



Subject: Science/ Physics

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Lab report: Density Assignment

Date: 30/10/2022

Grade-Section: 8 H CS

Title: in few words, write a title that describes what you are aiming to determine with this experiment.

Investigating the density of different materials.

Objective: why are you conducting this experiment?

To find the density of all the objects by finding their volume and mass.

Hypothesis: what do you think the results will be when you conduct the experiment?

To find the density, you will divide the mass by the volume.

Materials: write down the items you will need to conduct this experiment.

1. *Mass Balance or Scale*
2. *Volumetric Cylinder*
3. *Ruler*
4. *Water*

These are what we would usually use in the lab but since we are doing this remotely the simulation will have everything you need.

Procedure: list the steps will you take to conduct this experiment.

Visit the website by using the link below to use the simulation to solve the following.

[Simulation Link](https://phet.colorado.edu/sims/html/density/latest/density_en.html)

https://phet.colorado.edu/sims/html/density/latest/density_en.html

By using the toolbox on the top right-hand side, play around with **“same mass, same volume and same density”**, feature to get familiar with it.

After getting familiar with it, change the toolbox on the right-hand side, to the **mystery option**.

Try to find the density of all the objects by finding their volume and mass. Use the table below the toolbox on the right-hand side to figure out which object with each letter was which material. **Write the results in table 1**

Note:

To interact with the blocks, you just have to click and drag them, be careful not to stack them on top of each other.

Also, if the blocks float on water you can keep pressing them and just pull them all under the water in order to find the volume

Observation: What data did you collect in this experiment?

(5 marks)

Table 1

Letter	Mass of the object (kg)	Volume of the object (L)	Density of the object (kg/L)	Material of the object (use the table given)
A	19.30	5.5	3.51	diamond
B	0.40	1	0.4	wood
C	19.32	1	19.32	gold
D	5.00	5	1	water
E	2.80	7	0.4	wood

(5 marks)

Table 2

	Mass of the object (kg)	Volume of the object (L)	Density of the object (kg/L)	Material of the object
1	01.23	3.14	0.39	wood
2	03.60	3.91	0.92	ice
3	10.00	3.703	2.70	glass
4	02.69	0.3	8.97	copper

Conclusion: What conclusion or theory can you state regarding this experiment

To find the density, you divide the mass by the volume. With the density, you can find what material it is.