

Computing Progression of Skills



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 children are equipped with the skills they need to thrive in the current climate which has technology at its heart. Computing is taught to foster a passion and enthusiasm for a range of technologies through cross-curricular and progressive skills.

The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing supports pupils to become digitally literate - able to use, and express themselves and develop their ideas through, information and communication technology - at a level suitable for the future workplace and as active participants in a digital world.



Curriculum statement

INTENT (curriculum design, coverage and appropriateness)	IMPLEMENTATION (curriculum delivery, teaching and assessment)	IMPACT (attainment and progress)
<p>At Trewirgie, we recognise that Computing and the use of technology plays a fundamental role in how we live our lives. We aim to promote the skills; our children need to thrive in our ever-changing world growing into competent, responsible future global citizens and creative users of technology. Our curriculum fosters strong cross-curricular links with maths, literacy, science and creativity. Every lesson builds on knowledge, skills and understanding from previous lessons and prior learning in earlier year groups. Lessons are taught in a logical progression, systematically and explicitly enough for all children to acquire the intended knowledge and skills. Lessons follow a logical sequence and moves learning forward.</p>	<p>Our school uses Purple Mash to support the learning of each strand of the Computing curriculum. Each child has a log in and password to use at school and at home meaning children can access their school work at home as a way of extending their Computing learning. Purple Mash also offers opportunities for children to complete cross curricular work, helping to embed their Computing skills at every opportunity. Across the school, children are encouraged to use hardware and software, safely and with purpose. They use technology to handle data, record their work, further their learning and express themselves. The promotion of E-Safety is incredibly important for all children, staff and parents.</p>	<p>By the end of Key Stage 1, our children will have a range of experiences using different software and hardware. Children have developed their knowledge and skills in each subject over 3 years of teaching.</p>

Digital Literacy

National Curriculum aim:

Recognise common uses of information technology beyond school.

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.

EYFS	YEAR 1	YEAR 2
<ul style="list-style-type: none"> I can recognise some uses of technology in the world around me I can use some technology independently <p>EYFS - Understanding the world: Technology</p>	<ul style="list-style-type: none"> I can name different ways technology is used at home and school I can use a username and a password to log on with support I know where to go for help if I have concerns <p>1.1 Online safety and Exploring Purple Mash 1.9 Technology Outside School</p>	<ul style="list-style-type: none"> I can use a username and a password to log on independently I can keep personal information private I know where to go for help and support if I have concerns about content I see on the internet or other online technology <p>2.2 Online Safety</p>
<p>Q. Can I make this work? Intent: Children beginning to recognise that technology is in different places in the world around them. Implementation: Children could look in their environment and find the technology in their classroom Future learning: Children will independently be able to recognise uses of technology and be able to explain how they know it is technology.</p> <p>Q. What technology can you see? Intent: to use technology as a basis for discussion about how often it is used in everyday life Implementation: Use of IWB, tablets, cameras etc Future learning: Children will gain an understanding about what is meant by technology and will identify</p>	<p>Lesson 1: Q. What should I do if I am worried about something online? Builds on: Children have used technology supported previously and have been using a shared log in Intent: Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Implementation: Unit 1.1 Online Safety and Exploring PM Future learning: children will begin to discuss and understand the importance of technology and the variety of uses for it in everyday life.</p> <p>Lesson 2: Q. Does this use technology? Builds on: children have begun to recognise technology in the world around them with support.</p>	<p>Lesson 1: Q. What is online safety? Builds on: Children have previously explored what to do if they are worried about something online They need to revisit this to ensure it is embedded as they progress through the school. Intent: Children Contrast using Purple Mash as a safe and secure searching and computer program w with searching the Internet where there is much more content and not all of it is for children. Implementation: Unit 2.2 Online Safety - lesson 3 Future learning: Children will demonstrate the importance of having a secure password and not sharing this with anyone else. They will also be learning to explain the negative implications of failure to keep passwords safe and secure. They know more than one way to report unacceptable content and contact.</p>

