



# Math Box Activities

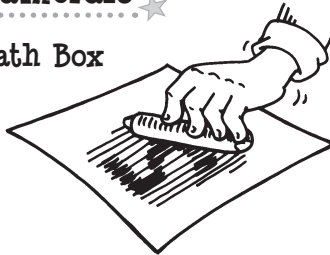
Are you looking for activity ideas that allow children the opportunity to work independently in the math center? If yes, consider making some math boxes. To do this, gather all necessary supplies for each activity and place them in designated plastic, shoe-box size or larger containers. Make a copy of the labels below and on page 23 and cut them out along the dashed lines. Laminate for durability and trim around the edges (optional). Tape the labels to the fronts of the corresponding containers. Place three or four boxes in the math center at a time and rotate the games to keep them fresh and interesting. NOTE: SOME OF THE ACTIVITIES USE SMALL OBJECTS SUCH AS DICE AND BEADS THAT MAY BE A CHOKING HAZARD.



## Sandpaper Numerals

### Packing the Math Box

- Sandpaper numeral cards
- Crayons
- Paper



**Getting Ready:** Using a stencil pattern, copy the numerals 0–9 onto coarse sandpaper by tracing around the shapes and then cut them out. Glue the sandpaper numerals onto heavy cardboard. Optional: Use other kinds of textured papers or materials to make the numeral cutouts.

**How to Play:** Place the paper on a numeral card. Hold a crayon lengthwise and rub it over the paper to reveal the shape of the numeral. Repeat the step with other cards.

## Egg Carton Sort

### Packing the Math Box

- Egg carton
- Large colorful beads
- Dried beans

### Getting Ready:

**For Game A,** paint the bottom section of an egg carton by using a different color in each cup or in as many cups as needed, leaving some unpainted. Place several large beads that match each painted color in a zippered plastic bag for a sort-and-match task.

**For Game B,** in 10 of the cups, draw a set of large dots in the bottom of each for the numbers 1–5, drawing each set twice. Leave two cups blank for zero. Add the corresponding number of dried beans to the cups and then pour the contents into a zippered plastic bag for storage.

**How to Play:** Place the matching colors of beads or corresponding quantity of beans in the cups.

## Sandpaper Numerals

**To Play:** Place a sheet of paper on a numeral. Hold a crayon lengthwise and rub it over the paper to see the shape. Do this again with other numerals.

## Egg Carton Sort

**To Play:** Place the matching colors of beads or the right number of beans in the cups.





# File Folder Game – Home Sweet Home

## Materials

- file folder
- zippered plastic bag
- markers, scissors, tape, and glue
- index cards

## Skill Builders

- sort and classify
- shape recognition

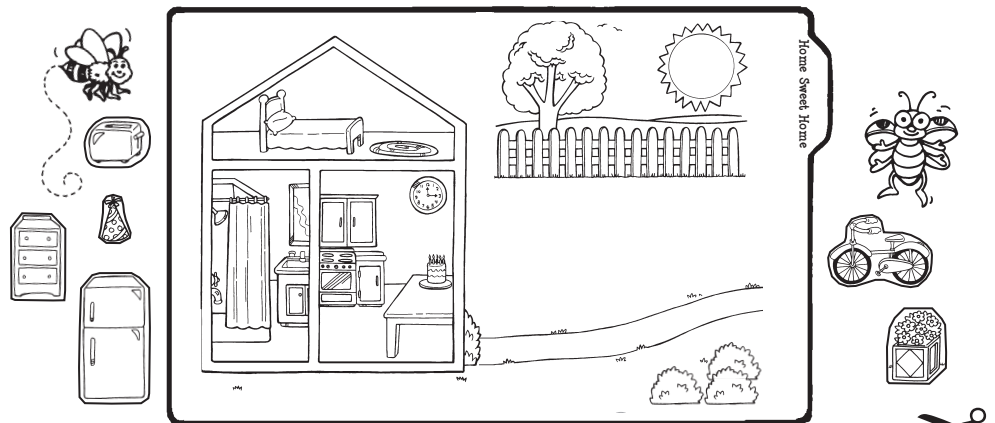
## Extending the Lesson

Choose a few objects for children to sort by shape, such as beach ball—circle, flower box—square, sail on boat—triangle, and so on. Have children sort the objects on the back of the file folder.



