

More About Math

Investigating Patterns

Background for Leaders

This unit focuses on pattern skills for 4-5 year olds. Children will learn that patterns consist of a “core” or “unit” that repeats as they identify, complete and create patterns.

Patterns

A pattern is anything that repeats in a certain order, such as sounds (clapping, stomping, humming), colors, shapes, numbers, animals. Children should have time to create their own patterns and work with patterns in order to build their problem solving and reasoning skills, reinforce math vocabulary and build connections among math concepts. Children at this age should learn to create, identify, and complete patterns. As they investigate patterns in this unit, children will learn related vocabulary, including: **pattern, core or unit of the pattern, identifying patterns, completing patterns, extending patterns, repeating patterns, and growing pattern.**

Identifying Patterns

Children establish the core unit of the pattern.

- This is an AB pattern. The core unit is made up of two items that repeat one after another.



- This is an ABB pattern. The core unit is made up of two shapes; for every repetition of the square there are two triangles.



- This is an ABAC pattern, the core unit is made up of three shapes and the circle repeats within the core unit.



Completing Patterns

Children identify what item is missing from the pattern.

- Children complete this pattern by adding a butterfly.

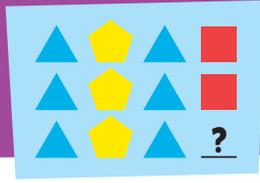


- In this simple AB pattern, two items are missing in the middle of the pattern which makes this problem more challenging for children. Children complete the pattern by adding a strawberry or banana in the appropriate space.





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Extending Patterns Children identify what comes next in the pattern.

- Children can extend this AAB pattern by adding a circle and a triangle.



Growing Patterns Once children have mastered identifying, creating, and completing patterns they can be challenged to build on growing patterns.

- In this example of a growing pattern for each repetition of the turtle another bird is added to the core unit.



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