

Master Teacher

Elaine Morgan

Time Allotment

30 minutes

Overview

The students will enjoy three of the many resources available to learn about shapes. First a story will engage the students in an imaginary journey through many locations. The students are to focus on the artwork while searching for geometric patterns throughout the story. Second the students will view an art project using an instructional video. Third the students will be able to play an interactive game using the computer. They will find specific geometric shapes within a beehive. It is a very bright and colorful activity to reinforce what the students will learn throughout the entire project.

Differentiation of Instruction

This lesson is modified for students with special needs; the lesson will need to be signed for the deaf. Visually impaired students may need to sit closer to the TV screen. Hand over hand assistance may be needed to guide students through tracing shapes on the screen as well as when using the mouse for the Web activity.





Activities for this lesson are based on guidelines from SC Curriculum Standards Implementation Guide, Chapter Four, pages 7-8, 19. Differentiation of Instruction (<http://www.myschools.com/offices/cso/SIG/k5.htm>) modifications for special needs students are included in the lesson plan. The modifications support the achievement of the selected standards.

Subject Matter

Math

Learning Objectives

Students will be able to:

-  Identify by pointing to a specific shape;
-  Trace a given shape;
-  Create an individual design using geometrical patterns;
-  Color inside a geometric pattern.

South Carolina Standards

(These Standards are available online at <http://www.myschools.com/Offices/CSO/>.)

- I. A. Recognize and represent shapes from different perspectives.
- B. Recognize geometric shapes and structures in the environment and specify their location. Locate geometric shapes in the environment.

Media Components

Video

Hands On Crafts For Kids: Crafts Around The World, Lesson 11: “Egypt, India, Morocco—Magic Carpet.” This video demonstrates the use of geometric figures to make a “magic carpet” allowing the students an opportunity for hands-on experience.

Web Site

Buzzing with Shapes

(<http://www.harcourtschool.com/activity/buzz/buzz.html>). This student activity is like Tic-Tac-Toe, four in a row. Know your shapes and win the game.

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Materials

Per student:

- a box of crayons
- 16 x 20-inch precut white cotton fabric
- 16 x 20-inch precut poster board or cardboard
- clips to secure fabric to cardboard
- 2 ½ x 8-inch piece of card board
- 10 yards of yarn (any color)
- 1 bottle of glue
- 4 geometric patterns of any shape (Large shapes are easier for students with disabilities to handle.)
- 1 ruler (optional)

Book: *Grandma Went to Market* by Stella Blackstone with pictures by Bernard. ISBN # 0-395-74045-2

Equipment

- computers for students
- TV
- VCR with remote control

Adapting NTTI Strategies for Deaf/Hard of Hearing and/or Visually-Impaired Students

Adapting Video

- ✎ Closed captioned and total communication for deaf students
 - Interpret (sign) closed-captioned video to provide total communication for deaf students.
 - Use visual communication to enhance understanding of the video scenes for students not reading at the vocabulary level of the captions.
 - Signing over narration helps students focus when an emphasis on certain information is needed.
- ✎ PAUSE strategy and closed captioned

- When using closed captioned, pausing the video can cause the loss of 1-3 sentences of closed captioned as the pause is released and the video begins to play at the pause point. Suggestions for modifying the PAUSE strategy:
- The teacher may need to rewind after the pause and then begin to play the video.
- Play closed captioned in longer segments and provide a video guide sheet with the **Focus for Media Interaction**.
- Play the video segments through from the beginning point to the ending point. The **Focus for Media Interaction** would be given at the beginning. Tell the students that they will watch the entire segment, and then watch it again, pausing for them to answer the focus task for each segment. Tell them some of the caption is lost at pause points, read carefully the first time.
- ✎ Non-captioned video
 - Prepare to interpret (sign) the video for deaf students.
 - Arrange for a qualified interpreter to sign the video. Plan the lesson in advance to allow time for this arrangement.
- ✎ Screen size for visually-impaired students
 - Use a projection device with the VCR to project the video to a large screen.
 - Allow students to sit close to TV or large screen.
 - Determine how the students can touch the TV screen, if not by hand, then with a pointer (yardstick). Provide an opportunity for the visually-impaired student to touch or trace

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images if touch would enhance the learning.

Adapting Web Sites

✎ Web sites with audio

- Provide an interpreter for each hearing-impaired student.
- Use with small groups with teacher interpreting and guiding the activity.
- Direct students to alternate text files for the video/audio if available.

✎ Screen size for visually-impaired students

- Use a projection device with the computer to project to a large screen.
- Allow students to sit close to computer screen or projector screen.
- Determine how the students can touch the screen, if not by hand, then with a pointer (yardstick). Provide an opportunity for the visually-impaired student to touch or trace images if touch would enhance the learning.

✎ Web sites with total communication for the blind

- Use sites encoded with Braille.
- Use sites with audio.
- Use sites that are easily read by text reader software. (Page is formatted from left to right allowing tab or arrow keys to move the reader through the text and images. Images have alternate text that identifies the image in relation to the text on the page.)

Prep for Teachers

- ✎ Acquire and read the book *Grandma Went to Market*.

