

1975

## Student Philosophy in Science Class

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### Recommended Citation

Primavera, Owen (1975) "Student Philosophy in Science Class," *Iowa Science Teachers Journal*: Vol. 12 : No. 1 , Article 10.

Available at: <https://scholarworks.uni.edu/istj/vol12/iss1/10>

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# STUDENT PHILOSOPHY IN SCIENCE CLASS

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As a science teacher I know that facts are vital parts of teaching chemistry or biology, and that the better students understand chemical and biological systems the better they will understand how organisms function. But more than facts seems to be needed to teach ecology.

Like many other biology teachers, I take my students on a number of field trips so that they may discover nature, learn to appreciate it, and then have a desire to conserve it. I show many films and present facts emphasizing the importance of ecology and conservation. However, I wasn't getting the enthusiasm and feedback I desired until I asked the students to write down their feelings about nature, their environment, and their relation to it.

It seems to me that in order to teach ecology effectively we must have commitment on the part of students, a personal commitment toward what life is really about—namely, living in close harmony with one's neighbor and with one's environmental heritage.

In order to approach this goal, I required all students in chemistry and biology last year to respond to the following questions. The object was to explore the feelings they had about themselves and nature.

The directions and questions are as follows:

You have heard the term *nature* used many times. What does it mean to you? How do you relate to nature? Do you feel a responsibility to preserve nature? Explain your answers.

The Bible says, "God gave man dominion over all things." Has man lived up to this responsibility? What can you do as an individual to make the environment around you better?

If you could observe yourself as your friends do, what would you like most about yourself? What would you like least?

In associations with your friends, what turns you off most?

What figure, past or present, do you admire most?

I was the only one to read the papers; they were not graded or discussed with anyone and most student comments were quite personal.

The response was significant in that almost everyone felt a deep responsibility to take care of his environment. However, most stated that they had had difficulty practicing conservation in the past. The point

is that many have now made a written commitment to clean up and maintain the natural beauty around them. This is more than they had done before.

The questions dealt not only with nature but also with the outlook toward oneself and one's peers. The premise was that if they could be honest with themselves, they could better identify any personal problems; therefore, they would be better able to help themselves. The questions helped open their eyes and give them a starting point for growth.

In summary, I feel that as educators in science we have a tendency to over-stress facts. We must involve our students more in making education personal and more meaningful. Sometimes this can be accomplished by having students establish and commit themselves to a philosophy. The greatest education is in knowing oneself; then all facts have a deeper meaning.

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Let us have "sweet girl graduates" by all means. They will be none the less sweet for a little wisdom, and the hair will not curl less gracefully outside the head by reason of there being brains within.

—*Thomas H. Huxley* (1863)

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If a little knowledge is dangerous, where is the man who has so much as to be out of danger?

—*Thomas H. Huxley* (1877)

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It is the customary fate of new truths to begin as heresies and to end as superstitions.

—*Thomas H. Huxley* (1880)

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There exists one book which, to my taste, furnishes the happiest treatise of natural education. What is this marvelous book? . . . It is *Robinson Crusoe*.

—*J. J. Rousseau* (1762)