

# Tangram Geometry

## Purpose

Students will investigate and predict the result of putting together and taking apart two-dimensional shapes.

## Materials

*For the teacher:* tangram shape overhead transparency, overhead projector, transparency marker

*For each student:* copy of Black Line Master (BLM) *Tangram Pieces*, blank piece of paper, pencil or marker

*For every 3-4 students:* copy of BLM *Tangram Shapes*

## Activity

### A. Pre-Activity Preparation

1. Copy the BLM *Tangram Pieces* onto heavy stock paper or regular paper to laminate. Make one copy for each student.
2. Cut along lines to create the seven tangram pieces.
3. Create one shape different from the ones on the BLM *Tangram Shapes* and copy it onto an overhead transparency. Do this by matching the edges of two or more tangram pieces and tracing around the outside edges.

### B. Introduction

1. Tell the class that each student will be receiving a set of tangram pieces. Hold up your set of tangram pieces to demonstrate.
2. Explain that tangram pieces can be used to make new shapes by matching the edges of two or more pieces. Demonstrate with your set.
3. Turn on the overhead projector.
4. Show the students how the correct pieces fit exactly into the tangram shape that you have created.
5. Tell the students that they will be finding which tangram pieces fit into certain shapes.
6. Tell the students that when they find the correct pieces, they should place them correctly into the shape and trace where the edges meet.
7. Demonstrate with your shape and pieces.

(continued)

connecting  
across the  
curriculum



### Visual Arts

Have students create designs by combining geometric shapes. Color the individual shapes different colors and identify the shapes by name.

INCORPORATING

**TECHNOLOGY**



Allow students to create shapes on the computer by using a drawing software program. Have students type or write the names of the shapes within the shapes.

Standards Link  
**2.6.2**

**Activity (continued)** 

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**C. Group Activity**

1. Divide the class into groups of three to four students.
2. Have students in each group work together to find the tangram pieces that fit exactly into the shapes on the BLM *Tangram Shapes*.
3. When the students have completed the tangram, have them trace around the shapes that they used within the BLM to show which pieces were used.

**D. Individual Activity**


1. Have students create their own shapes from two or three of the tangram pieces.
2. On a blank piece of paper, have the students trace around the outside edges of the tangram pieces.
3. Instruct students to pass their newly created shapes to the person in their group sitting to their left.
4. Have the students find the tangram pieces used to create the new shapes.
5. Have students compare answers with the other members in their groups.

**Questions for Review** 


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**Basic Concepts and Processes**

During the activity, discuss the following questions with your students to gauge their understanding of the Standard Indicator:

 Were you able to find the tangram pieces that fit into the shapes?

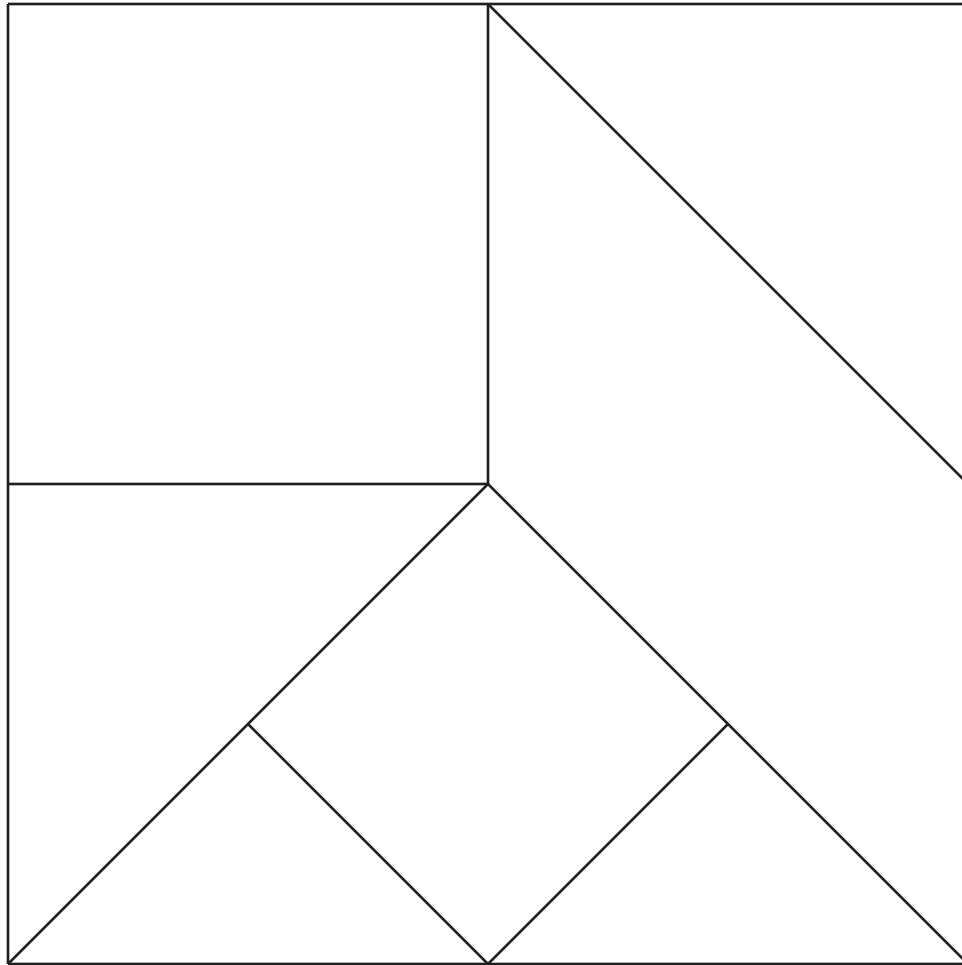
 How did you choose the pieces to try to fit into the shapes?

