

# St Anne's C of E Primary School Curriculum Plan

Subject: Computational thinking

Year: EYFS

Term: Autumn Term



Unit: Awesome Autumn



## What is Computational Thinking?

Computational thinking is the foundation of Computer Science and builds a skill set for children to help equip them for everyday life. It develops a set of problem solving skills that are at the heart of the schools Computing Curriculum and gives our youngest children foundations for them to develop further into KS1 and KS2. Activities in the classroom link of many different areas of the EYFS Statutory Framework and we have identified the key ones for this unit in this document.

## Links to EYFS curriculum areas:

- **ELG – Creating Materials** – Safely use and explore a variety of materials, tools and techniques, experiments with colour, design, texture, form and function.
- **ELG -Fine Motor Skills** – Use a range of small tools, including scissors, paintbrushes and cutlery.
- **ELG - Gross Motor Skills** – Negotiating space and obstacles safely with consideration for themselves and others.
- **ELG – Building Relationships** – Work cooperatively and take turns with others
- **ELG – Managing Self** – Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.

## Development Matters – Specific Areas

- **Maths** – Continue, copy and create repeating patterns.
- **PSED** – Show resilience and perseverance in the face of a challenge
- **UW** – explore the natural world around them
- **UW** – understand the effect of changing season on the natural world around them
- **Clang** – Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen

**Creating and thinking critically** - Review their progress as they try and achieve a goal. Check how well they are doing.

	Children will know (that).....	Children will understand (that).....	Children will be able to.....
<p><b>Same</b> – something that is exactly like something else.</p> <p><b>Different</b> – two things that have features that are not alike</p> <p><b>Repeating pattern</b> – when a set sequence is carried out again.</p> <p><b>Sequence</b> – a set of related event, movements or items that follow each other in a set order.</p> <p><b>Instructions</b> – tells you to do something.</p> <p><b>Order</b> – an arrangement of things</p>	<p>Objects have different features</p> <p>The word repeat means to do something again.</p> <p>Some activities have to be done in a certain order.</p> <p>That instruction's need to be followed in a set order.</p> <p>'Thinking aloud' helps them to plan how to do something and the order in which they will do it.</p> <p>Breaking bigger activities down into smaller steps helps to plan how to do something.</p> <p>Taking turns is important when working with other people</p>	<p>Some objects have features that are the same.</p> <p>That a repeating pattern means that a pattern is repeated in the same way again and again.</p> <p>They need to check what they are doing to make sure that they are doing it the right way.</p> <p>If an activity goes wrong, they can think about the different parts of the activity and plan to do something different next time.</p> <p>That taking turns means that everyone in a group gets to do something</p>	<p>Describe some of the features of different objects</p> <p>Can create a simple repeating pattern and talk about how the pattern repeats.</p> <p>Use the words 'First' and 'next' appropriately when describing a repeating pattern.</p> <p>Can predict what comes next in a repeating pattern.</p> <p>Can evaluate a repeating pattern and find errors in it and correct them.</p> <p>Can use 'first' and 'next' when describing a set of instructions.</p> <p>To take turns in a group</p>

# St Anne's C of E Primary School Curriculum Plan

Subject: Computational thinking

Year: EYFS

Term: Spring Term



Unit: Winter Warmers



## What is Computational Thinking?

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## Links to EYFS curriculum areas:

- **ELG – Speaking** – Participate in small group, class and one to one discussions, offering their own ideas, using recently introduced vocabulary.
- **ELG – The Natural World** – Understanding some important processes and changes in the natural world around them including the seasons and changing states of matter.
- **ELG – Creating Materials** – Safely use and explore a variety of materials, tools and techniques, experiments with colour, design, texture, form and function.
- **ELG -Fine Motor Skills** – Use a range of small tools, including scissors, paintbrushes and cutlery.
- **ELG – Building Relationships** – Work cooperatively and take turns with others

## Development Matters – Specific Areas

- **Maths** – Continue, copy and create repeating patterns. Making patterns with varying rules (Including AB, ABB and ABBC) and objects and invite children to continue the pattern.
- **PSED** – Show resilience and perseverance in the face of a challenge
- **UW** – understand the effect of changing season on the natural world around them
- **UW** – Recognising some environments that are different to the one in which they live.
- **Clang** – Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen

**Creating and thinking critically** - Review their progress as they try and achieve a goal. Check how well they are doing.

