BULLETIN 1953, NO. 6

How Children Use the Community for LEARNING

New Enterprises in Education

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
Office of Education

Contents

Foreword

THIS BULLETIN is one of a series that tells how teachers, pupils, parents, and other citizens have worked together to improve the quality of education for the children of their communities. Two other bulletins in the series are *Petersburg Builds a Health Program* and *Culloden Improves Its Curriculum*, which are reports of the work of rural schools that have a certain amount of supervision.

How Children Use the Community for Learning describes the work of a city school of 450 pupils with no regular supervision, the Garfield School of Cambridge, Ohio, from 1950 to 1952. The building in which the boys and girls and teachers worked was not a new or modern schoolhouse. Yet by working together to meet the needs of the children and solve problems as they arose, the staff, pupils, and community made the beginnings of a program that is meaningful to the children and promises to lead to better living. At the same time the boys and girls made greater progress in the school subjects than had been made by the pupils of previous years.

Other schools in the United States have the problem of providing good elementary school programs in similar situations. Perhaps the

ways of working described in one locality will suggest ideas that many schools similarly situated can use in providing more meaningful curriculum experiences for their boys and girls.

The professional staff responsible for the work discussed in the bulletin included the teachers, Lillian Davidson, Mrs. Esther Pine, Mrs. Ella Brown, Mary Smallwood, Mrs. Marjorie Black, Mary Moore, Mrs. Dora Allen, Ella Wave Riggle, Madge Miller, and Anthony Jefferson; the principal, Avilda Buck; the superintendent, A. E. Rupp; and the consultants, Esther Van Bockern for Bible and Marjorie Miner for art.

WAYNE O. REED,
Assistant Commissioner, Division of State and Local School Systems.

GALEN JONES, *Director, Instruction, Organization and Services Branch.*

A City and Its Schools

THIS IS a bulletin about children and their teachers. It tells how a school staff in Cambridge, Ohio, took first steps in making a curriculum to meet better the everyday needs of the children.

Cambridge is a thriving manufacturing and trading center in eastern Ohio. The city has long had a number of prosperous industries. In 1819 the first pottery was built; about 1870 manufacture of glass was begun; and around 1890 manufacture of iron and steel got a start. Recently new plants have sprung up to manufacture plastic goods and articles. Two new plants are getting started. One is a ferrous-alloy industry and the other a plant for the manufacture of aluminum doors and windows. The city now has more than 30 industrial plants producing many kinds of useful products. Employment has been stable for years. One source of information[1] reports no layoffs in industry between 1934 and 1943, and states that no single employer and no single industry during that time employed more than 19 percent of the total labor force of the city.

Cambridge is an old city. About 1800 the first settlers came. Many of the early settlers were from the Isle of Guernsey off the coast of England. In 1850, the city had over a thousand people. In 1940, according to the United States census, the city had 15,044 people. In 1950, census figures showed a population of 14,739.

As Cambridge Grew

Schools were started in Cambridge in the early 1800's. Today the city has six elementary schools, one junior high school, one senior high school, and one seventh- and eighth-grade school. A parochial school also serves Cambridge and vicinity. The city has a widely used public library.

In the community, 32 churches represent 24 religious denominations. Through these churches the people have many opportunities for religious observances and activities and for education and recreation.

For recreation, the people also have a city park and swimming pool.

[1] Wolfe, William G. Stories of Guernsey County, Ohio. Cambridge, Ohio, The Author. 1943. A source of authority for the historical statements on this page. Recent facts are from local sources.

Several large lakes in eastern Ohio are used by people of Cambridge for fishing, swimming, skating, boating, and other kinds of fun.

A Survey Was Made

The story of this bulletin begins with a study of a survey of the Cambridge schools in 1948.[2] The survey tells how teachers, principals, and superintendent paused to take a critical look at procedures they had long taken for granted. One section of the survey is about the school program. In this section, the teachers were asked to consider and answer certain questions centering in four commonly accepted objectives: (1) academic development, (2) social growth, (3) esthetic development, and (4) physical development and health. The teachers' answers show some of the lacks in the program at that time.