## Getting Ready

1. Make a copy of this page and the patterns on pages 28–31. Copy on colored paper or use white paper and then color the scenes and individual objects as desired. Cut out each object separately. Cut out the “To Play” instruction box and the file-folder name tags found on this page.
2. Laminate the objects and trim around the edges (optional). Place them in a zippered plastic bag along with a ball of sticky-tack adhesive (optional). Tape a name tag to the front of the bag.
3. Open the folder and orient it so that the tab is on the right. Glue a name tag onto the tab to identify the game.
4. Trim the copies of pages 28 and 29 as desired. Then, glue the house scene on the left panel and the yard scene on the right.
5. After closing the folder, glue the “To Play” instruction box on the front panel.
6. On the back panel of the closed folder, draw four simple shapes and boxes for sorting the objects into groups: circle, square, triangle, and rectangle.
7. Optional: Laminate the entire file folder for durability. Trim around the edges.
8. Staple the plastic bag with objects to the outside of the file folder.
9. Optional: Before children place the objects in the scenes, show them how to use the sticky-tack adhesive to arrange the objects on the file folder.
10. Prior to playing the game, have each child draw family members on two index cards. After coloring and cutting out the drawings, have the child place those family members in their favorite places in the house and yard.



## To Play

1. Take the pieces out of the bag.
2. Look at the house and the yard.
3. Place each object in its proper location.
4. Place the drawings of family members in their favorite places in the scene.





# File Folder Game – Catching Bugs

## Materials

- 2 game markers
- colorful card stock
- colorful file folder
- standard die
- zippered plastic bag
- watercolor markers, scissors, tape, and glue

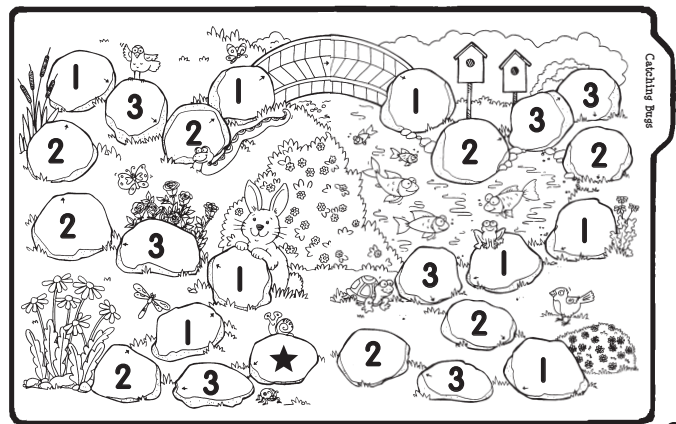
## Skill Builders

- counting up to 10 or higher
- counting up to 20 and by 5s (Game B)



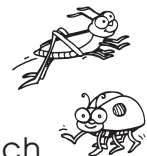
## Getting Ready

1. Make a copy of this page and pages 36–38. Copy the pages onto colorful paper or use white paper and then color the game board scene and individual bugs as desired. Also, if interested in having children count up to 20, make two copies of pages 25 on colorful card stock for Game B, one copy for each player. Cut out the bugs along the dashed lines. Cut out the “To Play” instruction box and the file-folder name tags found on this page.
2. Laminate the bug cards and trim around the edges (optional). Place them in a zippered plastic bag. Tape a name tag to the front of the bag.
3. Open the folder and orient it so that the tab is on the right. Glue a name tag onto the tab to identify the game. Trim around the game board scene pieces as desired. Glue the two game board pieces to the file folder so that the borders overlap at the center of the fold, making the path one continuous loop through the garden.
4. For Games A and B, print the numerals 1–3 randomly on the stones.
5. After closing the folder, glue the “To Play” instruction box on the front panel.
6. Optional: Laminate the entire file folder and the bug jar mats (if playing Game B) for durability.
7. Staple the plastic bag with bugs to the outside of the folder.
8. For Game B, show the players how to place the collected bugs on their Bug Jar Mats, arranging only five bugs on each jar. The first player to collect 20 bugs altogether is the winner.



## To Play (Partner Game)

Take the bugs out of the bag. Place your game marker on the ★. Take turns rolling the die and moving the same number of spaces as shown. Each time you stop on a stone, read the number and then collect the same number of bugs.



**Game A:** Go around the path once. Count your bugs.

**Game B:** Place the collected bugs in the jars on your mat. Only 5 bugs can be in each jar. The first player to “catch” 20 bugs altogether is the winner.



