

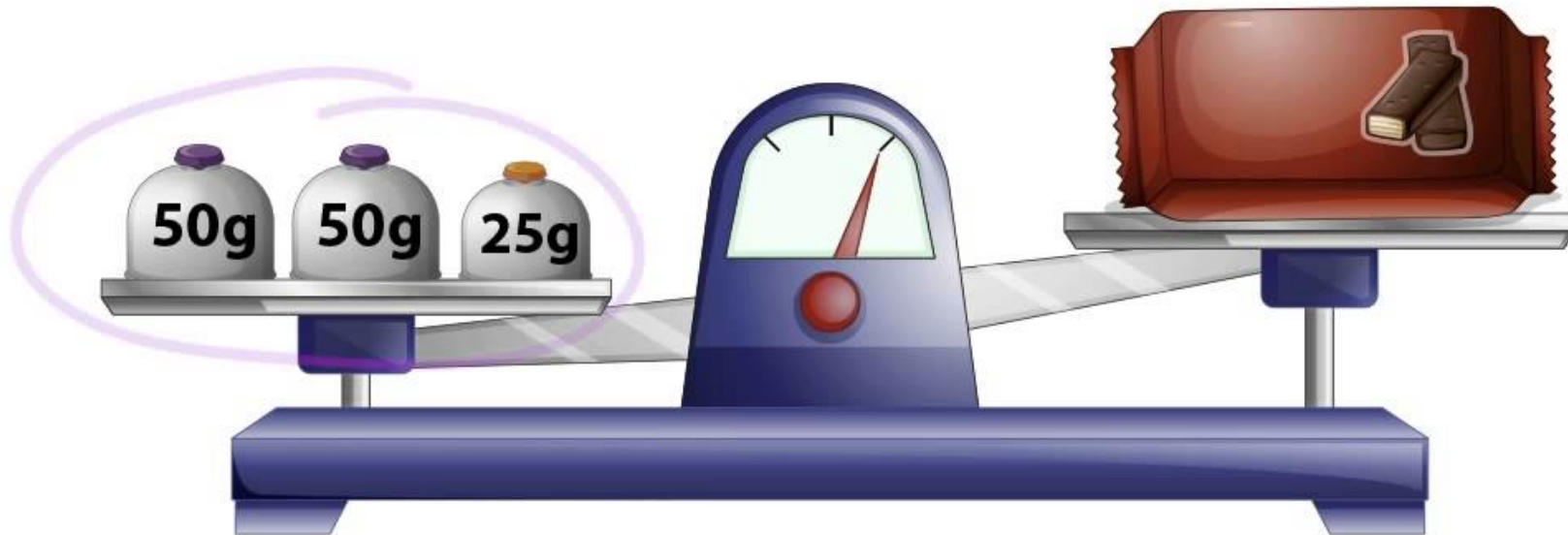
The background of the slide is an abstract composition of numerous 3D rectangular blocks or cubes. These blocks are arranged in a way that creates a sense of depth and perspective, with some blocks appearing to recede into the distance while others are in the foreground. The color palette is diverse, featuring warm tones like yellows, oranges, and reds on the left side, transitioning through purples and blues in the center, and cooler tones like teals and greens on the right side. The blocks are of varying sizes and are oriented in different directions, contributing to a complex, geometric pattern.

