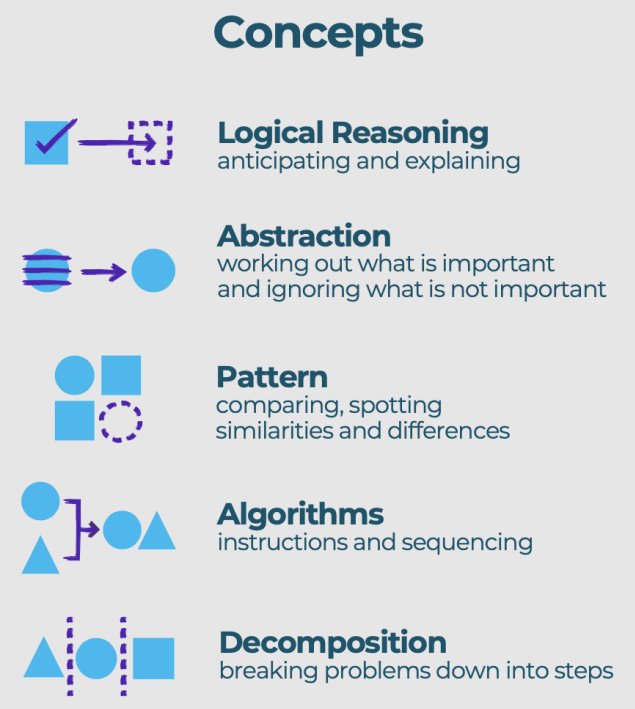
St Margaret's Academy

Computing in the Early Years Foundation Stage

Computing and technology are still vitally important subjects to deliver to Reception children. We want our children to enter Year 1 with a strong foundation of knowledge and will also ensure that children develop listening skills, problem-solving abilities and thoughtful questioning. In the Early Years, we use the resources from 'Barefoot Computing' based around computational thinking concepts and approaches.

What is Computational Thinking?

'Computational Thinking' is a set of problem-solving skills that we can use in everyday life.



Cross-reference of the EYFS Computational Thinking to Characteristics of Effective Learning

	Playing and Exploring	Active Learning	Creating and thinking critically
Tinkering	✓	✓	
Creating			✓
Collaboration			
Persevering	✓	✓	
Logic	✓		✓
Pattern	✓		✓
Abstraction	✓		✓
Algorithms and decomposition	✓		✓

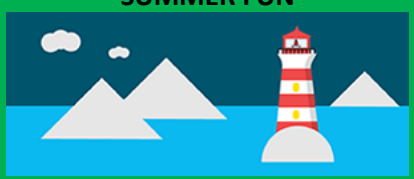
Cross-reference of the EYFS Computational Thinking concepts to the Prime Areas of Learning

	Communication and Language		Personal, Social and Emotional Development			Physical Development	
	Listening, Attention and Understanding	Speaking	Self-Regulation	Managing Self	Building relationships	Gross Motor Skills	Fine Motor Skills
Tinkering						✓	✓
Creating						✓	✓
Collaboration	✓		✓	✓	✓		
Persevering	✓			✓			
Logic	✓	✓					
Pattern	✓	✓					
Abstraction	✓	✓					
Algorithms and decomposition	✓	✓					

Cross-reference of the Early Years Computational Thinking concepts to the Specific Areas of Learning

	Literacy			Mathematics		Understanding the world			Expressive arts and design	
	Comprehension	Word Reading	Writing	Number	Numerical Patterns	Past and Present	People, Culture and communities	The Natural World	Creating with Materials	Being imaginative and Expressive
Tinkering									✓	✓
Creating								✓	✓	✓
Collaboration						✓	✓		✓	
Persevering										
Logic	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pattern	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Abstraction	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Algorithms and decomposition	✓	✓	✓	✓	✓	✓	✓	✓	✓	

EYFS Overview of Units

Term	Unit	Curriculum links	Concepts and approaches
Autumn	**AWESOME AUTUMN** Three Autumn themed activities which see the children explore patterns in Garlands Galore, create a leaf labyrinth and make Pumpkin Soup using computational thinking skills.	Early Years	Creating, Pattern, Logic, Algorithms, Decomposition, Collaborating
Spring 1	**BUSY BODIES** Provides four activities that help children discover how bodies move and grow. Using the resources provided they explore and learn about parts of the body, growth and movement. Simple algorithms are created and adapted to form a routine of movements.	Curriculum Links: PSHE, English, Science	Algorithms, Decomposition, Debugging, Logic, Patterns, Abstraction
Spring 2	**BOATS AHOY** Takes children on a journey of discovery as they investigate boats. Four activities make up this set of resources. Includes different uses of boats, floating and sinking predictions, creating a good boat through exploring designs and role play.	Science, Maths, English, D&T	Algorithms, Decomposition, Creating, Tinkering, Logic, Patterns, Abstraction, Collaborating
Summer	**SUMMER FUN**  Children explore their surroundings and get creative, take a journey and make a map, and discover seaside tangrams, in these three fun activities.	Science, Maths, English, D&T	Tinkering, Persevering, Patterns, Logic, Decomposition, Debugging, Collaborating, Algorithms