

Grade 6 - Science

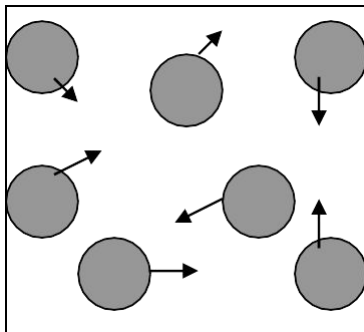
Student Review Pack - **Answers**

Week	Topic	Lesson	Resources
Week 13	Particle Theory	States of Matter	Longman Chemistry pg 20-29
Week 14	Particle Theory	Air Pressure	Longman Chemistry pg 30-35
Week 17	Chemistry	The Periodic Table	Longman Chemistry pg 45
Week 18	Chemistry	Chemical Reactions	Longman Chemistry pg 14

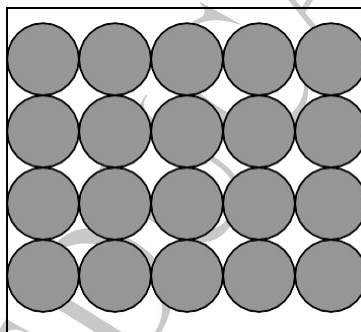
*if Longman Chemistry textbook is not available, use notes and booklets provided in class.

Particle Theory - States of Matter

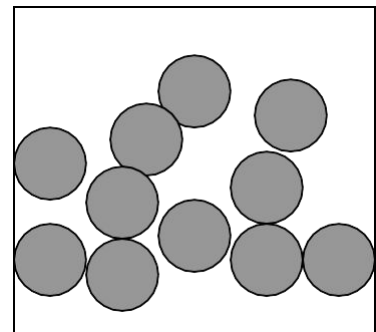
Name the three states of matter below:



gas



solid



liquid

Write one sentence to describe the **particle** arrangement for each of the above states:

- a) **Particles move and vibrate quickly and there is a large space between particles.**
- b) **Particles move and vibrate slowly and they are very close together.**
- c) **Particles move and vibrate faster than in a solid but more slowly than in a gas. Particles can move around each other.**

Name the processes that are described below:

Example: solid + heating = melting

- a) gas + cooling = **condensation**
- b) liquid + heating = **evaporation**
- c) liquid + cooling = **freezing**
- d) solid → gas = **sublimation**

The Water Cycle

Try an experiment at home!

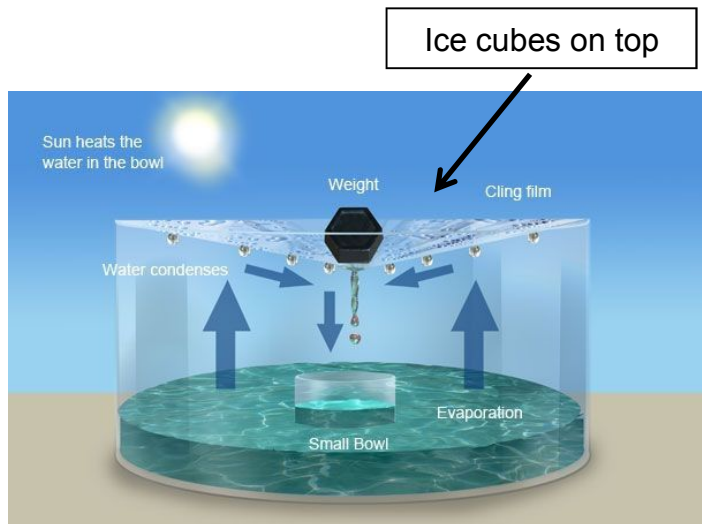
Search 'Water Cycle Experiment' on YouTube.

https://www.youtube.com/watch?v=2rwFK5_Viqo

Hot water **evaporates** and the steam rises.

It comes into contact with the cold cling film with ice and it **condenses**.

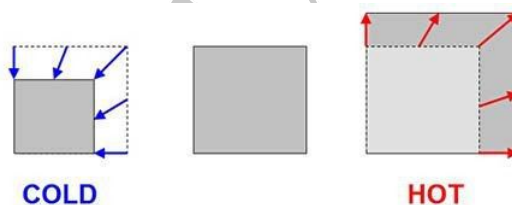
The water then drops down as **precipitation** and is collected in the smaller beaker.



