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| **NC.3.OA.3**  **Glue for the Tables** | |
| **Domain** | Operations and Algebraic Thinking |
| **Cluster** | Represent and solve problems involving multiplication and division. |
| **Standard(s)** | **NC.3.OA.3** Represent, interpret, and solve one-step problems involving multiplication and division.   * Solve multiplication word problems with factors up to and including 10. Represent the problem using arrays, pictures, and/or equations with a symbol for the unknown number to represent the problem. * Solve division word problems with a divisor and quotient up to and including 10. Represent the problem using arrays, pictures, repeated subtraction and/or equations with a symbol for the unknown number to represent the problem. |
| **Materials** | 1-inch square tiles, Paper, Pencil |
| **Task** | The art teacher has 40 bottles of glue. She needs to give same number of bottles to each table of students. There are less than 11 tables and more than 3 tables. How many tables will she need to seat students at so that she can share the glue equally?  Use pictures and/or numbers to show your thinking. You may use manipulatives to model the task.  What would happen if she had 7 tables? Could she distribute them evenly?  Write a sentence explaining how you used manipulatives to solve this task. |

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| **Rubric** | | |
| **Level I**  Not Yet | 1. **Level II** 2. Progressing | **Level III**  Meets Expectation |
| * Incorrect answer and work are given. | * Finds the correct answer, but there may be inaccuracies or incomplete justification of solution **OR** * Uses partially correct work but does not have a correct solution. | * Solutions: 40 bottles of glue can be equally shared at 4 tables, 5 tables, 8 tables, 10 tables. 7 tables cannot be distributed evenly.   **AND**   * Clearly shows thinking with a drawing or numbers. |

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| **Standards for Mathematical Practice** |
| **1**. **Makes sense and perseveres in solving problems.** |
| **2. Reasons abstractly and quantitatively.** |
| 3. Constructs viable arguments and critiques the reasoning of others. |
| 4. Models with mathematics. |
| **5. Uses appropriate tools strategically.** |
| **6. Attends to precision.** |
| **7. Looks for and makes use of structure.** |
| 8. Looks for and expresses regularity in repeated reasoning. |

**Glue for the Tables**

The art teacher has 40 bottles of glue. She needs to give same number of bottles to each table of students. There are less than 11 tables and more than 3 tables. How many tables will she need to seat students at so that she can share the glue equally?

Use pictures and/or numbers to show your thinking. You may use manipulatives to model the task.

What would happen if she had 7 tables? Could she distribute them evenly? Use pictures and/or numbers to show your thinking. You may use manipulatives to model the task.