



5.7

Writing a scientific review article

In this activity, students write an article, paying particular attention to the structure, content, language and format used. This activity should be carried out in conjunction with 5.9 Writing an abstract and 5.10 Compiling a bibliography, with 5.11 Evaluating scientific writing presenting an opportunity to evaluate the work.

Outcomes

Students will be able to:

- use their knowledge of the structure of scientific review articles (5.6) to write a review on a topic
- identify relevant sources of information to complete the task.

Time required

Allow 30 minutes class time plus several homeworks (additional class time may be required for reflective discussions as various points as discussed in the outline of the activity).

Outline of the activity

Students will be more confident in approaching this task if it is set after teaching a particular topic. Depending on the ability of the group, you could set this task as a self study activity or you may decide to do some initial teaching beforehand.

The in-class element of the task gives a chance to brief the students on what they need to do. Briefing sheet 1 gives information regarding the formatting, structure and content of the article. You could use the slides to outline these points. Briefing sheet 2 briefly details a suggested approach that students could take to write their article. Briefing sheet 3 contains a feedback sheet which can be used by a student editorial board. You may wish to tailor this to your own requirements (which may be exam board specific). Briefing sheet 4 suggests a process for improving the draft work.

Hold short, reflective discussions with the class at certain points, such as:

1 After the completion of research

Where did students look? What did they find? Did they have any problems? Do they need to do more research? Have they kept a record of their sources?

2 After completing their plan

Have students covered all the points? Do they have adequate information about each area to write their report? Do they need any guidance before attempting the first draft?

3 After writing their first draft

What is good about students' work? What do they need to do to improve? (This could be done using peer assessment, but you may prefer to do this later, as part of Activity 5.11 Evaluating scientific writing.)

Tips and strategies

See overleaf.



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Tips and strategies

In an ideal world, different students would write reviews on different aspects of a topic. But teachers will probably prefer to keep all students focussed on one area. However, you could invite students to write a review on one aspect of a topic, and compile the articles to form a class journal.

Point out to students that scientific articles can take the form of research papers or reviews. Research papers give details of research to address a specific question, describing the methods used, the results of the research and the conclusions drawn. Review papers draw on a range of sources, normally research papers, to present an overview of a field or a topic. The article students are writing is akin to a review.

A-level students are not in a position to write a genuine review article, but they should aim to be as formal as possible in their approach. This activity should only be done after Activity 5.6 The structure of scientific research articles. Students will have written a whole range of reports during their education up to this point, and they should reasonably be expected to produce work of high quality. But some students will be strong scientists who may lack flair when it comes to writing. This is an opportunity to help them develop those missing skills.

If using the briefing sheet, you may wish to remove some of the guidance to increase the demand of the activity to stretch more able students.



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Slides

The content of your review article

- The information presented should be relevant to the topic as outlined in additional documentation, or by your teacher.
- The scientific content should be correct and accurate.
- The introduction should be written to provoke interest and to encourage further reading.
- You should draw your information from a range of sources (at least 6 different sources, or perhaps more if you can find them). Make sure you keep a record of your sources (for the bibliography activity A5.10).



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The content of your review article

- Diagrams/illustrations should be used where appropriate. If you get these from other sources (as opposed to drawing them yourself), make sure you keep a record of where you got them from (for the bibliography activity A5.10).
- Your conclusion should summarise the key points covered in the article, with a clear indication of why you think the topic (or sub-topics) is (or are) important. It should raise any questions you have thought of while writing the article.



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The language you should use

- All writing should be in full sentences which are concise and clear.
- The sentences should be written in flowing language which maintains the readers interest.
- Your use of language, grammar and punctuation should be correct.



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