

SUGGESTIONS REGARDING THE SEQUENCE OF ACTIVITIES
IN THE PREPARATION OF A SCIENTIFIC PAPER

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In many cases much of the experimental work for a scientific paper has been accomplished before writing has begun in earnest. In such cases, the following sequence of writing activities can be helpful.

1. Write the last paragraph of the Introduction first. This should contain a statement of the objectives of the work. Simply complete the paragraph that begins "The objective(s) of this investigation was (were) to If this paragraph is written carefully it will suggest the logical subdivision of at least the Materials and Methods and Results sections of the manuscript and perhaps the Discussion section as well.
2. Write a numerical list of simple declarative sentences that contain every major and minor conclusion that you can draw from your experimental work. This list may not be incorporated in the manuscript itself but will be useful as an indication of the adequacy of your statement of objectives and as a guide to the organization of the Results and Discussion sections of the manuscript. Often these sentences, or at least those describing the major conclusions, can be used as topic sentences for the paragraphs of the Discussion section. Also, sometimes at least part of them can be used in a final section called Conclusions.

3. Prepare the tables, figures, graphs, or other data-containing parts of the manuscript that are necessary to draw each of the conclusions developed under (2) above.

4. Write the Results section into which you insert the tables, figures, graphs, etc. developed under (3) above. The Results should contain no references to previous work by other investigators.

5. Write the Materials and Methods section including all the information necessary to show how you obtained the results included in the Results.

6. Write the Discussion section checking carefully that it includes all the major conclusions developed under (2) above and that each and every statement is appropriate to the strength of evidence presented under Results. If you decide to combine Results and Discussion into a single section entitled Results and Discussion, some repetition frequently can be avoided. It is usually safer, however, to write them separately first and combine them later rather than to try to combine them from the start. The Discussion should relate the results and conclusions of your research to those of earlier investigators whose papers should be listed in the Literature Cited. Use the name-date system of literature citations in all sections of the text until the final typing of the manuscript prior to submission for publication.