# File Folder Game – Shape Factory

## Materials

- file folder
- colorful card stock
- zippered plastic bag
- markers, scissors, tape, and glue

## Skill Builders

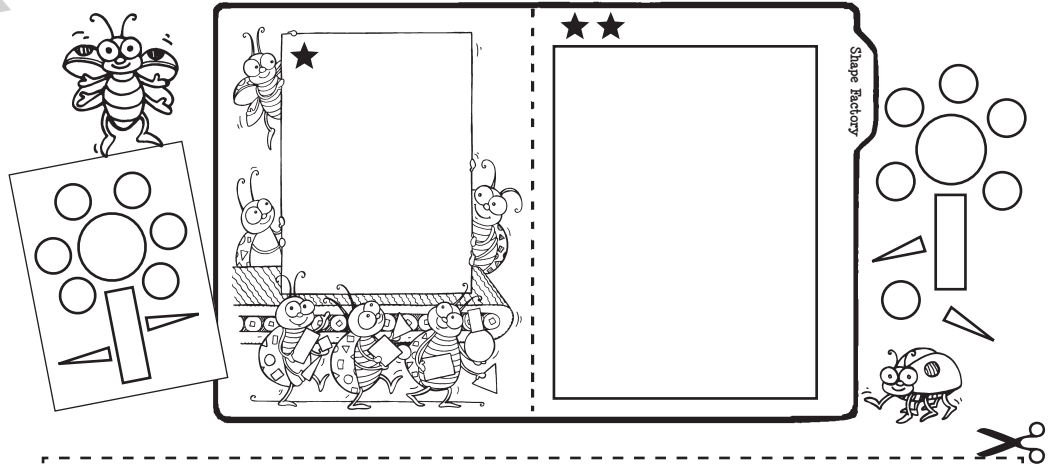
- shape recognition
- one-to-one matching

## Extending the Lesson

Have children make their own shape pictures on the file folder and then draw those figures in a little book. See pages 9 and 10 for book-making ideas.

## Getting Ready

1. Make one copy of this page and the Shape Factory Scene pattern on page 40 and one copy of pages 42 and 43. Copy the pages on colored paper or use white paper and then color the Shape Factory Scene as desired. Make four or five copies of the shapes on page 41 on colorful card stock. Cut out each shape separately. Cut out the “To Play” instruction box and the file-folder name tags found on this page.
2. Laminate the shape pieces and trim around the edges (optional). Place them in a zippered plastic bag along with a ball of sticky-tack adhesive (optional). Tape a name tag to the front of the bag.
3. Open the folder and orient it so that the tab is on the right. Glue a name tag onto the tab to identify the game.
4. Trim around the factory scene as desired. Glue the scene on the left panel. Draw one star on the left panel. On the right panel, draw two stars and a large box to indicate where the shape picture will be made.
5. After closing the folder, glue the “To Play” instruction box on the front panel.
6. Optional: Laminate the entire file folder for durability. Trim around the edges.
7. Staple the plastic bag with shape pieces to the outside of the file folder.
8. Optional: Before children make pictures, show them how to use the sticky-tack adhesive to place the shapes in the factory scene.



## To Play

1. Take the shapes out of the bag. Stack the picture cards. Place one card on the ★ box.
2. Use the shapes to make the same picture in the ★★ box.
3. Take off all pieces and play again with a new picture card.





# Shark Attack

## Materials

- 2 pieces of poster board
- bucket and water
- glue stick
- pictures of big and little things
- wooden skewers and masking tape
- lamination material
- empty dish detergent bottles
- *Smiley Shark* by Ruth Galloway

## Skill Builders

- identifying numerals
- sorting and classifying

## Getting Ready

- Clip an assortment of pictures of big and little things from magazines.
- Make 10 copies of the shark on page 46 on card stock for the game Shark Attack. Write a numeral 1–10 on each shark. Laminate the sharks and trim about  $\frac{1}{8}$ " (3 mm) around each shape. Tape a wooden skewer to the back of each shark and then poke the skewers into the ground in a large, open, grassy area.
- Fill the dish detergent bottles and bucket with water.

## Extending the Lesson

To play Shark Attack, have children sit in a line on the side of a grassy area. Call out a child's name and a number. The chosen child dashes to the shark with the corresponding numeral and squirts it with water from a detergent bottle. Continue until all children have played.

## Activity

Begin the lesson by talking about the differences in sizes between a shark and a small fish. If interested, have children use their bodies to show the length of a shark. (The great hammerhead shark can reach a length of 18 ft. [5.5 m].) Read aloud *Smiley Shark* by Ruth Galloway (Magi Publications, 2006). Have children discuss their ideas about the book. Also, point out that the word *big* does not necessarily mean *scary* or *mean*.

Chant the rhyme below, using your fingers to show numbers.

### Five Little Fish

**Five** little fish swam 'round and 'round  
All on a bright summer day.  
When a great big fish went "chomp,"  
"chomp," "chomp,"  
One little fish swam away.

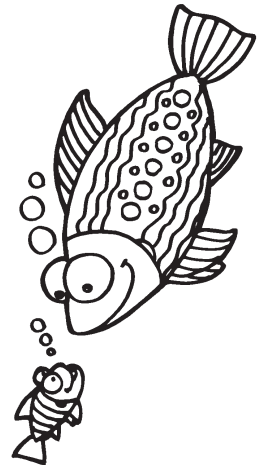
*Repeat other verses: Four* little fish . . . ,  
*Three* little fish . . . , and *Two* little fish . . .

