

Observing Chemical Change — Demonstration Task

A2-CHEM practical summative · 25% due: End of Component 2 (around Lesson 7)

Summative observation task for the Chemical sciences strand, modelled on the SCSA 'Observing chemical change' sample task. The teacher demonstrates a sequence of physical and chemical changes; students complete a results grid classifying each change as reversible or irreversible, identify any new substance, and describe the risks. Completed individually in class (~1 hour). Assesses ULO2 (reversible/irreversible change) and ULO6 (processing observations). Weighting is a school convention (25% of four equally weighted summatives), not mandated by the syllabus.

Task

Your teacher will demonstrate several changes to everyday materials. Watch each one carefully and record what you observe. For each change you will decide whether it is reversible or irreversible, say whether a new substance was made, and think about the safety risks.

How this works: the teacher carries out each demonstration while you watch and fill in the grid below on your own. You do not handle the hot materials yourself. Use full sentences in the grid.

Results grid

1. Complete the table for each change the teacher demonstrates.

Material and process	Physical or chemical change? Why?	Is there a new substance? What is it like?	Reversible or irreversible?	A risk and how to reduce it
1				
2				
3				
4				
5				

Thinking about your results

2. Choose one change you classified as **irreversible**. Explain how you knew a new **substance** had been made.

3. Explain the difference between a **reversible change** and an **irreversible change**, using an example of each from today.

Signs that a **chemical change** has happened include a colour change, a gas (bubbles or smell), heat or light given off, or a new material that will not change back.

Rubric criteria (weights as a percentage of this assessment)

Criterion	Weight	Descriptor
Classifying reversible and irreversible change	40%	High (5–6): Correctly classifies every change as reversible or irreversible and provides clear information about any new substance and its properties. Sound (3–4): Correctly classifies most changes and identifies a new substance where one is made. Limited (1–2): Classifies some changes correctly with limited reasoning.
Observation and description of changes	35%	High (5–6): Records detailed, accurate observations for each change and correctly identifies and describes the observable physical or chemical changes that occurred. Sound (3–4): Describes the physical and chemical changes observed. Limited (1–2): Lists a physical change and a chemical change observed, with little detail.
Identifying and managing risk	25%	High (3): Describes safety risks and suggests ways to reduce them. Sound (2): Describes safety risks. Limited (1): Lists some safety risks.