

Kindergarten Geometry Lesson Plan

Introduction

Topic: Circles, Squares, Triangles, and Rectangles

Length of Lesson: 30-45 minutes

VA Standards of Learning:

K.11 The student will

a) identify, describe, and trace plane geometric figures (circle, triangle, square, and rectangle);

Cognitive Objectives

Students will:

-State the correct geometric names for a circle, triangle, square, and rectangle regardless of their orientation and size.

-Manipulate a cardstock circle, triangle, square, and triangle to fit into the corresponding shape drawn on a shape mat.

-Verbally describe a circle, triangle, square, and rectangle using descriptive words (*straight lines, curves*) and/or comparing the shapes to objects in their environment (*A circle looks like a cookie.*).

-Identify circles, triangles, squares, and rectangles by coloring the shapes that the teacher says aloud by the shapes' geometric names.

-Choose, trace, and color the corresponding shape (circle, triangle, square, rectangle) that the teacher says by its geometric name.

Assessment

Formative

State the correct geometric names for a circle, triangle, square and rectangle regardless of their orientation and size.

-Listen to the students verbally identify the correct geometric names for a circle, triangle, square, and rectangle during a ***whole class*** discussion/lesson (individually or chorally).

Manipulate a cardstock circle, triangle, square, and triangle to fit into a corresponding shape drawn on a shape mat.

-Observe the students placing the shapes on top of the corresponding shape on their *individual* shape mat.

Verbally describe circles, triangles, squares, and rectangles using descriptive words (*straight lines, curves*) and/or comparing the shapes to objects in their environment (*A circle looks like a cookie.*).

-Listen to the students describe circles, triangles, squares and a rectangles using descriptive words and/or comparing the shapes to objects in their environment during *small group and reading carpet* time.

Summative

Identify circles, triangles, squares, and rectangles by coloring the shapes that the teacher says aloud by the shapes' geometric names.

-The students will color the corresponding shapes on a *worksheet* (attached) as the teacher reads the names of the shapes aloud to the class.

Choose, trace, and color the corresponding shape (circle, square, triangle, rectangle) that the teacher says by its geometric name.

-The students will choose the correct cardstock shapes to trace and color on the back of the *worksheet* (attached) as the teacher reads the names of the shapes aloud to the class.

Materials/Technology

-Hoban, Tans. (1996). *Shapes, Shapes, Shapes*. New York, New York: Greenwillow Books.

-Large dry erase board (or Smartboard if available)

-One black, red, blue, and green dry erase marker (or use these colors to finger trace on Smartboard)

-One large, cardstock circle, square, triangle, and rectangle (teacher model) *attached

-One rectangle eraser and one square sponge (cut if necessary)

-Three concrete objects for each shape

-A watch with a square or circle face (wear the watch)

-One set of cardstock shapes for each student (circle, triangle, square, rectangle) *attached

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- One shape mat for each student *attached
- One worksheet for each student *attached
- One rubric for assessment of worksheet for each student *attached
- One pencil for each student
- One black, red, blue, and green crayon for each student
- Homework Helper Letter *attached

Advanced Preparation

- Put book in the chair on the reading carpet.
- Place dry erase board and markers (or Smartboard) ready in front of classroom.
- Cut (and laminate if desired) the teacher model shapes. Place with the markers.
- Copy and cut (and laminate if desired) the cardstock shapes from the attached template.
- Copy (and laminate if desired) the attached shape map template.
- Put cardstock shapes in a ziplock bag on top of a shape mat on each of the students' desks/ places. Do this while the students are walking to and back from the reading carpet or have assistant put them on desks while you are reading the book (if available).
- Have ziplock bags with the four crayons ready to hand out.
- Have the worksheets ready to hand out.
- Write names on "Homework Helper" letters and put them in homework folders to go home.
- Place at least three obvious objects for each shape around the classroom.

