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| **NC.3.OA.3**  **Crackers for All** | |
| **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** | Task handout, Paper, pencils, manipulative counters or square tiles  Optional: White boards and dry-erase markers |
| **Task** | **Part One:**  Cheese crackers come in packs of 4 or 6. If you need to feed 12 people with one size or the other (1 cracker per person), what are the ways that you can buy them? Use your manipulatives to model the problem and find solutions. Draw pictures of the various packs of crackers and then write an equation for each solution.  **Part Two:**  What if you wanted to give them 2 crackers each? Draw the packs of crackers and write an equation for each solution you can find.  **Part Three:**  What if you wanted to give them 3 crackers each? Draw the packs of crackers and write an equation for each solution you can find. 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 1 cracker per person (12 crackers):   3 packs of 4 and 2 packs of 6;  2 crackers per person (24):  4 packs of 6 and 6 packs of 4;  3 crackers per person (36 total)  6 packs of 6 and 9 packs **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. |

**Packs of Crackers**

**Part One:**

Cheese crackers come in packs of 4 or 6. If you need to feed 12 people with one size or the other (1 cracker per person), what are the ways that you can buy them? Use your manipulatives to model the problem and find solutions. Draw pictures of the various packs of crackers and then write an equation for each solution.

**Part Two:**

What if you wanted to give them 2 crackers each? Draw the packs of crackers and write an equation for each solution you can find.

**Part Three:**

What if you wanted to give them 3 crackers each? Draw the packs of crackers and write an equation for each solution you can find. Write a sentence explaining how you solved this task.