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| **NC.3.OA.3**  **Chairs for a Party** | |
| **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** | Activity sheet, Paper, pencils  Optional: White boards and dry-erase markers |
| **Task** | **Part One:** There are 24 chairs that need to be arranged for a party. What are the various ways that you can arrange the chairs into equal groups? You want to have between 3 and 13 chairs in each group.  Draw pictures of the various groups of chairs and then write an equation for each solution.  **Part Two:** What if you had 40 chairs to arrange in groups? You want to have between 3 and 12 chairs in each group.  **Part Three:** Write a sentence explaining how you solved this task. |

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| **Rubric** | | |
| **Level I**  Not Yet | 1. **Level II** 2. Progressing | **Level III**  Meets Expectation |
| * Student struggles to find different ways to arrange chairs. | * Student accurately finds all of the answers, but has errors in their pictures, equations, or sentence * Student logically shows work but makes a mathematical error. | * Student accurately finds the various ways to arrange 24 chairs and 40 chairs within the constraints of the task:   24 chairs: 2 groups of 12, 3 groups of 8, 4 groups of 6, 6 groups of 4, 8 groups of 3.  40 chairs: 4 groups of 10, 5 groups of 8, 8 groups of 5, 10 groups of 4. **AND**   * Uses correct pictures and equations. **AND** * The sentence clearly and accurately demonstrates the student’s strategy. |

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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. |

**Chairs for a Party**

**Part One:**

There are 24 chairs that need to be arranged for a party. What are the various ways that you can arrange the chairs into equal groups? You want to have between 3 and 13 chairs in each group.

Draw pictures of the various groups of chairs and then write an equation for each solution.

**Part Two:**

What if you had 40 chairs to arrange in groups? You want to have between 3 and 12 chairs in each group.

**Part Three:**

Write a sentence explaining how you solved this task.