

## MiniLab Determine the Density of a Pencil

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### Procedure

1. Read the procedure and safety information, and complete the lab form.
2. Find a pencil that will fit entirely in a 100-mL graduated cylinder below the 90-mL mark.
3. Measure the mass of the pencil in grams with a balance.
4. Put 90 mL of water (initial volume) into the 100-mL graduated cylinder. Lower the pencil, eraser first, into the cylinder. Push the pencil down until it is just submerged. Hold it there, and record the final volume to the nearest tenth of a milliliter.

### Analysis

1. Determine the water displaced by the pencil by subtracting the initial volume from the final volume.

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2. Calculate the pencil's density by dividing its mass by the volume of water displaced.

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3. Compare the density of the pencil to the density of water.

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