With respect to the children's *academic development*, that is, their mastery of school subjects, the teachers answered that in each grade they were emphasizing knowledge, skill, and techniques the pupils might need in the next higher grade. The teachers seemed to pay little attention to the knowledge children needed in everyday living. The survey pointed out especially that the children needed "ability to think, to plan, and to carry out ideas for themselves," to which the teachers were giving but little attention. As to results:

> (Test data in the survey showed) that the Cambridge pupils are not doing so well in subject-matter achievement as is true of pupils in other schools throughout the country. Mental-test data . . . indicate that this deficiency in academic achievement is not due to less ability on the part of pupils. . . .
>
> Observations by the Survey Staff indicate that, in general, the Cambridge elementary teachers are emphasizing the mastery of subject matter. This would seem to make the shortcomings revealed by the test results all the more baffling. A partial answer will undoubtedly be found in the fact that pure drill and high-pressure teaching for the mastery of information are not necessarily the best means for attaining the desired goals. It has been shown that facts and skills are better mastered and longer remembered when they are taught in connection with activities which have purpose and meaning to the children at the time. For example, the pupil who learns to measure in feet and inches in laying out a garden or constructing a make-believe store or postoffice in the classroom will have a better mastery of these concepts of measurement than will the pupils who merely memorize a table from a textbook.[3]

As for the children's social development, the teachers were agreed on *social adequacy* as an objective of the school, but did not provide opportunities for directed experiences in social situations, which, according to the survey, are needed for growth in poise, stability,

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[2] Flesher, W. R., *and Others.* A Study of Public Education in Cambridge, Ohio. College of Education, Ohio State University, Columbus, Ohio, 1948. 162 p. Contains helpful suggestions dealing with the study of school and community problems.

[3] Op. cit., p. 86, 88.

cooperation, and a sense of responsibility. Experiences in clubs, committees, discussion groups, and projects in the community were lacking in the school program, except in the classes of a few teachers.

The survey also pointed out that:

> Although the nature of democracy and the learning processes are not defined in many of the (teachers') statements, it is clear that the majority of the staff subscribe to democratic purposes in education and recognize the importance of the elementary school and its program in contributing to the achievement of such goals. Observation by the Survey Staff in the classrooms, however, indicates more concern for the mastery of *isolated bits of subject matter and the acquisition of isolated skills than for the inculcation of democratic habits and attitudes.*[4] [Italics by ed.]

At the time of the survey, the *esthetic development* of the children also seemed of little concern to the teachers. Even though instruction in art and music was provided for most classes, it seemed not to result in better living, even in school. No efforts apparently had been made to make the dark soiled walls attractive. Drinking fountains were not kept clean. The grounds were littered, and neither children nor staff took advantage of the situation as a means of improving the school program. Some teachers tried to improve the appearance of their classrooms, but they did the work themselves; the children seldom had a part in planning or working, desirable as this would have been. The children's experiences with music were often limited to note reading and other technicalities; too little time was used for enjoyment of singing.

The general program of the school provided for *physical development and health.* In the survey, however, Cambridge teachers as a group did not mention these program areas. It is possible that they considered their responsibilities to be limited to the mental phases of child growth and considered health and physical education to be the responsibility of special teachers. Yet the school system made no provision for such teachers.

All objectives considered, the situation in general seemed to the survey staff and to some of the school staff to show the need for additional emphasis on the well-rounded development of the children. The boys and girls needed opportunities to think and plan together for the improvement of their surroundings in school and community. They needed guidance in carrying out their plans. Experience in working in committees, clubs, and discussion groups would help most of the children socially. All would profit by having art and music in their daily living. Many children needed guidance in building and maintaining good health. These were needs that might be met partly as the children learned to read, write, and speak effectively and to calculate, if such

[4] Op. cit., p. 71.

skills were taught in ways that made sense to boys and girls. But the survey staff agreed that other kinds of learning experiences were also needed by most of the children.

Hike

One fine day in November, our teacher went with us on a hike to Johnson's Hill. After we reached the top of the hill we ate our lunch. We had sandwiches, milk, fruit, vegetables, pickles, cake, candy, potato chips, and pop. . . .

Then we started hunting things for our field collection. We found thorns, crab apples, bitter sweet, sumac seeds, golden rod, wild wheat, red and yellow thorn berries, and red leaves.

