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Open Letter to Science Teachers

Clifford G. McCollum
University of Northern Iowa

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OPEN LETTER TO SCIENCE TEACHERS

Dear Fellow Science Teachers:

"Our responsibilities as science educators have never been greater than they are today." I know personally that such a statement has been made regularly since the 1930s, and I suspect it was commonplace some before that.



These responsibilities have had various emphases identified as the reason for their being. The emphases have included such applications as those made to industry, engineering, medicine, warfare, and space exploration.

But the responsibilities I grow more concerned about every day are those associated with the social problems accompanying the application of science and technology. By calling attention to this concern I do not intend to negate the importance of developing an understanding and an appreciation of the basic methods of science or the power of increasing the knowledge of our natural universe. Science is knowledge and science is process. But, as important, possibly even more important for us today, science is a social phenomenon. As science teachers, we need to recognize this, and we need to give attention to this phenomenon in our classrooms and in our laboratories.

There is spreading among our youth a distaste for science because it is felt that society has used science and technology to reinforce the "establishment" in such a way that the dignity and the self-determination of the individual have been violated. As science teachers, we cannot ignore this. It is appropriate for controversial social issues to be discussed in science classes and to be the subject for cooperative studies with social science and humanities classes. Nuclear fission and nuclear fusion cannot be studied today without attention being given to "The Bomb" and peacetime applications of nuclear energy. Genetics has something to say about racism. The problems of an exploding population involve biological, psychological, and sociological principles. The chemistry of chlorinated hydrocarbons is important in debating whether DDT should be used as a pesticide.

Lack of time and lack of formal academic background have often been a part of our justification for "sticking to our subject." My suggestion is that the social impact of science is our subject, too. If we don't accept such as a part of our responsibility, others with less understanding of the knowledges and processes of science will be more influential in forming attitudes and influencing social action. If we do accept our responsibility, it means I will need to rethink some curricular plans to provide time, and I will need to do some serious study in such fields as history, philosophy, sociology, economics, and political science.

I think it's important that I try. Do you?

Clifford G. McCollum
Dean, College of Natural Sciences
University of Northern Iowa
Cedar Falls, Iowa