

Daily Review

Reminder:

Quantitative observations are **measurements**.
They have a numerical value and units.

Qualitative observations are descriptions

Using the picture and on your whiteboard,

- Write one quantitative observation
- Write one qualitative observation



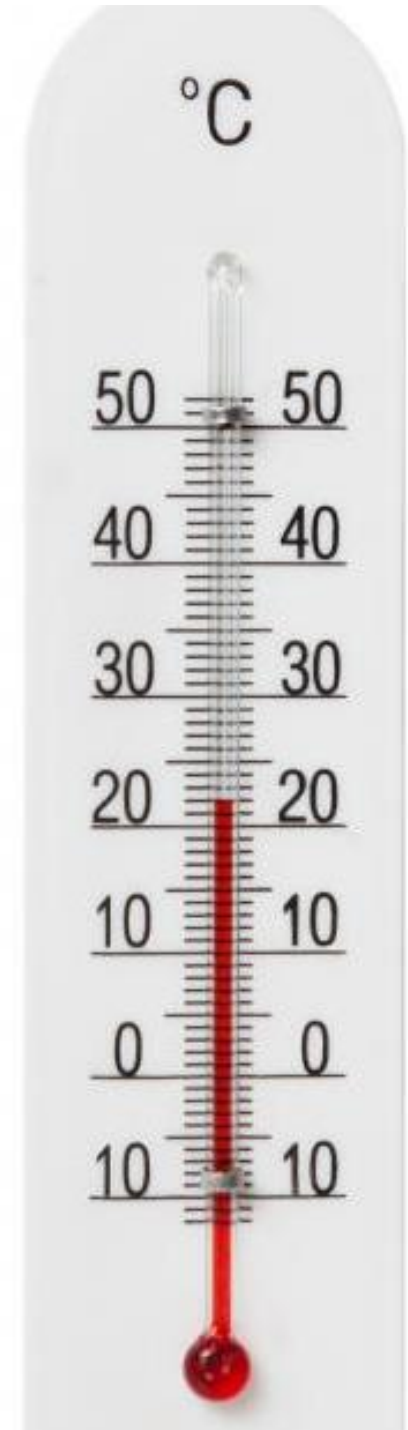
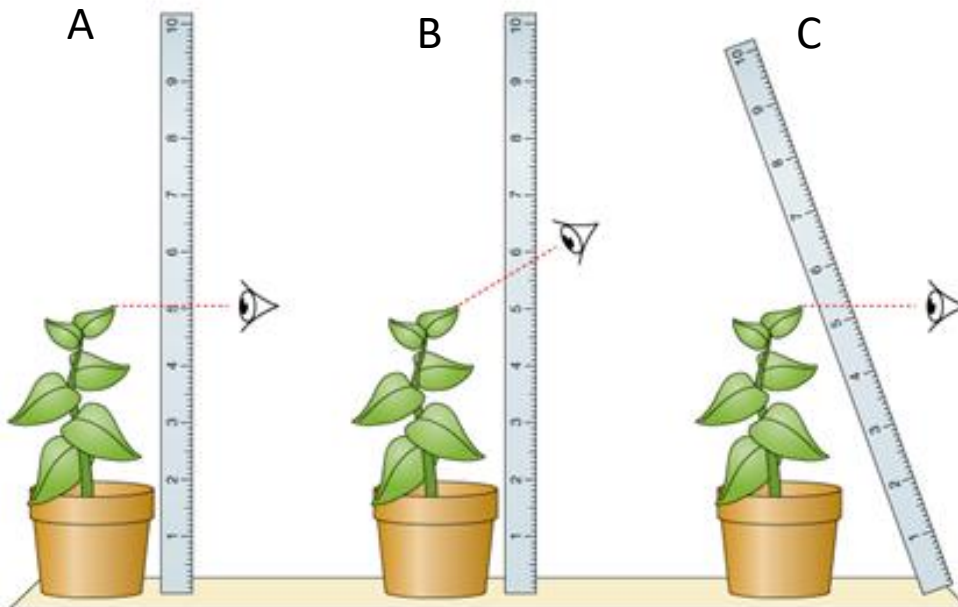
Daily Review

Reminder:

When using measuring equipment, you should be at **eye-level** and measure to the **closest line**.

What is the temperature on the thermometer? (don't forget units)

Which part of the picture shows the correct way to measure the height of the plant? Explain your choice.



Daily Review

Reminder:

Observations are statements of **fact** using descriptions or measurements.

Inferences are likely explanations of observations.

A student made this observation:

There are four people running across the oval

Write an inference for this observation



Daily Review

Reminder:

What you are trying to find an answer to is the **question**
An **aim** is what you are trying to achieve in an experiment
A **hypothesis** is a testable statement

Observation: Paper helicopters with different wing sizes fall at different rates

Write a **question** that can be investigated for this observation

Do paper helicopters with different wing sizes fall at different rates?

Write an **aim** for this investigation

To find out if paper helicopters with different wing sizes fall at different rates.

Write a **hypothesis** for this investigation

States of Matter

Learning Objective

1. Define matter
2. Identify the three states of matter
3. Name the properties of each state of matter

CFU

What are we going to learn?