**One** little fish swam 'round and 'round  
All on a bright summer day.  
When the great big fish went "chomp,"  
"chomp," "chomp,"  
That little fish did not swim away.  
He looked that great big fish right in the eye  
And said, "That's not how we play!"  
"Stop that chomp, chomp, chomping right now!"  
And the great big fish said, "Okay!"

Assess what children have learned about the concepts of big and little by having them sort pictures. Let each child choose one or two pictures from your collection and then place them in the corresponding piles. When finished, label one sheet of poster board with the word *Big* and the other poster board with the word *Little*. Glue the pictures in the proper categories on the poster boards.

## Large Motor Connection: Tagging Minnows

Choose one child to be the "shark." Invite the other children to be the "minnows." In a large playing area, have the minnows spread out away from the shark. At your signal, all the minnows begin "swimming" around the "ocean" to prevent being tagged by the shark. If the shark does tag a minnow, that fish also becomes a shark. Continue the game until all players have become sharks.





# Shape Stretch

## Materials

- CD player and music
- elastic
- crayons and paper
- craft sticks and tape
- poster board and scissors
- *When a Line Bends . . . A Shape Begins* by Rhonda Gowler Greene
- *Round Is a Mooncake: A Book of Shapes* by Roseanne Thong or *Shapes, Shapes, Shapes* by Tana Hoban

## Skill Builders

- shape recognition

## Getting Ready

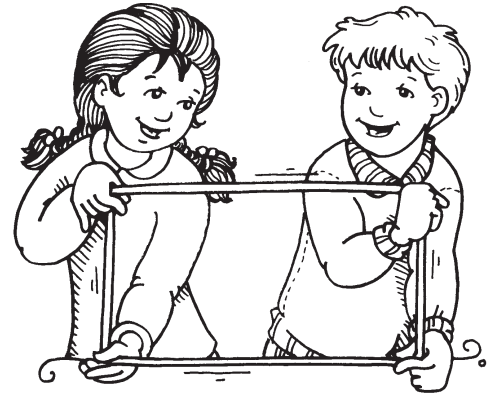
- Cut a piece of elastic, purchased at a fabric or craft store, into 4 ft. (1.25 m) lengths, one for each child. Tie the ends together securely in a knot. Make a larger piece for yourself. You should be able to stretch the elastic to hold both hands over your head while standing on the other end of the elastic loop.
- Make enlarged copies of the shape cards on page 48. Cut them out along the dashed lines. Tape each shape to a craft stick to make a sign.

## Extending the Lesson

Read *The Shape of Me and Other Stuff* by Dr. Seuss (Random House, 1973). Then, give each child a shape card. Let children find something in the classroom that has that featured shape.

## Activity

Hold up one of the shape signs, such as the rectangle, and then have children identify it. Ask them if there is anything else they can tell you about the shape. Count the sides and talk about how we distinguish shapes by their unique features. (Note: The pentagon and octagon are provided only for counting the sides of those shapes and are a lot of fun for children to make by working cooperatively with others.) Read *When a Line Bends . . . A Shape Begins* by Rhonda Gowler Greene (Houghton Mifflin, 2001). Have children look for the different shapes in the book. Then, let them practice turning lines into shapes with crayons on paper.



Making shapes with an elastic loop can be a lot of fun. Hand out the elastic loops and then direct children to step on their loops with their feet and then stretch the elastic over their heads. Demonstrate with your loop how to make a rectangle with the elastic by evenly spreading out the legs and arms. Let children practice making triangles and rectangles with the elastic loops. If making the shape with their bodies is too difficult, direct children to work with partners to make the shape.

Continue the activity with more difficult shapes by having children pair off to make the rhombus, circle, oval, and square; form groups of five members for making the pentagon; and work in groups of eight members for the octagon.

Finally, play a favorite piece of music (soft, flowing music rather than loud, jazzy songs may work best for this activity). Hold up one of the shape signs and have children explore ways to create the shape.

## Literacy Connection: Shape Books

Read *Round Is a Mooncake: A Book of Shapes* by Roseanne Thong (Chronicle, 2000) or *Shapes, Shapes, Shapes* by Tana Hoban (Greenwillow, 1986). Talk about the different shapes that can be found all around us. Make a simple little book for each child by stapling a few half sheets of copy paper together or refer to pages 9 and 10 for other book-making ideas. Have children write about and draw pictures of their favorite shapes and the things that have those shapes in their little books.