

A PROJECT IN RURAL SCHOOL HEALTH EDUCATION

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III. BUILDING THE PROGRAM—UNIT TEACHING¹

TWO groups of chickens are feeding in a corner of the schoolroom. The children are gathered around large cartons which serve as exercise pens and brooders combined. One little boy, a habitual coffee drinker remarks, "Why the milk chickens are larger than the others," and the teacher anticipates the experiment is proving its worth. Three weeks have passed since this chick-feeding experiment was started. During this time the children have participated in the feeding and care of the chicks. The six chicks in Box 1 have been fed a standard ration including milk and cod-liver oil. The diet of those in Box 2 has been the same except that water was substituted for milk. Differences between the two groups have been in evidence for some time. The milkfed chicks are more active, their bodies sturdier, and their feathers more fully developed than the others. As a group these better nourished chickens weight 13 per cent more than their brothers.

On a bulletin board over the chicks is a growth chart containing the monthly weight records of each child in the school. It is near the end of the year and the total gains for the year are recorded. For the past few weeks the children have been engaged in a study of growth of chicks and children and the factors which promote growth. Farm bulletins have been consulted to learn how to care for the chicks and

¹From the Cattaraugus Supervisory School Hygiene District and the Division of Public Health Activities, Milbank Memorial Fund. This is the third of a series of papers by the director of the health education study in Cattaraugus County.

to become familiar with the food value of the chicks' rations. Health books and pamphlets have served as references for child growth. Such interest has been aroused in the whole experiment that even parents have visited the school and volunteered suggestions as well as asked many questions.

A phase of the rural school health education program in Cattaraugus County, New York, has been to experiment with health teaching through various types of purposeful learning experiences, or "units of work" such as that just described. Effort has been made to develop these units from the rural point of view and to integrate them with the daily life and needs of the country child both at school and at home.

Units of work differ as widely in extent and content as do gardens planted to vegetables. Plots of land, small or large, may be planted with single kinds of seeds or with combinations of seeds. In some gardens, where two or more kinds are mixed, one kind may predominate over the others. A fence, or less distinct line of demarcation, usually separates a plot from other parts of the farm. So with units of work as they are being considered in Cattaraugus County. Some units are short and principally limited to a single theme. Others are longer yet again centered around a single theme. The broader the unit becomes, however, the more varied are the experiences and activities related to it and the less distinct are the lines between the unit and the school activities as a whole. In a garden potatoes, carrots, and corn remain forever distinct. In a broad unit, there is a tendency to blend or integrate activities so that the child's learnings in various subject matter fields become integrated or fused into a unity of ideas. To illustrate, a unit of work on sleep may be limited almost entirely to a consideration from the health standpoint of sleep in general and the sleep habits of the children in the school and may last from one to several days. This unit may

be expanded to include wider interests, such as the relation of ventilation to sleep (science), the sleep habits of animals (nature study) and of children of other lands and times (social studies) yet the principal emphasis still is on the health problems of sleep. In contrast, the health aspects of sleep may be quite incidental to the center of interest in a broad learning situation. This was the case in a school where, as a part of a study of "time" each child wrote a diary of his day mentioning in it his rising and retiring hours.

Units of work also vary in quality. The success of a crop depends upon the farmer's knowledge of such things as soils, fertilizers, and climatic conditions as well as his skill in applying the knowledge. So also the success of a unit of work, in terms of child growth, depends upon the teacher's knowledge of such things as the psychology of learning, the principles of child development, the basic subject matter related to the unit as well as her skill in applying this knowledge.

Educators recognize four stages in any learning experience of an individual, namely, purposing, planning, executing, and evaluating, and believe that these steps should be discernible in good units of work. They also agree in general on certain criterions for evaluating units or larger activities on each level of children's development. A suggestive set of criterions has been prepared by teachers of New York State as follows:

1. Is the unit of work selected from a *real life situation* within the understanding of the pupils? Does it follow naturally the previous experiences of the children?
2. Does the unit afford many opportunities for *real purposing* and *planning*? Could the child carry it into his normal living situations?
3. Does the unit of work call out many kinds of activities and so provide for *individual differences*?
4. Does the unit permit *all-round growth* of each individual?

