

How to Conduct a Peer-Review

Peer-review is an essential activity for the vast majority of credited scientific journals and represents the cornerstone for assessing the quality of potential publications, since it is substantially aimed to identify drawbacks or inaccuracies that may flaw the outcome or the presentation of scientific research. Reviewing a scientific manuscript can feel like a daunting task. If you commit to reviewing a paper, there are some simple steps you can follow to complete a timely and thorough review.

10 Steps to Conducting a Peer-Review

- 1. Determine reviewer suitability and respond to the invitation to review.** Does the article match your area of expertise? Do you have a potential conflict of interest? Do you have time?
- 2. Download the article, tables, figures and supplemental material.** Download and carefully read the journal's author guidelines. Decide how you will track notes – as comments within the document, or as bullets on a separate page. Create those note documents as required.
- 3. Do a general reading through all the materials to form an initial impression of the article.** Compare the article to the journal's author guidelines to ensure general suitability.
- 4. Do layered readings:**
 - a. Focus on the significance/innovative value of the article to the field and the relevance to the journal's scope. Do the authors adequately explain the importance of the article in the discipline?
 - b. Focus on the references used to support the article. Are there any other references that you would recommend as essential to the article?
 - c. Focus on the scientific rigor. Is the methodology or argument used in the article sound? Does the article make a reasonable interpretation of the data or sources? Is there sufficient evidence to substantiate the article's claims?
 - d. Focus on the specific aim(s)/hypotheses. Follow one aim all the way through the paper to see how it is framed in the beginning, results and discussion.
 - e. Focus on grammar and readability.
- 5. Block the manuscript for the journal. Does the style and structure of the article match journal standards?**
 - a. Search the library for 2-3 articles in the topic area that were published in that same journal over the last year. Study those 3 articles for organization and specific commonalities and consistencies. Look for patterns in how the arguments are constructed. Then, compare the published articles with the review article.
- 6. Check all data.** Is the information (e.g., data, formulae, quotations, references, tables and figures) in the article accurate and correct?
- 7. Go over your review notes and make sure that it makes sense and that you are communicating your critiques and suggestions in as helpful a way as possible.**
- 8. Decide on a final recommendation:** (1) accept without revision, (2) minor revisions needed, (3) major revisions needed, or (4) decline, the article is inappropriate for the journal.
- 9. Write up a paragraph overview that summarizes your conclusions.** Keep in mind that the editor will likely use your overview paragraph to craft their response email to the author. Mention specific actions that need to take place in order for the article to become acceptable.
- 10. Submit your review early to the editor.**