonstrate how to navigate a simple webpage to retrieve information.</p>	<p><b>Year 2 Learn It: Lesson 1 - The Work of Others</b> To know that content on the internet may belong to other people and why it belongs to them.</p> <p><b>2 Year 2 Mind It: Lesson 1 - Follow the Digital Footprint</b> To explain how information put online about me can last for a long time.</p> <p><b>3 Year 2 Secure It: Lesson 2 - Protecting My Privacy</b> To describe and explain some rules for keeping information private.</p> <p><b>4 Year 2 Think It: Lesson 2 - Fake Profiles</b> To find out how to spot a fake profile.</p>	<p><b>1 Year 2 Chat It: Lesson 2 - Communicating with People We Don't Know</b> To be able to communicate safely with people we don't know.</p> <p><b>2 Year 2 Feel It: Lesson 3 - Be Brave; Stand Tall</b> To understand who is responsible for bullying behaviour.</p> <p><b>3 Year 2 Learn It: Lesson 3 - Internet Idols</b> To know how to learn from others online.</p> <p><b>4 Year 2 Question It: Lesson 3 - Real and Reliable</b> To understand that some information we find online may not be true.</p>
	Autumn	Spring	Summer

Year 1 Computing			
National curriculum statement	Unit 1 Digital painting	Unit 2 Digital writing	Unit 3 Creating animations in programs
	<a href="#"><u>Go to unit resources</u></a>	<a href="#"><u>Go to unit resources</u></a>	<a href="#"><u>Go to unit resources</u></a>
Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	✓	✓	
Recognise common uses of information technology beyond school.		✓	
Understand that programs execute by following precise and unambiguous instructions.			✓
Understand how algorithms are implemented as programs on digital devices.			✓
Create and debug simple programs.			✓

Year 2 Computing			
National curriculum statement	Unit 1 Information technology in the world beyond school	Unit 2 Using IT to organise and present data	Unit 3 Building sequences in programs
	<u><a href="#">Go to unit resources</a></u>	<u><a href="#">Go to unit resources</a></u>	<u><a href="#">Go to unit resources</a></u>
Identify where to go for help and support when they have concerns about online content or contact.	✓		
Use technology safely and respectfully, keeping personal information private.	✓	✓	
Recognise common uses of information technology beyond school.	✓	✓	
Use technology purposefully to create, organise, store, manipulate and retrieve digital content.		✓	
Understand that programs execute by following precise and unambiguous instructions.			✓
Understand how algorithms are implemented as programs on digital devices.			✓
Use logical reasoning to predict the behaviour of simple programs.			✓
Create and debug simple programs.			✓
Understand what algorithms are.			✓

## Teach Computing

EYFS	YEAR 1	YEAR 2
<ul style="list-style-type: none"> <li>I can program a programmable toy</li> <li>I can use simple programs</li> </ul>	<p><u>Go to unit resources</u></p> <ul style="list-style-type: none"> <li>I can use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> </ul>	<p><u>Go to unit resources</u></p> <ul style="list-style-type: none"> <li>I can identify where to go for help and support when they have concerns about online content or contact.</li> <li>I can use technology safely and respectfully, keeping personal information private.</li> <li>I can recognise common uses of information technology beyond school.</li> </ul>
<p><b>Q. What does this do?</b>  <b>Intent:</b> Children begin to explore and use a range of technology (e.g. BeeBots, cameras, computers)  <b>Implementation:</b>  <b>Future learning:</b> Giving children opportunities to experiment and build up resilience with new technology will support coding and algorithm work.</p> <p><b>Q. How does this work?</b>  <b>Intent:</b> Children to use a huge range of equipment in the classroom and outside settings to gain an understanding about how it works. What do I need to do to make something happen. This could be buttons, switches, pulling, pushing, moving swiping etc  <b>Implementation:</b></p>	<p><b>Unit 1.2 Digital Painting:</b>  <b>Q. How can we paint using computer?</b></p> <ul style="list-style-type: none"> <li><b>Builds on:</b> EYFS - children have had a chance to explore and use a range of equipment and to see how computers can be used for a purpose. Pupils should be familiar with how to switch their device on Pupils should be familiar with how to log in to their device</li> </ul> <p><b>Intent:</b> In this unit, pupils develop their understanding of how to manipulate digital devices by using painting tools. They practise by creating digital paintings, gaining inspiration from the work of artists whilst reflecting on</p>	<p><b>Unit 2.2 Coding: Q. How is information technology in the world beyond our school?</b></p> <p><b>Builds on:</b> Year 1 Natterhub learning (see above)</p> <ul style="list-style-type: none"> <li>Pupils will know how to turn on and log in to a digital device.</li> <li>Pupils will be able to operate a digital device and use it to enter and edit textual information.</li> <li>Pupils will have talked with teachers and responsible adults about the appropriate use of IT.</li> </ul> <p><b>Intent:</b> In this unit pupils develop their understanding of what information technology is and will begin to identify examples. Pupils will discuss where they have seen IT in school and beyond. They will investigate how IT improves our</p>

