

Lab Observation Report #1

Investigating The properties of solids

Name: **Answer key**

Grade **7A**

Date: **/11/2022**

In this lesson you will investigate and record the properties of different solids.

1- Hardness test

Scratch one solid with another. If you make a mark on one of them, then this is softer than the solid that scratched it.

Record your observation in the table below

Solid	Scratched by	Result
Lead (Pb)	Iron / wood	scratched
Iron (Fe)	wood	Not scratched
Wood	Iron	scratched

Arrange the solids in order of hardness.

Iron – wood - leaf

What conclusions can you make about the different metals?

Different solids have different hardness properties.

2- Solubility test

Add a spatula of copper filings to 20 cm³ of warm water (25 °C). Do the same for iron filings and salt in two more beakers. Leave for 5 minutes and record your observations.

Record your observation in the table below

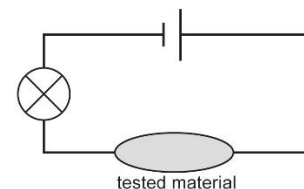
Solid	Dissolved in water	Didn't dissolve in water
Copper filings (Cu)		✓
Iron filings (Fe)		✓
Salt	✓	

What conclusions can you make about the different solids?

Some solids are soluble; they dissolve in water while other solids don't.

3- Conduction of electricity

Set up the circuit as shown in the diagram. Test a range of solids and see which will conduct electricity and allow the light bulb to come on. Record your results in a table.



Record your observation in the table below

Solid	The light bulb turned on	The light bulb didn't turn on
Aluminium (Al)	✓	
Copper (Cu)	✓	
Wood		✓

What conclusion can you draw about solids and their conduction of electricity?

Metals conduct electricity whereas non-metals don't conduct electricity.

Are there any common properties that all solids have? If so, what are they?

All solids have fixed shape and fixed volumes, and they cannot be easily compressed.
