The Scientific Method is a process to gain knowledge. It requires thought, experience, and demands proof of results. People that think logically use parts of the Scientific Method. You probably use parts of it, too.

**Basic Steps:**

1. Learn about it (Research, observe; look, listen, etc.).
2. **Question** it (why is this happening?).
3. Try to explain it (Hypothesis – an educated question or guess about what will happen.).
4. Test it (Experiment – designed to gain information)
5. Analyze it (Collect and analyze Data.)
6. See what you learned about it (check your data, make Conclusions; was your hypothesis right?).

**Possible Additional Steps**

7. Retest it (maybe it was a fluke).
8. Maybe go back to step 1 or 2.

**REMEMBER: Really Quiet Hippos Eat Dark Chocolate**

Research; Question; Hypothesis; Experiment; Take Data; Form Conclusions

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Use the Scientific Method to determine an object is a gas or a liquid?

1. Research—Learn the properties of gases and liquids
2. Question—Is it a gas or a liquid?
3. Hypothesis—It is a liquid!
4. Experiment—
5. Data—
6. Conclusions—

Use the Scientific Method to determine an object is a liquid or a solid?

1. 
2. 
3. 
4. 
5. 
6. 

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Q: How could you measure the mass of a hole punch dot?
A:

Q: How could you measure the mass of a pile of bricks?
A:

**Displacement method:**
The volume of some objects is easy to find, like a cube or a cylinder. The volume of some irregular objects, like a rock, would be hard to calculate. If you put the object in water and measure the volume change, you have found the volume of the object.

**Indirect Method of Measuring Small Mass**

\[ M_o = \frac{M_W}{N_W} \]

- Mass of One Object
- Number of Objects in Whole Sample
- Means divided by
- Mass of Whole Sample

*Example*: If 10 feathers equal 1.5 grams, how much does one feather weigh?

Mass of 1 feather = \( \frac{1.5}{10} = 0.15 \) grams

**Reading the Meniscus**

The **meniscus** is the curvature of some liquids in containers. It is caused by **adhesion** (an attraction between the liquid and the glass).

Measure at the Bottom - or your reading will be too high

Eye Level - or your reading will be too high