Physical and chemical changes and identify indicators of energy change...

compare physical and chemical changes and identify indicators of energy change in chemical reactions

Learning intention

- compare physical and chemical changes and identify indicators of energy change in chemical reactions

Teach and model

- performing simple chemical reactions to identify the indicators of chemical change such as gas production, solid production, colour change and temperature change
- analysing and interpreting data on the properties of substances before and after the substances interact to determine if a chemical or physical change has occurred
- investigating and identifying energy changes in different chemical reactions such as differences in temperature

Check understanding

- Explain the main idea in physical and chemical changes and identify indicators of energy change... using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.