

MATTER

Anything that has mass
and takes up space

MASS & VOLUME

▶ Mass

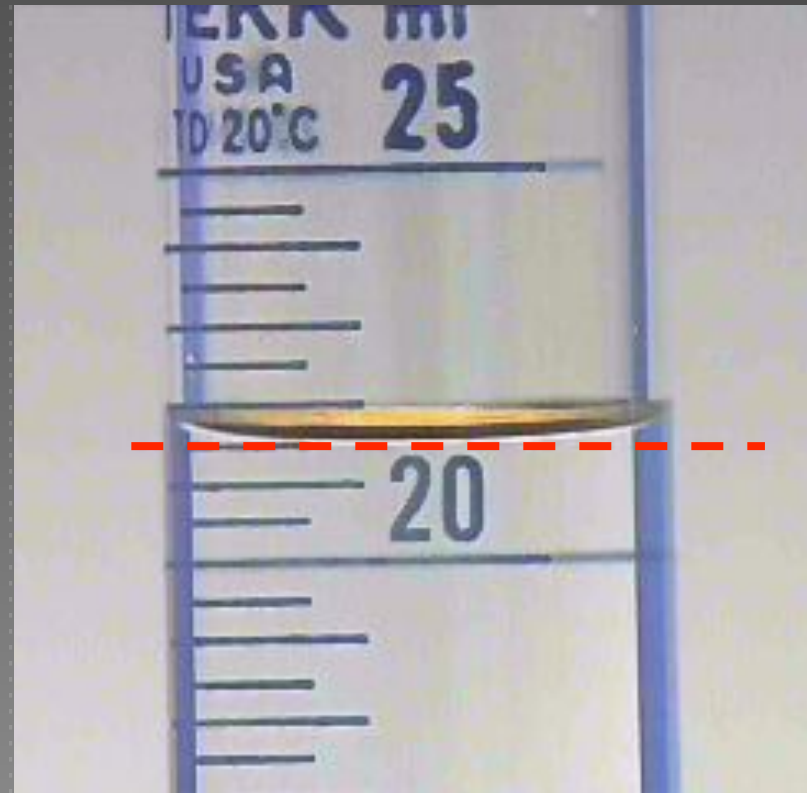
- ▶ The amount of matter an object contains
 - ▶ Measure using a Triple Beam Balance

▶ Volume

- ▶ The amount of space an object takes up
 - ▶ Measure using a formula, such as $V = L \times W \times H$
 - ▶ Measure using a graduated cylinder
 - ▶ Measure using the Water Displacement Method

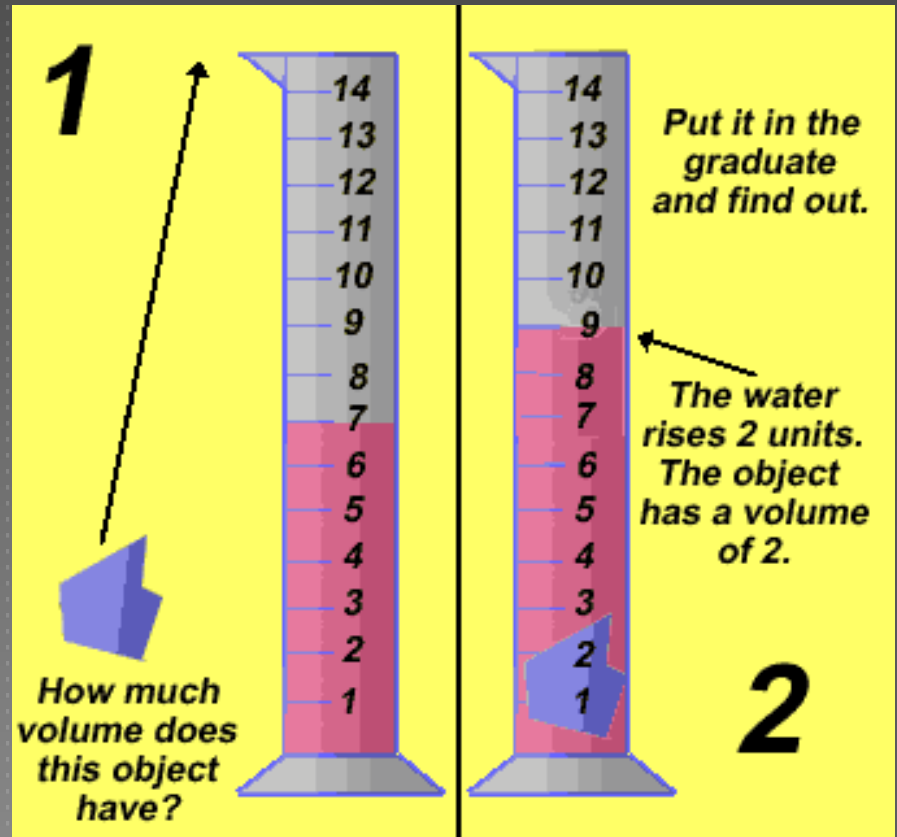
READING LIQUID VOLUME

- ▶ How to read liquid volume accurately.
 - ▶ Watch out for the Meniscus!!!
 - ▶ Read the water level at the bottom and lowest point of the Meniscus.
 - ▶ What is the volume?



VOLUME OF AN IRREGULARLY-SHAPED SOLID

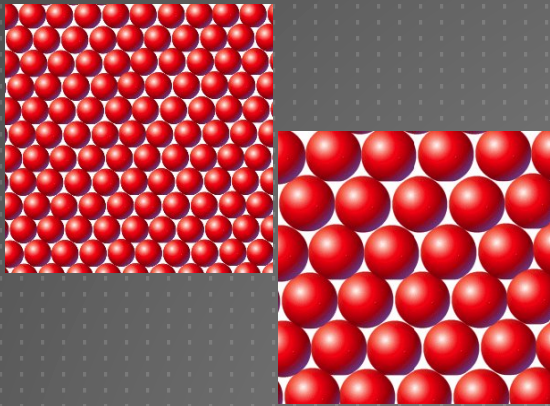
- ▶ Measure the height of the water.
- ▶ Add the object.
- ▶ Measure the new height of the water.
- ▶ The difference is the volume for the solid.
- ▶ What is the volume in the example?



MASS vs VOLUME

Mass

- ▶ The amount of matter in an object.

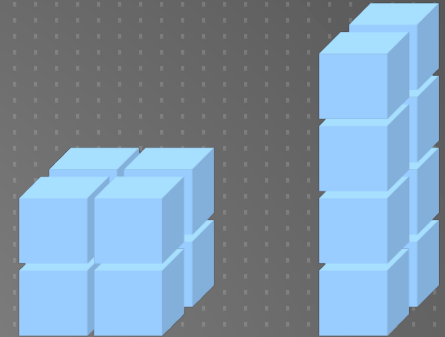


Volume

- ▶ The amount of space an object takes up.



Photo © Norman Myers



BUILDING BLOCKS OF MATTER

- ▶ Atoms are the building blocks of matter
- ▶ Atoms give matter its volume and mass.