



Year: 8

Subject: Science

Topic: Reactivity

Knowledge and Understanding to be developed:

The difference between chemical and physical processes
 What combustion is and some environmental impacts, and how to manage fire.
 Writing word equations
 Metal and acid reactions
 How to speed up a chemical reaction
 Reactions can go in two directions.

Homework:

Work through Reactivity booklet.

lessons

Skills/practicals

Lesson 1: Identifying chemical and physical change

Define physical change and give examples
 Define chemical change and give examples
 Investigate substances to see if chemical or physical changes are taking place.

Class Practical:
Observing and looking for chemical change
Demo : Mentos geyser

Lesson 2 Combustion Part I

State the meaning of combustion
 State the fire triangle
 Explain how the fire triangle can be used to prevent and extinguish fires

Class Demo:
 Chip pan fire

Lesson 3 Combustion Part II – Global Warming

To know that combustion of fossil fuels produces carbon dioxide
 To understand how increased greenhouse gases can cause global warming
 To know the impacts of global warming on the earth

Lesson 4 Reactivity of metals

To learn how to recall the reactivity series of metals
 To investigate the reactivity series by reacting metals with acid
 To recall the general equation for metal reacting with acid
 To learn how to test for hydrogen gas with a lit splint.

Class Practical:

Reacting copper zinc iron and magnesium with acid
Testing for hydrogen

Lessons 5: Speeding up a chemical reaction

To measure and calculate the surface area of a magnesium strip
 To measure the rate of a chemical reaction
 To write a scientific investigation

Levelled Rich Task

Area of a rectangle 8M.10
 Plan how to collect data to test a hypothesis 8D2
 Draw conclusion from data KS3.19
 Use appropriate units KS3.14
 construct and select appropriate charts ks3.15
 Present answers to a given number of significant figures 8N15a
 Measure to complete a task KS5
 Construct graphs to represent data 8D4b
 Summarise and synthesise information Response and analysis 8.RA3
 Distinguish between bias and objectivity Response and analysis 8.RA4
 in planning writing make choices about language and purpose to suit the audience meaning purposes readers 8.WM3
 Use whole text structure to support and communicate meaning structure and organisation 8WS1
 select analyse and present ideas information convincingly objectively structure and organisation 8.WS2
 use technical terms language expression consistent with subject content language 8.WL2

Lesson 6: Reversible reactions

Describe how a solid can be obtained from a solution

Describe what factors can speed up evaporation

Explain how factors speed up evaporation

Class practical:
Observing Dehydrating and rehydrating copper sulphate and cobalt chloride