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: Is density a property of a material like wood, or of an object like a wooden chair?

Density is a property of the material itself.

Regular Solids

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

1. *Mass Balance or Scale*
2. *Ruler*
3. *Material Cubes*

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

1. *Use the balance to measure the mass of each shape.*
2. *Start by calculating the volume of the different samples by recording the length, width and height of each sample.*
3. *Use the Density Formula to calculate the density.*

Observation: What data did you collect in this experiment?

Table 1

Specimen	Length (cm)	Width (cm)	Height (cm)	Volume (cm³)
1				
2	Different Values will be taken but, in the end, to find the volume you follow the rule: $$V = l \times w \times h$$			
3				
4				

Table 2

Specimen	Mass of the specimen (g)	Volume of the specimen (cm^3)	Density of the specimen (g/cm^3)
1			
2	Different Values will be taken but, in the end, to find the density you follow the rule: $$D = \frac{m}{V}$$		
3			
4			

Irregular Solids

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

1. *Mass Balance or Scale*
2. *Measuring cylinder*
3. *Irregular solid specimens*

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

1. *Use the balance to measure the mass of each shape.*
2. *Start by calculating the volume of the different samples*
3. *Use a measuring cylinder filled with water.*
4. *Record the initial amount of fluid.*
5. *Drop the object into the graduated cylinder.*
6. *Record the level of the fluid with the object (final volume).*
7. *Subtract the original reading from the new reading to get the volume of the solid.*

Observation: **What data did you collect in this experiment?**

Table 3

Specimen	Initial Volume (ml)	Final Volume (ml)	Volume of specimen (ml)
1			
2	Different Values will be taken but, in the end, to find the volume you follow the rule: $$V = V_{Final} - V_{Initial}$$		
3			
4			

Table 4

Specimen	Mass of the specimen (g)	Volume of the specimen (cm^3)	Density of the specimen (g/cm^3)
1			
2	Different Values will be taken but, in the end, to find the density you follow the rule: $$D = \frac{m}{V}$$		
3			
4			

Liquids

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

1. *Mass Balance or Scale*
2. *Measuring cylinder*
3. *Liquid specimens*

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

1. *Use the measuring cylinder to measure the volume of each liquid.*
2. *Use the balance to measure the mass of the empty cylinder (initial mass).*
3. *Fill the cylinder with the required volume.*
4. *Use the balance to measure the mass of the filled cylinder (final mass).*
5. *Subtract the mass of the empty cylinder from the filled cylinder to find the mass of the liquid.*

Observation: **What data did you collect in this experiment?**

Table 5

Specimen	Initial mass (g)	Final mass (g)	Mass of specimen (g)
1	Different Values will be taken but, in the end, to find the mass you follow the rule: $m = m_{Final} - m_{Initial}$		
2			
3			

Table 6

Specimen	Mass of the specimen (g)	Volume of the specimen (cm^3)	Density of the specimen (g/cm^3)
1	Different Values will be taken but, in the end, to find the density you follow the rule: $D = \dfrac{m}{V}$		
2			
3			

Conclusion:

1) What conclusion or theory can you state regarding this experiment?

We see that each material had a different density based on its own physical properties.

2) What must you do to keep these experiments fair?

This experiment was a fair experiment because when reading the volume from the measuring cylinder we made sure we read the bottom of the meniscus and when taking the mass of the objects we had the scale at zero every time.

3) If the mass was doubled, what would happen to the density of the material?

It will get doubled.