

Grade 8 June exam 2025

Marks: 80

Duration: 1hour30 minutes

Topic	Breakdown of topic	
Periodic Table Of Elements	<p><u>Arrangement of elements on the periodic table.</u></p> <ul style="list-style-type: none">• Groups• Periods• The first 20 elements <p><u>Some properties of metals, semi-metal and non-metals</u></p> <ul style="list-style-type: none">• Identifying elements in the periodic table	<ul style="list-style-type: none">• Identify the names and symbols of the first 20 elements of the periodic table [learners need NOT memorise the atomic number of each element]• Identify metals, semi-metals, and non-metals on the periodic table of elements• Show the atoms which make up molecules (such as O₂, H₂, N₂, H₂O, CO₂)• Draw diagrams to represent particles in a solid, a liquid and a gas, and explain them in terms of arrangement, movement, forces and spacing using the particle model of matter
Atoms	<p><u>Atoms – building blocks of matter</u> Drawing an atomic model</p> <p><u>Sub-atomic particles:</u></p> <ul style="list-style-type: none">• Protons• Electrons• Neutrons <p><u>Pure substances:</u></p> <ul style="list-style-type: none">• Elements• Compounds <p><u>Mixtures of elements and compounds</u></p>	<ul style="list-style-type: none">• Draw a table comparing the particles of gases, liquids, and solids• Do an investigation to determine whether it is possible to decompose copper chloride using electrical energy• Investigate if particles diffuse (mix) faster when they are in the liquid state or in the gaseous state• Investigate what happens when we heat and then cool candle wax• Compare objects with same volume but with different mass (by hand) in terms of their density, such as sponge, polystyrene, wooden and metal blocks of the same size
The particle model of matter	<p><u>The concept of the particle model of matter</u></p> <ul style="list-style-type: none">• States of matter <p><u>Change of state</u></p>	<ul style="list-style-type: none">• Compare the densities of different states of the same material, a solid, a liquid or a gas

	<u>Density, mass and volume</u> <u>Density and states of matter</u> <u>Density of different materials</u> <u>Expansion and contraction of materials</u> <u>Pressure</u>	<ul style="list-style-type: none"> • Investigate which material has the highest density; sand, flour, water, or air
Chemical reactions	<u>Reactants and products</u>	

Investigative skills required

Skill	Key point
Drawing a: Line graph Bar graph Histogram Pie chart	<ul style="list-style-type: none"> • The caption must have two variables • Scale: Equal spaces between units on axes which are in chronological order • Equal width of the bars and between bars • Pie graph must show calculations and a compass & protractor must be used
Drawing a: Table Diagram with labels	<ul style="list-style-type: none"> • Table must be drawn with clear columns and related items must be compared • Drawing must be in pencil with a definite heading/caption and label lines must point to the exact part and the labels written in pen
Answering: Scientific investigative questions	<ul style="list-style-type: none"> • Use the aim of the investigation to determine the dependent and independent variables which is not always the same as the labels on a graph or table • Reliability – repeat the investigation and increase the sample size must be linked to the investigation • Validity – keep the variables constant e.g., same age, gender, environmental conditions etc. the word same must be included • Control – to compare results and ensure that the results are due to the factor that is tested • Difference between the experiment and the control. With the control you eliminate the factor that you test. With the experiment you provide the factor you test
Do calculations	<u>Simple calculations</u> <ul style="list-style-type: none"> • Percentage • Average • Percentage increase or decrease formula Convert calculations to a description

Tips from A Ngubane

- Use reading time to plan how you will answer each question and manage your time wisely.
- Read the instructions of the question paper and follow them.

- Do not create a cover page, start answering from the first page of your answer book.

Exam tips

- All diagrams for each topic must be studied
- All activities given in the classroom must be studied
- Practice terminologies
- practice all topic tests
- show calculations even when not asked to

Use the link for [past papers](#)