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| **NC.5.NF.1**  **How Much Wood?** | |
| **Domain** | **Numbers and Operations - Fractions** |
| **Cluster** | **Use equivalent fractions as a strategy to add and subtract fractions.** |
| **Standard(s)** | **NC.5.NF.1**: Add and subtract fractions, including mixed numbers, with unlike denominators using related fractions: halves, fourths, and eighths; thirds, sixths, and twelfths; fifths, tenths, and hundredths.   * Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers. * Solve one- and two-step word problems in context using area and length models to develop the algorithm. Represent the word problem in an equation. |
| **Materials** | Paper and pencil  Optional: fraction bars or pattern blocks |
| **Task** | How Much Wood?  Each of the Boy Scouts has 5 feet of wood.  **Part 1:** For a project, they use a certain amount of wood. How much wood does each person have left?   |  |  |  | | --- | --- | --- | | **Person** | **Amount of Wood Used** | **Amount of Wood Left** | | Blake | 2 feet |  | | Chris | 1 feet |  | | Deondre | 4 feet |  | | Hector | 3 feet |  | | Tyrone | 2 feet |  |   **Part 2:**  How much wood did Blake, Deondre, Hector use?  How much wood did Chris and Tyrone use?  **Part 3:**  Using your work from Part 2, how many feet of wood did all five boys use for their projects?  **Part 4:**  Write an explanation about how you solved Part 3.  Solutions:   * Part 1: Student correctly identifies how much wood each Boy Scout has left:   Blake- 2 feet, Chris- 3 feet, Deondre- foot, Hector- 1 feet, Tyrone- 2 feet   * Part 2: Blake, Deondre, and Hector- 10 feet; Chris and Tyrone- 4 feet * Part 3: Total- 15 feet   Part 4: The explanation includes an accurate description of how the student added fractions to find the correct sum. |

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| **Rubric** | | |
| **Level I**  **Not Yet** | 1. **Level II** 2. **Progressing** | **Level III**  **Meets Expectations** |
| * Student is not yet able to solve at least 2 of the parts of this task. | * Student correctly solves 2 or 3 parts of the task correctly. | * Student correctly solves all 4 parts of the task correctly. |

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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. |

**How Much Wood?**

Each of the Boy Scouts has 5 feet of wood.

**Part 1:** For a project, they use a certain amount of wood. How much wood does each person have left?

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| **Person** | **Amount of Wood Used** | **Amount of Wood Left** |
| Blake | 2 feet |  |
| Chris | 1 feet |  |
| Deondre | 4 feet |  |
| Hector | 3 feet |  |
| Tyrone | 2 feet |  |

**Part 2:**

How much wood did Blake, Deondre, Hector use?

How much wood did Chris and Tyrone use?

**Part 3:**

Using your work from Part 2, how many feet of wood did all five boys use for their projects?

**Part 4:**

Write an explanation about how you solved Part 3.