



Papel Picado

THIS IS ABOUT

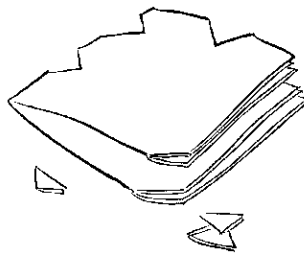
- Δ symmetry
- Δ using scissors
- Δ folding paper

YOU WILL NEED

- Δ scissors
- Δ clear tape
- Δ string
- Δ tissue paper (the kind that is used for gift-wrapping), recycled gift wrap or wax paper

ACTIVITY

1. Cut a sheet of tissue paper into a rectangle about eight inches by eleven inches, or if you like, it can be a smaller rectangle.
2. Fold in half (in any direction).
3. Fold it in half again (in any direction).
4. Fold it in half one more time.
5. Try cutting tiny triangles at intervals along one side, like this:

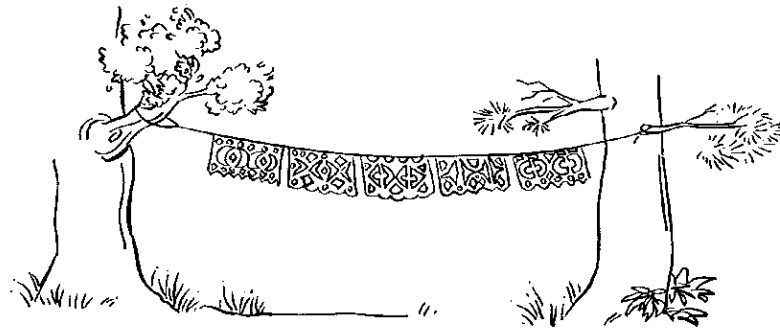




6. Make some more cuts. Experiment by cutting out other shapes like half circles, or half diamonds. Try combining different shapes.
7. Unfold the paper and see what wonderful designs you have created! Tape your papel picado on some string and hang it up.

In many Latino communities papel picado is used as decoration for birthday parties, *tardeadas* (afternoon get-togethers) and other special events.

Some papel picado has cut-out shapes: birds, suns, moons, and stars.



How can you find out if your papel picado is symmetrical?

INSIGHT

Younger children (four and five year-olds) may cut paper without folding it. They may begin by cutting short random pieces as they learn to control the scissors. In this case, start a collection of cut-ups. Revisit it when your child is in first or second grade. Children like to compare their present work to their “when I was a little kid” work.



Copy-Cats

THIS IS ABOUT

- Δ symmetry
- Δ spatial reasoning
- Δ using scissors

YOU WILL NEED

- Δ some blank sheets of paper or the grid paper
- Δ paste, scissors
- Δ some cut-out shapes in different colors or designs, beans, or small macaroni

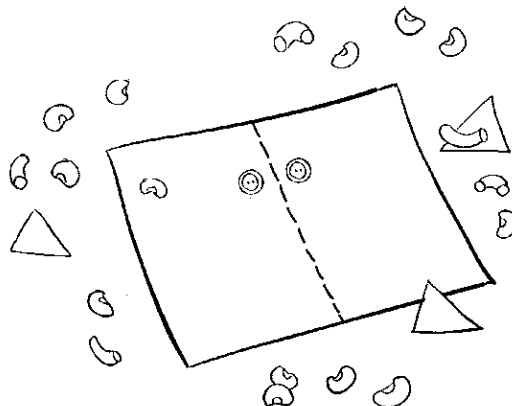
GETTING READY

Fold your paper in half. Each partner chooses a side that will be their space.

Share the shapes or items between the two partners so that each person has an identical set of items. For example, each person should have the same kind and number of red triangles, pinto beans, elbow macaroni, and so on.

ACTIVITY

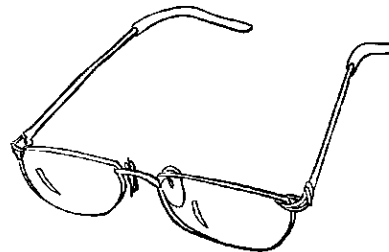
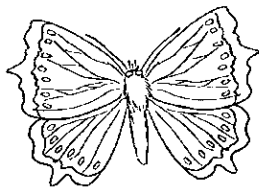
1. Have your child place a shape anywhere on her side of the paper. You copy by placing an identical shape (and color) on your side.





2. Continue taking turns and copying until you've taken five turns each, or until you think you have enough things on your page.
3. Once you think that your sides "match," paste or glue the objects to the paper.
4. How closely did your partner copy your design? How can you find out?
5. Try it again. This time you go first.

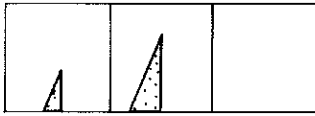
Can you and your child think of some things that already look the same on both sides? This is called "symmetry."



