IES Institute of Education Sciences

Everyday Math: Shapes and Patterns

Regional Educational Laboratories Appalachia, Central, Northwest

From the National Center for Education Evaluation at IES

This activity will teach early geometry and patterns. Although numbers may be the first things that come to mind when you think about math, shapes and patterns are also a part of math. Teach your child the names of different shapes—circles, triangles, squares, and rectangles—and then see how many of them you can find in books and out in the world or when using shapes to make patterns.

Learning Goal: Help children learn shapes and patterns (early geometry).

Age Range: 5–7 years old

Materials:

1. Paper and markers/crayons
2. Books
3. Your world around you
4. Shape blocks or other household items (or use virtual shape blocks, e.g., https://apps.mathlearningcenter.org/pattern-shapes/)

Activity Instructions

1. Teach your child the names of different shapes (such as circles, triangles, squares, and rectangles) by drawing them on paper together and practicing with your child.
2. See how many of these shapes you can find in books and out in the world. Ask your child to find a shape (for circles, try wheels or tires; for squares or rectangles, look for sidewalk sections, windows, or doors; for triangles, look for roofs of buildings and swing sets). If that seems easy, ask them to find another of that kind of shape in a different size.
3. Practice these shapes by making different patterns with shape blocks or other household items such as dried pasta, beans, or coins. Have fun creating patterns with your child and seeing how long you can go before you run out of patterns.

Supporting your child

Here are some suggestions for you as you teach your child about geometry and patterns:

- A really powerful idea is that shapes have the same name even when they're upside down, lying on their sides, big or small. For example, triangles always have three corners even if they're long and skinny, or short and wide.
- You can teach older children additional vocabulary, such as sides and angles, as they learn more complex shapes, like octagons, which have eight sides.

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