✎ Preview and cue the video. (Watch the video prior to the lesson for directions on making the carpet. For students with special needs, you may prepare some of the steps ahead of time.)

✎ Make a completed carpet sample as an example for students. Use a 16 x 20-inch piece of cloth and 4-inch shape pieces (square, rectangle, circle, triangle).

Precut the cloth and cardboard and secure the cloth to the cardboard. This will keep the cloth from slipping around, while the students are coloring it.

Precut the yarn (**Note to Teacher:** Students, who have the ability, can cut their own yarn). Pre-cut four geometric shapes. Each shape will need to be 4-inches in diameter/length. Students will be tracing these shapes.

Assemble all materials for making the magic carpets with the class.

✎ Bookmark the Web site *Buzzing with Shapes* (<http://www.harcourtschool.com/activity/buzz/buzz.html>) on each computer. Load Shockwave, Ver. 8.51 (it is available free at <http://www.macromedia.com>) on all computers. Preview and bookmark the rest of the Web sites on each computer to be used by the students. (**Note to Teacher:** Some students may need hand over hand assistance with the mouse depending on their disability.)

✎ When using media, provide students with a **Focus for Media Interaction**, a specific task to complete and/or information to identify during or after viewing of video segments, Web sites, or other multimedia elements.

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Introductory Activity

Step 1: Begin by reading the story *Grandma Went to Market*. While showing the pictures to the class, point out the numerous geometric patterns. Students can interact with the pictures by naming the shape orally and /or with sign language. Brainstorm with the students about what shapes they may see on a magic carpet.

Step 2: Explain to the students that they will now watch the video *Hands On Crafts For Kids: Crafts Around The World*, Lesson 11: “Egypt, India, Morocco—Magic Carpet.” Let the students know that they will make their own magic carpets using similar steps.

Learning Activities

Step 1: Insert the video into the VCR. START the tape. Rosanna will be in front of a large map on the wall. She will begin by saying, “Today we are going to be exploring a different kind of transportation.” PAUSE the tape on the full screen picture of the carpet. Rosanna is saying, “First we are going to....”

Step 2: Provide the students with a **Focus for Media Interaction** by asking them “What shapes did Rosanna use in her magic carpet?” (*squares, diamonds, ovals, rectangles, triangles*)

(**Not to Teacher:** Students that are mobile, can trace a shape on the TV screen and then identify it with speech or sign language.)

Step 3: Turn the SOUND OFF. The students will not be following the exact directions on the video. Provide the students with a **Focus for Media Interaction** by telling them that as they watch Rosanna make her magic carpet, they need to notice the materials she uses and the steps it takes to make a magic carpet. Say, “We need to make a list of the materials we need and we need to know

what to do first. Watch Rosanna to see what she does first, second, third? What materials does she need to make the carpet? When Rosanna finishes her carpet, we will make a list of what we need to make our carpet and the steps for making a carpet.”

Step 4: START the video at the PAUSE point. STOP the video at the full screen picture of Rosanna’s carpet. Brainstorm with the students to compile a list of materials seen in the clip. (*paper, cloth, shape pieces, glue, crayons, yarn, scissors*)

Guide the students to make a list of the steps they will use to make the carpet. (*Fold the paper to find the center, trace shapes, use ruler to draw lines, color the carpet, wrap the yarn, cut the yarn, glue the yarn*)

(**Note to Teacher:** If students are not sure of the order of the steps, REWIND and REPLAY with NO SOUND the segment of the video that begins with the picture of Rosanna’s carpet and ends with the same picture.)

Step 5: Hand out the materials listed for each student. Depending on the students’ individual abilities let them create as much as they can independently. Some students may require you to outline the shapes and then allow them to color in the design. When the design is complete with two or more geometric shapes, the students may begin to color the carpet. When each carpet is fully colored, remove clips securing the cloth. Assist students, as needed, in gluing the yarn around the edges of the carpet.

Step 6: When the students complete this project, they can enjoy an interactive site on the Web to reinforce the geometric patterns they have learned. Some students may need hand over hand assistance with the mouse. Direct the students to the Web site *Buzzing*

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with Shapes. The Web address is <http://www.harcourtschool.com/activity/buzz/buzz.html> on each computer.

Culminating Activity

Step 1: Have the class sit in small groups. Exchange carpets, mix up the shape pieces, instruct the students to cover the shapes on the carpets with the correct shape pieces.

Step 2: You can visually check and ask individual students to name at least one of the shapes used on the magic carpet.

Cross-Curricular Extensions

English/Language Arts: Students can use oral speech and or sign language to name shapes. The magic carpets can be “story starters” for oral stories, “When I travel on my magic carpet, I go to....”

Math: Students can count the number of shapes in the magic carpet and count the number of sides of each shape. Students can identify any square, circle, or rectangle shapes in the classroom.

Social Studies: Introduce the topic of street and safety signs. Have students identify the shapes they know and introduce them to names of these new shapes.

Community Connections

- ✍ Invite a school resource officer into the classroom to talk about the many safety signs and their geometrical shapes.
- ✍ You can plan a field trip and have the students graph how many geometrical signs they can find. Examples may include stop signs, yield signs, school crossing or railroad crossing signs.