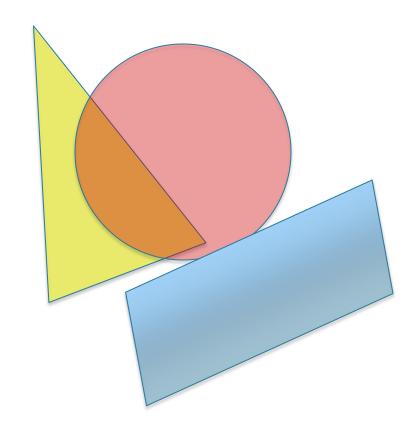
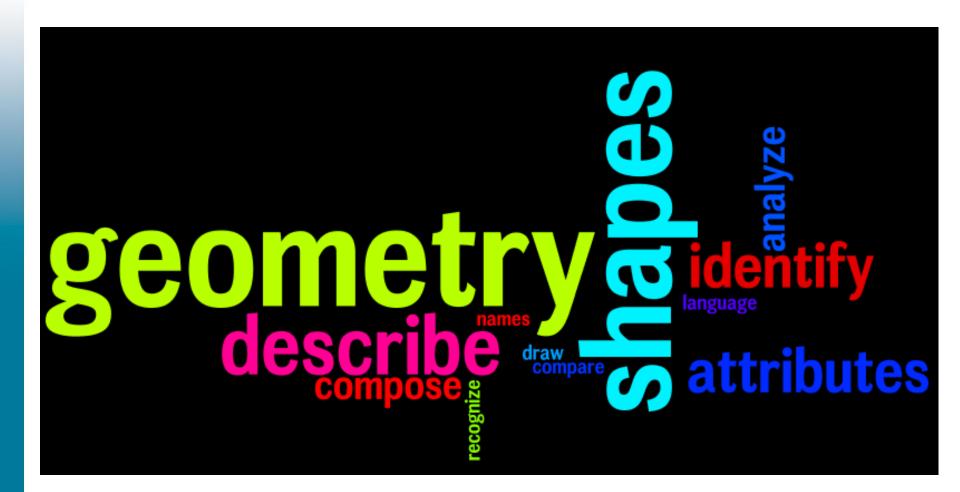


Lisa Rogers

NCTM Annual Meeting April 2011





Identify and describe shapes. Analyze, compare, create, and compose shapes.

K

Reason with shapes and their attributes.

1<sup>st</sup>/2<sup>nd</sup>



#### Levels of Geometric Thinking

Visual Level

Descriptive Level Informal Deduction

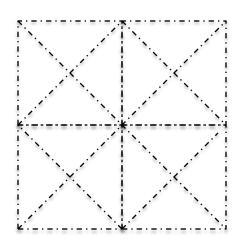
Level 0

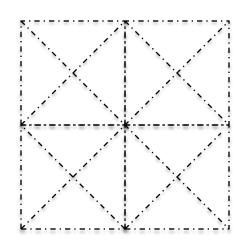
Level 1

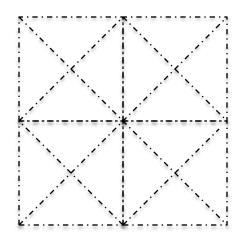
Level 2



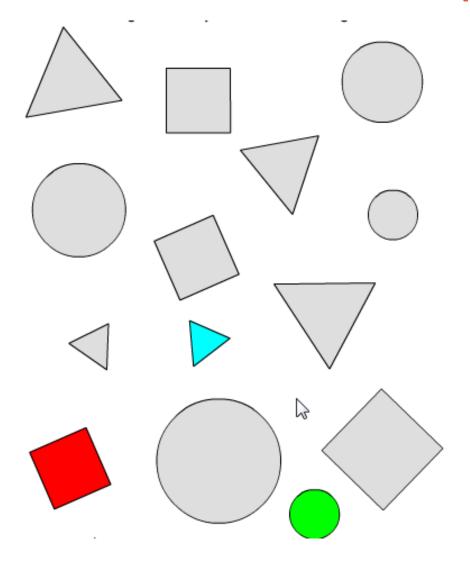
#### In each figure below, outline a square. The squares must not be the same size.