<p>a variety of examples both in and out of school.</p>	<p>Intent: Children will understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.</p> <p>Implementation:</p> <p>Future learning: children will begin to discuss and understand the importance of technology and the variety of uses for it in everyday life.</p> <p>Lesson 2: Q. Why do teachers use technology?</p> <p>Builds on: Previously children have begun to recognise some technology in the world around them</p> <p>Intent: Children to take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.</p> <p>Implementation:</p> <p>Future learning: Children will be exposed to and given opportunities to use more varied technology and become more familiar with Purple Mash</p>	<p>Lesson 2: Q. Can you send an email?</p> <p>Builds on: Children have not used email before but have gained an understanding of the need to be safe online.</p> <p>Intent: Children to begin to gain knowledge and understanding about sharing more globally on the Internet. To introduce Email as a communication tool using 2Respond simulations. To understand how we talk to others when they aren't there in front of us. To open and send simple online communications in the form of email.</p> <p>Implementation: Unit 2.2 Online Safety - lesson 2</p> <p>Future learning: They understand the importance of staying safe and the importance of their conduct when using familiar communication tools such as 2Email in Purple Mash. They know more than one way to report unacceptable content and contact.</p> <p>Lesson 3: Q. What should I put online?</p> <p>Builds on: Children have previously learnt about the importance of keeping information, such as their usernames and passwords, private.</p> <p>Intent: Children can explain what a digital footprint is. Children can give examples of things that they wouldn't want to be in their digital footprint.</p> <p>Implementation: Unit 2.2 Online Safety - lesson 3</p> <p>Future learning: Children can explore key concepts relating to online safety using concept mapping. They can help others to understand the importance of online safety. Children know a range of ways of reporting inappropriate content and contact.</p>
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Computer Science

National Curriculum aim:

Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.

Create and debug simple programs.

Use logical reasoning to predict the behaviour of simple programs.

EYFS	YEAR 1	YEAR 2
<ul style="list-style-type: none"> I can program a programmable toy I can use simple programs 	<ul style="list-style-type: none"> I understand what an algorithm is I understand that programs need precise instructions to work I can independently create simple programs 	<ul style="list-style-type: none"> I understand that algorithms are implemented as programs on digital devices I can debug simple programs I can use logical reasoning to predict the behaviour of a simple program
<p>Q. What does this do? Intent: Children begin to explore and use a range of technology (e.g. BeeBots, cameras, computers) Implementation: Set up investigation area where children can explore a range of every day technology items. Can they identify how to make it start/stop? What is its function? Future learning: Giving children opportunities to experiment and build up resilience with new technology will support coding and algorithm work.</p> <p>Q. How does this work? Intent: 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</p>	<p>Lesson 1: Q. What is an algorithm? Builds on: EYFS - children have had a chance to explore and use a range of equipment to see what happens. Intent: Children to gain an understanding that a set of instructions can lead to a chosen outcome Implementation: (sequencing steps, jam sandwich, directing a friend around the classroom/playground) Future learning: Becoming more familiar with the different algorithms that they come across in everyday life, start to develop their own and debug existing ones.</p> <p>Lesson 2: Q. Is this algorithm in the right order? Builds on: EYFS - children have had a chance to explore and use a range of equipment to see what happens without being concerned about the</p>	<p>Lesson 1: Q: What does an algorithm do? Builds on: Y1 - children have discussed and gained an understanding that algorithms are a set of instructions to achieve a goal. Intent: Children to be exposed to a range of algorithm (PM - designing simple programs) Implementation: Future learning: KS2 - They will further this by designing, writing and debugging programs to accomplish a specific goal.</p> <p>Lesson 2: Q. Does this algorithm work? Builds on: Previously the children have been correcting simple errors in the order of algorithm steps. Intent: The children will now develop skills to identify and correct errors. Implementation:</p>

<p>Implementation: Using a range of technology items that the children can explore within the provision. Demonstrate how the technology in school and at home can help us. Encourage the children to show others how it works. Can they identify the technology they need for a specific task?</p> <p>Future learning: Children will then be exposed to more opportunities for making this work using computer programs.</p> <p>Q. Can you use this program?</p> <p>Intent: Children will be given opportunities to explore programs such as 2PaintaPicture. And use the tools appropriately with exploration in mind.</p> <p>Implementation: Use of Interactive Board within continuous provision, linking the game or task to the topic or other areas of the curriculum eg, maths. Ensure access to class tablets. Can they take photos independently of something they are proud of? How will they show this to others?</p> <p>Future learning: Children will be given purpose when using programs and support will be withdrawn to improve independence.</p>	<p>consequences and it doing the correct thing.</p> <p>Intent: Children will begin to gain an understanding that a set of instructions needs to be in the right order for it to be successful. They need to have opportunities to see what happens if things go wrong and the importance of the algorithms they make/create/write being precise.</p> <p>Implementation: cutting up and ordering steps, being shown what happens if it is not correct (extremes), PM - The Wrong Sandwich</p> <p>Future learning: Y2 - Children will be given opportunities to debug and solve more complex problems.</p> <p>Lesson 3: Q. How can we complete this program?</p> <p>Builds on: Children were given opportunities to explore simple programs with some support.</p> <p>Intent: Children to produce a piece of work on the computers or complete an activity</p> <p>Implementation:</p> <p>Future learning: Children will begin to use logical reasoning to complete more complex programs</p>	<p>Future learning: KS2 - They will further this by designing, writing and debugging programs to accomplish a specific goal.</p> <p>Lesson 3: Q. Why does this not work?</p> <p>Builds on: Previously the children have been correcting simple errors in the order of algorithm steps.</p> <p>Intent: Children can identify the parts of a program that respond to specific events and initiate specific actions.</p> <p>Implementation:</p> <p>Future learning: KS2 - They will further this by designing, writing and debugging programs to accomplish a specific goal.</p>
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Information Technology

