**The National Orthodox School/ Shmessani**

**Subject: Science/ Physics**

**Name: mila Lab report: Density Assignment**

**Date: 10/11/2022 Grade-Section: 8 f 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?**

**The higher the mass per litre of a material, the higher the density will be.**

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

 *• Mass Balance or Scale*

 *• Volumetric Cylinder*

 *• Ruler*

 *• 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

*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

1.50

10

0.150

styrofoam

B

4.00

10

0.400

wood

C

9.19

10

0.919

Ice

D

20.00

10

2.000

Brick

E

27.00

10

2.700

(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

2.

03.60

3.91

3.

10.00

3.703

4.

02.69

0.3

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

**The higher the mass per litre of an object, the higher the density of that object will be.**