	Children will know (that).....	Children will understand (that).....	Children will be able to.....
<p><b>Same</b> – something that is exactly like something else.</p> <p><b>Different</b> – two things that have features that are not alike</p> <p><b>Repeating pattern</b> – when a set sequence is carried out again.</p> <p><b>Varying rules</b> – Rules can be different to each other.</p> <p><b>Sequence</b> – a set of related event, movements or items that follow each other in a set order.</p> <p><b>Test</b> – To try something to see if it works.</p> <p><b>Predict</b> – To make a good guess about something based on information you know.</p> <p><b>Instructions</b> – tells you to do something.</p> <p><b>Order</b> – an arrangement of things</p> <p><b>Perseverance</b> – to try something over and over again until you get it right</p>	<p>The word repeat means to do something again.</p> <p>Some activities have to be done in a certain order.</p> <p>That instruction’s need to be followed in a set order.</p> <p>‘Thinking aloud’ helps them to plan how to do something and the order in which they will do it.</p> <p>Breaking bigger activities down into smaller steps helps to plan how to do something.</p> <p>Taking turns is important when working with other people</p> <p>You can try and guess what might happen next.</p>	<p>Some objects have features that are the same.</p> <p>That a repeating pattern means that a pattern is repeated in the same way again and again.</p> <p>They need to check what they are doing to make sure that they are doing it the right way.</p> <p>If an activity goes wrong, they can think about the different parts of the activity and plan to do something different next time.</p> <p>That taking turns means that everyone in a group gets to do something</p> <p>That making a prediction means it is a ‘good guess’.</p>	<p>Describe some of the features of different objects</p> <p>Can create different repeating patterns with variable rules and talk about how the pattern repeats.</p> <p>Use the words ‘First’, ‘next’ and ‘end’ or ‘finally’ appropriately when describing a repeating pattern.</p> <p>Can predict what comes next in a repeating pattern.</p> <p>Can give reasons for how and where they placed something in a repeating pattern.</p> <p>Can evaluate a repeating pattern and find errors in it and correct them.</p> <p>Can use ‘first’, ‘next’, ‘Then’ ‘at the end’ and ‘finally’ when describing a set of instructions.</p> <p>Make a prediction or good guess based on things they know.</p> <p>Show perseverance if something goes wrong or doesn’t work.</p> <p>To take turns in a group</p>

# St Anne's C of E Primary School Curriculum Plan

Subject: Computational thinking

Year: EYFS

Term: Summer Term



Unit: Boats Ahoy and Summer Fun



## What is Computational Thinking?

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## Links to EYFS curriculum areas:

- **ELG – Listening Attention and Understanding** – Make comments about what they have heard and ask questions to clarify their understanding
- **ELG – Speaking** - Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate.
- **ELG – Creating Materials** – Safely use and explore a variety of materials, tools and techniques, experiments with colour, design, texture, form and function.
- **ELG – Creating with Materials** – Make use of props and materials when role playing characters in narratives and stories.
- **ELG -Fine Motor Skills** – Use a range of small tools, including scissors, paintbrushes and cutlery.
- **ELG – Building Relationships** – Work cooperatively and take turns with others
- **ELG – Expressive Arts and Design** – Share their creating, explaining the process that they have used.
- **ELG – Expressive Arts and Design** – Develop storylines in their pretend place.

## Development Matters – Specific Areas

- **Maths** – Count objects, actions and sounds and compare numbers.
- **Clang** – Use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen

**Playing and Exploring** – Plan and think ahead about how they will explore or play with objects.

**Creating and thinking critically** - Review their progress as they try and achieve a goal. Check how well they are doing.

- Know more so feel confident about coming up with their own ideas.
- Make more links between those ideas.

	Children will know (that).....	Children will understand (that).....	Children will be able to.....
<p><b>Features</b> – the structure, form or appearance of something.</p> <p><b>Organise</b> – to arrange things or order things so that they can be found quickly</p> <p><b>Groups</b> – a set of things placed together because they have something in common.</p> <p><b>Compare</b> – looking to see what is the same about two things.</p> <p><b>Same</b> – something that is exactly like something else.</p> <p><b>Different</b> – two things that have features that are not alike</p> <p><b>Test</b> – To try something to see if it works.</p> <p><b>Predict</b> – To make a good guess about something based on information you know.</p> <p><b>Prove</b> – to use facts to find that something is true</p> <p><b>Perseverance</b> – to try something over and over again until you get it right</p>	<p>Different objects have different features.</p> <p>Know the name of some features, size, colour, shape etc.</p> <p>You can put objects that are the same into a group to organise them.</p> <p>You can make a good guess about what might happen and that this is called prediction.</p> <p>‘Thinking aloud’ helps them to plan how to do something and the order in which they will do it.</p> <p>Breaking bigger activities down into smaller steps helps to plan how to do something.</p> <p>Changing something can improve it.</p> <p>Taking turns is important when working with other people</p>	<p>Some objects have features that are the same and some features that are different.</p> <p>That objects can be organised into different groups.</p> <p>That each group has objects in that have one or more features that are the same.</p> <p>That predictions are based on what we know and what we think might happen based on our experience.</p> <p>That taking turns means that everyone in a group gets to do something</p> <p>That making a prediction means it is a ‘good guess’.</p> <p>Things we make and do can always be improved to make them even better.</p>	<p>Describe some of the features of different objects using increasing varied vocabulary.</p> <p>Describe what is the same and different between two objects.</p> <p>Start to organise objects into groups, verbalising the reasons why they have chosen to group them.</p> <p>Find new and different ways to organise the same objects.</p> <p>Can predict what might happen and say why</p> <p>Can give reasons for how and where they placed something in a group.</p> <p>Express changes they might make to something to improve it.</p> <p>Show perseverance if something goes wrong or doesn’t work.</p> <p>To take turns in a group</p>

