SAVING THE YOUTH OF OUR NATION

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All science teachers are conservation-minded, and for years we have been concentrating our efforts upon conserving our nation's natural resources for the oncoming generations. Today we are thinking of another phase in this field, namely, the conservation of our most important resource, our boys and girls, who are the citizens of tomorrow. This has been brought about by recent trends in modern education which have stimulated us to analyze our teaching to determine whether we are meeting the needs of the youth of today.

It is important for our youths to learn how to live safely and how to care for their bodies in order that each one may live a healthy, normal life. A group of teachers and administrators met in a workshop at Southern Illinois University from July 10 through July 21, 1951, to ascertain what some of the health and safety problems are and what could be done about them. This workshop originated under the auspices of the Kellogg Foundation and was sponsored by the Office of the Public Health Instruction, Springfield, Illinois, and the Department of Education and Health Education, Southern Illinois University, with Dr. Woodson Fishback as director and Miss Francis Phillips, the coordinator. I shall first give you some of the conclusions drawn at this workshop and follow with some of the ideas which I have formulated from my experiences as a science teacher.

The first need of primary importance is that our young people learn how to live safely in this "Age of Accidents," for "accidents is the number one agent in causing death in our young people between the ages of one and thirty."[1] Therefore, we must have better and more effective safety and health instruction in all our schools today. This goal has been reached in some communities; a survey made in twelve states disclosed the fact that there were half as many accidents in communities where safety instruction had been given. Furthermore, these accidents were less serious and resulted in fewer fatalities.

The same is true in regard to health. Heart disease should not rank first in causes of death of our citizens. If our health instruction had been more meaningful in the past, many of these deaths could have been avoided. The question is: What can we do about this situation as science teachers? Science in this "Atomic Age" is full to overflowing with factual material which must be taught as background, but there is not enough time for the teacher

[1] Meredith, Florence L., *Hygiene*, 1946.

of science to cover it all. That is one of our many problems today. Would it be possible for us to examine our courses of study to see what work does not meet the needs of our youth or is not meaningful? Of what good is knowledge if the individuals are unhealthy or crippled to the extent that they cannot live useful lives simply because they have not been taught how to live safely? This is a challenge for all teachers. Can we prune our courses of study, as we would a tree, and remove some of the useless dead timber?

Some of the ideas which grew out of the workshop might help science teachers. First, there is a real opportunity for the cafeteria managers to work with the science instructors in developing correct eating habits in young people. Such instruction would have more meaning to students and might solve several of the common eating problems which are so often displayed in the school cafeterias. Students generally prefer "a hamburger and hot-dog diet" with cokes rather than a well-balanced meal which includes vegetables, salad, and milk. If pupils were taught that a menu rich in vitamins and minerals would help them build stronger bodies, many of them might be encouraged to make a better selection of foods.

In the past, the instruction on foods and eating habits has been presented, too often, as isolated facts in a textbook rather than a means of developing the proper attitudes toward eating. If the instruction were made more meaningful to the students, better results could be achieved. This work could be even more effective if experiments with guinea pigs or hamsters were carried on in the school laboratories so that the students could see the effect of proper diet. Growth, condition of eyes and hair, as well as the increased vitality, of the animals fed a vitamin-rich diet could be compared with those of the animals which were fed unbalanced meals with a low vitamin content. In order to achieve the best results, the cafeteria manager must watch to see what foods the students avoid and report immediately to the science instructors. Cooperation between these two groups in the school can be of tremendous importance in helping our citizens of tomorrow become strong, able-bodied Americans. In this time of national crisis it is imperative that we do all in our power to help our young people become physically strong as a means of national defense.

Another phase of health instruction is to help each student see why health examinations are important to his physical well-being, how and why he should take proper care of his eyes, the importance of good dental care, why we have immunization programs in the school and periodic X-ray examinations. When the child sees the reason for these practices and realizes that it is for his own personal welfare, he will be more willing to cooperate with the health program.

Each student, through understanding, will gain insight into the importance of health. It is wise to instill a sense of personal responsibility for the health of the community as a whole. Each student would then be more willing to cooperate in an immunization program as a

means of protecting himself and his associates. He would feel responsible for working to make his community a safe place in which to live a happy, healthy life.

In connection with the unit on eyes in our science courses, the instructors could work in cooperation with either the school or public health nurse in screening the vision of students. This would have a personal appeal to the young people and the work would be more meaningful. Students would learn to appreciate their eyes and would acquire better habits in the proper care of their eyes.

