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| **Task 4 Metre as a Benchmark**    **Lesson Goal (Big Ideas):**  Measurement   * **Familiarity with known benchmark measurements can help you estimate and calculate other measurements**. * **The use of standard measurement unit simplifies communication about the size of objects.**   Related Big Ideas:  Measurement   * **We use units to make measurement comparisons simpler. This is only effective if the same unit is used for both objects and the unit is uniform.** * **There is always value in estimating a measurement, sometimes because an estimate is all you need or all that is possible, and sometimes because an estimate is a useful check on the reasonableness of a measurement.** * **Units of different sizes and tools of different types allow us to measure with different levels of precision. The larger the unit the fewer units required. The smaller the unit the more units required (proportional reasoning)**   NS&N   * Numbers tell how many or how much. * Number benchmarks are useful for relating numbers and estimating amounts. | |
| Materials:  Base ten materials  Metre Sticks (enough for 1 per set of partners)  Math journal (or recording paper for metre comparison findings) | Math Words:   * Unit * Metre * Length * Size * Number * Benchmark * Tens, ones * Taller than, shorter than |
| Getting Started:  Show students a metre stick. Ask students to look around the room and find objects about the same length. Have record and share the objects chosen with justifications of why they chose those objects. | |
| Working On It:  Have students use the metre stick to determine where on their body is the height of the metre stick. Students should use this personal referent for the following task.  On a walk through the classroom or the school, have students identify objects that are a lot taller than a metre, about a metre, and a lot smaller than a metre.  Students can create a chart to organize objects into the categories taller than a metre, about a metre, smaller than a metre. | |
| **Consolidation:**   |  |  | | --- | --- | | **Guiding Questions** | **Big Ideas to Highlight** | | How did you know it was taller than a metre, about a metre, or shorter than a metre?  I say an object is about a metre tall, how can you figure out about how big that is if you don’t have a metre stick?  If I tell you something is about two “zorks” -or any made up unit- long. How long is that? What questions could you ask me to figure out how long that is?  Why is it important to measure objects with something like a metre? | **Familiarity with known benchmark measurements can help you estimate and calculate other measurements.**  **The use of standard measurement unit simplifies communication about the size of objects.**  **The use of standard measurement unit simplifies communication about the size of objects.**  **Familiarity with known benchmark measurements can help you estimate and calculate other measurements.**  **The use of standard measurement unit simplifies communication about the size of objects.** | | |
| **Independent Practice:**  Have students find and record a few objects that are a lot taller than a metre, about a metre, and a lot smaller than a metre. | |
| **Assessment:**  Are students able to identify objects in relation to the benchmark of a metre? (**Familiarity with known benchmark measurements can help you estimate and calculate other measurements.)**  Through conferencing with individual students, are they able to explain how they know one of their objects is (taller than a metre, about a metre, less than metre) depending on how they’ve identified in relation to the benchmark. (**Familiarity with known benchmark measurements can help you estimate and calculate other measurements.)**  Through conferencing ask students why is it important to measure objects with something like a metre? ((**The use of standard measurement unit simplifies communication about the size of objects.)** | |
| Curriculum Expectations:  Measurement  **Overall Expectations:**  • **estimate, measure, and describe length,** area, mass, capacity, time, and temperature, using  **non-standard units of the same size;**  • compare**, describe**, and order objects, **using attributes measured in non-standard units.**  **Specific Expectations:**  -use the metre as a benchmark for measuring length, and compare the metre with non-standard units  -describe, through investigation using concrete materials, the relationship between the size of the units needed to measure length | |