<p><b>Future learning:</b> Children will then be exposed to more opportunities for making this work using computer programs.</p> <p><b>Q. Can you use this program?</b></p> <p><b>Intent:</b> Children will be given opportunities to explore programs such as SketchSchool. And use the tools appropriately with exploration in mind.</p> <p><b>Implementation:</b></p> <p><b>Future learning:</b> Children will be given purpose when using programs and support will be withdrawn to improve independence.</p>	<p>their preferences when painting with and without the use of digital devices.</p> <p><b>Implementation:</b></p> <ol style="list-style-type: none"> <li>1. Painting using computers</li> <li>2. Using lines and shapes to create digital pictures</li> <li>3. Creating digital pictures in the style of an artist</li> <li>4. Choosing the right digital painting tool</li> <li>5. Using the paintbrush tool to create digital pictures</li> <li>6. Comparing computer art and painting</li> </ol> <p><b>Future learning:</b> <u>Digital writing Year 1 unit 2</u></p>	<p>world whilst also recognising the importance of using IT responsibly.</p> <p><b>Implementation:</b></p> <ul style="list-style-type: none"> <li>• Introduction to information technology</li> <li>• Information technology in school</li> <li>• Information technology in the world</li> <li>• Benefits of information technology</li> <li>• Using information technology safely</li> <li>• Making choices when using information technology</li> </ul> <p><b>Future learning:</b> <u>Natterhub (See above)</u></p>
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## Spring Term

	<p style="text-align: center;"><u>Go to unit resources</u></p> <ul style="list-style-type: none"> <li>• I can use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> <li>• I can recognise common uses of information technology beyond school.</li> </ul>	<p style="text-align: center;"><u>Go to unit resources</u></p> <ul style="list-style-type: none"> <li>• I can use technology safely and respectfully, keeping personal information private.</li> <li>• I can recognise common uses of information technology beyond school.</li> <li>• I can use technology purposefully to create, organise, store, manipulate and retrieve digital content.</li> </ul>
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	<p><b>Unit 1.2: Q What is digital writing?</b>  <b>Builds on:</b> Digital Painting unit in Autumn.</p> <p><b>Intent:</b> This unit covers various aspects of using a computer to create and manipulate text. Pupils will become familiar with using a keyboard and mouse to enter and remove text. They will consider how to change the look of their text, and will be able to justify their reasoning for making these changes.</p> <p><b>Implementation:</b></p> <ol style="list-style-type: none"> <li>1. Exploring the keyboard</li> <li>2. Adding and removing text</li> <li>3. Make changes to text</li> <li>4. Exploring the toolbar</li> <li>5. Choosing formatting tools</li> <li>6. Comparing digital writing to using a pencil</li> </ol> <p><b>Future learning:</b> Information technology in the world beyond school (Year 2 Unit 1)</p>	<p><b>Unit 2.2 Data: Q: How can I use IT to organise and present data?</b>  <b>Builds on:</b> Y1 - 1.2 - Digital Writing</p> <p><b>Intent:</b> In this unit pupils will explore what the term data means and how data can be collected. They will explore how attributes can be used to organise data and how data can be presented in the form of pictograms and block diagrams. Pupils will use the data presented to answer questions.</p> <p><b>Implementation:</b></p> <ol style="list-style-type: none"> <li>1. Counting and comparing data</li> <li>2. Entering data</li> <li>3. Creating pictograms</li> <li>4. Attributes in data</li> <li>5. Comparing data</li> <li>6. Presenting information clearly</li> </ol> <p><b>Future learning:</b> KS2 -3.4 Organising data and using data bases.</p>
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**Summer Term**

	<p><b><u>Go to unit resources</u></b></p> <ul style="list-style-type: none"> <li>• I can understand that programs execute by following precise and unambiguous instructions.</li> <li>• I can understand how algorithms are implemented as programs on digital devices.</li> <li>• I can create and debug simple programs.</li> </ul>	<p><b><u>Go to unit resources</u></b></p> <ul style="list-style-type: none"> <li>• I understand that programs execute by following precise and unambiguous instructions.</li> <li>• I understand how algorithms are implemented as programs on digital devices.</li> <li>• I can use logical reasoning to predict the behaviour of simple programs.</li> </ul>
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		<ul style="list-style-type: none"> <li>• I can create and debug simple programs.</li> <li>• I understand what algorithms are.</li> </ul>
	<p><b>Unit 1.3 Q. How can we create animations in programs?</b></p> <ul style="list-style-type: none"> <li>• <b>Builds on:</b> Pupils will know how to turn on and log in to a digital device.</li> <li>• Pupils will know how to perform basic actions to control a digital device, (point, click, move, type).</li> </ul> <p><b>Intent:</b> In this unit pupils are introduced to on-screen programming through ScratchJr. Pupils will explore the way a project looks onscreen by investigating sprites and backgrounds. They will use programming blocks to use, modify, and create programs that move objects.</p> <p><b>Implementation:</b></p> <ol style="list-style-type: none"> <li>1. Programming using command blocks</li> <li>2. Joining command blocks</li> <li>3. Changing values in a program</li> <li>4. Controlling sprites</li> <li>5. Designing an animated program</li> <li>6. Testing a program</li> </ol> <p><b>Future learning:</b> Building sequences in programs (Year 2 Unit 3)</p>	<p><b>Unit 2.3 Building sequences in programs: Q: What is a sequence and why does the order matter?</b></p> <p><b>Builds on:</b> Y1 - 1.3 How can we create animations in programs?</p> <p><b>Intent:</b> In this unit, pupils will begin to understand that sequences of commands have an outcome and will start to make predictions about what these outcomes may be. Pupils will use and modify designs to create their own quiz questions using sequences of code blocks.</p> <p><b>Implementation:</b></p> <ol style="list-style-type: none"> <li>1. Programming sequences</li> <li>2. Outcomes of sequences</li> <li>3. Building blocks to create a sequence</li> <li>4. Programming multiple sprites and backgrounds</li> <li>5. Designing and creating a quiz program</li> <li>6. Evaluating and improving a program</li> </ol> <p><b>Future learning:</b> KS2 -3.4 Data and information - Branching databases.</p>

