

Patterns at a Glance

What Are Patterns?

Patterns are predictable repetitions. You can see, hear, or act out a pattern when sights, sounds, or movements repeat in predictable ways.

Examples:

- **Colors:** blue, red, purple, blue, red, purple
- **Shapes:** triangle, triangle, square, triangle, triangle, square, triangle, triangle, square
- **Sounds:** clap, snap, clap, snap, clap, snap
- **Objects:** car, truck, car, truck, car, truck
- **Motions:** jump, squat, turn around, jump, squat, turn around, jump, squat, turn around

A pattern unit is the core part of the sequence that repeats. In these examples, notice how the pattern unit (for example, car, truck) repeats two or more times. This is because it takes at least two complete repetitions of a pattern unit to be able to identify what the pattern unit is and what comes next.

Why Is Learning About Patterns Important?

Learning simple, repeating patterns helps us identify patterns in our world, such as the seasons, life cycles, and base-10 number system. Patterns help us predict what will happen, such as what day comes after Tuesday. The ability to work with and create patterns can help children learn algebra and more advanced math when they are older.

What Do Children Need to Know About Patterns?

Children need to know how to:

- **Recognize patterns:** “I see a pattern!”
- **Describe patterns in words:** “The pattern is spoon, fork, fork, spoon, fork, fork.”
- **Copy patterns that someone else has made.**
- **Fill in missing parts of patterns:** “The pattern goes red, yellow, green, red, yellow, green, red, yellow ... What comes next?”
- **Recognize equivalent patterns:** “This blanket with red and blue stripes has the same pattern as that one with green and white stripes.”
- **Extend patterns:** “We need a blue block next.”
- **Create their own patterns with objects, movements, or sounds.**

How Can We Help Children Learn Patterns?

Talk About Data Throughout the Day

- Try to use the word pattern only when it is a true pattern, with at least two complete pattern units repeating.
- Ask what parts repeat and predict what comes next.
- Offer a variety of patterns and identify them with abstract labels, such as ABBABB or ABABAB.

Ideas for Exploring Patterns During:

Centers/Small Groups

Pattern Bridge: Children learn to recognize and extend patterns as they add and remove pattern units using blocks or tiles to complete a bridge.

Math Moments

Line Up in Patterns: The teacher gives each child a card with a shape, object, or color on it and has students line up in a pattern based on their cards (for example, alternating squares and triangles).

How Can We Support Learning About Patterns at Home?

Encourage families to:

- **Discuss the patterns on clothing:** For example, blue stripe, yellow stripe, blue stripe, yellow stripe.
- **Arrange food on a plate in a pattern and predict what comes next:** For example, carrot, celery, celery, carrot, celery, celery.
- **Create patterns with movements and have their child repeat the pattern and create one of their own:** For example, clapping, patting head, and jumping.



The pattern unit is the part of the pattern that repeats over and over again. There are two pattern units shown here.