SCIENCE · Y1–Y6

Working Scientifically

Knowledge Organiser — KS1–KS2

Types of scientific enquiry

1

Fair test

An investigation where only ONE variable is changed at a time. All other variables are kept the same.

Example: testing which material is waterproof — same amount of water, same time, different materials

2

Observing over time

Watching and recording how something changes — not testing a variable.

Example: recording plant growth week by week

3

Pattern seeking

Looking for a pattern in data — often comparing measurements.

Example: measuring hand span and height — is there a pattern?

4

Classifying

Sorting objects or organisms into groups based on shared features.

Example: sorting materials by properties

5

Research

Finding information from books, data, or secondary sources.

Example: researching food chains using reference books

Variables

1

Independent variable

The one variable YOU change in the experiment.

Example: in a ramp test: the height of the ramp

2

Dependent variable

What you measure — what CHANGES because of your independent variable.

Example: how far the car travels

3

Control variable

Everything else that is KEPT THE SAME to make it a fair test.

Example: the same car, the same surface, the same measuring tape

cientific method

A guide for planning any inves

- 1. QUESTION: What do you want to find out?
- 2. PREDICTION: What do you think will happen? Why?
- 3. METHOD: What will you change, measure, and keep the same?
- 4. RESULTS: Record data in a table
- 5. PATTERN: Is there a pattern in your results?
- 6. CONCLUSION: What does the evidence show? Does it match your prediction?
- 7. EVALUATION: Was the test fair? What would you change?
- A GOOD SCIENTIST: measures carefully, repeats to check reliability, considers alternative explanations