Miss Mary Askew, of the Illinois Society for the Prevention of Blindness, explained the Massachusetts Vision Test and the School Vision Screening Program in Illinois, which is being used in several of our school systems. Teachers can be trained by the school or public health nurse in the community to apply the test. If a teacher tests her own pupils, they will react more normally, and the routine of the school will be disturbed less. Children wearing glasses are not tested; the object of the Conservation of Vision Program is to *discover* vision difficulties.

Mental hygiene is a new addition in the biology courses in our schools today. The increased number of delinquency, divorce, insanity, and crime cases in our country today has shown us the need for mental health. By knowing themselves better, students discover the strong and weak points in their personalities and are thus able to eliminate the undesirable qualities while they are yet young. Thus, they are better fitted to get along in life. They learn to face facts without fear, to make decisions, and to accept responsibilities. Such experience is valuable in that it develops self-confidence and stability.

There are so many pressures in life today which cannot be removed that we must develop in each child the ability to face them. The people who become delinquent or go insane are those who are striving to escape these pressures in society because they have not been taught how to meet them. The child who has been taught to face issues and make his own decisions is better prepared to resist these pressures without ill effects.

Miss Virginia Mason, Supervisor of Human Relations classes for the State of Delaware, presented her methods of achieving these results. A demonstration by Miss Mason at the workshop with a group of students from a Carbondale school portrayed a classroom situation where good human relations were taught. Miss Mason strives to create a healthy emotional atmosphere in the classroom so that each student feels that he is an important part of the group and that he is responsible for himself and for others around him. She accomplishes this by having students feel that they are loved and are free to participate. This satisfies three natural drives, namely, (1) the drive for safety; (2) the drive for recognition; (3) the drive for adventure. Life then becomes a challenge as well as an adventure and he learns how to meet real life situations without becoming frustrated. Each child then brings his own personal problems to light and each one finds a solution.

The members of the workshop were indebted to the two consultants, Dr. H. F. Kilander, Specialist in Health Education, U. S. Office of Education, Washington, D. C., and Dr. W. W. Patty, School of Health, Physical Education and Safety, University of Indiana, who were most helpful in presenting new methods of instruction in health and safety.

From my experiences as a science teacher, I have concluded that safety education should be taught as a unit in our ninth grade general science classes. It would be wise to have it at this level as the greatest drop-out is at the end of the freshman year. We must reach all our young people if we want to reduce accidents both for the present as well as the future. Also, this is the age group having the greatest number of accidents. Since many people die from shock rather than from the actual injuries received, some simple first-aid measures should be taught in connection with this unit, such as treatment for shock, how to stop a hemorrhage, how to secure help, how to treat wounds to prevent infection, how to treat sprains and poisoning, and how to administer artificial respiration.

The aims of safety education should be to teach each student:

1. How to protect himself
2. How to prevent others from being injured
3. To know what to do when hurt
4. To develop a sense of loyalty in helping his school and community to be a safe place in which to live
5. Emotional health, to avoid accidents
6. How to prevent the spread of disease as a safety measure

The safety course should be divided into the following categories:

1. School safety–laboratory safety
2. Recreational safety, including that on the beach, in pools, and woods-science (ivy poisoning)
3. Highway safety
4. Home safety–machinery
5. Occupation safety

Each student should receive in this science course sufficient knowledge of anatomy and physiology in order to be able to determine the nature of the injury, discern certain functional disorders, and learn the proper treatment for an injured person. In this age of accidents, the need for first aid is increasing. A course taught by a competent instructor will be very valuable in that students will learn how to avoid accidents, what to do in case an accident does occur, and how to prevent injury being added to injury.

It would be wise for the science teacher to consult teachers in other departments to be certain that there is no repetition, as this would dull the students' interest. A group of students from the science class might work as a committee with the student council establishing safety measures in and around school.

I think it would be advisable to have the Red Cross First Aid course in the senior year, as a requirement for graduation. Since this course is concerned both with prevention of accidents and with treatment of injuries, we could certainly protect our citizens in the future if every high school student received training in this subject area.

Also, I would recommend having every teacher take first-aid training

as a requirement for certification In all schools, accidents occur in which teachers could be very helpful if they were trained in safety and first aid. Since we are responsible for the most precious thing in life, the lives of children, we should be prepared to know what to do in any emergency.

Science teachers can do much for the welfare of the country by training young Americans, developing in them correct health and safety attitudes and habits. "As the twig is bent, so the tree inclines." And just as young twigs are snapped from trees by storms before they reach maturity, so many young lives are snuffed out or permanently handicapped by accidents or illness.