Teaching and Learning Sequence *(ARRG) According to their Regular Routine and Guidelines

Introduction/Anticipatory Set

- Gather students on the reading carpet (ARRG).
- Show the cover of the *Shapes, Shapes, Shapes* book to the students and ask them to make any observations and predictions about the book based on the cover (ARRG).
- The students should notice the different shapes on the cover of the book. If no one says any of the shapes, then point some out before beginning to read the book.
- Read the book and highlight, with tone of voice and pointing to, the shapes that are being covered in the lesson (circle, square, triangle, rectangle).

Lesson Development

- Share/model a concrete example of a rectangle. *This eraser looks like a rectangle.* Trace the sides of the eraser with your finger. Share/model a concrete example of a square. *This sponge looks like a square.* Trace the side of the eraser with your finger.

-Ask the students what they think are the similarities and differences between a square and a rectangle. Listen to several students' answers (ARRG). If the fact that a square has *four sides that are all equal lengths* is not said, make sure that the students understand.

-Explain that a rectangle has two long sides and two shorter sides. Show them some examples from the book.

-Talk about ways to tell if a side is the same length or not. Let students offer suggestions. *Sometimes it is hard to tell, but we can use a ruler to measure the sides or use our "best guesses" if we don't have one. We will talk about measuring on another day.*

-Ask the students to think of objects they have seen at home or outside that are in the shape of a circle, square, triangle, or rectangle. Give enough time for each student to name one object.

-Dismiss the students back to their seats (AARG). Tell them not to do anything with their bag of shapes and shape mat until you have given them directions

-Go to the dry erase board (using the large, teacher model shapes) and trace a black circle, a red square, a blue triangle, and a green rectangle. Talk to the students about some of the characteristics of each shape as you draw them; *I curve around when I draw a circle. It is round. I make four equal, straight lines called sides when I draw a square. I draw three lines called sides for a triangle. I make two long lines called sides and two short lines called sides when I make a rectangle.* You can mention **angles**, but might want to save this for another lesson. Repeat this process quarter turning your shapes to the left.

-Tell the students to trace the shape, in the air or on their shape mat, with their pointer finger as you retrace the shapes on the board. Be sure to go slowly and try to have the class stay together. Restate the characteristics and the name of the shape again as you trace. Tell students to say these characteristics with you. (More detail about lines, angles and curves for another lesson.)

-Point to each shape on the board, one at a time, and have the students chorally say the correct geometric names of the shapes. Repeat this as many times as you find necessary.

-Tell the students to carefully take the shapes out of their ziplock bag; *We want to use these shapes and mats again, so please be careful not to tear or write on them.*

-Tell the students to fit their cut-out shapes on top the same shapes on their shape mat. Model this for the students by putting the teacher model shapes back on the board in their corresponding shapes. Either hold the shapes up one at a time, or tape them up as you place them. Have them do this once with the mat turned vertically, and once horizontally.

-Walk around and observe the students working. Tell them to keep their shapes in place until you have given them the “thumbs up” (individually) to take them off. Give them the option of creating objects and patterns with their shapes while they are waiting for others to finish.

-Point to each shape again on the board (in or out of order) and have the students chorally name the corresponding shapes again. Choose to erase the shapes from the board or leave them up for students to reference during the formative assessment worksheet.

-Collect the shape mats **only**. Have the students put their shapes back into their baggies and keep them at their desks. Tell them to make sure they count “four” shapes to put back in their bag; one circle, one square, one triangle, and one rectangle.

-Have the students get into their four small math groups (AARG). Assign a shape to each group by putting one of your large, teacher model shapes in the center of their table or area on the floor.

-Remind the students of when they each named an object that was a shape that they knew from home or outside or see in the classroom during reading carpet time.

-Tell the students, AS A GROUP, to find three more objects in the classroom that are the shape of the big cut-out in the center of their group. Assign someone to be the speaker for the group when it is time to share with the class. Allow 5 minutes for this group discovery and discussion. Students should be able to get up and walk around the classroom to observe.

-Make sure to have objects placed around the room that represent different sizes and orientations in space for the students to discover.

-Tell the students to go back to their group’s table so they can share their discoveries with the class.

