

The Nature of Scientific Investigation

Chapter 1: Exploring the Investigative World of Science · Topic 1

Key Concept

A good scientific investigation begins with a clearly framed question, followed by planning an experiment that isolates the variable being tested. Data must be recorded accurately and honestly, even unexpected results, since these can lead to new discoveries. Scientists often repeat experiments multiple times to check consistency, and they present findings to other scientists for review before conclusions are widely accepted as reliable.

Quick Revision Notes

- Scientific investigation involves observation, questioning, and controlled experimentation.
- A good investigation isolates one variable while controlling all others.
- Honest recording of data, even unexpected results, is essential.
- Findings are reviewed by other scientists before being widely accepted.

Practice Questions

- 1 Design a simple investigation to test which liquid evaporates fastest.
- 2 Why is it important to record unexpected results honestly in an experiment?
- 3 Explain why scientists repeat experiments multiple times.