We enjoyed the view of Cambridge from the hill and we could recognize some of the buildings that we know. . . . The next day we made art displays of our berries, seeds, and weeds. We put them all together and made two lovely winter bouquets.

—From "Work and Play," a collection of stories and reports by pupils of Room 9, Grade IV, Garfield School. Other excerpts from "Work and Play" are found at the close of each section, p. 38, 43, and 46.

One School's Activities

Superintendent, principals, and some teachers thought that something should be done about the inadequacies the survey revealed. Garfield School undertook to develop a trial program based directly on the needs of the children of Cambridge. Garfield School has 12 elementary class groups, 2 classes for each grade.

Discussing Improvements

In various staff meetings and with one another, teachers, principal, superintendent, and resource people discussed the needs of the children and the nature of the experiences they were having. Among questions raised at different times were:

1. Are the children getting the kind of instruction and help they need? What ought they to be getting? How can we find time to teach the 3 R's if we also try to do the other things the children need?
2. What do the people of our neighborhood think their boys and girls are learning? What do they want them to learn?
3. To what extent can parents have a part in the school program?

In their discussions, the teachers talked about the kind of school program that would aid the children in solving their social and emotional problems and help them to be better citizens. They discussed the needs of the children. Some of the teachers hoped, for example, that the children would gain ability to work and plan with others, particularly with classmates, schoolmates in other grades, and adult members of the community. Others emphasized the importance of helping children learn to take responsibility. All desired improvements but considered it unnecessary and undesirable to overhaul the school's curriculum.

A flexible program for the school as a whole, continuous from grade to grade and with occasional whole-school projects would help achieve desired objectives and at the same time give the boys and girls opportunities to learn to be with older and younger pupils as well as with their own age groups. Such a program could begin with a single whole-school project with all grades taking part. If well chosen, the

project would provide many of the social experiences needed and help to bring about better living in the community. Conservation of the natural resources was considered as a possible center for curriculum experiences. It was a community interest that might well have been a concern of the whole school. State conservation specialists were working on the problem along with local officials. As the problem was discussed; however, it became evident that the children and most of the teachers were not sufficiently interested in conservation at the time, and were not used to working on problems in which more than one class had a part.

Bringing parents into the school program was a gradual process. When the pupils planned trips, parents drove cars and assisted through observing and helping answer questions. In this way, a few parents saw what the boys and girls were learning as the program changed. Now and then parents also sent materials to school and helped the children get information at home. The year after the project closed, a promising parent-study group was organized.

Plans and Suggestions

When the time came for taking definite steps toward a more effective curriculum, the group of teachers decided to try their ideas first with their own classes and in problem areas with which they were already familiar, rather than to take up such community problems as conservation or to plan for cooperative projects involving the school as a whole. Activities that included more than one grade, community projects, and experience in conservation were carried on later. Desirable subject matter not taught in connection with the projects and activities was taught as formerly.

Next to improving their understanding of their pupils, the Garfield teachers wanted to find ways of identifying the children's problems and of selecting major problems or problem areas for the curriculum. Once appropriate problems were selected by the staff, teachers and children could decide cooperatively on experiences and activities related to them.

A summary of the plans and suggestions made by the staff at different times individually and in groups includes the following steps toward improvement:

1. Work individually and with other staff members to understand each child, to know what each one is striving to achieve, why he does as he does, and how to help him feel successful in the achievements he values most.
2. Provide opportunities for the children to have more real life experiences as the basis of learning the 3 R's and gaining the other abilities and skills that make life more interesting and more useful.
3. Introduce into the curriculum more activities and projects that broaden

the children's contacts with the resources of Cambridge and help them get acquainted with townspeople who help and serve them and carry on the business of the community.

4. Help the boys and girls of different grades to have some experiences together in order that they may learn to work and to have real fun with those older or younger than themselves as well as with children of their own age.
5. Have more cooperative planning; that is, arrange for pupils and teacher to plan their activities together instead of following a program in which the teacher makes all the assignments and lays down the rules and expects the children to carry them out.
6. Help the children increase in ability and inclination to be responsible and dependable.
7. Encourage parents to participate in the program of the school.

