

Same idea, different audience

Setting the scene

Scientists design experiments to answer a question. Once they have collected the relevant data, they must analyse them to see if there is a pattern. They then need to communicate their findings to a range of audiences. Findings are communicated in different ways, depending on who the audience is.

Aims

In this activity, you will be using **enquiry processes** to:

- **Communicate:** write in a style appropriate for purpose and audience
- **Communicate:** use scientific vocabulary accurately
- **Communicate:** give evidence to back up your points
- **Communicate:** make your writing clear, concise, correct, and coherent.

Task

A group of scientists has discovered a new alloy. The alloy has a very low density and low resistance. The scientists want to find out how well different thicknesses of the alloy conduct electricity.

Your task is to produce two different pieces of writing about the scientists' experiment and findings. Each piece of writing should be written to suit a particular audience.

You need to find out about the experiment, and then plan your writing ...

The experiment

Five different thicknesses of the alloy were tested in an electrical circuit. For each thickness, the resistance of the alloy was measured.

Wire thickness (mm)	Resistance (ohms)			
	Repeat 1	Repeat 2	Repeat 3	Mean
0.1	0.37	0.35	0.36	0.36
0.2	0.19	0.19	0.16	0.18
0.3	0.12	0.12	0.12	0.12
0.4	0.10	0.07	0.10	0.09
0.5	0.06	0.08	0.07	0.07

1 State the independent variable the scientists used.

2 State the dependent variable the scientists used.

3 State one variable which would need to be controlled in this experiment.

4 Describe the pattern shown in the data.

Your writing

Choose two types of writing from:

- newspaper article
- magazine article
- summary of the findings for a scientific journal
- storyboard for a children's television programme, showing how the material could be used in the future
- information leaflet for primary-school pupils, explaining how they could carry out the scientists' experiment.

Questions

1 State two different types of audience you may need to write for.

2 Your writing should be *concise*. Explain what *concise* means.

3 Your writing should be *coherent*. Explain what *coherent* means.

4 State three reasons why you should proofread your written report.

Extension

Here are some differences between a scientific journal and a scientific magazine.

	Scientific journal	Scientific magazine
Content	detailed report of original research or experiment	secondary report or discussion; may include personal narrative; opinion and/or anecdotes
Author	author credentials are given; usually a scholar with subject expertise	author may or may not be named; often a professional writer; may or may not have subject expertise
Audience	scholars; researchers; students	general public; interested non-specialists
Peer-reviewed	yes	no

Describe the differences in the way you would write for a scientific journal and a scientific magazine.