Activate Prior Knowledge

Water comes in different forms.

- It can be in a solid, like ice.
- It can be a liquid, like tap water
- It can be a gas, like steam



Think, Pair, Share: Name three solids, two liquids and one gas

Concept Development

What is matter?

- Matter is anything that has mass and volume

Examples



Non - Examples



Sound



Light

CFU 1

What is matter?

CFU 2

Is a table made of matter? Why?

CFU 3

Is light made of matter? Why?

Vocabulary

Mass: the amount of matter in the object

Volume: the amount of space the object takes up

Concept Development

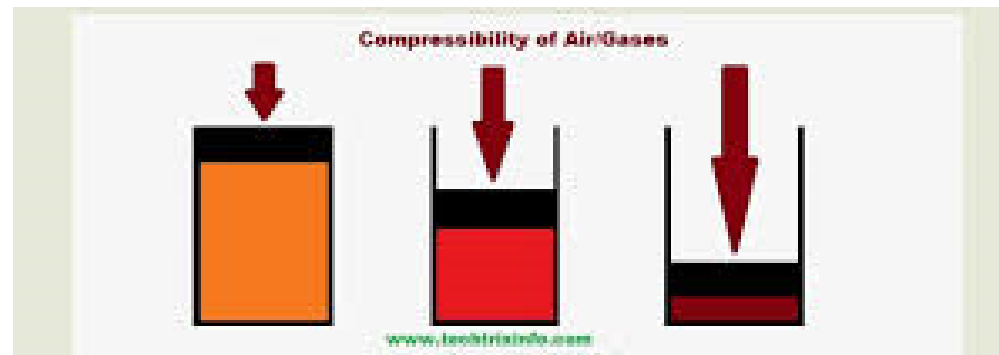
Properties of matter

The states of matter can be described using three properties

Shape: Holds its own shape or changes to fit the container

Volume: The amount of space it takes up

Compressibility: Making the volume smaller by increasing pressure



CFU 1

When you throw a rock into a pond, what happens to the shape of the rock?

CFU 2

Which has a larger volume, a mouse or an elephant? Explain your choice.

CFU 3

When you compress something, what happens to its volume?

Vocabulary

Mass: the amount of matter in the object

Volume: the amount of space the object takes up

Properties of Solids

- Fixed shape
- Fixed volume
- Not compressible



Vocabulary

Volume: the amount of space the object takes up

Compressible: make the volume smaller using pressure

Concept Development

Properties of liquids

- Variable shape
- Fixed volume
- Not compressible



CFU 1

Why is milk a liquid?

CFU 2

How are liquids different to solids?

Vocabulary

Volume: the amount of space the object takes up

Compressible: make the volume smaller using pressure

Concept Development

Properties of gases

- Variable shape
- Variable volume
- Compressible



Chlorine Gas

CFU 1

How would you describe chlorine? Why?

Vocabulary

Volume: the amount of space the object takes up

Compressible: make the volume smaller using pressure

Skill Development/Guided Practice

Steps for describing the state of matter

Step 1: Think about its shape

Step 2: Think about its volume

Step 3: Think about its compressibility

Dish soap is a liquid because it has a variable shape, a fixed volume and is not compressible.



CFU 1

Is the shape fixed or variable?

CFU 2

Is the volume fixed or variable?

CFU 3

Is it compressible?

CFU 4

Which state of matter?

Vocabulary

Volume: the amount of space the object takes up

Compressible: make the volume smaller using pressure

Skill Development/Guided Practice

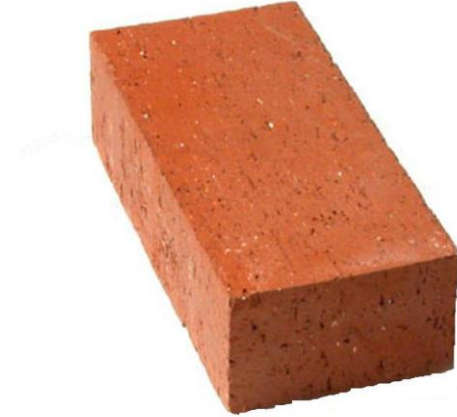
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A brick is a solid because it has a fixed shape, a fixed volume and is not compressible.



CFU 1

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CFU 2

Is the volume fixed or variable?

CFU 3

Is it compressible?

CFU 4

Which state of matter?

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Skill Development/Guided Practice

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Steam is a gas because it has a variable shape, a variable volume and is compressible.



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Is the volume fixed or variable?

CFU 3

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Relevance

The state of matter will determine how a substance will behave

The state of matter might determine how we use or store a substance.

Skill Closure

Name a liquid and describe its properties.

Skill Closure

Name a solid and describe its properties.

Reminder

Steps for describing the state of matter

Step 1: Think about its shape

Step 2: Think about its volume

Step 3: Think about its compressibility

Independent Practice

In your books or on your device

1. Write a one sentence description of the properties of solids, liquids and gases
2. Draw a table with three columns. Label the columns solids, liquids and gases. Put the substances listed below in the correct column of your table.

Olive oil, glass, Freddo frog, table, steam, paper, honey, apple, orange juice, computer, \$1 coin, oxygen, cordial, carbon dioxide, milk, water