In the pages that follow, a 2-year trial period in which teachers and principal worked to bring about the improvements listed is described and progress is analyzed.

Finding Newer Ways of Learning

Some teachers made lists of problems or activities that would give their pupils helpful learning experiences. These were discussed with the principal and other teachers who were interested. Records were kept and ways were sought to unify work across grades so that the children would neither repeat nor omit experiences in moving from one grade to another at the close of the year. Teachers also tried to bring the boys and girls into the planning and help them work together.

The Milk We Drink

A first-grade teacher decided that a study of milk might be interesting to her boys and girls. A number of them showed signs of being undernourished. For some time milk had been provided for the children's mid-morning snack in school, but the teacher learned that many of the children did not drink milk for other meals. She thought a study of milk might result in more milk drinking, particularly by the children who needed it most. In her own planning she considered things the children might be interested in or might themselves suggest. The following activities were in her plans:

1. Finding out how many and who are drinking milk at home and in school.
2. Making ice cream in school with the help of the fifth- or sixth-graders whom the first-grade children know.
3. Making junket in school with junket powder, sugar, and flavoring and serving it at an informal party for the second grade. Learning to measure the ingredients.

4. Taking an excursion to a dairy farm and seeing the cows and talking with the dairy farmer, Mr. Randall Rose.
5. Making pictures and posters to show the other children what we learned about milk.
6. Using watercolors, clay, paper, milk cartons, and other materials to make things that show other children what was learned in the study.
7. Making charts about our experiences for the other children to read and for us to read when we want to remember our experiences. (Children dictate, teacher prints.)
8. Making a collection of picture books to help us learn more about milk, such as "Milk for You and Me," "My Friend, the Cow," and "Ice Cream for You and Me."

Activities that were carried out during the first year of the improvement project included items 1, 7, and 8. Items 2, 3, 4, 5, and 6 were not attempted. The class that followed, however, in the second year of the experiment also needed to learn more about milk, and they, too, made the study of milk. They took a trip to a dairy farm. Here is a story they dictated to their teacher and had a lot of fun reading after she had printed it.

A Farm Trip

The first grade went to the farm in two cars and a truck.
All of us went up the hill to the big white barn.
It was the cow barn.
Mr. Ross let us pat the little calves.
There were 13 calves.
Robert and Paul brushed the cows.
Then we saw the milk being cooled in the milk house.
We had fun jumping in the haymow.

Through the study this second year's class increased their awareness of the community around them and made the community aware of the children. One of the parents who drove a car to take the children to the farm said, "I have followed the children around on this excursion and have learned a lot myself. Many of these things I did not know."

A parent whose son was a member of the group that went to the farm said to the teacher, "I think you're going to make a farmer of my boy. I've never seen him so interested in school."

The trip helped the boys and girls learn how to act toward people outside of their classroom. They dictated a letter to Mr. Ross asking for permission to go to the farm. They also dictated a note thanking him for the visit. Two children stamped and mailed the letters. Children who might ordinarily have been too shy to ask questions were observed making inquiries of the kindly Mr. Ross. When they left

the farm, all of them thanked Mr. and Mrs. Ross. They thanked the two parents who drove the cars and truck for the class to make the trip.

This class got help from the fifth grade in learning to make ice cream. They learned how to measure the ingredients. They had a party and invited guests.

More materials were collected by this class than by the children who made the study the first year. More frequent use was made of the books, pictures, and other materials collected. Greater interest was shown in drinking milk, and more children bought milk at school to be used with lunches carried to school.

First-grade pupils tell about their farm.

Things Good for Us To Eat

The second year's experiment with this study of milk that began in first grade appeared also to lead to more interesting and useful activities in other phases of the curriculum. For example, an organized study was made of *Things Good for Us To Eat*. The teacher noted that the children who stayed at school for lunch were eating too few vegetables and fruits to meet the commonly accepted standards for a good diet. Since most of the children have gardens, the teacher began to find out what they knew about vegetables. Discovering that some did not know the names of common vegetables, she asked pupils to bring vegetables to school and tell the other children what to call them. In class the pupils were encouraged to talk about the vegetables and to find out

how these were preserved for the winter. Three ways of preserving vegetables were mentioned: Burying, canning, and freezing. The pupils brought magazine pictures of vegetables to school, some of which they thought were funny. The children's first reading about vegetables was done from a chart made from stories the children dictated.