National Curriculum aim:

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

EYFS	YEAR 1	YEAR 2
<ul style="list-style-type: none"> I can use technology to write words I can use technology to take photos I can use technology to create digital content 	<ul style="list-style-type: none"> I can use technology purposefully to create digital content independently I can use technology purposefully to store or save digital content I can use technology purposefully to manipulate digital content 	<ul style="list-style-type: none"> I can use technology purposefully to organise digital content I can use technology purposefully to retrieve digital content
<p>Q. How do I take a photo? Intent: Children to be involved in the process of photographing work and adding to their tapestry journal or Class Dojo portfolio. Implementation: Using CT tablets to take photos with a grown up. With an adult, type a message or label to accompany the photo. Encourage use of Class Dojo portfolios to add photos/work at home and type labels to explain what it is. Future learning: Children will then continue this by taking photos and then editing, saving or manipulating them</p> <p>Q. What could I do with my photo? Intent: Children need to know that a photo is taken and then can be moved, printed, stored or edited. Implementation: e.g. PM - 'MashCam', use of Tapestry, Class Dojo individual account, use of photos on displays in classrooms to document</p>	<p>Lesson 1: Q. What can you create using this program? Builds on: Children have previously had support to use programs with support from adults for taking photographs and inputting text. Intent: Children could use simple programs to experiment and select tools for a specific purpose Implementation: e.g. using a paint program (2Paint a Picture) to create a picture related to topic work. Future learning: Children will learn to save and edit previously created pieces of work on a computer.</p> <p>Lesson 2: Q. What is saving? Builds on: Children have built skills to create pieces of work on a computer but have not saved their work yet. Intent: Children need to understand why we can save work and the benefits of being able to save progress and then continue. Teachers could provide</p>	<p>Lesson 1: Q. How do you save your work? Builds on: children have previously learnt about the benefits of saving work and can do this with support Intent: Children to start a piece of work and then need to save it independently to access again to make changes. Implementation: Future learning:</p> <p>Lesson 2: Q. Where is my work?! Builds on: children have previously learnt about the benefits of saving work and can now do this independently Intent: Children should gain the skills to find a piece of work they have previously started Implementation: PM – log in to own area and then find their saved work. Future learning:</p>

<p>learning - can children add a label? Future learning: Children will learn how to save and manipulate pictures.</p> <p>Q. How do you get words on the screen? Intent: Children to gain a knowledge that the words they can write with pencils can also be inputted into the computer. Implementation: Use of Interactive Board to demonstrate this. Use of tablet apps to annotate a favourite photo or picture. Future learning: Children will develop skills to type and use computers for a variety of reasons in year 1 and 2</p>	<p>examples of times when saving is used for them. Implementation: Future learning:</p> <p>Lesson 3: Q. How can I change my work? Builds on: Children previously learnt how to save their work. Intent: Children will now be retrieving their previous work and making changes. It is important to allow children opportunities to explore and gain and understanding of the usefulness of computers to improve their information technology. Implementation: CT to choose appropriate activity for children to complete which could relate to topic work - thinking about using IT in a cross curricular capacity Future learning: Children will be working on gaining skills to save and retrieve work independently.</p>	<p>Lesson 3: Q. How can I put my work on paper? Builds on: children have had opportunities to work on a piece of learning over a period amount of time - allowing them to create, organise, store, manipulate and retrieve it. Intent: Children should be taught how to print their work. This could be with or without teacher support. Implementation: Future learning: KS2 - Children will gain skills to use a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.</p>
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YEAR GROUP VOCABULARY

