



Evaluating scientific writing

After completing the article, with abstract and bibliography, the students now learn about assessing their work according to assessment criteria.

Outcomes

Students will be able to:

- formulate criteria for evaluating written work
- carry out self-assessment of their own work
- formulate suggestions for improvements to the work.

5 After completing the assessment, the students use sheet 2 to provide written feedback for their partner. This should be constructive and give clear suggestions about how the article could be improved.

Time required

One lesson

Outline of the activity

Make sure the students have copies of any briefing sheets that were given at each stage of the preparation of the article about stem cells as this will help them to formulate the evaluation criteria. The accompanying slide presentation may be used to work through these steps. This also outlines the difference between a holistic approach to evaluation (based more on feel) and an analytic approach which uses specified criteria. The latter approach will be used here.

1 Ask the students 'What criteria could we use to assess your articles?'. Compile their ideas, adding any necessary suggestions of your own.

2 Ask students 'Are all of these criteria of equal importance?' Discuss the concept of weighting different categories of criteria.

3 Get the students to work in pairs. Issue briefing sheet 1, which is a pre-made evaluation form with specified criteria (these may be altered - see 'Tips and strategies'). Run through the form with the students and get them to work in pairs to assess each others' work.

4 Ask 'Was the mark you got roughly what you expected?'. If any marks are considerably higher or lower than the students expected, it's worth discussing reasons with the class.



Tips and strategies

By this stage of their education, the students should have a reasonable level of experience of self and peer assessment. They should be able to produce a good list of evaluation criteria, applying good reasoning to their choices. The ability to do this will vary, depending on students' prior experience. If students produce a comprehensive list of criteria and understand how to use weightings, you can dispense with the student guidance sheet and let them assess the articles according to an agreed set of evaluation criteria.

The students should work in pairs to complete the assessment task as a combined self/peer assessment exercise. This will promote helpful discussion and provide a level of moderation leading to a more realistic set of marks.

Take the articles in and mark them yourself after the self-assessment exercise so you can give further feedback to the students on their perception of the work. For example, some students will not have sufficient knowledge of the correct use of language to be able to give an accurate assessment of performance in this area.

If the students are familiar with the principles behind giving feedback, you may choose not to use briefing sheet 2. It may also be a useful exercise for the students to respond to feedback by writing notes to show how they are going to do to improve their performance in future.



Evaluating scientific writing: briefing sheet 1

Working in pairs, you are going to assess your articles according to the criteria in the table below. You will need to refer to the criteria you were given before you wrote the article about stem cells to be able to complete this task:

Category	Weight	Criteria	Mark
Structure	10 %	The article has been structured according to the criteria laid out at the start of the assignment. There is a title, an abstract, the author's name and institution is given, there is an introduction, the main body is structured under appropriate sub-headings, there is a conclusion and a bibliography.	/10
Formatting	10 %	The formatting is consistent throughout and adheres to the formatting criteria laid out at the start of the assignment. Attention should be paid to font size and style, headings, line spacing, numbering/bullet points if used.	/10
Language	15 %	The writing is clear and accessible. Spelling, punctuation and sentence structure are correct throughout.	/15
Illustrations	15 %	Illustrations have been used which are appropriate for the article. The illustrations are placed at appropriate points in the article. There are the right number of illustrations (not too few or too many).	/15
Abstract	5 %	The abstract is between 150 and 200 words and is in a single paragraph. There are 1 or 2 sentences of introduction. It contains a condensed description of the contents of the article. It outlines the main conclusion(s). It encourages the reader to read the whole article.	/5



Evaluating scientific writing: briefing sheet 1

Category	Weight	Criteria	Mark
Scientific content	30 %	<p>The introduction clearly outlines the content of the article.</p> <p>The article uses appropriate information from a range of sources.</p> <p>All of the points in the original criteria have been covered in the article.</p> <p>The content is presented in a clear manner and in a logical order.</p> <p>The author has added their own discussion (not just replicating content from the sources).</p> <p>The writing is accurate and reliable, as well as interesting.</p>	/30
Conclusion	5 %	<p>The conclusion summarises the key points of the article and explains, with reasoning, the importance of these key points.</p> <p>The conclusion identifies questions raised by the author that could direct further research/reading.</p>	/5
Bibliography	5 %	<p>The formatting adheres to the criteria laid out at the start.</p> <p>If any images have been taken from other sources, these are included in the bibliography.</p> <p>Numbered in-text citations have been used.</p>	/5
Individuality	5 %	<p>The writing shows some creativity and individuality from the hand of the author.</p>	/5

Total mark: _____ %



Evaluating scientific writing: briefing sheet 2

When evaluating work, it is not enough to simply give the work a mark. Constructive feedback should also be given to help the person to improve their performance in future. There is a vast amount of information on the Internet about what good feedback is, and you might do a search to find out more.

In this exercise, you are going to write constructive feedback for your partner on how they can improve their article. You can use this worksheet to help you to write the feedback.

Three good things about this article are:

Some areas that could be improved are:

Area

What could be done to improve this?

Area

What could be done to improve this?

Area

What could be done to improve this?

Area

What could be done to improve this?