INSIGHT

Be the copy-cat first. This way, you provide a model for your child. Let your child choose which work should be displayed. Ask questions about why that particular piece was chosen. This is the beginning of children looking at their own work and learning to make decisions about what they like or do not like about it.

Simple Symmetries



Grade Level

TOOLS

- Paper (some colored)
- Paint
- Scissors
- Crayons
- Paste
- Old magazines
- Cloth or wallpaper scraps

Why

To help young children develop an understanding of bilateral symmetry and a sense of geometric patterns

- ▶ *Bilateral symmetry shows the same pattern arranged symmetrically on two sides of a center line or axis.* ◀

How

Help your child follow the directions for each design.

Blob Pictures

- Fold a piece of paper in half.
- Open it up and drop a blob of paint on one side.
- Fold it in half again and press.
- Open it up to see the design that has been made.



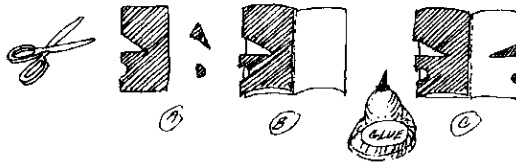
Cut Outs

- Fold a paper in half and cut a shape out along the fold.
- Guess what the shape will look like when the paper is opened.
- Paste the paper on another sheet to display the design.



Flip Flop

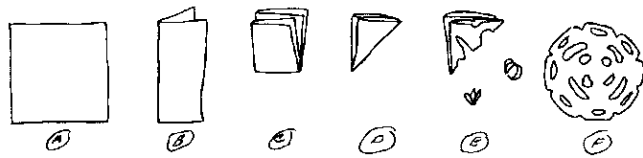
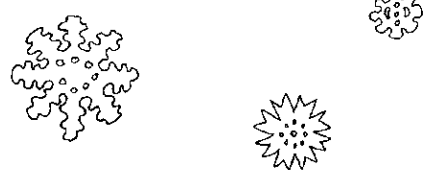
- Cut several shapes out of the edge of a paper.
- Paste the paper onto another piece that is twice as long.
- Then take the pieces cut out, fit them into their original holes, and flip flop them to the other side so that they make a reverse design. Paste them into place.





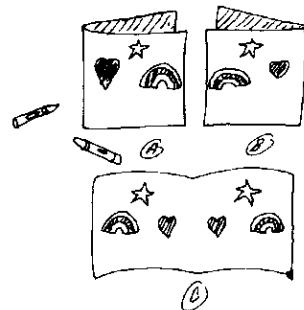
Snowflake

- Start with a square.
- Fold a square in half.
- In half again.
- In half again, on the diagonal.
- Cut out designs.
- Open the paper and find a snowflake pattern.



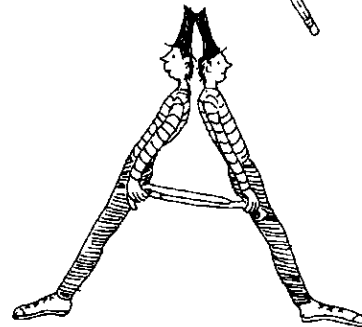
Symmetrical Pictures

- Fold a piece of paper in half.
- Color the same design on both sides so that it is symmetrical.
- To check, open the picture slowly to see if you see the same thing on both sides at the same time.
- If you start drawing from the outside and work in, it will be easier.
- Make your first picture simple.



Alphabet Symmetry

- Think of the capital letters of the alphabet.
- Pick one, say C, and write it backwards. Does it look the same as it did originally?
- Pick another, say D, and write it backwards. Does it look the same?
- What happens with A? A is different, because it is symmetrical—both sides of the letter look the same.
- Go through the alphabet, making a list of the letters that are symmetrical (look the same on both sides) and those that are unsymmetrical (look different when written backward.)



