page justification of the selection. I have the class discuss among themselves the attributes of a good paper. Concluding the assignment, I challenge each member of the class to write me in ten years and indicate how good his or her choice was.

**Conclusion and Summary**

These exercises can serve as a very viable alternative to a term paper. The students learn to find original source material, how to use a major reference tool, follow the course of scientific paper review, and try to pick out a significant recent paper. Students bibliographic skills are enhanced as they learn to access "The Scientific Literature."

**LITERATURE CITED**


**Editor's Note:** For a very different reading of Watson and Crick (namely, as a fairy tale) that is likely to excite or enrage your students, consult Alan G. Gross's "The Tale of DNA" in his (1990) book entitled *The Rhetoric of Science*. Cambridge, Massachusetts: Harvard University Press.

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**Teaching Students about Science -- A Modest Proposal**

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Many, if not most students in high school take biology as their one, and possibly only, course in natural science. Yet the understanding of this complex science in the way in which it is usually taught presents the most difficulty for beginning students for both theoretical and practical reasons. The unifying theory which explains observations about plants and animals is evolution. This theory is one in which at least a third of the teachers do not themselves believe and do not teach. In addition, many school districts frown on teachers who attempt to teach this theory. These are practical difficulties. The theoretical difficulty lies in evolution itself, which can best be understood as a . . . "chancy result of a long string of unpredictable antecedents, rather than as a necessary outcome of nature's laws" (Gould, 1991).* Thus, evolutionary theory is not predictive. Prediction of the results of future experiments is the strongest support for an hypothesis. In traditional biology, students are presented with masses of empirical information, but the only theory available to organize the data cannot predict future events. It becomes clear that teaching students to understand that science is a problem solving procedure that depends upon a theoretical understanding of the subject is not readily done in the framework of classical biology.

Molecular biology suffers neither the practical or theoretical problems listed above. It has a strong theoretical foundation in basic atomic theory, and the important subject of evolution may be taught as a natural consequence of molecular events. There is yet no organized religious movement to obstruct the teaching of molecular biology. My modest proposal is that in the future, high school teachers of biology should be educated most thoroughly in molecular biology, rather than the more traditional botany and zoology. By concentrating on the teaching of molecular biology, future teachers of biology can demonstrate easily the basic principles of scientific thought, as well as the unbroken thread that unites all of the natural sciences, including biology.