5. Does the unit of work furnish opportunities for *many kinds of endeavor*, furnish leads into other units and stimulate in the child the desire for a continued *widening of his interests and understandings*?
6. Will the unit give the child a better *understanding* of the demands of *society* and a better understanding of his *social environment*?
7. Does the unit provide for growth in the use of such *tool subjects* as contribute to the unit?
8. Does it lead to the development of *desirable habits*?

Units of work with health significance have been growing out of the rural school experiences in Cattaraugus County during the past three years. A few of these will be described in the following paragraphs and evaluated in terms of the above criteria.

In a small one-teacher school, where the teacher thought that posture was a problem, a simple but effective unit of work was carried out in an attempt to improve the condition. The unit was motivated by a visit to the school of "Peter Posture" a versatile posture doll. The teacher reports, "Immediately the children wanted to do something about their own posture. The first thing they did was to stage a 'moving picture show,' in which each child walked slowly and naturally across the front of the room. The class discussed how each one could correct his walking posture and why it was important to do so. Health books were used for reference in this. Two children collected pictures of people standing and sitting. Stick figures were drawn and clay models were made of good and poor posture in various positions.

"Some girls were wearing high-heeled shoes so we had an exhibition of shoes. We decided that shoes play an important part in posture. Now most of the girls are wearing lower heels. The foot with and without shoes was traced to see if our shoes were large enough.

“Exercises that would help posture were made up by the children. Tracks were made in the snow to see if we were walking correctly. Near the end of the day some children were apt to slump in their seats. I have found that marching to the tune of the victrola rests them.”

The activities just described were based on real life situations and led to a development of desirable habits. Since the theme was a rather limited one, opportunity for many kinds of endeavor was meagre. Creative expression, which contributes to the well-rounded growth of a child, was given free play throughout the unit, however.

When the fall medical examinations were completed in another one-teacher school the findings were discussed informally and the conclusion was reached that something should be done to improve the condition of the pupil's teeth. The teacher had several aims in view as she encouraged a further study in this direction, such as better realization of the importance of giving the first teeth good care, of correcting teeth defects in general, and of eating proper foods for sound teeth. The children's questions which were formulated at the beginning of the study centered around ways of building strong teeth and keeping them in good condition. It was decided to summarize the findings of the study in booklet form and to make an effort to obtain corrections.

All of the children from beginners through the eighth grade took part in the study. They tied it in with their living by keeping a daily record for a time of the consumption of teeth-building foods. They linked it with their other school activities in various ways. Letters were written to the nurse, inviting her to speak to the mothers on the care of teeth. Other letters, requesting literature were sent out by the pupils. A study of animal teeth was made and incorporated in the booklet.

The interest aroused by this study has resulted in a community effort to raise funds for corrections. It has produced other equally tangible results. After the nurse's talk to the mothers, one family began to buy more milk for its children. Another family eliminated coffee from the children's diet and substituted more milk instead. One girl learned to like oatmeal after her mother's assistance had been enlisted and two older girls, who expect to leave school, say they plan to direct the first money they earn into teeth corrections.

In this unit the activities were so closely related to the life of each child that interest in them was maintained throughout the school year. The learning experiences were quite within the range of accomplishment at the various age levels although some of the ultimate goals were beyond the control of the children. This was realized by the teacher since she sought the help of parents and nurse in matters of diet and corrections. It is evident that the unit has led to a broader understanding of nutrition and good bodily health and to a cooperative community effort to improve an existing evil.

The farm served as a focus of interest in problems of sanitation and health in another one-teacher school. When the teacher was asked how the unit developed she remarked, "It just grew—it is hard to say how. It began when the suggestion was made that we construct a room to show proper ventilation. The children asked if they couldn't build a complete farm instead. This we did and as the plans developed various health principles were brought out."