-Have each group speaker tell about or point to the three objects that they identified as their shape. If they are mistaken about a shape, gently encourage them to find another object. Possibly allow other students in the class give their suggestions (AARG).

-After everyone has shared, have the students go back to their own desk/place. Tell the students to take their shapes back out of their bags and to get out a pencil.

Closure

-Hand each student a worksheet and a bag of the presorted crayons. Tell the students to write their names on their papers (AARG), and take their crayons out of their bags.

-Explain to the students that you are going to say a name of a shape that you have talked about in the lesson, and they are to color the shapes in with the color of the crayon that you tell them to; *Pick up your green crayon, and color the RECTANGLES that you see on your paper with the*

green crayon. The colors that they use will correspond to the colors that you used on the dry erase board of Smartboard to help them remember better.

-After all of the shapes have been colored, have the students turn their paper over to the blank side.

-Explain to the students that they are to trace each of the cut-out shapes on to the back of their paper with their pencil and then color them in with the same colors that they did on the front of their paper. Tell them that they can look at the front of their paper for help.

-Walk around to observe and assist students with the completion of this worksheet.

-Tell the students to put their shapes back into their baggies (four!), put their crayons back into the second baggie (four!), and put their baggies on top of their paper when they are finished. They can read/look at a book on the reading carpet until everyone is finished (AARG). Collect the baggies and papers.

-Meet back on the reading carpet (AARG) and explain to the students about the “homework”. Talk to them about some examples that they might bring in for tomorrow; *If I look around my house or backyard I might find somethings that are the shapes that we talked about today. Maybe I will bring in a watch like the one I am wearing right now. What is the shape of the face of my watch?* Allow time for students to answer (AARG).

-Explain to the students that there is a note going home in their folder that will explain to their “homework helpers” what they are supposed to find. Tell them to make sure they put their object in their backpack to bring to school with them tomorrow so that they can share with the class.

-Explain to the students that you will be talking more about ***different sizes, directions and colors*** of the shapes that you talked about today when they come to school tomorrow; *Think about this...Can shapes be different sizes? What if I turn my triangle upside down like this...Is it still a triangle? Can shapes be different colors?*

Homework

-The students will be asked to bring in ***one thing*** that they find at home that is the shape of a circle, square, triangle, OR rectangle to share for show-and-tell the next day.

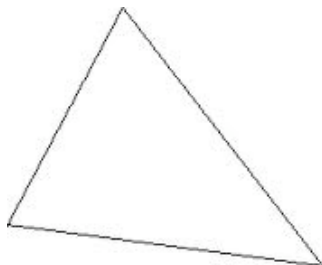
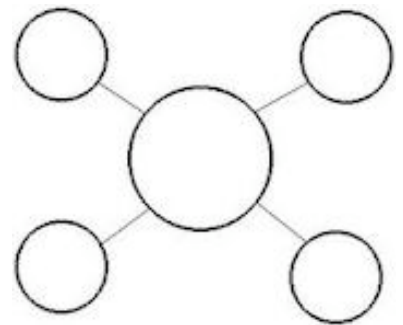
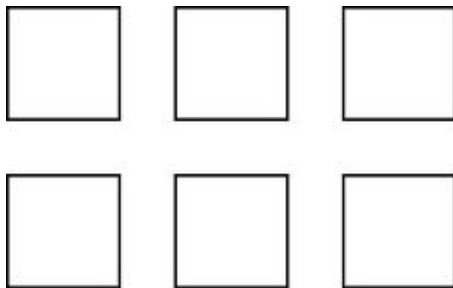
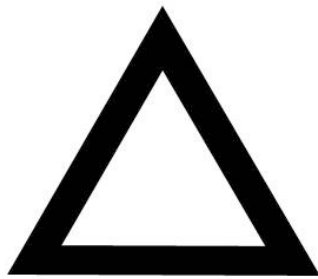
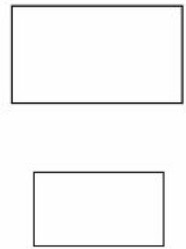
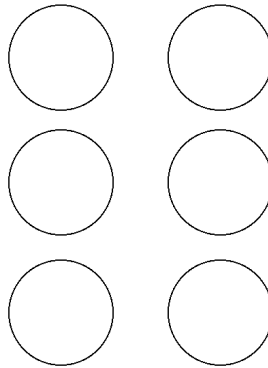
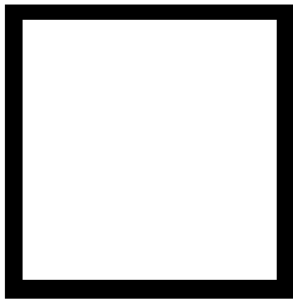
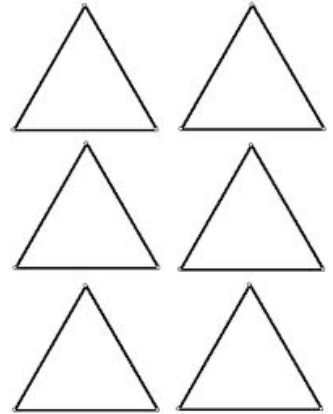
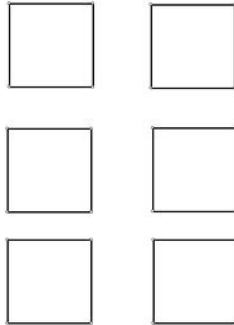
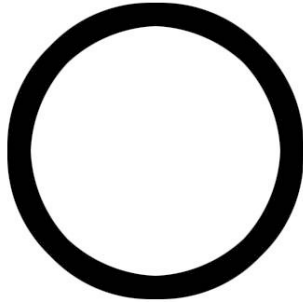
-A letter will be sent home to remind “homework helpers” to assist them if necessary and to make sure that the object gets put their backpacks.