#### Find and color the shapes.



# LET'S PLAY....

### I, SPY a Shape!

Source of Image: http://www.webweaver.nu/clipart/eyes2.shtml





Indiana War Memorial Plaza Source: FunCityFinder.com





Indiana War Memorial Plaza Museum

Source: FunCityFinder.com

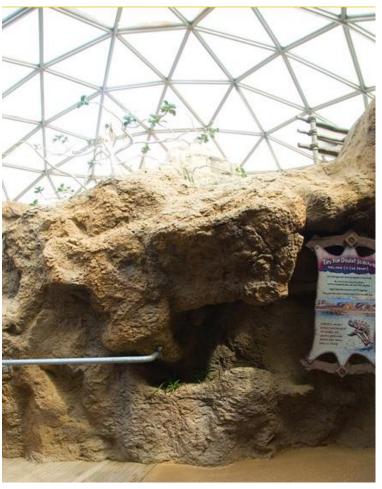




Source: gettyimages®

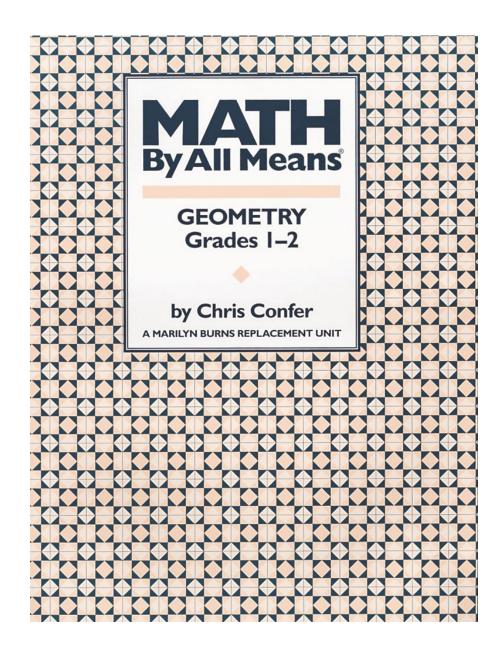






Source: Shelby Materials





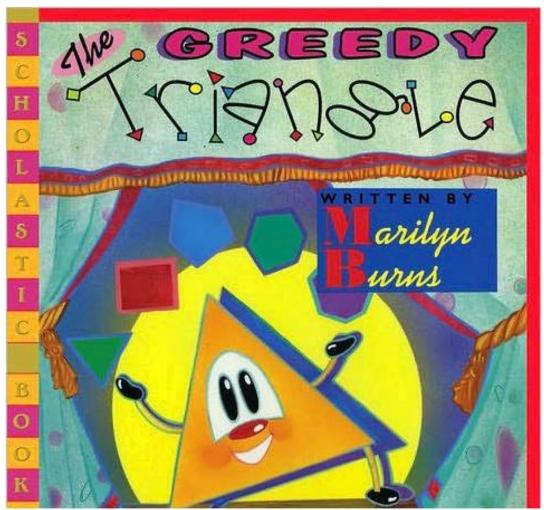


- Describe this shape.
- How is that shape like this one? How is it different?
- What shape is this? What makes it a \_\_\_\_\_?
  Why isn't it a \_\_\_\_\_?
- Where have you seen this shape before?
- What shapes could you make out of these shapes?
- Have you found all the ways to put those shapes together? How do you know?

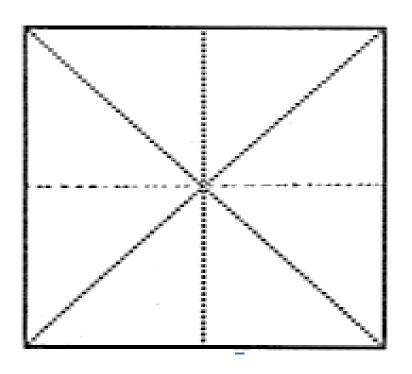
#### 6 Triangle Problem

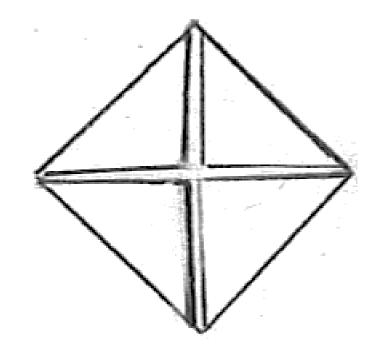
- Using 6 pattern block triangles, how many different shapes can you make?
- Sides must touch completely.

#### **The Greedy Triangle**



#### **Shape Shifter**





#### **Shape Shifter Task**

- With a partner, find all the different shapes possible with the shape shifter.
- Trace every new shape on construction paper.

#### **Shape Shifter Task**

- Join with another partnership at your table to compare results. Together, cut out one of every different shape you have found.
- As you work, identify strategies that you use identifying possible shapes. When you think you have found them all, come up with an explanation that tells how you went about finding shapes so that none were left out.

#### Vocabulary



#### **Sentence Frames**

 Choose among your collection of shapes and practice the following sentence frames to help young students the geometrical ideas:

- **≻**A \_\_\_\_\_ has \_\_\_\_\_.
- **≻**It has \_\_\_\_\_.
- **≻**A \_\_\_\_\_, and \_\_\_\_.
- ➤ My shape has \_\_\_\_\_, \_\_\_\_, and \_\_\_\_\_.
- ➤ It looks like a \_\_\_\_\_.
- Create your own sentence frames!



#### **Shape Sorting**

**Triangles** 

Quadrilaterals

**Pentagons** 

Hexagons



#### **Shape Shifter Extension**



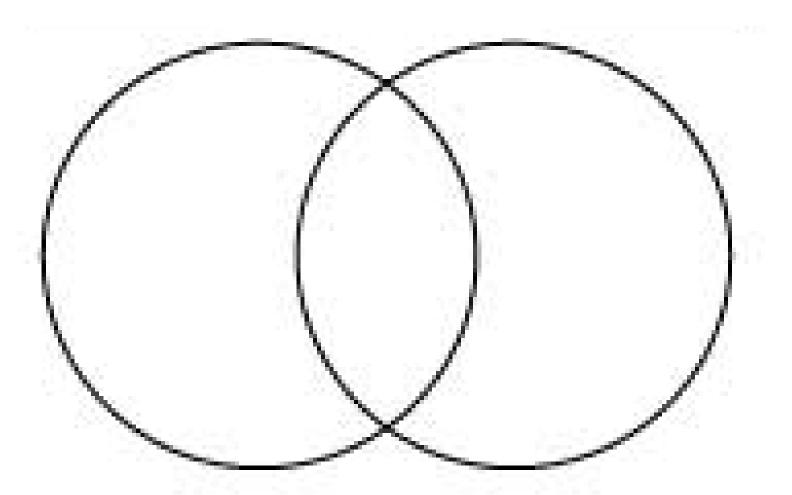


Same

or

**Different** 

#### **Shape Shifter Extension**



If we teach today as we taught yesterday, we rob our children of tomorrow.

John Dewey







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http://mathsolutions.com/presentation