One committee of children decided on the health problems to be stressed, another helped to furnish the house and plan for the "Happy Family" who live there while another committee constructed the house and farm. The children wrote imaginary stories about Mr. and Mrs. Happy and the Baby, in which they told how the family happened to move from

the city to the farm, and of the advantages brought about by the change. New words were learned by the younger children. Various problems in arithmetic arose as the construction work progressed. Color schemes and artistic arrangement of furniture were considered.

As various health questions arose reference books, including health books were consulted. To illustrate, the question "Where are we going to get the water for our farm?" was brought up by one child at the time a well was being drilled in the neighborhood. The matter was discussed informally and the children looked up all they could find in health books. The well was then constructed according to the best principles discovered. It was placed in a safe position relative to possible sources of pollution including the outside toilet they had built. As this work progressed the children talked about the water supplies at home and in the community.

The problems considered can best be described by quoting some of the signs prepared by the children for placing as labels on the farm. They were:

1. This family raises its own supply of vegetables so it will have fresh ones for summer and plenty left over for a winter supply. (Near garden.)
2. The baby sleeps in the air and sunshine. The net prevents germ-carrying insects from entering. (Near baby carriage.)
3. Windows and doors are screened to prevent flies and other insects from entering the house. (Near screened window.)
4. All garbage which cannot be burned should be buried. (Near incinerator.)
5. This family keeps two cows for its daily supply of fresh milk, butter, and cream. (Near barn.)
6. This well is properly located and constructed. It is at a safe distance from all refuse and is sealed. (Near well.)

The children worked on this unit for about two months, using the two hours each week ordinarily devoted to art, nature study, and hygiene. Activities in these three fields, as well as in others were included in the unit. Life situations close to the rural child formed the centers of interest but new and unexplored angles to these situations were introduced. The opportunities for group participation in many kinds of endeavor were numerous and the enthusiasm of the children was keen.

A long and inclusive unit of work called "Our School" was developed in still another one-teacher school during the year. The teacher reports concerning it:

"During the summer vacation of 1933 the school district had made several improvements in the school building and grounds. The children had been at the school while the men were working and had made and painted several small things as clock shelf, waste paper basket, and chair. They were anxious to have school reopen in the fall because of the newness of it all. The first day of school, most of the conversation centered on the improvements so, this being the children's interest at the time, it developed into a unit of work on 'Our School.'

"The unit occupied the entire school year. The whole school met as a group four times a week for a period of twenty to thirty minutes. The period was used for making plans, construction work, bringing in results of research, or whatever the need was at the time. The work of the first semester was centered around the schoolroom and a miniature schoolroom like our own was constructed. During the second semester emphasis was placed on the school grounds and a replica of the school grounds with desired equipment was built on the sand table.

"The improvements already made were studied in groups. For example, under 'Safety' the value of the eaves to prevent ice from getting on walk, of stove jacket, et cetera, were discussed. These discussions led to a desire for still

further changes. In time the following improvements in the schoolroom were brought about by the children: making and furnishing a first aid kit; making pads for drinking cups; buying two ventilators for school, and making aprons to wear while painting.

“The first aid kit was an outcome of the study on safety. In making plans the children considered what materials were needed, how to fix them, and how to use the kit. We used health books as reference material and made a list of the contents needed. The children wanted to bring the things themselves. A cigar box was used for the case. Shelves were put in, a latch was added and the box was painted. As the children learned how to use the kit, demonstrations were carried out whenever possible. At the same time they learned how to use the fire extinguisher.

“The most important results of the study of school grounds were: learning new games; group entertainment once a month; making bird houses; making windmill for school grounds; making flower bed. In this study we included exercise, shoes, posture, and sports.”

Throughout the year this unit was closely integrated with many school activities. Committees to do certain things were selected during the meetings of the School Club. The social studies activities which centered around the home and school fitted in very nicely with this unit. As a result the children were more courteous and careful with their school duties.

In nature study, the home, habits, and cleanliness of common wild animals were studied during the winter months and the home and habits of birds during the spring.