References

Hoban, Tans. (1996). *Shapes, Shapes, Shapes*. New York, New York: Greenwillow Books.

Name _____

Circles, Squares, Triangles, and Rectangles...Oh my!



Shapes Worksheet Rubric

Student's Name _____

Date of Assessment

Points Earned

5 points- Student followed directions and colored 90-100% of shapes correctly.

4 points- Student followed directions and colored 70-80% of shapes correctly.

3 points- Student followed directions and colored 50-60% of shapes correctly.

2 points- Student followed directions and colored 30-40% of the shape correctly.

1 point- Student displayed little to no understanding of the concept.

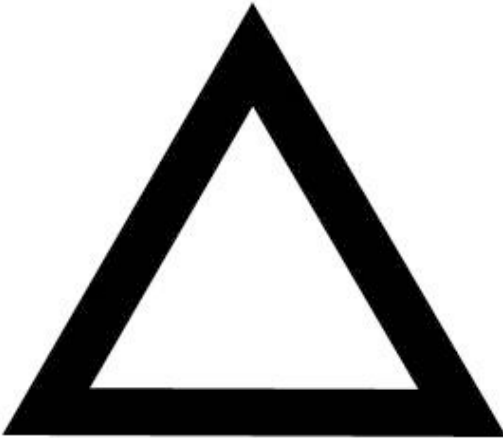
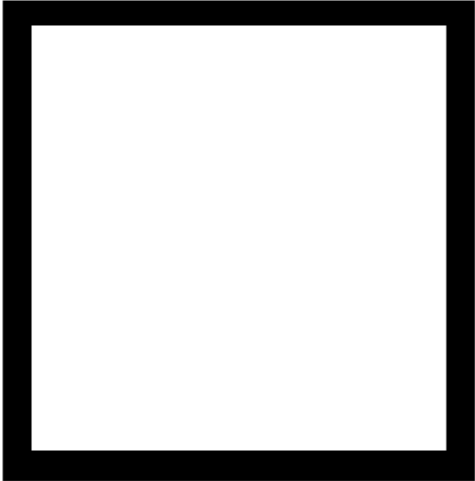
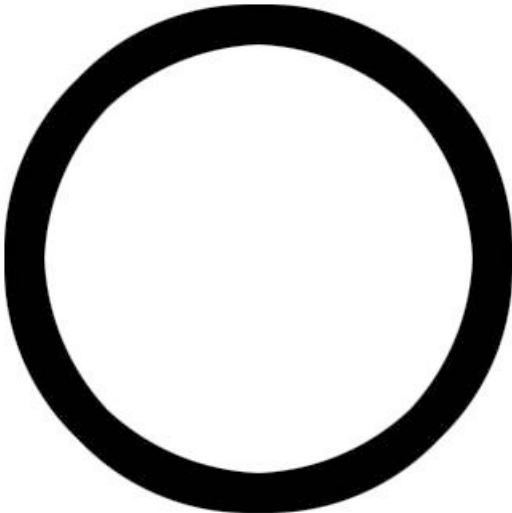
*If a student earns 4 or five points, then minimal correction and instruction is needed.

