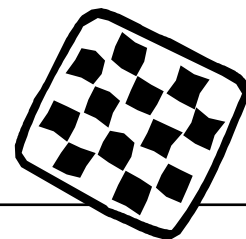


Pattern Families



Sort the patterns into similar “families.”

What you need

Examples of patterns on strips of paper
Stickers
Glue or tape

Various stamps and ink pad
Buttons and or other objects
Blank strips of paper

What to do

1. Copy and cut out the patterns on the next page.
2. Sort the patterns into “families”—groups that have the same pattern, just with different symbols.
3. For example, a pattern with two triangles followed by two squares goes into the same family as a pattern with two hearts followed by two stars. They are both two of one shape followed by two of a second shape, then back to two of the first shape. Even though they appear different, they have the same pattern:
▲▲■ ■▲▲■ ■ is the same pattern as ♥♥★ ★♥♥★ ★
4. Use the stamps, stickers, and buttons to create your own patterns that will fit into each family.

What to ask

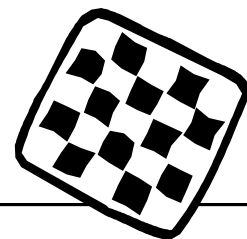
- Why do you think these patterns go together?
- How many different groups of pattern do you have?
- How are these patterns the same?
- How are these patterns different?
- How did you decide to make your pattern?
- What was hard about making your pattern?
- Can you describe your pattern without naming the objects? How?



Did you know?

Patterns are all around us and generalizing those patterns is one way of building algebraic understanding. For instance, a pattern that repeats red, blue, red, blue is algebraically the same as green, red, green, red. One way children can talk about these patterns is to sort, group and copy other patterns as well as make them for themselves.





What's next?

- Create a pattern not in any of the families already made.
- Make several new patterns and then sort them into families.
- Name each pattern family

To learn more

Pattern

by Henry Arthur Pluckrose

A picture book containing brilliantly colored photographs that have patterns. The pictures provide opportunities to discuss repeating core patterns and other patterns.

How it helps with school

Texas PreKindergarten Curriculum Guidelines

Patterns

Texas Essential Knowledge and Skills (TEKS) Standards

Patterns, Relationships, and Algebraic Thinking: K.5, K.6A; 1.4A; 2.6C

Underlying Processes and Mathematical Tools: K.13C, K.15; 1.11C, 1.13; 2.12C, 2.14

National Council of Teachers of Mathematics (NCTM) Standards

Algebra, Problem Solving, Reasoning and Proof, Communication

Activity inspired by: Elementary and Middle School Mathematics, John A. Van de Walle, (2001)

Pattern Families

