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| **NC.2.OA.1****Puzzle Pieces** |
| **Domain** | Operations and Algebraic ThinkingNumber and Operations in Base Ten |
| **Cluster** | Represent and solve problems involving addition & subtraction.Use place value understanding and properties of operations to add and subtract. |
| **Standard(s)** | **NC.2.OA.1** Represent and solve addition an subtraction word problems, within 100, with unknowns in all positions, by using representations and equations with a symbol for the unknown number to represent the problem, when solving:* One-Step problems:
* Add to/Take from –Start Unknown
* Compare-Bigger Unknown
* Compare Smaller-Unknown
* Two-Step problems involving single digits:
* Add to/Take from- Change Unknown
* Add to/Take from- Result Unknown

**NC.2.NBT.5** Demonstrate fluency with addition and subtraction, within 100, by:* Flexibly using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.
* Comparing addition and subtraction strategies and explaining why they work.

Selecting an appropriate strategy in order to efficiently compute sums and differences. |
| **Materials** | SF, Pencil, Paper, counters and base ten materials available |
| **Task** | Provide materials to the student. Read the problem to the student: *The rocket puzzle has 51 pieces. The boat puzzle has 100 pieces. How many fewer puzzle pieces does the rocket puzzle have than the boat puzzle?* *Write an equation that represents this problem.* *Use a symbol for the unknown number.*Once an equation is written, say: *Solve the problem and use words, numbers or pictures to explain your reasoning.* |

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| **Continuum of Understanding** |
| **Not Yet Proficient** | * Needs prerequisite skills
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| **Progressing** | * Incorrectly solves the problem.
* Relies on counting as primary strategy for solving problem.
* Equation is inaccurate.
* Explanation is lacking in detail or non-existent.
 | Strategy(ies) Used:* Counting All
* Counting On
* Makes Tens
* Basic Facts
* Creates easier or known sums
* Doubles
* Doubles +/- 1, 2
* Other:
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| **Meets Expectation** | * Correctly solves the problem: 49 pieces
* Successfully uses strategies such as making tens, creates easier or known sums, and basic facts.
* Equation is accurate (e.g., 100 – 51 = \*; 100 = 51 + \*)
* Explanation is clear.
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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. |

The rocket puzzle has 51 pieces. The speed boat puzzle has 100 pieces. How many fewer puzzle pieces does the rocket puzzle have than the speed boat puzzle?

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| **Write an equation that represents this problem. Use a symbol for the unknown number.** |
| Solve the problem.Use words, numbers or pictures to explain your reasoning.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_puzzle pieces |

**Student Work Samples**

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|  | Meets Expectation:The student’s equation and strategy are correct. The number line strategy jumps back 50 and then 1. The answer of 49 is correct. |
|  | Not Yet Proficient:The student has an equation and strategy that are both incorrect. |