*If a student earns 2 or 3 points then correction and additional instruction is needed.

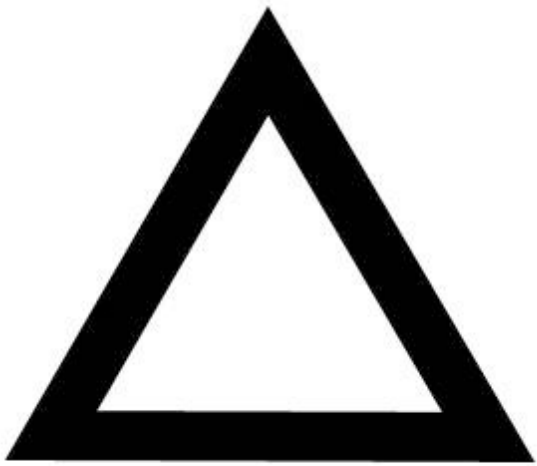
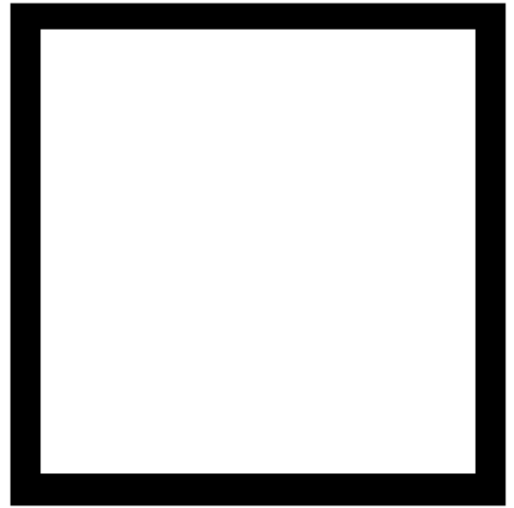
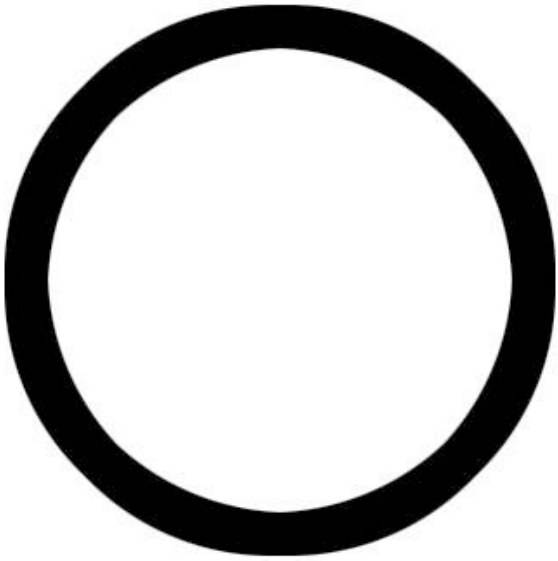
*If a student earns 1 point then it is assumed that total instruction needs to be repeated.