 Did you turn the pieces around in different ways to fit them into the shapes?

 What process did you use to create your own tangram shape?

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# Tangram Pieces



# Tangram Pieces

## Teacher Directions

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Copy the BLM *Tangram Pieces* onto heavy stock paper or regular weight paper and laminate. Cut along lines to create one set of tangram pieces. Copy enough for each student to have one set of tangram pieces.

## Answer Key

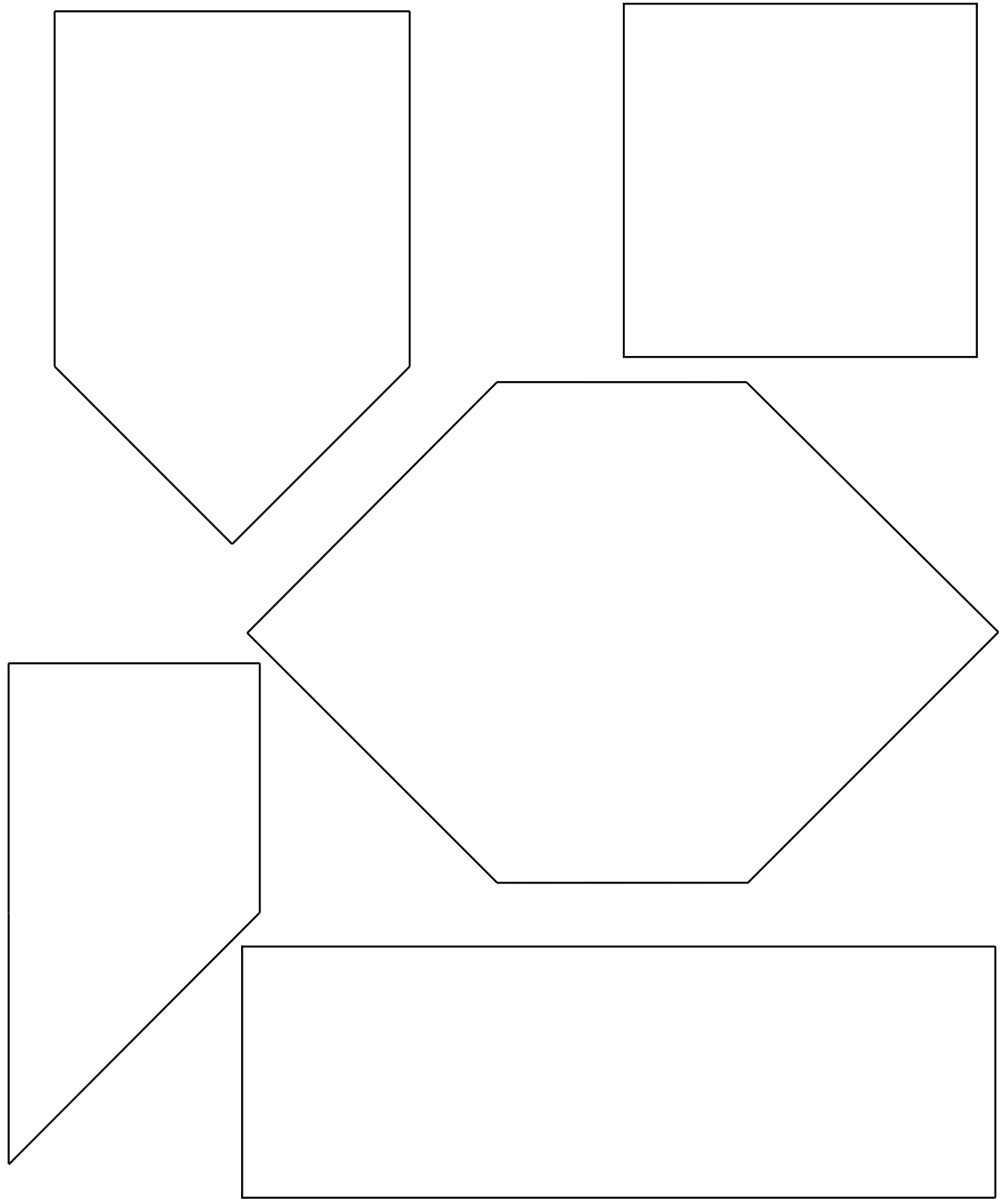
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Not applicable.

Name: \_\_\_\_\_

# Tangram *Shapes*

Directions: Find the tangram pieces that fit exactly into the shapes below.



# Tangram Shapes

## Teacher Directions

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Have students find the tangram pieces that fit exactly into the shapes. Instruct students to trace around each piece after placing it correctly so that it is clear which pieces they have used to fit into the shape.

## Answer Key

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Answers will vary but could include the following:

