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| **NC.3.MD.3, NC3.NBT.2, NC.3.OA.8****Incomplete Graph** |
| **Domain** | Measurement and Data |
| **Cluster** | Represent and interpret data. |
| **Standard(s)** | **NC.3.MD.3** Represent and interpret scaled picture and bar graphs: • Collect data by asking a question that yields data in up to four categories. • Make a representation of data and interpret data in a frequency table, scaled picture graph, and/or scaled bar graph with axes provided. • Solve one and two-step “how many more” and “how many less” problems using information from these graphs**NC.3.NBT.2** Add and subtract whole numbers up to and including 1,000. * Use estimation strategies to assess reasonableness of answers.
* Model and explain how the relationship between addition and subtraction can be applied to solve addition and subtraction problems.
* Use expanded form to decompose numbers and then find sums and differences.

**NC.3.OA.8** Solve two-step word problems using addition, subtraction, ~~and multiplication, representing problems using equations with a symbol for the unknown number.~~ |
| **Materials** | Activity sheet (attached).  |
| **Task** | Distribute the activity sheet for students to work on.  |

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| **Rubric** |
| **Level I**Not Yet  | **Level II**Progressing | **Level III**Meets Expectation |
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| * Student’s work includes more than 4 errors on the 9 problems.
 | * Student’s work includes between 1 and 4 incorrect answers on the 9 problems.
 | * Student’s work includes correct answers. Part 1: Grade 3: 130 students. Grade 2: 100 students. Grade 1: any multiple of 10 between 140 and 300.
* Part 2: Answers will vary based on the number of students in Grade 1. The student writes a question that is able to be answered with the data, provides a correct answer, and appropriate strategies.
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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. |

**Incomplete Graph**

Part 1: Complete the graph.

The graph shows the number of students in each grade. Grade 4 is done for you.

The number of students in Grade 3 is 180 fewer than Grade 4. Find the answer and make a bar for Grade 3.

The number of students in Grade 2 is 30 fewer than the number of students in Grade 3. Find the answer and make a bar for Grade 2.

The number of students in Grade 1 is a multiple of 10, larger than Grade 3, but fewer than Grade 4. Find the answer and make a bar for Grade 1.

Part 2:

To the nearest hundred, about how many students are in Grades 1 through 4?

How many actual students are in Grades 1 through 4?

How far was your estimate from the actual number of students in Grades 1 through 4?

How many more students are in Grade 1 compared to Grade 2?

How many more students are in Grades 3 and 4 combined compared to Grade 1?

Write one more question about the data and answer it below.