

1. Scientific Investigation

To start Year 8 we revisit the work on scientific investigations covered during Year 7. In this first unit we will be investigating why penguins huddle. All the scientific skills will be covered including **planning** an investigation, displaying data appropriately, **plotting graphs**, drawing **conclusions** from data and **evaluating** investigations.



Method writing:
separating mixtures

2. Matter 3 - Separation techniques

In this unit we link to the work in year 7 on elements and compounds by studying mixtures. We consider what a **mixture** is and compare them to **compounds**. We move on to **explaining** ways in which different mixtures can be **separated** and **investigating** how these methods are carried out.



3. Reactions 3: metals forces

Following on from the unit on chemical reactions in year 7 we study metals and their **reactions** in more detail. We begin by comparing and contrasting the properties of metals and non-metals and linking these to their uses. We

observe **reactions** of metals with acids, oxygen and water, **writing word and chemical equations** to represent the reactions. We then carry out a series of experiments to determine which metals are more **reactive**.



4. Earth 1 – Earth structure

We start the unit by looking at the structure of the Earth and the **minerals** found in its crust. We move on to consider the formation and properties of three different types of rock; **sedimentary**, **igneous** and **metamorphic**. Once we understand the structure and formation of these we **link** all the ideas together into the rock cycle



Writing a scientific method:
investigating insulation



5. Matter 4 – Heating and cooling

In this unit we link together fundamental ideas in chemistry and physics to consider how **energy** is transferred via **heating** and how the arrangements of **particles** in substances help to explain this. Once we have established the difference between heat and temperature, we describe how heat is transferred via **conduction**, **convection** and **radiation** using the particle model in our explanations. We will **investigate** how to reduce heat loss using **insulation** and determine the most effective insulating material before finishing by looking at what happens when substances are heated and cooled.

SUMMATIVE ASSESSMENT 4
(genes 3, matter 4, energy 2)
Week 38

