**Lesson Title:** Surveying Shapes

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| **Grade Level: 3rd Grade** |
| **Assessment:**  To assess the students learning the teacher will collect the “Surveying Shapes” and “My Findings” worksheets. Based on the students completion of the table and answers to the questions the teacher will be able to determine if each student met the objectives of the lesson. In addition, the teacher will distribute a “Ticker Out the Door” slip to each student. The ticket out the door asks the students to make one conclusion about their findings. The teacher will collect these responses to have additional documentation of each student’s learning. |
| **Standards:**  [CCSS.MATH.CONTENT.3.G.A.1](http://www.corestandards.org/Math/Content/3/G/A/1/) Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.  [CCSS.ELA-LITERACY.SL.3.6](http://www.corestandards.org/ELA-Literacy/SL/3/6/) Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.  [CCSS.ELA-LITERACY.SL.3.3](http://www.corestandards.org/ELA-Literacy/SL/3/3/) Ask and answer questions about information from a speaker, offering appropriate elaboration and detail.  [CCSS.ELA-LITERACY.L.3.3](http://www.corestandards.org/ELA-Literacy/L/3/3/) Use knowledge of language and its conventions when writing, speaking, reading, or listening. [CCSS.ELA-LITERACY.W.3.2.D](http://www.corestandards.org/ELA-Literacy/W/3/2/d/) Provide a concluding statement or section. |
| **Vocabulary:**   * **2D or plane shapes**: two-dimensional or flat shapes, having only the two dimensions of length and breadth (width). * **Geometry**: area of mathematics dealing with solids, surfaces, points, lines, curves and angles, and their relationships in space. * **Parallel**: lines that are the same distance apart. * **Parallelogram**: a quadrilateral with opposite sides that are parallel and of equal length and opposite angles that are equal. * **Polygon**: a plane shape having three or more straight sides. * **Quadrilateral**: a polygon with four sides. * **Shape**: form or outline. Pattern of objects. * **Side**: a straight line joining the vertices of a polygon. * **Symmetry: a**n object is symmetrical when one half is a mirror image of the other half. * **Vertex**: a point where: two or more rays or the arms of an angle meet, the adjacent sides of a polygon meet, or the edges of a solid figure meet. |
| **Objectives:**   * Given 8 two-dimensional shapes and a chart with prompts the students will identify the characteristics of each shape with 90% accuracy. * Given a worksheet with five questions the students will identify similarities among 8 two-dimensional shapes including which are quadrilaterals and which are not quadrilaterals with 90% accuracy. |
| **Essential Questions:** What can be identified when we survey shapes?  What are similarities among the shapes? |
| **Duration:**   * **Introduction (Before)** 10 minutes * **Activity (During)** 30-35 minutes * **Conclusion (After)** 5 minutes |
| **Materials:**   * Book: *Shapes, Shapes, Shapes* by Tana Hoban * “Surveying Shapes” worksheet * “My Findings” worksheet * Scissors * Glue sticks * Pencil * Math workbook (optional) * “Ticket out the Door” slip |
| **Suggested Instructional Strategies:**  **Active Engagement:** All students are actively learning, interacting with others, and responding to instruction.   * Active engagement is used by the students to complete the “Surveying Shapes” worksheet during the main activity. They will have the option to interact with a partner to complete the table on their worksheet.   **Nonlinguistic Learning:** The teacher provides ongoing instruction and explicit guidance in helping students to create nonlinguistic representations for acquiring knowledge within or across subject areas. Examples of nonlinguistic representation include: movement, images, sounds, various graphic organizers, etc.   * Nonlinguistic learning is incorporated within the lesson’s main activity in the form of a graphic organizer by the students completing the table on the “Surveying Shapes” worksheet.   **Kinesthetic/Tactile:** prefer use of body and sense of touch to learn and process information   * The students cutting and pasting of the two-dimensional shapes is an example of kinesthetic/tactile learning.   **Auditory:** Prefer use of listening to learn and process information   * Auditory learning is integrated into the introduction of the lesson. The teacher will read *Shapes, Shapes, Shapes* by Tana Hoban while the students listen.   **Visual/Spatial:** prefer using images, pictures, colors, and maps to learn, organize, and process information   * The use of the book *Shapes, Shapes, Shapes* by Tana Hoban in the introduction and the two-dimensional shapes on the worksheet in the main activity examples of visual/spatial learning within this lesson.   **Verbal/Linguistic:** prefers using words, both oral and written, to learn and process information   * The students will be writing on the “Surveying Shapes” and “My Findings” worksheets using a written form of verbal/linguistic language.   **Higher Order Thinking:** Teacher engages students in higher order thinking skills   * The students will be utilizing their higher order thinking to complete the “Ticket out the Door” in the conclusion of this lesson.   **Knowledge (Remembering):** student recalls or remembers relevant information   * Students will be using knowledge (remembering) skills to recall information they have previously learned about shapes and the mathematical vocabulary associated with this lesson.   **Comprehension:** student explains information or concept; construct meaning   * The student’s comprehension is measured through the “My Findings” worksheet in which the students have to explain the information they have outlined on their previous worksheet.   **Analysis (Analyzing):** student can distinguish between different parts, compare, etc.   * Analysis is incorporated into this lesson through the students identifying various characteristics of each shape and comparing the shapes commonalities.   **Skill/Concept:** students can use information or conceptual knowledge, follow or select appropriate procedures, follow two or more steps with decision points along the way, solve routine problems, and/or organize/display data   * Students are displaying skill/concept through the “Surveying Shapes” worksheet in which they are required to organize and display data into the table. |
| **Instructional Procedure:**  **Introduction (Before):**  The teacher will instruct the students to gather on the carpeted area. The teacher will read*Shapes, Shapes, Shapes*by Tana Hoban. The teacher will ask the students questions throughout the book to activate the student's prior knowledge and review the mathematical vocabulary (e.g. How many sides make a square?). The teacher will encourage the students to ask questions when prompted throughout the reading. The students will then go back to their desks.   * Extension: Students may sit on the carpet, in a chair placed on the carpet, or in a wheelchair on the carpet based on the student's individual need. Students who are nonverbal or have limited verbal abilities will be provided answer cards to engage in the conversation throughout the reading.   **Activity (During):**   * The teacher will distribute the "Surveying Shapes" and "My Findings" worksheets to the students. The teacher will ask for a student to volunteer to read the directions on the worksheets. The students will be assigned a partner by the teacher. Each pair will complete the "Surveying Shapes" worksheet according to the directions. The teacher will walk throughout the room to offer assistance. The teacher will instruct the students to begin the "My Findings" worksheet independently. The teacher will continue to move throughout the room to offer assistance. The teacher will remind the students of the time as it elapses. Extension: All students will complete both worksheets, but some may need modifications. For students with fine motor difficulties, they will have a writing assistance tool and receive additional assistance from the teacher as needed. Students who have difficulty staying on task will receive individual reminders from the teacher as time passes and redirection as needed.   **Conclusion (After):** The students will hand in their "Surveying Shapes" and "My Findings" worksheet in the designated bin. Next to the bin will be the "Ticket out the Door" slips for the students to take back to their desk. The students will read the prompt on the slip and write their answer on the lines provided. The teacher will instruct the students that it is time to line up for recess and that they should put their "Ticket out the Door" slip on the desk by the door on their way out.   * Extension: For students with fine motor difficulties, they will have a writing assistance tool and receive additional assistance from the teacher as needed. They may also be provided with a series of previously written examples in which they can choose which best fits the prompt on their slip. |