Another study was about fruit. The children dictated stories about the kinds of fruit they liked best. They were encouraged to eat fruit any time of day, particularly after school, instead of candy. Eating fruit is now popular with the children. During the fruit and vegetable studies, the teacher made lists of words the children had learned, particularly of those they would need when they began to read in their preprimers and primers.

Courtesy, George Ruther, Daily Jeffersonian, Cambridge, Ohio.

A feathered guest seen from our window—Fifth grade.

The Birds Around Us

In the spring, the residential district where most of Garfield's children live has a variety of birds. Different teachers have tried to help the children have some organized and guided experiences in observing and studying birds. One of the first-grade teachers planned to help the children learn some of the birds at sight and to recognize their songs and calls. She collected pictures of birds and had several good picture books about birds for the children to look at. A number of the books provided interesting and easy reading for first-grade children, and the boys and girls made good use of them. However, this group of pupils did not become greatly interested in birds, perhaps because the pupils had no experiences in observing birds.

Had there been more time, the teacher says field trips might have been taken. The children would have observed birds on their way home from school and near their homes. They could have dictated stories about their experiences, and these might have been printed on charts and used as reading lessons. Phonograph records with bird calls and songs would have been used in the classroom. These ideas are not lost sight of. The teacher can use them with a future class.

Later a fifth grade made a more mature study of birds. The activity grew out of a visit by two robins that built their nest on the ledge of a window of the children's classroom. The children made a study of robins' nesting places. They observed the birds from day to day from the time the nest was begun to the time when the young were hatched. A news reporter was invited to see the birds.

Keeping Our Teeth Healthy and Other Second-Grade Activities

One of the projects planned cooperatively was how to have healthy teeth. Two second-grade teachers planned the study. They felt it would be helpful to most of their pupils because so many of the children did not brush their teeth regularly and were not forming the habit of having clean teeth. Most of the children, furthermore, knew little about the care of the teeth or the kinds of food that build good teeth.

The two teachers discussed experiences the children might have in such a study that would help them understand the kind of care their teeth should have, including straightening and brushing and the right foods. The following activities were listed:

1. Collecting pictures of boys and girls with healthy, attractive teeth.
2. Looking at motion pictures on how to brush the teeth. (The film entitled "It Doesn't Hurt" was available through the central office.)
3. Inviting dentists to come to school and help the children answer the questions they have about care of the teeth.
4. Visiting dentists' offices and looking at some of the equipment and getting personally acquainted with the dentists.
5. Finding out what kinds of food are good for the teeth and keeping individual records to see that some of these foods are eaten every day.
6. Collecting books with information about the care of the teeth. Looking at these and putting markers in the proper places. Children who are good readers take the initiative in this and help the children locate information.

The second year of the experiment brought new second-grade teachers. Children from the previous year's first grades came to the two second grades. These children had had a year's experience in

people with courtesy, and to talk clearly and fluently about their work. They learned to see problems and plan ways of solving them, often worked independently, and asked for help from the teacher when they needed it. Teachers and principal looked forward to the next year's work hoping that with such a good start in democratic ways of working, the boys and girls would be especially able to carry on a similar program in the third grade.

Doing Something About Our School Terrace

In the second year of the experiment, as a second-grade teacher and pupils took walks to look at people's flowers in the neighborhood of the school, they observed that there were no flowers on the school ground. There was one place where flowers might grow, a bank or terrace on the south side of the ground. It had had no attention for a long time. Large trees grew there, and at the end of the bank a few barberry plants struggled to keep alive in the poor soil of the heavily shaded terrace. Here and there scraggly weeds tried to grow. Small ragged gullies had grown into ditches. During heavy rains, streams of water washed yellow mud to the sidewalk.

The teacher called attention to what was happening to the terrace. On their way to and from school the children saw similar terraces on private property made to look pretty with grass or shrubs. Why could not the school have a pretty terrace? The class discussed the idea of planting flowers or shrubs on the terrace. What would they like to plant? What would grow on such a terrace? They made a statement about their problem, and the teacher wrote it on the blackboard so all could read it and remember.

