**Pre-K Professional Learning Program Lesson Plan**

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| **Content Area:** | **Math** |
| **Lesson Title:** | **“Build a Shape”** |
| **Time Frame/Lesson Length:** | 10-15 minutes |
| **Lesson Setting:** | This lesson is designed to be taught at a small group table or on a classroom rug. |
| **Grouping of Students** | Small groups of 4-5 students are recommended for teaching this lesson. Heterogenous (mixed levels of ability) grouping works fine for this lesson. |

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| **Lesson Objective:** | The learner will be able to identify and create basic shapes: square, triangle, rectangle, rhombus, hexagon.  *Student-Friendly: I can identify and create shapes.* |
| **Aligned Standard(s):**  **(TN-ELDS)** | *PK.G.A.2 Correctly name some two-dimensional shapes.*  *PK.G.A.4 Begin to describe objects in the environment using names of shapes.*  *PK.G.B.4 Describe similarities and differences between two-dimensional shapes.* |
| **Assessment Method:** | The teacher will observe the children replicating shape structures with the correct number of sides and vertices. The teacher will make anecdotal notes detailing student. This documentation will be used to determine which students need more practice and instruction with shapes. |

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| **Background Knowledge** | Students will have been introduced to shapes through books and pattern block exploration play. (See attached list of suggested books about shapes.) |
| **Intentional Vocabulary:** | Shape names: square, triangle, rectangle, rhombus, hexagon, trapezoid  Rhombus, diamond  Vertices: the points where two lines meet  It is recommended that the teacher provide a visual or a physical action to help students remember the definition of each word |
| **Materials Needed:** | * Set of pattern blocks (or cards with pictures of each shape) * Toothpicks * Cranberries |
| **Considerations for Learning:**  *possible challenges, management issues, and safety considerations* | If your school does not allow food to be used for this activity, you may use small balls of playdough or clay. If you have an allergy in your classroom, marshmallows or gum drops work equally as well. |

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| **Lesson Procedures and Questioning** | | |
| **Lesson Section** | **Detailed Procedure**  *[Sample teacher script is in italics]* | **Questioning Sequence** |
| **Introduction:** | *We’ve been reading a lot of books about shapes lately. Can you remember a book we have read that had shapes in it?*  Pause to acknowledge any raised hands and affirm answers.  *What are some of the shapes we have read about in those books?*  Pause to acknowledge any raised hands and affirm answers.  *We’ve also been exploring and playing with pattern blocks in our classroom. Let’s review all the shapes of our pattern blocks.*  Review each pattern block shape (square, triangle, rhombus, hexagon, trapezoid). Use two squares to show the shape of a rectangle. | Knowledge and comprehension questions are recommended for the introduction.   * *Can you remember a book we have read that had shapes in it?* * *What are some of the shapes we have read about?* * *What have we been playing with in our classroom that are shapes?* |
| **Exploration:** | *Today we will use toothpicks and cranberries to build the shapes of our pattern blocks. For each shape we will have to count and decide how many sides we will need and how many vertices. Have you ever heard that word before:”‘vertices”? Say it with me: “vertices.” The vertices are the pointed edges of a shape, the place where two sides meet. We are going use toothpicks for the sides and cranberries for the vertices. Let’s start with a square.*  Give each child a square to hold and examine.  *Let’s count together and see how many sides a square has: 1-2-3-4 (*while pointing to each side as you count). *Now lets count the vertices: 1-2-3-4* (while pointing to each vertex).  Set out the tray of cranberries and toothpicks.  *Let’s see if we can use these toothpicks and cranberries to build a square. We are going to use toothpicks for sides and cranberries for vertices. How many toothpicks will you need to make the 4 sides? How many cranberries will you need to make the 4 vertices?*  Give students time to construct their square on the table.  Invite students to create additional shapes, pointing to and counting sides and vertices for each one. | Application and analysis questions are recommended for the exploration.   * *Have you heard the word vertices?* * *How many sides does a square have? How many vertices?* * *How many toothpicks will you need to make a square? How many cranberries?* * *Can you use the toothpicks and cranberries to make a square with four sides and four vertices?* |
| **Closing:** | *You built some excellent shapes today! Who can tell me what parts of each shape we had to count in order to know how to build it?*  Pause to acknowledge raised hands and get the answer of “sides and vertices.”  *Great! Now who can tell me what vertices are?*  Pause to acknowledge raised hands and get the answer “the points where the sides meet.”  *Good job, everyone. You are all shape engineers!* | Creation and evaluation questions are recommended for the closing.   * *What parts of each shape did we have to count in order to build that shape?* * *Who remembers what the word “vertices” means?* |

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| **Opportunities for Differentiation:** | Students may be paired up to assist each other in construction of the shapes if desired. |
| **Extending the Learning:** | This activity can easily lead to discussion and exploration of 3-D shapes by encouraging the children to build up from the base shape. Encourage shape creation at other centers throughout the day. Refer to the vocabulary during all parts of the day. Shape creation and the discovery of how items can work together happens in multiple parts of the classroom. Explore puzzles and how those shapes come together to create a larger picture. Be intentional with language during this time, referencing back to the small group lesson. |

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| **Appendices:** |
| Books about shapes |

