

Activity 2.1 Investigating the properties of solids, liquids and gases

Activity type



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In this activity you are going to be conducting a series of tests on each state of matter – **SOLIDS, LIQUIDS** and **GASES** to investigate their properties.

Comparing the properties of solids, liquids and gases

What to use:

Each **STUDENT** will require:

- Science by Doing **Notebook**
- safety glasses.

Each **GROUP** will require:

- wooden block.
- 100 mL of water in a measuring cylinder
- 100 mL beaker
- 250 mL beaker
- syringe.

Start by conducting all tests on the solid, then the liquid and finally the gas.

Before you start each test you will need to make a prediction.

When you conduct the test you need to record your observations.

After you have finished the test you need to explain your observations.

Think about the best way to display your results in your **Notebook**.

PREDICT

OBSERVE

EXPLAIN

Activity 2.1 Investigating the properties of solids, liquids and gases Continued

WHEN CLASSIFYING MATERIALS
AS **SOLIDS**, **LIQUIDS** OR **GASES** SCIENTISTS
USE THESE PROPERTIES:

SHAPE

Shape tells you something about the dimensions of the substance.



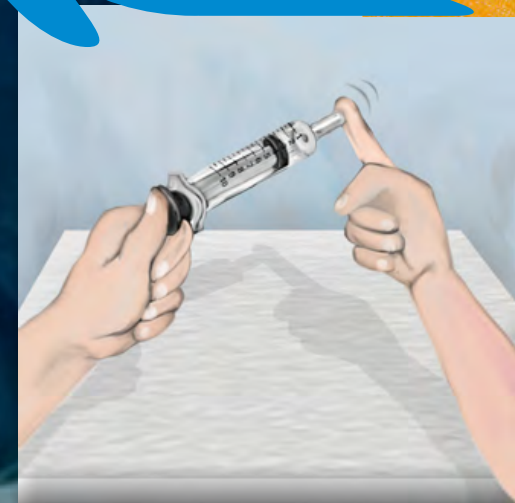
VOLUME

Volume is the amount of space a substance takes up.



COMPRESSIBILITY

Compressibility refers to whether or not a substance can be squeezed into a smaller space.



Activity 2.1 Investigating the properties of solids, liquids and gases Continued

Test 1: Shape

What to use:

Each GROUP will require:

- 100 mL beaker with "test" matter
- 250 mL beaker.



What to do:

Step 1

Predict what you think will happen to the shape of the matter when it is placed into the 250 mL beaker.

Step 2

Place the matter in the 250 mL beaker.

Step 3

Record your observation.

Step 4

Explain your observation.

Test 2: Volume

What to use:

Each GROUP will require:

- 100 mL beaker with "test" matter
- 250 mL beaker.



What to do:

Step 1

Predict what you think will happen to the volume when you pour the matter into the larger beaker.

Step 2

Pour the matter into the beaker.

Step 3

Record your observation.

Step 4

Explain your observation.

Test 3: Compressibility

What to use:

Each GROUP will require:

- 100 mL beaker with "test" matter
- syringe.



What to do:

Step 1

Predict what you think will happen when you push on the matter with the syringe plunger.

Step 2

Remove the plunger from the syringe.

Step 3

Replace the plunger.

Step 4

Place your finger over the end of the syringe and push the plunger as far as you can.

Step 5

Record your observation.

Step 6

Explain your observation.



Click here to explore the three states of matter further.

Share your thoughts with the class.