HOME ACTIVITY

Sid the Science Kid: Searching for Symmetry

What's The Point

Folding paper cutouts and using mirrors to investigate lines of symmetry are engaging ways for children to develop concepts of geometry and spatial sense.

This Activity Will Help Your Child

- Understand symmetry
- Practice putting matching halves of an item together

Book Suggestions

- ***IS IT SYMMETRICAL?***
  by Nancy Kelly Allen
- ***LET'S FLY A KITE***
  by Stuart Murphy

Supplies

- 4 sheets of paper (8.5 x 11)
- Child-safe scissors
- String

How Do I Do It?

1. Make 4 paper snowflakes by folding each sheet of paper in half and then in half again (for a more complex pattern fold it a third time). Cut out a series of shapes, such as triangles and semi-circles, along the edges of the folded paper. You can also round the corners if you want. Vary the shapes you cut out to make each snowflake as different as possible.
2. Unfold the pieces of paper to reveal your snowflakes.
3. Ask your child to look at the snowflakes and tell you what she sees. What is different? What is the same?
4. Tell your child that the folded line down the center of each snowflake is called a "symmetry line," and explain that "symmetry" is when the two sides of something match up when you fold the object in half. Show your child that this is true of the snowflakes – each half of a snowflake is exactly the same as the other half. Mention that other things in nature (like butterfly wings) also have symmetry.
5. Cut each snowflake in half along the shortest center fold to produce 8 half snowflakes.
6. Mix up the snowflake halves and ask your child to match them back up.
7. Tape the snowflakes back together again, put a string through the top of each one, and hang them in a window. It's snowing!

Take It Further

Show your child other symmetrical objects around the house, such as a fork. Place a hand mirror along the line of symmetry of the fork and ask your child what he sees. (The whole fork appears in the mirror because the mirror image of the one half is identical to the other half, making it appear that you are looking at a reflection of the entire fork.)
Tell your child that faces are symmetrical. Ask him to explain why (both sides are identical; they have an eye, an ear, half a mouth and half a nose).
Show the difference between an object that is symmetrical (e.g., a soda bottle) and one that is not (e.g., a mug with a handle).

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