

Finding Volume – The Water Displacement Method

Key Concepts:

- A submerged object displaces a volume of liquid equal to the _____.
- One millimeter (1 mL) of water has a volume of _____.
- Atoms on the periodic table are arranged in order according to the number of _____.
- Even though an atom may be smaller than another atom, it might have more _____.
- The _____ of atoms, their _____, and how they are _____ determine the _____ of a substance.
- _____ equals the mass of an object divided by its volume ($D = m/v$).
- Objects with the same mass but a different _____ have different densities.

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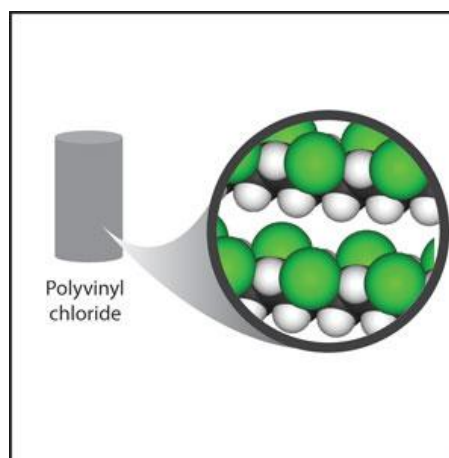
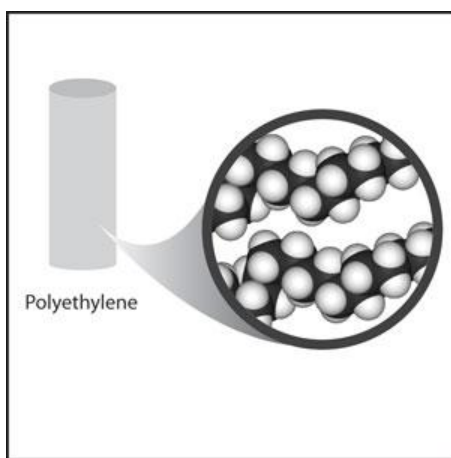
Finding Volume – The Water Displacement Method – Processing

EXPLAIN IT WITH ATOMS & MOLECULES

The difference in density between the small, medium, and large rods can be explained based on the atoms and molecules they are made from. Refer to the chart of atomic size and mass to answer the following question about each substance.

Polyethylene is made of carbon and hydrogen atoms. Polyvinyl chloride is also made of carbon and hydrogen atoms, but also has chlorine atoms.

Look at the size and mass of these atoms in the chart to explain why polyvinyl chloride is denser than polyethylene.



Brass is made of copper and zinc atoms. These atoms are pretty heavy for their size, but they are also packed together differently than the molecules of the plastics. How does the way these atoms pack together help make the brass denser than the plastics?

