

L Patterns

Stage	Strand	Strand Unit
2	Algebra	Patterns, Rules and
		Relationships

Learning Outcomes	Maths Concepts
 Through appropriately playful and engaging learning experiences, children should be able to identify and express relationships in patterns, including growing or shrinking shape patterns and number sequences. 	 Quantitative change in growing and shrinking patterns is consistent and predictable. We can describe the structure of a growing or shrinking pattern, in word or number sentences, and use our
	description to predict future terms

Learning Maths

This learning experience asks learners to identify and express relationships in a growing pattern. First learners observe the pattern and identify what is changing and what is staying the same. They use this information to extend the pattern.



Understanding and Connecting	Communicating	Reasoning	Applying and Problem Solving	
The learner				
Quantifies the change in the number of squares in the growing pattern.	Describes the change in the number of units in the growing pattern.	Analyses the growing pattern to identify the relationship.	Copies and extends increasingly complex patterns, using a range of manipulatives and/or pictures/ symbols.	



Teaching Maths				
Fostering Productive Disposition		Encouraging Playfuln	ess with Mathematics	
Celebrate the learners' effort and success		Introduce and reinforce	the mathematical	
while completing the learning experience.		language of patterns as	it arises eg pattern,	
		growing pattern, repeati	ng, changing, etc	
Provide choice for learners on how they				
engage with the task, e.g. group size,		Provide a variety of mat	erials for learners to	
materials, representing their thinking.		explore and investigate	the growing pattern.	
L	Emphasising Mathematical Modeling			
	Encourage learners to develop their own			
	models and representations to record the			
	changes in the pattern, in a way that makes			
	sense to them.			

Allow learners to describe the growing pattern in a variety of ways e.g.

- Orally
- Written with words (Every time the L gets bigger, I add on two squares)

Using Cognitively Challenging Tasks	Promoting Maths Talk
Provide learners with time to delve deeper into	Provide a safe environment for children to
the task and solve it in a variety of ways.	share and exchange thinking and ideas.

Assessing Maths

- Can learners identify what is changing and staying the same as the L gets bigger?
- Can learners write a rule to describe the growing pattern?
- What was the learners' attitude while completing the task?

Source

Adapted from https://nzmaths.co.nz/resource/staircases





How many blocks are in a 4-L? How many blocks are in a 5-L? What do you notice about the pattern in the Ls? What is the largest L that you can tell us about?