

Name: \_\_\_\_\_

Date: \_\_\_\_\_



# Density: Locked in School

Use the [Virtual Science Teachers Density: Locked in School interactive](#) to help you answer these questions.

- \_\_\_\_\_ is the amount of matter in an object or substance.
- \_\_\_\_\_ is the amount of space an object or substance takes up.
- \_\_\_\_\_ is a measure of how much matter is in a certain volume.
- Complete the data table to show which measurement types correspond to the provided units.

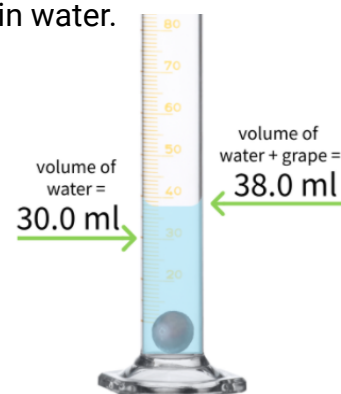
Measurement Type	Units
	grams (g), kilograms (kg), metric tons (t)
	milliliters (ml), cubic centimeters (cm <sup>3</sup> ), liters (L)
	grams per milliliters (g/ml) grams per cubic centimeters (g/cm <sup>3</sup> ) kilograms per liter (kg/L)

5. Grapes are \_\_\_\_\_ dense than water. We know this because they \_\_\_\_\_ in water.

6. The mass of the grape is \_\_\_\_\_ grams.

The volume of the grape is \_\_\_\_\_ ml.

The density of the grape is \_\_\_\_\_ g/ml.



7. Calculate and write the density of the basketball, baseball, and soccer ball in the table. Round the calculated densities to the nearest hundredths place (two decimal places).

<u>Ball Type</u>	<u>mass</u>	<u>volume</u>	<u>Density</u>
Tennis Ball	58 grams	149 cm <sup>3</sup>	0.39 grams/cm <sup>3</sup>
Basketball	620 grams	7000 cm <sup>3</sup>	
Baseball	145 grams	202 cm <sup>3</sup>	
Soccer Ball	420 grams	5700 cm <sup>3</sup>	

8. Circle the least dense and put an X over the most dense from the list below.

Coin

Corn Syrup

Oil

Ping Pong Ball

Water

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# Density: Locked in School

Use the [Virtual Science Teachers Density: Locked in School interactive](#) to help you answer these questions.

1. **Mass** is the amount of matter in an object or substance.
2. **Volume** is the amount of space an object or substance takes up.
3. **Density** is a measure of how much matter is in a certain volume.
4. Complete the data table to show which measurement types correspond to the provided units.

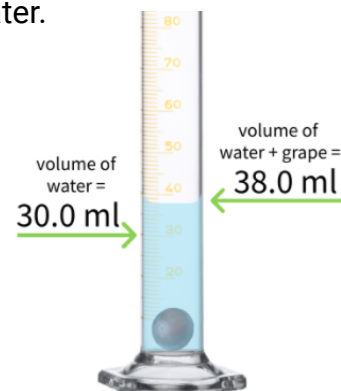
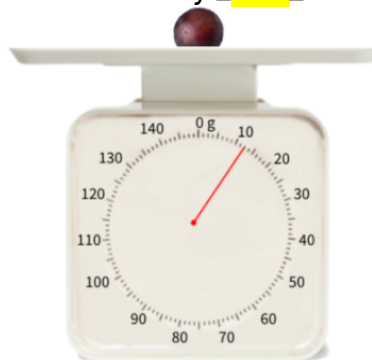
Measurement Type	Units
<b>Mass</b>	grams (g), kilograms (kg), metric tons (t)
<b>Volume</b>	milliliters (ml), cubic centimeters (cm <sup>3</sup> ), liters (L)
<b>Density</b>	grams per milliliters (g/ml) grams per cubic centimeters (g/cm <sup>3</sup> ) kilograms per liter (kg/L)

5. Grapes are **more** dense than water. We know this because they **sink** in water.

6. The mass of the grape is **12.0** grams.

The volume of the grape is **8.0** ml.

The density of the grape is **1.5** g/ml.



7. Calculate and write the density of the basketball, baseball, and soccer ball in the table. Round the calculated densities to the nearest hundredths place (two decimal places).

Ball Type	mass	volume	Density
Tennis Ball	58 grams	149 cm <sup>3</sup>	0.39 grams/cm <sup>3</sup>
Basketball	620 grams	7000 cm <sup>3</sup>	<b>0.09 grams/cm<sup>3</sup></b>
Baseball	145 grams	202 cm <sup>3</sup>	<b>0.72 grams/cm<sup>3</sup></b>
Soccer Ball	420 grams	5700 cm <sup>3</sup>	<b>0.07 grams/cm<sup>3</sup></b>

8. Circle the least dense and cross out the most dense from the list below.

**Coin**

Corn Syrup

Oil

**Ping Pong Ball**

Water