# MASS & VOLUME

## Chapter 1 Section 2

# What is mass?

- Mass is the amount of matter in an object
- SI unit of mass is **grams**



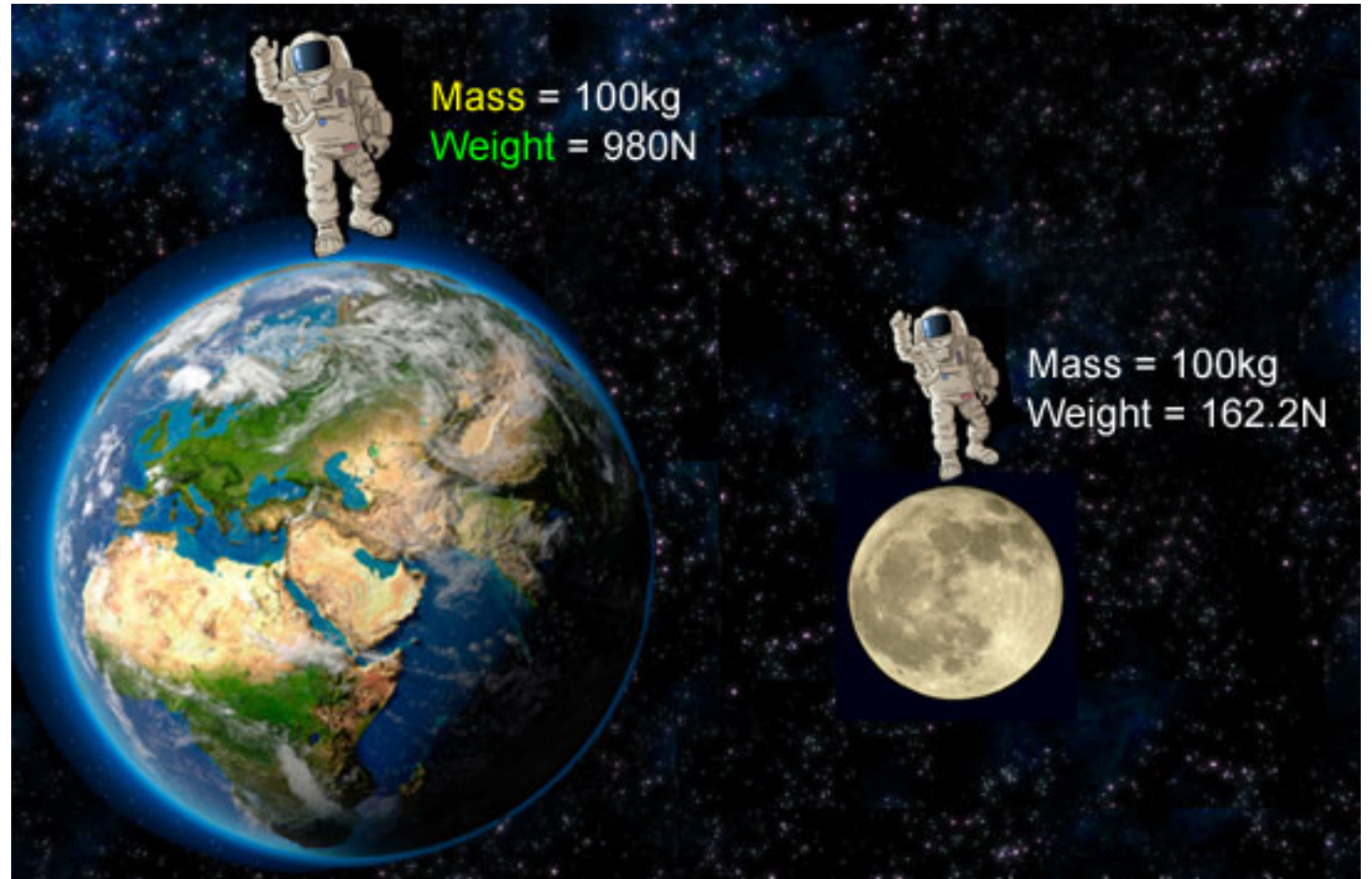
# What is mass?

- We use two instruments to measure mass:  
**electronic scale and triple beam balance**



# What is the difference between mass and weight?

- **Weight** is dependent on gravity and location
- Weight changes on different surfaces, but mass does not





