

FAMILY MATH

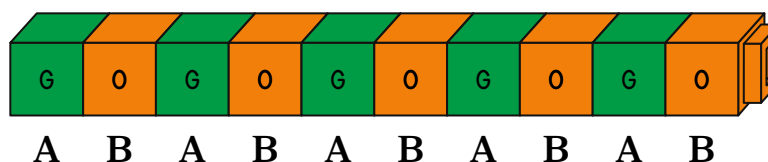
Make Use of Structure

Dear Family,

Students build an understanding of structure by studying and naming patterns. For example, green-orange, green-orange can be described as an AB pattern. Students demonstrate their understanding by recreating the same type of pattern with different materials. When analyzing patterns, students are likely to perceive them in different ways. This provides an important opportunity to share multiple perspectives, a theme that will carry throughout their mathematics learning.

Words We Are Learning

Pattern



This green-orange pattern is an example of an AB pattern.

At-Home Activities

Activity Idea 1 Pattern Hunt

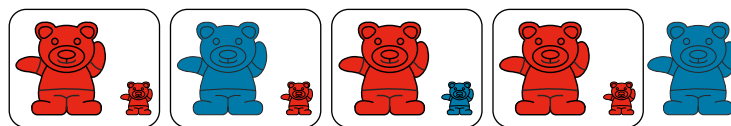
Invite your child to help you hunt for patterns. Consider patterns that are in and outside of your home. Children may notice patterns in colors, shapes, or design. As your child points out a pattern, pause to ask them how they see it. Consider highlighting that people see things differently and acknowledge their viewpoint.

Activity Idea 2 Match My Pattern

Build a pattern using household items, such as dried beans and pasta. It might look like this: bean-bean-pasta, bean-bean-pasta. Ask your child to study the pattern and to use other items to show the same pattern. They might recreate the pattern using coins, such as, penny-penny-dime, penny-penny-dime.

Patterns

Students learn that a pattern is something that repeats and can help us know what will happen next. In the example below, students might see a color or size pattern (i.e., big-small, big-small or red-red-blue, red-red-blue).



As students replicate a pattern with different items, they discover mathematics is built on structure, not physical appearances. As their learning progresses, students can use repeated reasoning to recognize patterns in a story context. For example, by solving a series of problems, students might notice, *When there are 5 children in the bouncy house, there are 10 shoes outside. When there are 6 children, there are 12 shoes. And when there are 7 children, there are 14 shoes.* The pattern can be used to efficiently solve the next problem, *How many shoes will be outside the bouncy house when there are 8 children?*

Children	Shoes
5	10
6	12
7	14

Students may notice that when 1 more child goes into the bouncy house, the number of shoes goes up by 2 (or the number doubles). 5 and 5 is 10. 6 and 6 is 12. Students can use these patterns to solve the next problem (8 children in the bouncy house) by either adding 2 to the number of shoes or by doubling 8.