Standard: OH.K-2.G.A – Describe and create plane figures: circle, rectangle, square, triangle, hexagon, trapezoid, parallelogram, and rhombus, and identify them in the environment.

Anticipatory Set:

Hand each student a small bag of stick pretzels. Explain to students that each pretzel stick represents the side of a shape. Begin giving students verbal directions. For example – "Use your pretzel sticks to make a closed shape with three sides." After several examples list the different shapes from the standard on the board and use direct instruction to give definitions and match pretzel shapes to each shape name. Model for students how to count sides, angles, and vertices. Use the <u>SmartBoard activity</u> to match shape to definition to name.

Whole Group Learning:

Pass out a <u>note card</u> to each student with either a definition, a picture, or a vocabulary word. Have students work to find their 'matches' among their classmates. Each group should think aloud for the remainder of the class to explain why their answers are correct.

Small Group Learning:

Use the groups formed in the previous activity. Hand each student a <u>handout</u> with pictures of the shapes introduced in the anticipatory set. Have the group label each shape, trace each side in red, and circle each angle in blue. This is an ideal time for the teacher to reteach with any struggling students.

Collaborative Learning:

Students could rotate through these 5 centers during one week or the centers could be used independently throughout the year as a review. Activities could be completed as a group or individually.

Collaboration 1: Problem solving worksheet to coordinate with the standard. Students should choose one problem and explain in writing how they chose their answers.

Collaboration 2: Provide group with a set of shape cards. Students will then use those cards as the data to create a tally chart and bar graph.

Collaboration 3: Create a geometric picture using the shapes we have learned. Create a <u>worksheet</u> that gives students an example and instructions. Students should color coordinate their shapes after their picture is created.

Collaboration 4: Use Geo Sketchpad to create three variations (different sizes or orientations) of each shape: triangle, hexagon, rectangle, and circle. Have students print and label each shape with name, sides, and angles.

Collaboration 5: Play a game of memory using the note cards created in the whole group activity – students will match picture with definition and name.

^{***}Underlined items are attached as materials for the lesson***

Assessments:

Formative Assessments: observation, fact check with teacher, worksheet from collaboration one, printout from collaboration four.

Summative Assessments: Present one shape to class in any manner they choose. Description should include definition, real life example, and picture. (Direction Sheet)

***Possible Extensions and Concurrent Activities:

- Use the Geo Sketchpad to demonstrate that even when the appearance of a shape changes (Stretch, shrink, etc.), the attributes (number of sides, angles, etc.) remain the same.
- Have students 'fact check' with a title teacher, classroom aide, or with regular teacher during small group activities.
- Create a bulletin board of found shapes labeled with names and sides/angles highlighted
- Website activities during computer time

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