Measurement Estimation Strategies

**Purpose:** Using mental and visual information to measure without the use of measurement tools. For example, we can estimate the length of a room or the weight of a watermelon in the grocery store.

**Techniques:**

1. **Develop and use benchmarks for important units.** Using mental benchmarks or reference points for measurement promotes multiplicative reasoning.
   - *The width of the building is about one-fourth the length of a football field – about 25 yards.*
   - *My bed is about 7 feet long (benchmark), I could get about 3 beds in my bedroom, so this room must be about 21 feet wide.*

2. **Use “chunking” when appropriate.** It might be easier to estimate the shorter chunks than to estimate the whole length as one.
   - *I have 3 windows that are about 3 feet wide on a wall, with about another 3-4 feet left over, so my wall must be between 12-13 feet.*

3. **Use subdivisions.** A similar strategy to chunking, but with the chunks imposed on the object by the estimator. Length, volume and area measurements all lend themselves to this technique.
   - *For example, if the wall has no useful chunks, it can be mentally divided in half and then fourths or even eighths until a more manageable length is arrived at.*

4. **Repeat a unit mentally or physically.** For length, area and volume, it is sometimes easy to mark off single units visually.
   - *You might use your hands or make marks or folds to keep track as you go.*

Adapted from Elementary and Middle School Mathematics by John A. Van de Walle