Household Symmetry

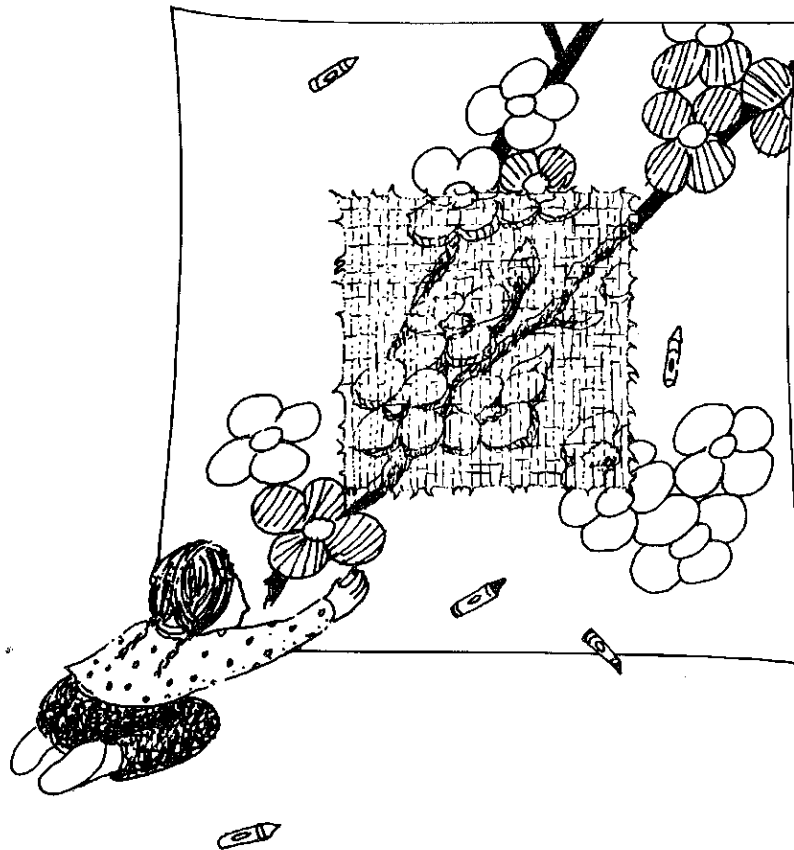
- Look around the house and find objects that are symmetrical. Draw a picture of each one.



Complete the Symmetry

- Cut out pictures of designs from magazines or cut up scraps of wallpaper or cloth.
- Paste each picture in the center of a large piece of paper.
- With crayons or pencil, continue the design of the picture or cloth, until the paper is filled, or the symmetry is completed.

► This activity is especially interesting to watch as young children draw their designs. Many children seem to be looking at the fine details of the picture, while others are seeing the larger whole. Often, children will see things that adults may miss completely. There is no right or wrong way, and children should be allowed to make their own interpretations of the designs. ◀



Create a Puzzle

Why

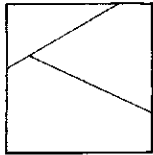
To explore the attributes of geometric shapes by building and solving a sequenced series of puzzles

How

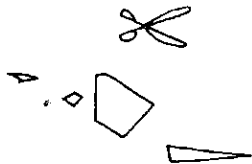
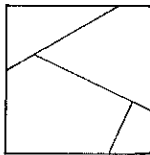
- Start with a square or any other shape you find pleasing.
- Make one straight cut in any direction. For example:



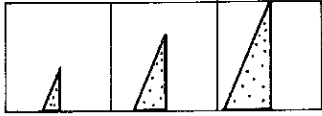
- Make a second cut. For example:



- Fit the three pieces together to make sure you can solve this puzzle.
- Make any third cut. For example:



- Practice with the four pieces, then give your puzzle to a friend to solve.
- Special Note: If you wish to make your puzzle a little easier to solve, color the backs of the pieces differently from the front.



Grade Level

TOOLS

- Scissors
- Cardboard or Heavy paper





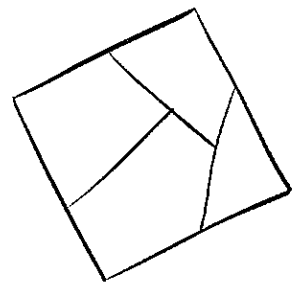
Create A Puzzle Jr.

THIS IS ABOUT

- Δ geometry
- Δ looking at different shapes
- Δ solving puzzles

YOU WILL NEED

- Δ scissors
- Δ cardboard (cereal boxes are great)
- Δ old calendars or magazines
- Δ glue or paste



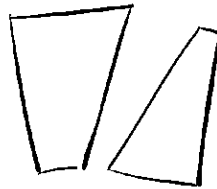
ACTIVITY

1. Cut two six-inch squares from a piece of cardboard, one for each person. If you are using a cereal box, your cardboard squares already have a picture on them; skip steps two and three.
2. Cut two six-inch square pictures from a magazine or old calendar. Make sure the pictures are the same size as the cardboard square.
3. Paste the picture to each square, and let them dry for a few minutes.



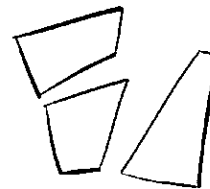


4. Make one straight cut in any direction. For example:

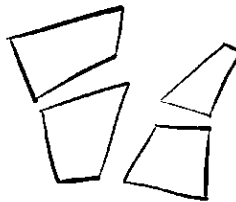


5. Make a second cut:

Fit the three pieces together to make sure you can solve the puzzle.



6. Make a third cut, scramble the pieces, and try putting your puzzle together.



7. Exchange your puzzle with a partner.

For a more challenging puzzle, flip it over to the side with no picture on it.

Note:

Try cutting out two squares from the same calendar picture. This way when you put your puzzle together with your child's, they form a connected picture.

INSIGHT

Exploring the attributes of different shapes by building and solving a puzzle helps children develop their spatial visual skills.