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Biology and Consumer Education

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The past four or five years have witnessed a remarkable outburst of interest in education for the consumer. For year after year the educator has gone on his way teaching the masses in the public schools and state-endowed colleges and universities to become producers, while most of them are destined to be consumers. Indeed, all must be consumers of commodities of one sort or another, even though they do become the trained producers of the world's goods. So there is every reason to believe that this interest in consumer education is something that has come to stay. Scores of books have been written on the subject, some of them "best sellers." Magazines, such as the *Journal of Home Economics*, the *Journal of the National Education Association* and even the staid *School Review*, devote page after page to phases of consumer education—one magazine, indeed, has been named *Consumer Training* and is devoted to the interests of teachers in the field of consumer education. Hundreds of schools have introduced courses in consumer education,

and even the sciences have taken over the subject. Courses in consumer chemistry¹ and consumer science have found their way into the secondary school curriculum and several good texts have been written for use in such courses. And now courses in general science and biology are beginning to add units in consumer education to their already overloaded outlines and courses of study. Evidently there must be some good reasons for those trends—what are they?

First and foremost is the fact that our secondary school population has almost completely changed from what it was two or three decades ago. Not only have the reasons for secondary education changed, but the clientele of the schools has changed as well. The high school population has increased 1000% while the population of our country has increased 50%. And our group of college preparatory pupils has continuously dwindled while the group of students

¹ Crew, M. C., *The Teaching of Consumer Chemistry*, School Science and Mathematics, June, 1939.

who step directly into life activities from the secondary school has increased by leaps and bounds. There is much reason, then, since the secondary school is now largely concerned with life preparation, that consumer education should play an increasingly important rôle.

The fact that all people are destined to be consumers undoubtedly plays a part in shaping some of these new courses. The writer's recent questionnaire returns from nearly 700 of the better junior and senior high schools of the country disclose the interesting fact that instead of our time-honored placement of chemistry and physics in the upper years of the secondary school, large numbers of new courses in practical chemistry, physics and science survey are taking the place of the old-time pure science courses. No less than 14% of all science courses in the last two years of the high school, according to the returns from the questionnaire, are such new type courses, all of which show a common slant in the choice of subject matter. When we realize that far too much emphasis has been placed on the "scare heads" of consumer education and far too little emphasis on the scientific approach then there are seen to be good reasons for the introduction of these courses in science. Books like *100,000,000 Guinea Pigs* are interesting and useful for motivation but we must not let the prospective consumer believe that *all* fruit is unfit to eat because it has been sprayed or that *all* manufactured food products are worthless because they are processed.

Consumer education must be *science education* and must use the method of the scientist if it is to stay in the curriculum. Advertising ploys and false statements made without scientific background are spread in delectable form in our popular magazines or broadcast

from our radio programs. Young people can become much interested in studying these statements to find the number of false assumptions made in the average "ad" which has to do with the patent medicines or cosmetics. Examples of tests are found in some of the workshop publications of the Progressive Education Association. The excellent text of Hawkes² will be found suggestive but the best source for biology teachers is probably the Sarah Lawrence College Workshop of the Progressive Education Association which came out in mimeographed form in 1938. Somewhat similar are the evaluation tests of the *Eight Year Study* obtainable in booklet form for a small sum from the Progressive Education Association, 6010 Dorchester Avenue, Chicago, Illinois. If such tests are mimeographed and used as a basis for class discussion they will create absorbing interest and will do much toward getting students to do really straight thinking about the values of certain much advertised medical and food products.

Biology has in the past reached more students than any other one science (general science excepted) and hence is a logical vehicle for consumer science. As a matter of fact many biology teachers have been using consumer science for years in their teaching of foods, patent medicines, alcohol and narcotics. The health needs of students have always been utilized as the most valuable areas of biological science. A summary of adolescent needs shows that diet, exercise, posture and rest, drugs, allergies, pathogenic organisms, endocrine functions and heredity stand out as topics that should make the backbone of the

² Hawkes, H. E., and others, *The Construction and Use of Achievement Examinations*, Houghton Mifflin and Co., 1936.

biology course. If we add to these a knowledge of the uses of clothing and some scientific evaluation of animal and vegetable fibers used in clothing then we have the core subjects of our biology course.

In practically all of these areas which touch the needs of the adolescent, consumer education plays a part. In nutrition we have diet fads, values of breakfast foods, sources of vitamins and the numerous well advertised sources of mineral constituents of foods to be evaluated in scientific terms. Caloric needs, budgetary requirements and the place of dietaries in bodily welfare are all consumer topics. So also are gadgets advertised as necessary for good posture or home exercise. All biology teachers know something of the difficulties of scientifically teaching the subject of alcohol and narcotics. Self-built tests which show the dangers of false assumptions and untenable conclusions will do much to place the teaching of these topics on a scientific basis. In the field of pathogenic organisms there is a constant consumer approach. Take as an example

the experimental evidence obtainable in the use of certain dentifrices or mouth washes. Microscopic examination for grit in a tooth paste is just as valuable an exercise from the standpoint of techniques as is the study of a leaf cross section or a stained slide showing a section through the skin. In the study of allergies there are plenty of opportunities to do microscopic work which is practical as well as technical. The collection and examination of pollens, wind blown or sticky, will do more to explode popular fallacies on "rose cold" or "orange fever" than any amount of reading or telling on the part of the teacher. And finally in the field of plant products there are unlimited opportunities for real scientific observational work in the examination and testing of fibers, furs, cloths, leather, and all kinds of textiles.

By all means let us add consumer biology topics to our courses of study so that we may best meet the needs of that great group of our students who, after leaving high school, go out into life as prospective housewives, managers of budgets as well as fathers and mothers of families.

What Should Consumer Biology Include?

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It is generally agreed that any part of the educational training of an individual should include the fullest development of his capacities for adjustment to continuous change.

He must be able to solve today's problems, not only from the results of the past experiences of others, but by attack-

ing individually each new problem in a progressive manner unswayed by the propaganda and emotionalism of others. He must think clearly and independently act free and unhampered, and yet be able to see the good of mutual co-operation and regimentation when necessary.