



Playing with Patterns



The purpose of this activity is to explore math concepts using a playful approach. In this activity, you will search for patterns and use symbols to represent the patterns. Then, you will reflect on how it felt to engage in this playful math learning experience.

Key Concepts

- Engage in a playful learning experience with math in your everyday environments.
- Explore patterns by finding or creating a sequence of repeating items, such as objects, shapes, or numbers.
- Practice symbolic representation by using symbols to stand for something else. Examples of symbols include icons, colors, shapes, numbers, and actions.

Materials and Setup

- Paper (optional)
- Crayons, coloring pencils or markers (optional)



10–15 minutes



Individually, pairs



In-person or virtual professional learning





Activity Instructions

1. Reflect by yourself or discuss with a partner what comes to mind when you think about the word “pattern.” Consider how patterns are present in your cultural background or practices.
2. Move around your environment. Observe and feel different objects and surfaces, such as tiles, tables, chairs, or baskets. Notice the lines, shapes, colors, and textures that you observe and feel.



- Find a pattern or create one with items, such as pens and paper.
- Describe the pattern you found or created and what makes it a pattern.
- Represent the pattern you found or created using symbols. Use different kinds of symbols, such as numbers, hand signals, movements, sounds, shapes, letters, colors, or other representations. (Note: The chart below shows some ways to represent patterns using shapes, sounds, hand signals, and letters.)
- Use a second set of symbols to represent the pattern you found or created.

Table. Examples of patterns, pattern descriptions, and symbolic representations of the pattern

Object	Describe the pattern	Represent the pattern using two sets of symbols
Fabric curtain 	White fabric with an orange geometric zigzag pattern that moves up and down	Shapes:  Sounds: BeepBop ... BeepBop ... BeepBop
Beaded bracelet 	Four pink beads, a silver bead, four blue beads, a silver bead, four white beads, and a silver bead (then repeat)	Hand signals:  Letters: AAAABCCCCBDDDDDB ...

Reflect and Discuss

Reflect on and discuss the following questions with a partner or in a small group:

- In what ways was this experience playful?
- Did this experience feel like a math activity? Why or why not?



Activities for Children

For activities that support children's learning about patterns, explore the books below and the related activities.

- **0 to 3 years:** [Press Here](#) (or [Presione aquí](#) in Spanish) by Hervé Tullet and the activity [Press Here](#) (or [Presione aquí](#) in Spanish)
- **3 to 5 years:** [Pattern Bugs](#) (or [Errores de patrones](#) in Spanish) by Trudy Harris and the activity [Bug Patterns](#) (or [Patrones en Todas Partes](#) in Spanish)
- **6 to 8 years:** [Six Dinner Sid](#) (or [Sixto seis cenas](#) in Spanish) by Inga Moore and the activity [A Day in Sid's Life](#) (or [Un día en la vida de Sid](#) in Spanish)