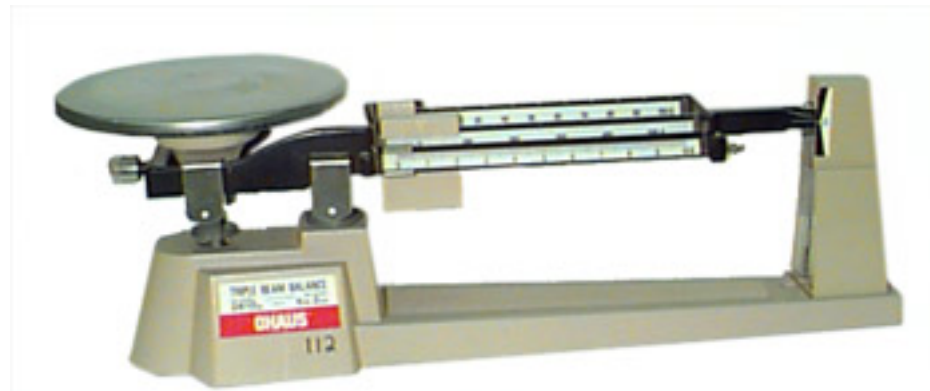
# What is mass?

- What does a bathroom scale measure? **Weight**
- *When you step on the scale, springs in the scale compress due to how much gravity is pushing down on you.*
- We use scales because we all live on the same surface!



# How to use a Triple Beam Balance?

1. Place the object on the **pan**
2. Slide the large **slider** to the right until the **arm** drops below the line and then move it back one notch.



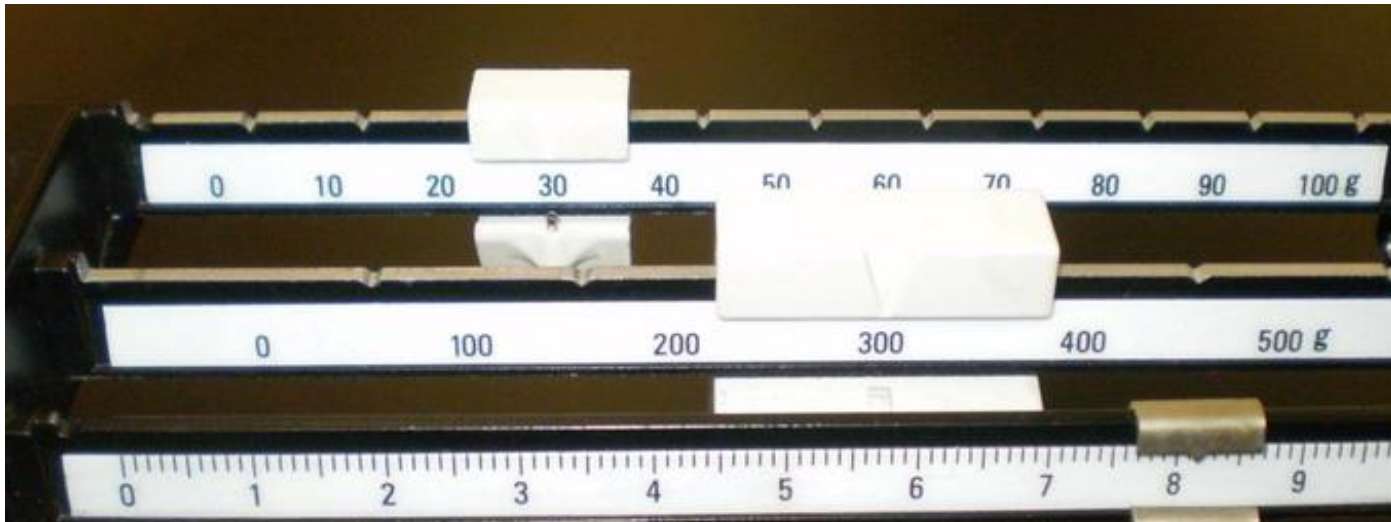
# How to use a Triple Beam Balance?

3. Repeat this process with the **medium** slider. When the arm moves below the line, back it up one groove.
4. Slide the **small** slider on the front beam until the **arm** and zero match up.