Particle Theory - Air Pressure

Complete the sentences using the word bank:

thermometer	faster	contracts	closer	substance	cooled
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When a **substance** is heated, the particles move **faster** causing it to **expand**.

When a substance is **cooled**, the particles move **closer** to each other. The substance **contracts**.

This describes how a **thermometer** works.

The **density** of an object is its mass per unit volume.

density = mass / volume

A sugar cube has a **mass** of 16g.

Each side of the cube is 2cm in length.

(Remember: **volume** = length x width x height)

Calculate the **density** of the sugar cube:

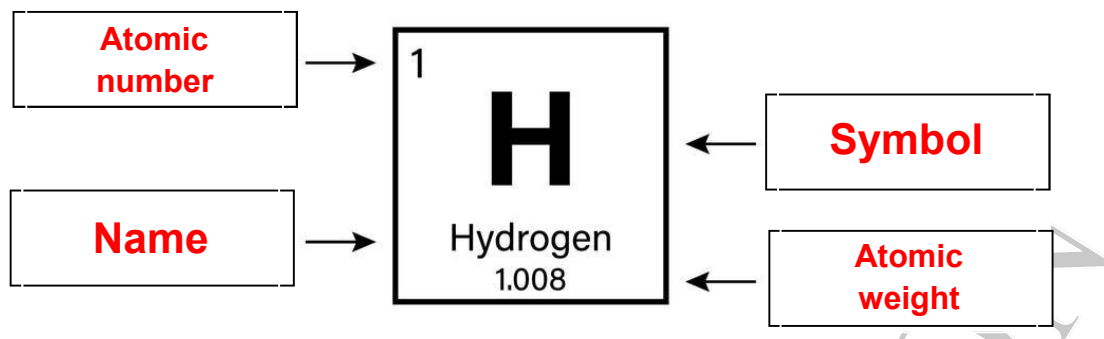
$$16\text{g} \div 8\text{ cm}^3 = 2\text{g/cm}^3$$



Chemistry - The Periodic Table

Use the Periodic Table on page 45 of the Longman Chemistry Textbook, Unit 2.2, Elements.

1. Label the parts of the hydrogen element: *name, atomic number, atomic weight, symbol*.



2. What are the symbols for the following elements?
- a) Magnesium **Mg**
 - b) Potassium **K**
 - c) Iron **Fe**
 - d) Copper **Cu**
3. What are the names of the following elements?
- a) C **Carbon**
 - b) Cl **Chlorine**
 - c) Au **Gold**
 - d) Sr **Strontium**
4. What are the atomic numbers of the following elements?
- a) Calcium **20**
 - b) Iron **26**
 - c) Gold **79**
 - d) Uranium **92**
5. Which element is used to kill bacteria in swimming pools? **Chlorine**
6. Which element is used to blow up party balloons? **Helium**
7. Which element is often used in batteries? **Lithium**
8. Which element is commonly used in toothpaste? **Fluorine**
9. Which two elements are commonly used to make jewellery? **Silver & Gold**
10. Which element is used to clean cuts and wounds? **Iodine**

Go to Longman Chemistry Textbook, Unit 2.3, Elements, compounds and mixtures
Page 52. Answer Q4.

Chemistry - Chemical Reactions

Chemical reactions are when materials are changed and **new** substances are made.

Write 3 examples of chemical reactions:

- a) **Using a battery**
- b) **Baking a cake**
- c) **Fireworks**

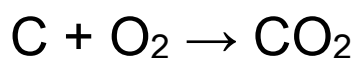


Complete the sentence using the word bank:

colour	heat	gas
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We know a chemical reaction is happening when there is **heat** released or taken in, **gas** formation and a **colour** change.

Chemical equation:



- a) Write this chemical equation in **words**: **Carbon and oxygen produces carbon dioxide.**
- b) The reactants are the starting materials in a reaction. What are the reactants in this reaction?
carbon and oxygen
- c) The products are the substances made in a reaction. What is the product of this reaction?
carbon dioxide

The Science Behind the Colours of Fireworks

Did you know that fireworks were different colours because of the minerals and **elements** present? Use the guide to colour the fireworks!

