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| **Task 1 Selecting Appropriate Units for Measurement**  **Lesson Goal (Big Ideas):**  Students will know:   * **The same object can be described by using different measurements** * **Units of different sizes and tools of different types allow us to measure with different levels of precision**. * **Familiarity with known benchmark measurements can help you estimate and calculate other measurements**   Related Big Ideas:  NS&N   * Numbers tell how many or how much   Data Management and Probability:   * When working with data, organize or classify the data into meaningful categories   \*Bold text indicates the big ideas that are the focus of this lesson. | |
| **Materials:**  -labels for four corner benchmarks (appendix a)  -Object image cards (appendix b) (appendix b)  -rope or string for value line  -clothespins  -tape | **Math Words**  length  size  number  appropriate  about  Attributes  longer  shorter  equal  benchmark  non-standard unit |
| **Getting Started:**  Four Corners Activity   1. Place one of the four corner cards with different units of measurement (one card for each of the following; popsicle sticks, snap cubes, centicubes, straws) in each corner of the classroom. 2. Distribute an image of an object to each student. Students take their image to the corner that they think is the most appropriate unit of measurement to measure the object on their card. Ask the students why did you choose that unit/corner? Discuss as a class.   (Continue activity into the Working On It) | |
| **Working On It:**   1. At each corner, have the students order themselves by the size of the objects on their cards (Clothesline, Value Line). From what they think would be the shortest object in the set to longest object in the set (estimating). Ask the class, how did you estimate the length of your objects? How did you organize yourselves? 2. Have the centicube and snap cube groups combine but remain in order of length (shortest---longest). Do the same with the popsicle sticks and straws groups. (Making two linear value lines). 3. Next, have the larger unit group (popsicle sticks and straws) connect with the smaller unit group (centicubes, snap cubes) to make one value line of shortest object to longest object. Discuss any objects that may be questionable between the units of measurement. 4. Have students pin or tape their object cards from the shortest to the longest object.   **Alternative Working On It or Extension Activity:**  Choose 4 objects and order them from shortest to longest. Discuss which benchmark unit (centicube, snap cubes, popsicle sticks, straws) they would use to measure each object. | |
| **Consolidation:**   |  |  | | --- | --- | | **Guiding questions:** | **Big Ideas to Highlight:** | | How did you estimate the length of your object?  How could you use more than one unit for the same object?  Which unit (corner) would you choose and why? | * Familiarity with known benchmark measurements can help you estimate and calculate other measurements * The same object can be described by using different measurements * Units of different sizes and tools of different types allow us to measure with different levels of precision. | | |
| **Independent Practice:**  Choose one object from the value line that could be measured with 2 of the non-standard units. Which unit is more appropriate? Justify; show and explain your thinking. | |
| **Assessment:**  Assessment for Learning   |  |  |  |  | | --- | --- | --- | --- | | **Guiding questions:** | **Big Ideas to Highlight:** | **Yes** | No | | How did you order your objects? | Familiarity with known benchmark measurements can help you estimate and calculate other measurements |  |  | | How could you use more than one unit for the same object? | The same object can be described by using different measurements |  |  | | Which unit would you choose and why? | Units of different sizes and tools of different types allow us to measure with different levels of precision. |  |  | | |
| **Expectations:**  **Measurement:**  Overall Expectations:  compare, describe, and order objects, using attributes measured in non-standard units  Specific Expectations:  -compare and order objects by their linear measurements, using the same non-standard unit.  -compare two or three objects using measurable attributes  -estimate, measure, and record lengths (no gaps or overlaps)  **Data Management:**  Overall Expectations:  -collect and organize categorical primary data  Specific Expectations:  -demonstrate an ability to organize objects into categories b sorting and classifying objects using one attribute  -read primary data presented in concrete graphs  -pose and answer questions about the collected data  **Number Sense and Numeration:**  Specific Expectation:  – demonstrate, using concrete materials, the concept of one-to-one correspondence between number and objects when counting | |