# How to use a Triple Beam Balance?

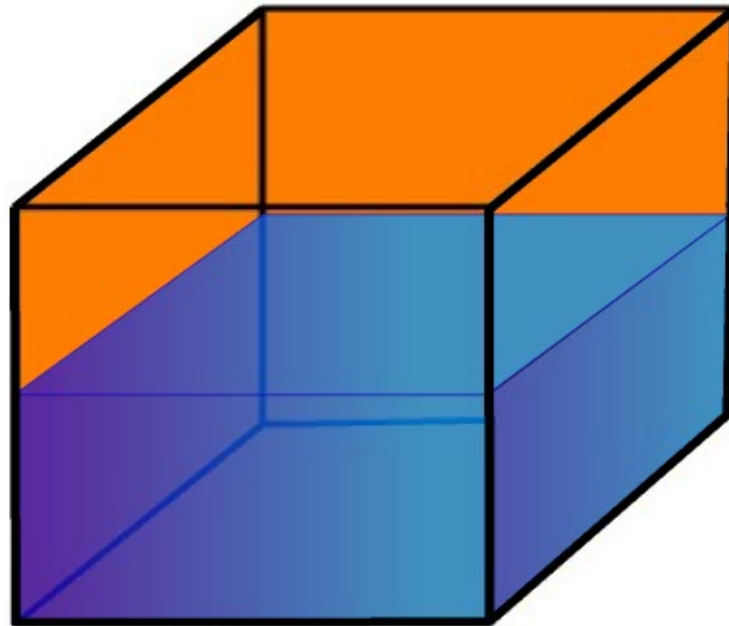
5. Add the amounts on each beam to find the total **mass** to the nearest tenth of a gram.





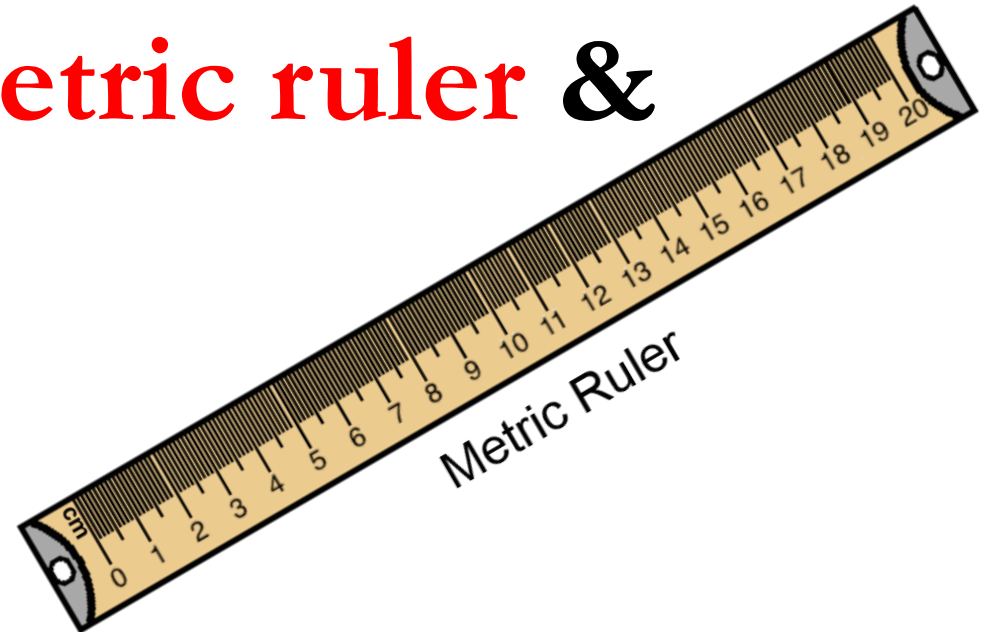
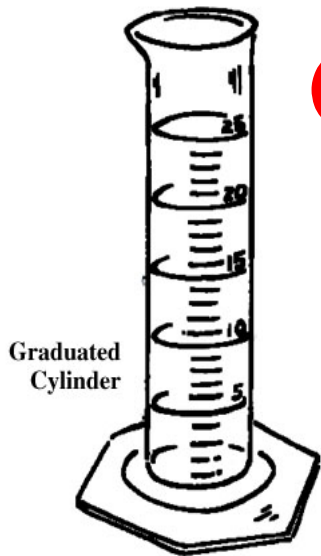
# What is Volume?

