



Year 8 Learning Journey

Summer

Types of Chemical Reaction (Part 1)

Core knowledge
1. Describe some common properties of metals.
2. Relate the uses of different metals to their physical properties.
3. Describe what a catalyst is and some uses of catalysts.
4. Name the compounds formed by a reaction between a metal and a non-metal and write word equations for these reactions.
5. Explain what is meant by 'corrosion' and 'rusting'.
6. Write word equations and interpret symbol equations for oxidation reactions.
7. Explain how metals can be protected from corrosion.
8. Describe the reactions of different metals with water and write word and symbol equations for these reactions.
9. Describe the gas test for hydrogen.
10. Place metals in order of reactivity based on their reactions with water and oxygen.
11. Key Practical Skill: Explain what is meant by 'accurate' data. Identify data as repeatable and reproducible. Identify the range of readings in an experiment. Explain how to improve the quality of data collected during an investigation.
12. State what is produced when a metal reacts with an acid and write word equations for these reactions.
13. Name the salts produced by the reactions between metals and different acids.
14. State what is meant by an 'alloy' and describe their properties.
15. Draw a diagram to model the arrangement of particles in pure metals and alloys and use this to explain the properties of alloys.
16. State what is meant by a 'pure' substance and identify pure substances by their melting and boiling points.

Learning Checkpoints

Learning Checkpoint Title	Attempt 1		Attempt 2 / Extend	
	Mark	RAG	Mark	RAG
LC1				
LC2				

Key Vocabulary

Tier 2

Categorise, Contrast, Accuracy, Relate, Judge

Tier 3

Metal, Acid, Rusting, Oxidation, Properties, Water



Year 8 Learning Journey

Autumn Term

Acids and Alkalis

Core knowledge
1. Recognise hazard symbols.
2. Name 2 lab acids and their formulae.
3. Write a definition for an indicator.
4. Name 2 indicators and state how they work.
5. Name some household solutions that would be classified as acidic, alkaline or neutral.
6. Explain what is meant by neutralisation and describe how to neutralise an acid.
7. Predict the salts produced when an acid reacts with a metal.

Learning Checkpoints

Learning Checkpoint Title	Attempt 1		Attempt 2 / Extend	
	Mark	RAG	Mark	RAG
LC1				
LC2				

Key Vocabulary
Tier 2 Experiment, Distinguish, Classify, React, Predict
Tier 3 Acid, Alkali, Indicator, Neutral, pH, Universal Indicator, Hazard, Salt, Hydrogen



Year 8 Learning Journey

Summer Term

The Periodic Table

Core knowledge
1. Describe Dalton's atomic theory.
2. Use Dalton's atomic model to describe an element.
3. Give examples of the physical properties of different elements.
4. Give examples of the chemical properties of different elements.
5. Write word equations for chemical reactions.
6. Write and interpret chemical formulae.
7. Write balanced symbol equations.
8. Identify alkali metals, halogens and noble gases in the periodic table and describe their typical properties.
9. State what elements in the same group of the periodic table share.
10. Describe how the periodic table is arranged and compare this to early periodic tables.
11. Key Practical Skill: Explain what anomalous results are, identify them in a set of data and suggest reasons for anomalous results occurring.
12. Describe how the sizes of atoms change in the groups and periods of the periodic table
13. Identify where metals and non-metals are found in the periodic table.
14. Describe and identify trends in physical properties within the periodic table.
15. Describe the reactions of metals with water and oxygen and write word and symbol equations for these reactions.

Learning Checkpoints

Learning Checkpoint Title	Attempt 1		Attempt 2 / Extend	
	Mark	RAG	Mark	RAG
LC1				
LC2				

Key Vocabulary

Tier 2

Balanced, Distinguish, Determine, Period

Tier 3

Equation, Alkali metals, Halogens, Noble Gases, Element, Formulae