

Investigating Materials: A Scientific Report

Learning objective: To describe and compare the properties of everyday materials and justify their uses based on these properties.

Use this writing frame to report on your recent materials investigation. Remember to use scientific vocabulary and refer to the specific properties you tested, such as transparency, thermal conductivity, or flexibility.

In our latest science investigation, we explored the properties of various materials to determine which would be most suitable for building a new outdoor shelter for Nova the owl.

Word bank: furthermore · consequently · in contrast · due to · transparent · opaque · thermal conductor · insulator · permeable · flexible · durable

1. Introduction: State the aim of your investigation. What question were you trying to answer? Start with: 'The aim of this experiment was to investigate...' (2 marks)

2. Method: Describe how you tested the materials. Start with: 'To ensure a fair test, we kept the following variables the same: ...' (3 marks)

3. Results: What did you observe during the testing? Start with: 'The results showed that [material name] was the most [property] because...' (3 marks)

4. Analysis: Why do these properties matter? Start with: 'This property is important for Nova's shelter because...' (3 marks)

5. Conclusion: What is your final recommendation? Start with: 'Based on my findings, I would recommend using [material] for the shelter because...' (2 marks)

Extension challenge: Imagine Nova needs a material that is both a thermal insulator and waterproof. Research which common materials fit these criteria and explain why they would be effective for a cold-weather nest.