- Volume is the amount of **space** inside an object or that it takes up



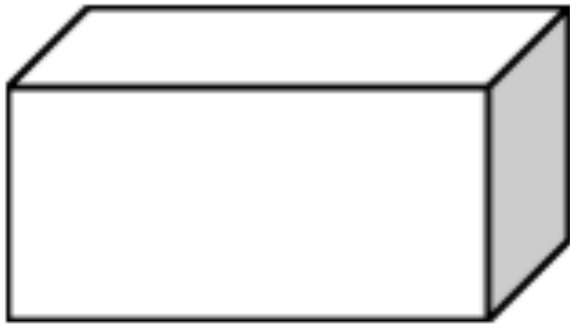
# What is Volume?

- SI unit of **mL and  $\text{cm}^3$**
- We use two instruments to measure volume: **Metric ruler & Graduated cylinder**



# How do you measure volume of a regular shape?

- Unit  $\text{cm}^3$
- $V = L \times W \times H$



$$1 \text{ cm}^3 = 1 \text{ mL}$$

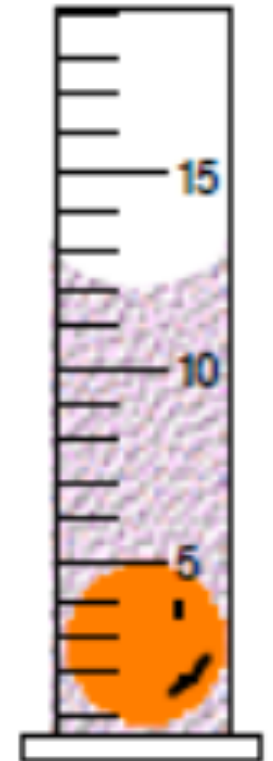
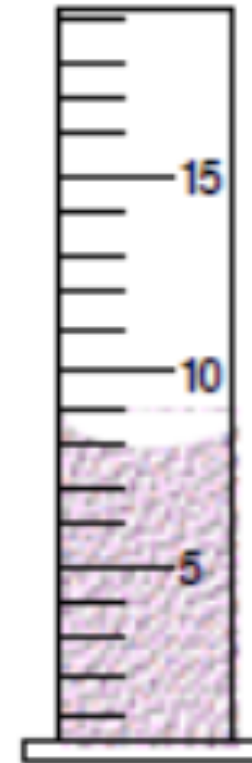
# How do you measure liquid volume ?

- Unit **mL**
- **ALWAYS** read volume from the bottom of the **meniscus**



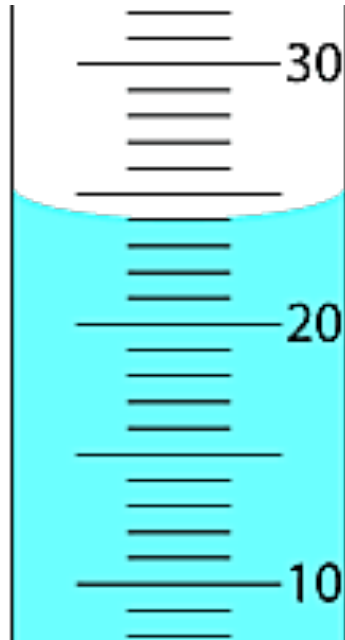
# How do you measure the volume of an irregular shape?

- Unit **mL**
- Water displacement
  1. **Measure the volume of liquid**
  2. **Add the object**
  3. **Subtract the volumes.**

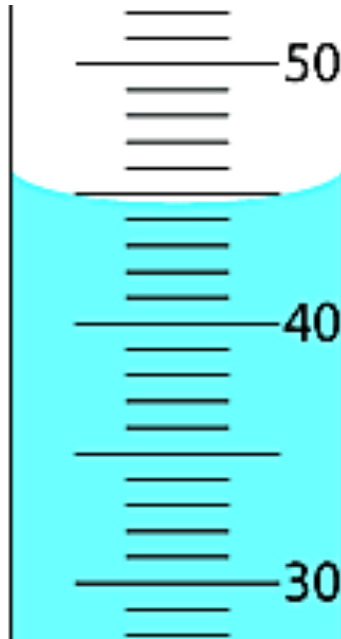




# Practice



# Practice



# Practice

