The intended purpose of this document is to provide teachers with a tool to determine student understanding and suggest instructional moves that may help guide a student forward in their learning of a concept or standard. This guide is not an exhaustive list of strategies.

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| **Second Grade: Cluster 1**  **Measurement and Data**  **Creating Classroom Community through Data and Graphing** | |
| **NC.2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points and represent whole-number sums and differences, within 100 (only up to 20 at this point), on a number line diagram**  **NC.2.OA.2 Demonstrate fluency with addition and subtraction, within 20, using mental strategies.**  **NC.2.OA.3 Determine whether a group of objects, within 20, has an odd or even number of members by:**  **● Pairing objects, then counting them by 2s.**  **● Determining whether objects can be placed into two equal groups.**  **● Writing an equation to express an even number as a sum of two equal addends.** | |
| **Not Yet** | **Students that are consistently scoring “Not Yet” could have a variety of errors. These errors may include not knowing the counting sequence within 100, gaps with addition and subtraction fluency within 10 (first grade standard), or counting a set of 20 objects.** |
| **Next Steps:**  **For students who cannot represent numbers on a number line (2.MD.6):**   * provide opportunities for students to explore numbers and patterns on a hundreds board and then mark the numbers on a number line * have students build numbers within 100 with base ten blocks and mark them on a number line * provide graph paper or lined paper turned sideways to help students understand that numbers are written on the lines on a number line   **For students who lack addition and subtraction fluency within 10 (a first-grade standard and prerequisite for 2.OA.2):**   * have students play a variety of math games related to fluency.   + a) Roll and record subtraction: Roll two number cubes, find the difference, record the equation   + b) Roll and record addition: Roll two number cubes, find the difference, record the equation   + c) Number card subtraction: Pull two number cards, find the difference, record the equation   + d) Build it, change it: Pull a number card, build the number on a ten frame, pull another number card, change the number on the ten frame and record the equation, e.g., 7 changed to a 4 would be 7 - 3 = 4. * avoid timed tests or activities that promote speed * work with students on various strategies for addition and subtraction combinations such as doubles, doubles plus 1, plus 1 facts, making 5 (4+3 = 4+1+2 = 7)   **For students who are unable to count a set of 20 objects (prerequisite for 2.OA.3):**   * complete activities that promote counting objects in a jar or container * counting objects around the class (e.g., shoes, pockets, pencils, chairs, etc.) * Tasks and Lessons: [Counting sequence and counting on](https://tools4ncteachers.com/resources/0-kindergarten/tasks/cluster-2/c2cc1cc2-counting-sequence-and-counting-on-within-20.docx), [Handfuls of counting](https://tools4ncteachers.com/resources/0-kindergarten/lessons/cluster-2/c2c3cc1cc4cc5-handfuls-of-counting.docx) lesson * Subitizing activities: [Perceptual subitizing](https://tools4ncteachers.com/resources/0-kindergarten/lessons/cluster-2/c2cc4-perceptual-subitizing.docx) lesson |

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| **Progressing** | **Students that are consistently scoring “Progressing” may demonstrate confusion with drawing the number line and the counting sequence with certain numbers, fluency with addition and subtraction for certain numbers, and using strategies to determine if numbers are even or odd.** |
| **Next Steps:**  **For students not yet able to draw the number line with the correct counting sequence (2.MD.6):**   * Provide opportunities for students to explore patterns of numbers on the hundreds board and represent numbers on the number line while using the hundreds board as a reference. * Allow students to draw a number line counting from 1 to 100 using lined paper turned sideways or graph paper.   **For students not yet able to demonstrate fluency with addition and subtraction within 20 (2.OA.2):**   * have students play a variety of math games related to fluency.   + a) Roll and record subtraction: Roll two number cubes, find the difference, record the equation   + b) Roll and record addition: Roll 2 number cubes, find difference, record equation   + c) Number card subtraction: Pull 2 number cards, find difference, record equation   + d) Build it, change it: Pull a number card, build the number on a ten frame, pull another number card, change the number on the ten frame and record the equation, e.g., 7 changed to a 4 would be 7 - 3 = 4. * avoid timed tests or activities that promote speed * work with students on various strategies for addition and subtraction combinations such as doubles, doubles plus 1, plus 1 facts, making 5 (4+3 = 4+1+2 = 7)   **For students not yet able to determine if numbers within 20 are even or odd (2.OA.3):**   * have students use manipulatives (e.g., counters or cubes) to see if a quantity can be broken into two equal groups by matching counters with each other. * have students use manipulatives (e.g., counters or cubes) to see if a quantity can be broken into groups of 2 without any leftovers * [Odds and Evens](https://tools4ncteachers.com/resources/2-second-grade/lessons/cluster-1/odds-and-evens-oa3.doc) lesson, [Equal Groups](https://tools4ncteachers.com/resources/district-leaders/documents/equal-groups-oa3-cluster1.docx) task |

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| **Meets Expectation** | **Students that are consistently scoring “Meets Expectation” in this cluster are able to identify the different types of data, represent the various types of data correctly, and interpret the data correctly. Further, students are able to generate, plot points for, and analyze two different numerical patterns made with two different rules.** |
| **Next Steps:**  **For students who have demonstrated proficiency related to drawing a number line with the correct number sequence (2.MD.6):**   * Spend time on other standards. This concept will be revisited in future clusters as students use the number line as a tool to add and subtract two-digit numbers.   **For students who have demonstrated proficiency related to fluency with addition and subtraction within 20 (2.OA.2):**   * Continue to develop fluency with flexibility and efficiency with math games listed above   **For students who have demonstrated strategies to determine if numbers within 20 are even or odd (2.OA.3):**   * Provide opportunities for students to explain and reason about how they know if a number is even or odd, and have them prove it with a number. |