Unit title: I spy shapes!

Subject: Math - Geometry

Grade level: Kindergarten

Lesson #: 2

Lesson title: Shape Detective

Time needed: 50 minutes

Materials needed:
- Writing utensil
- Paper/shape chart per child
- Wanted poster
- Graph for number of shapes found

Vocabulary words: Shape names (circle, square, rectangle, triangle, and hexagon)

Descriptive position words (on, under, above, behind, next to, in front of, below)

Prerequisite: Prepositional terms or language and understanding of positions words such as above, below, next to, beside, behind and next to.

Common core state standard:

1. K.G.1 Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to.
2. K.G.2 correctly name shapes regardless of their orientations or overall size.

<table>
<thead>
<tr>
<th>Instructional goal</th>
<th>Types of Learning Targets</th>
<th>Key Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall basic information and facts</td>
<td>Knowledge (k)</td>
<td>Name, identify, describe</td>
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<tr>
<td>Think and develop an understanding</td>
<td>Reasoning/ understanding (R)</td>
<td>Explain, compare and contrast, predict</td>
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</tbody>
</table>

The common core; Clarifying Expectations for Teachers and Students; Math Grade K, Created by Align, Assess, Achieve (2011)

Author’s Name: Lisa Cline  Contact information: Lisa.m.cline@cmsdnet.net
#6 Attend to precision.

Attending to precise detail increases reliability of mathematical results and minimizes miscommunication of mathematical explanations.

Mathematical Practice:
What makes work clear and precise so that results are reliable and communicated effectively?

Enduring understanding

Essential questions

Learning targets

Geometric attributes (such as shapes, lines, angles, figures, and planes) provide descriptive information about an object’s properties and position in space and support visualization and problem solving

How does geometry better describe objects?

I can find and name shapes in my environment (K)

I can describe the position of objects as above, below, in front of, behind, and next to. (R)

Essential questions:

- What shapes make up our classroom and toys?
- How do you know what shape you are looking at?

Lesson Objective(s); I can statements

- I can name shapes correctly.
- I can find and name shapes in my environment.
- I can describe the position of objects.

Introduction: (2 minutes)

The police called this morning and said they needed our help! The Shapes are missing and they don’t know what to do. Who would like to be a detective today? (Hold up a poster board with all the shapes)

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Here is the wanted poster the police sent over. I have been advised that they are disguising themselves as everyday objects, so we have to look closely and look everywhere. Hang up the “I can” statements on the board and read them to children, have the children repeat back to you what they are going to be able to do. Be sure to use the statements throughout the lesson, example: “I can find shapes in my environment and describe where it is, I found a circle, it is in the block center next to the dinosaur under the truck.”

Lesson Outline:

**Modeling (2 minutes)**

I found one this morning hiding on my desk next to my lunch box. (Hold up any object and describe it to the children.) I found this toy box. It is a rectangle. (Point to the bottom of the box and run finger around the outline of the rectangle). This rectangle is not flat like my poster is; it has height, width, and length dimension to it. My poster only has length and width it is called a 2-D shape or flat shape, because my toy box has length and width like the flat one but it also has height it is called a 3-D shape or solid. A 3-d shape like this is called a rectangular prism.

**Guided practice (15 minutes consecutively with the whole group portion of lesson)**

Walk around with the children and give hints as needed, such as: look at the door; I wonder what shape is disguised as our door? Look under the table something is hiding, it’s not a flat shape but I can see the end of the crayon is a circle, did you see it? Can you catch it?

**Differentiated Instructions**

*(15 minutes) Whole group: Take your paper and fold it in half long ways or like a hot dog (model this). On the left side of the fold draw each of the shapes from the poster. When you are on your detective shape hunt walk slowly and look closely at everything and when you find one of the wanted shapes on your paper put a check mark next to it you have 15 minutes to do your detective work. After 13 minutes of the detective hunt, tell the children to freeze, Order from the police is “You have 2 minutes to find 1 shape that was hiding really well and bring it with you to the carpet so we can turn it in to the police. Remember where you found the wanted shape so you can describe what shape it is and where tell you found it.”*  

*(1 minutes per child) Independent: Have each child tell you about the wanted shape they captured to turn in to the police and describe where they found it. (Such as: I found a circle hiding in the kitchen center it was in the sink, under a cup. It is a plate!)*

*(5 minutes per 5 kids) Small group: How many shapes did you find altogether? Which shape did you find the most of? Which shape did you find the least of? (Create a bar-graph to color in as you count up each shape the children found.)*
Assessment:

1. **Products:** Create a page to our class book about being a detective. Describe what shape you captured, where you find it hiding in the classroom, and what object it was disguised as. Teacher checklist during small group and independent portion of lesson.

2. **Observations:** During shape hunt listen to the children note what they say, the clues you gave, could they describe the object, and did they see shapes on own, could they describe positioning of objects.

3. **Conversations:** Should sound like, I found a square in the library on the bottom shelf hiding as a book, or A circle was hiding in the kitchen in the sink, it is disguised as a plate. Children should be naming the basic shapes and objects they find them in, and where they found them.

Suggestions for modifying up or down for other grade levels within grade band:

- Provide a mini lesson (5 minutes) on position terms. Using a three tier shelf place six objects on it. Randomly select students to find an object that you describe by position. “I see a toy next to the bear and under the truck”. Then have a couple of children describe an objects position to the group and have group guess what toy it is.
- Give children 1 or 2 shapes specific to look for
- Pair children (higher functioning child with a lower functioning child)
- Complete shape hunt with a small group of children to give more guided support while other children complete independent work.
- Hunt for 1 shape at a time and designate a small area to look in.

If applicable-Accommodations for ELL or Exceptional Needs Students:

- Provide a partner to work with
- Complete hunt for 1 shape at a time
- Hide 2D shape around the room instead of choosing real objects
- Place items in reach of children who would need them to be lower.

Attachments:

1. Student shape sheet
2. assessment checklist

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3. Graph for data
<table>
<thead>
<tr>
<th></th>
<th>Circle</th>
<th>Square</th>
<th>rectangle</th>
<th>hexagon</th>
<th>Triangle</th>
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Color graph using the data collected by each child