

Scientific Article Worksheet¹

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Objective: Students will learn strategies to read scientific articles and extract useful concepts effectively and efficiently.

The Background:

1. What key aspects of your research does this article relate to?
2. What was the context of the research? What was known from prior studies?

The Basics:

Most of the information here will be found in the introduction and conclusion sections of the publication. You may also choose to look at the figures and their caption to refine your first understanding.

1. What research question does the paper address? What is their hypothesis? (Intro/Conclusion)
2. What experiments were done to test the hypothesis? (Intro/Conclusion)
3. What are the major conclusions/achievements of the paper? (Intro/Conclusion)
4. What scientific evidence supports each of the conclusions? (Intro/Conclusion/Figures)
5. What is implied or proposed as future study/recommended research direction?

The Critique:

Think critically about the paper, its significance, and the way it conveys information.

1. Is the paper well written? How do you know? (e.g. structure and style contribution to conveying the scientific concepts)
2. Do the conclusions seem logical given the data presented? Why or why not?
3. Why are the conclusions important/significant to the advancement of the field?
4. What were the best and most useful aspects of the research presented, and how could it be improved?

Additional Resources:

Think about potential resources that could improve your understanding of the scientific concepts presented in the paper.

¹ Adapted from Branchaw, J.L., Pfund, C., and Rediske, R. (2010), *Entering Research: A Facilitator's Manual: Workshops for Students Beginning Research in Science*, W.H. Freeman & Company

1. What are the basic concepts that you need to know to understand the science presented in this paper?
2. Identify a chapter/section in a textbook that outlines these basic concepts. Is reading this helpful to your understanding? Feel free to ask your mentor or peers about potential additional reading suggestions
3. What other information or resources would help you better understand the paper? Think who may be able to provide you with these additional resources.

Further Questions:

Write comments or questions about the article you would like to discuss with your mentor. This can relate to the results presented in the article, their conclusions, or the methods used. You can also suggest future areas of research or specific tasks inspired from the paper.

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