**** ADDITIONAL NOTES:** _____

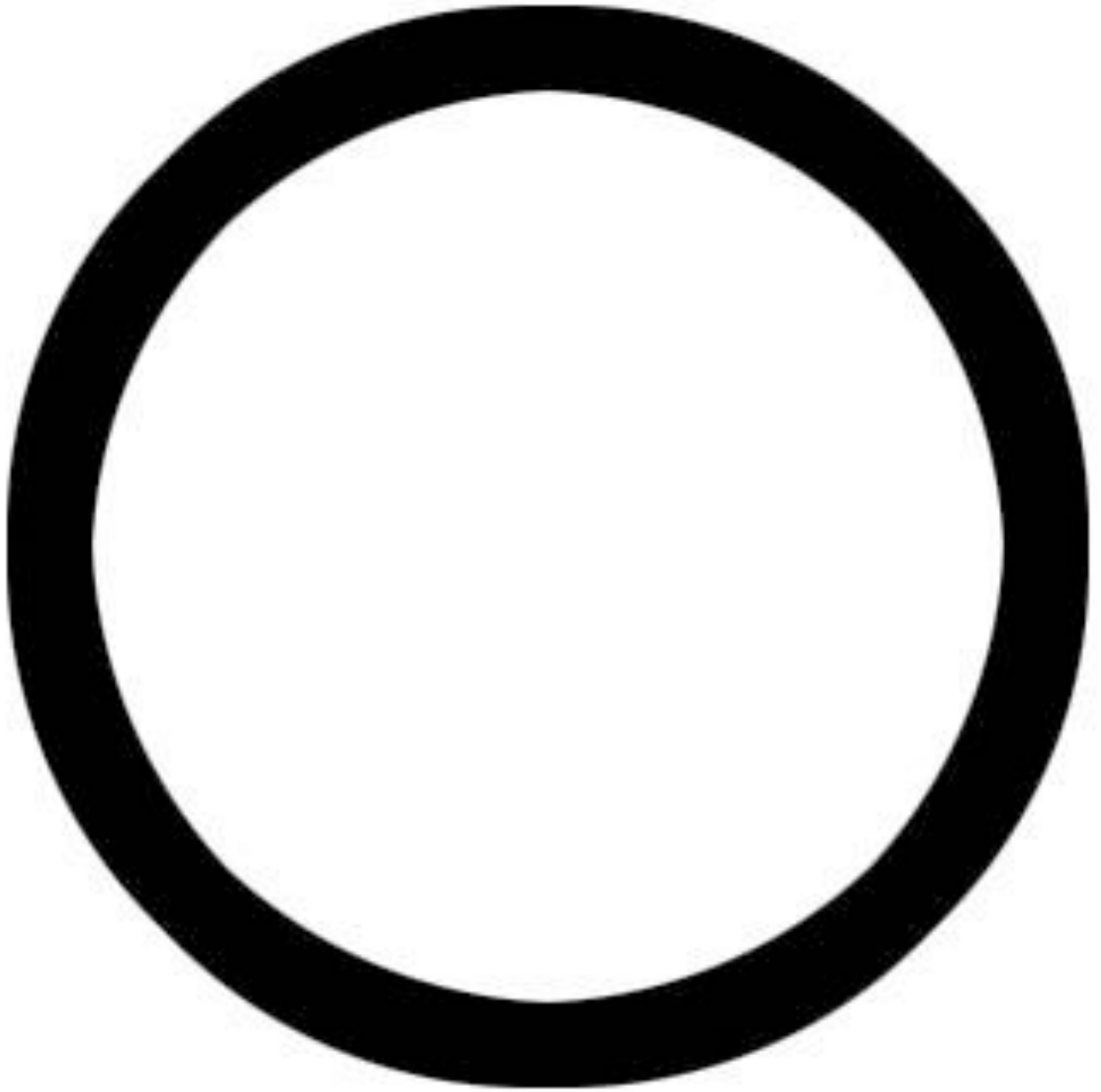
STUDENT SHAPE CUT-OUTS

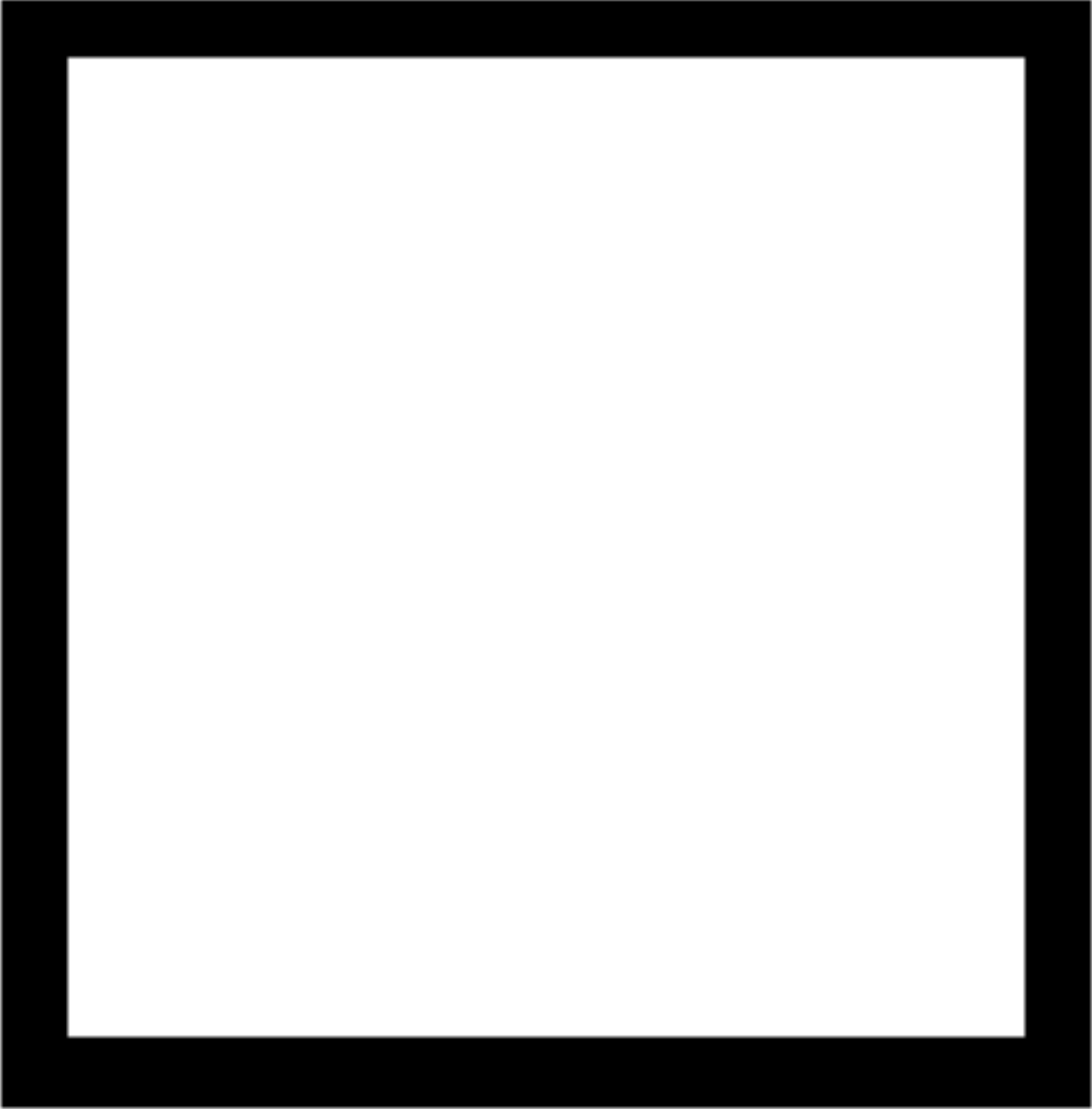


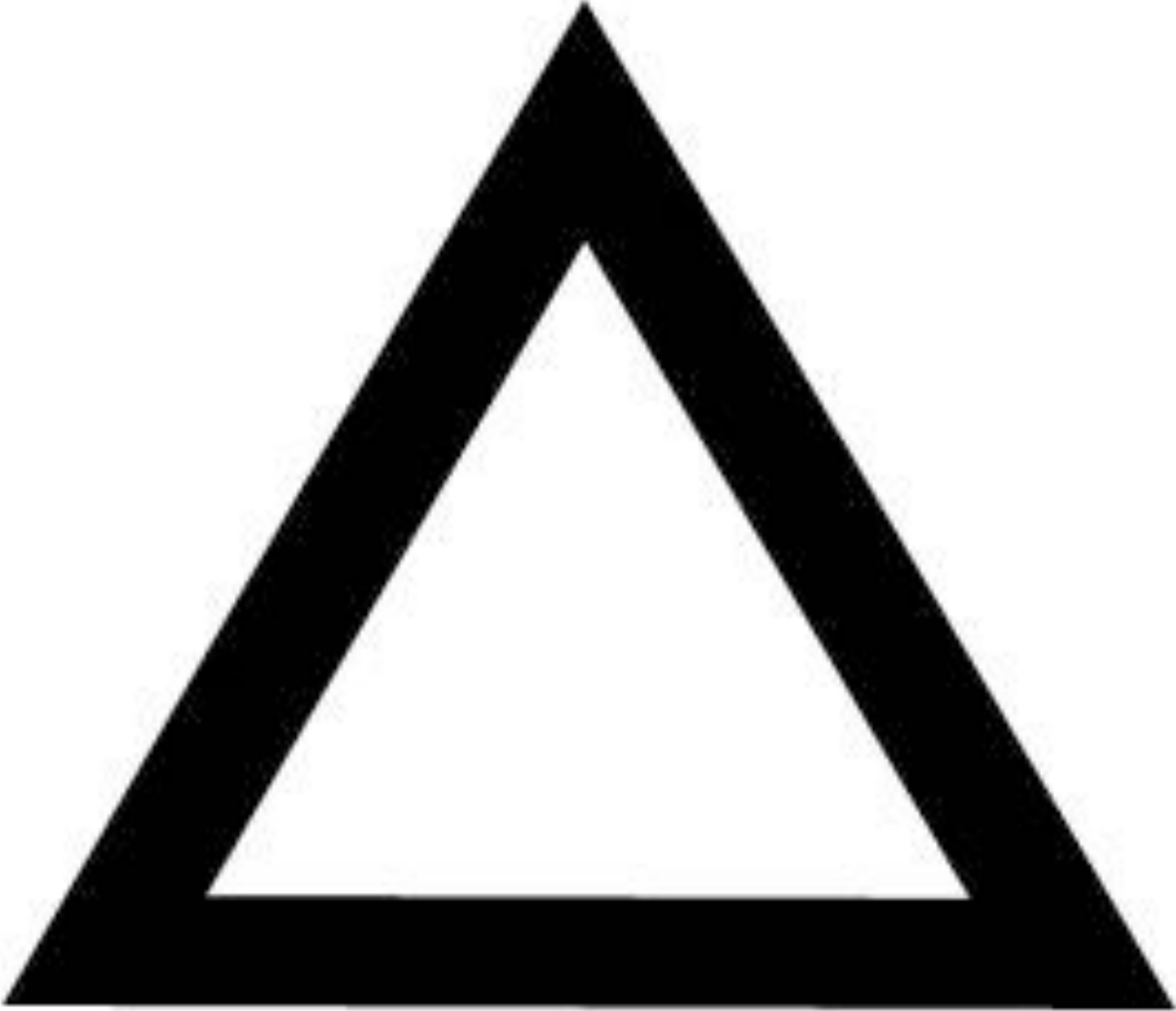
STUDENT SHAPE MAT



LARGE TEACHER MODEL CUT-OUTS









Homework Helper Alert!

Dear Homework Helper!

_____ needs your help tonight finding something that is the shape of a circle, square, triangle, or rectangle. Please put the object in their backpack so that they can share it with the class tomorrow!

Examples: drink coaster, watch, book, orange, piece of bread (in a ziplock bag)...

Thank you for your help with learning about shapes!
Mrs. Roman

Homework Helper Alert!

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