## SEN Adaptions

Adapting the curriculum for pupils with SEND The Teach Computing Curriculum has been written to support all pupils, with units containing a number of scaffolding activities and utilising effective pedagogies to ensure high quality teaching. However, you may still need to adapt resources to enable some of your pupils, for example those with special educational needs and disabilities (SEND), to access lessons fully. The following principles will help you make adaptations that benefit all learners, and these will be more effective if you identify clearly what it is your individual pupils need help with - do they have poor working memory that means that following instructions is more difficult, or do they need help to stay focussed when completing projects?

1. Identify essential learning and misconceptions: Determine the key learning in each unit that every child should know. Provide repeated opportunities for pupils to revisit this content in different ways. Identify any likely misconceptions and address these explicitly in lessons. For example, in the year 1 Moving a Robot unit, pupils might struggle with right and left turns and what this looks like for the Bee-Bot, so it

is worth spending extra time modelling and practising this.

2. Pre-teach key vocabulary: Pre-teach the essential vocabulary for each unit, provide learners with a word list supported by images and use the vocabulary regularly throughout the unit with a consistent definition. Concentrate on a small number of terms and consider using a graphic organiser to highlight

relationships between concepts, e.g. the Frayer model.

3. Create step-by-step instructions: Break down complex tasks and routine skills for using software and hardware into smaller steps and create pictorial instructions for children to follow. For example, in the year 2 Digital Music unit, you can adapt the Chrome Music Lab song maker help card handout to create a

sequence of instructions for making their own composition. 4. Provide templates: In Creating Media or Data & Information units, support task completion by providing a template for pupils to modify - removing the fear of the blank page and helping to build confidence. For example, in the year 2 Pictograms unit, pupils can continue to use the minibeast template rather than set up their own pictogram.

5. Consider non-computing barriers: Consider if difficulties in other areas, such as writing or maths, present barriers to completing a task and if so, modify the task to help mitigate these. For example, in the 'What can you tell me' task within the year 2 Pictograms unit, allow pupils to dictate sentences into a digital version of the worksheet rather than writing them down.

6. Use the PRIMM framework or Parson's problems: In programming units, add extra scaffolding using PRIMM and Parson's problems. Some pupils may not be able to create a program, but they can practise reading and exploring code in a working program, then modify it to make it more personalised. For example, in the 2 Computing

year 1 Programming Animations unit you could provide learners with the code to make the rockets move as a Parson's problem to put together in the correct order. The aim is to remove these scaffolds as children develop their skills, but some learners may not become fully independent. Adapting the curriculum | Key Stage 1 Teacher Guide | 19

7. Harness pupils' special interests: Increase engagement and make learning more relevant by incorporating pupils' special interests. This is also important in terms of culturally relevant pedagogy. For example, in the year 1 Programming Animations unit, pupils could make different animals race, or another form of transport.

8. Use unplugged activities and the semantic wave: We can use unplugged activities to help make computing concepts more relevant and understandable for learners. However, it is very important to 'repack' the knowledge of the abstract concept so that learners understand what it means in a wider context and they can use the technical language. For example, in the

year 1 Moving a Robot unit pupils work in pairs to develop their understanding of algorithms. One pupil directs their 'robot' partner by giving precise instructions on where to move. Children then need to see the link between instructing their 'robot' partner and how this transfers to pressing buttons on a Bee-Bot, whilst also practising using the key language in context. Pupils with SEND may need repeated examples and smaller steps to repack the knowledge.

9. Support planning: Break down the planning process into smaller parts which can be ticked off as each one is completed, and provide a planning scaffold for learners where required. For example, when planning out algorithms for the Bee-Bot, use a scaffold with the clear and go commands already included and provide command cards to slot into the gaps in between.

10. Reinforce digital skills: A significant barrier to accessing the whole computing curriculum is a lack of key digital skills, for example being able to log on to a computer and use the keyboard effectively. Time spent revisiting digital

skills across all units is important to develop fluency. Some pupils may also benefit from extra time to practise

these skills in small groups, or may need image-supported help sheets to support

specific repeated tasks, such as saving work

## YEAR GROUP VOCABULARY