Arithmetic was applied in measuring and constructing the schoolroom and school grounds to scale. Drawing and art were utilized in the construction work and in making the flower bed. As a part of the English activities the children kept notes for reports and wrote business letters to

order a picture for the room. They also made a study of the picture "A School in Brittany," by Jean Geoffry. Progress notes of the work were put in the school newspaper.

There is little doubt that this unit was closely related to the lives of the children who carried it out. As it developed it motivated within the range of accomplishment of the children many activities which were varied and involved knowledge of a number of fields of subject matter. Chances for social contacts were many and the worthwhile leads which came from the different phases of the study were numerous.

It previously has been stated that health principles may be stressed but incidentally in a comprehensive unit of work. Such was the case in a review unit on "Transportation of the World," carried out in a school in which there were a number of older boys. Since some antagonism existed toward the health work the teacher decided to weave in health ideas as subtly as possible. The integrations included: discussion of ways in which people may injure their health by carrying heavy loads; the care and feeding of beasts of burden compared to man; methods of keeping food from spoiling while being transported and sources of our commonly imported foods, with emphasis on foods important to health. The teacher reported success with this unit.

If a county-wide health education program is to be adaptable to diverse teaching situations such as occur in rural areas, it must be broad in its scope and ever growing. The exchange of classroom experiences between teachers is one means of bringing about this continual growth. When a teacher has access to a wide variety of teaching suggestions from other schools she may select from them activities suitable to her own group and use them to motivate new activities in her school. This method of curriculum development

is occurring continuously in the rural schools of Cattaraugus County.

Previous articles have dealt with methods employed to bring about an exchange of experiences among the teachers.² Let us analyze a specific instance in which such exchanges resulted in the development of a new unit of work which possesses some elements of the old but which has unique characteristics of its own.

The unit, "Storage and Use of Foods," was initiated in an effort to increase knowledge of methods of food preservation and to encourage better balanced and more varied meals. Plans were discussed and the group decided to gather vegetables and fruits and keep them for the school hot lunches during the winter. Pamphlets and cook books were studied for best methods of preservation. A field trip was taken to collect the produce which was stored and preserved at school. A study of balanced menus followed and health books were used freely for reference. The children cooked lunches during the school year and had a special "Breakfast Party," using well-balanced menus they themselves had worked out.

According to the teacher's own account of the unit, the idea of carrying out a storage project was inspired by reading over a food storage unit in a teachers' guide.³ Here, she thought, was something that would fit the needs of her group, particularly in one home of older children where the mother knew little about country life and the girls helped with the housework. A home-canning tomato project, described in the same book, led her to think of canning tomatoes at school.

²Grout, Ruth E.: *A Project in Rural School Health Education*. The Milbank Memorial Fund *Quarterly Bulletin*, July, 1933, xi, No. 3, pp. 201-207; *Quarterly*, April, 1934, xii, No. 2, pp. 147-159.

³Cattaraugus County School Health Education Project: *Handbook of Health Education*, pp. 156-158.

She had heard about a study of foods carried out in a neighboring school in which table setting and manners played an important part, so this she worked in with the breakfast party. She also had read an account of a group that combined a nature walk with a trip to a neighboring farm to be weighed. This made her think of the idea of taking a field trip, in this instance for studying weeds and collecting the vegetables. Original contributions of the teacher and pupils included the breakfast party, the computation of food costs for the breakfast, and the hot-lunch dishes. The unit in its entirety is distinctive and admirably adapted to the situation in which it developed.

If a program in a special field is to be workable in a school it must be in harmony with the school curriculum as a whole. In the rural schools of Cattaraugus County, where unit teaching is encouraged throughout the curriculum, the health education program has attempted to make continual use of the unit method. Since the particular field of health education is little hampered by conventional procedures it presents an excellent opportunity for teachers to experiment in newer and more progressive ways of teaching. As units of work, such as those described in this article, are applied in the different schools the teachers and pupils are gaining confidence and experience in unit activities for they find them helpful in motivating the living of health through the child's day.