



Arranging a scientific report

In this activity, students identify the structure of scientific studies and compare these with a standard written scientific report (scientific studies are carried out routinely in the food industry and in materials testing).

Outcomes

Students will be able to:

- recognise the sections found within a scientific report
- answer questions that test the purpose of each section in a report
- compare a 'routine' scientific report or survey to other types of science article.

Time required

30-60 minutes

Outline of the activity

Food industry surveys collect data from a sample of sources. This information is analysed and the conclusions are often used to form market research. The target audience is not only food industry professionals but also the consumer. It is anticipated that the surveys will support the consumer in making informed decisions.

Give the students jumbled copies of the 'baked beans and tinned pasta survey' provided on a separate Word document. Printing each set on different coloured paper will be helpful. Ask the students to identify the various sections, and then arrange the papers in the correct order.

Students answer specific questions about the text and then discuss the need for a common format in scientific reports. They could also compare the differences between a scientific report that could be cited by others in the scientific community and scientific reports (or 'surveys') that are used for routine testing.

Tips and strategies



Food industry surveys are available at

<http://www.food.gov.uk/science/dietarysurveys/minisurveys/>

In effect these 'surveys' are scientific reports and follow a standardised structure very similar to that of a recognised scientific report, that is:

- abstract or summary
- introduction or background
- methodology
- results
- discussion and conclusion
- references.

Students commonly find this exercise more difficult than expected, with many putting the summary at the end of the report.

Specific questions relating to the 'baked beans and tinned pasta survey' are available in the briefing sheet pack. However, if you are using a paper that you have found yourself, perhaps to fit in with a current topic that you are teaching, then the following 'template' may be useful:

- 1 Question asking about the meaning of a key term used in the paper.
- 2 Question asking students to explain an illustration in words.
- 3 In brief:
 - a What is the objective of the study?
 - b What is the study's principal conclusion?
- 4 Question about the methods used and why.
- 5 Question about the validity of the conclusion, given the methods and the results.



Arranging a scientific report: briefing sheet

In this activity you will be given sections from a scientific study paper, and asked to reorganise the sections to form a useful document.

Part 1 Re-organising a scientific report

- 1 A scientific study paper has been divided into sections. Your task is to reorganise the sections into the most useful order. Justify your choice.
- 2 List the sections of a scientific report. Make brief notes about what is found in each section. Why do you think it is important that all scientific reports are written in a similar format?
- 3 Answer questions about the content of the paper in Part 2.

Part 2 Questions about the scientific report 'baked beans and tinned pasta survey'

- 1 On average, what percentage of the adult target maximum of salt per day is in a portion of standard baked beans? When was the salt content last surveyed, and has the value changed?
- 2 What is the intended outcome of the study?
- 3 How many products were tested? Were laboratory analyses carried out?
- 4 Find the text: 'The range of salt content in these products was much greater in the present survey than in the previous data'. What is the stated possible reason for this?
- 5 List some of the ways in which the study tries to be a 'fair test'.
- 6 Write down any reflections you have on whether your knowledge of the structure of a scientific report helped when answering the questions a-f.