OUR PROBLEM

Plants for the terrace

To hold the soil

To look pretty

Teacher and children brought books about flowers to school. They collected pictures of shrubs and other plants and tried to find out the soil and water requirements of each. They observed the growth of the slips of plants they had started in the classroom. Children who had gardens at home talked with their parents and told the class what they had learned from them. When many facts had been considered, the children thought it would be a big job for second-graders to do much about the terrace by themselves. Should they give up? The teacher suggested that some of the older boys and girls in other classes might help. The children liked that idea. They invited two representatives

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from each of the 11 other rooms to come to the second grade and talk over plans. This group served as an advisory council for the project.

The group decided much of the work would have to be done in the spring. Still there were things to do during the winter months. Each Wednesday afternoon 22 older boys and girls met with the second grade and talked about ways to beautify the terrace and keep the soil from washing away. The children asked many people for information, including Lt. D. C. Stark, Ohio State Highway Patrol; Arthur B. Orme of the Cambridge glass factory, who knew about fertilizers for plants; and George Eikenberry of the Soil Conservation Service in Cambridge. Avilda Buck, the principal of the school, brought books and pictures, answered questions, and now and then helped with the planning. Harley Davis, the school custodian, helped.

What to plant was a question that interested everyone. The children had seen roses along highway slopes and thought these would look pretty on their terrace. They learned that the roses they had seen were called multiflora roses. They wondered if the multiflora rose would grow well on their terrace. Committees talked with the specialists mentioned. Individuals consulted catalogs and Sunday supplements of local newspapers. The children finally decided that the multiflora rose might be suitable for their terrace. It was, for example, supposed to grow quickly and to bear lovely white flowers. It was relatively cheap. It was hardy and resistant particularly to drought and insects. It had been recommended and used to prevent erosion on highway slopes. Multiflora rose bushes might attract birds to the terrace. Would multiflora roses grow on the school terrace? That was the question the children must answer. They wrote to the Ohio State Department of Highways for information and help. Here are excerpts from two letters from Robert C. Ranney that helped them.

October 17, 1950.

DEAR SECOND-GRADE PUPILS:

I feel that I would have to see the terrace before I can give you any information that would be of real value to you.

As for securing roses or other nursery material, this material would probably have to be bought from a commercial nursery. This is how we have to get any plants or other landscaping material we use on our highways. While I do not know at this moment exactly where these could be purchased, I can do some inquiring about sources of supply for you. . . .

I expect to be passing through Cambridge within the next week or two and shall be glad to stop at your school and see the terrace. Then if I can be of help in the improvement of its appearance I shall be glad to do that, too. . . .

Very truly yours,

ROBERT C. RANNEY,

Division Landscape Architect.

January 4, 1951.

DEAR SECOND-GRADE PUPILS:

I have held up writing to you again until now, while I did some inquiring and gave some further thought to the problem of what to plant under the trees on the bank in front of your school. . . .

The combination of steep slope, heavy shade from the trees, competition for plant food offered to any shrubs by the tree roots and the children themselves tramping over the area make this one of the toughest of problems to solve.

I recently discussed this problem with Mr. Everett Albyn, of the Albyn Nurseries here at Newark. We talked of various plants which might work here. Mr. Albyn told me that the roses we discussed absolutely will not grow in heavy shade on this bank. And after considering several other possible plants we finally came to the conclusion that probably no other type of plant could be expected to grow any better than the Japanese Barberry shrubs which presently occupy the bank in the places where they have not died out.

It would be my recommendation, if you still wish to try improving this spot to plant more of the Barberry plants on the slope spaced 4 feet or 5 feet apart, staggered so that each plant in any one row horizontally is spaced half way between those in the next horizontal row above or below. . . .

Very truly yours,
ROBERT C. RANNEY,
Division Landscape Architect.

Mr. Ranney continued his letter by telling the children how to plant, fertilize, and prune the barberry plants. He suggested the use of straw, leaves, and commercial fertilizer. He recommended the proper size of plant to buy and advised the pupils to try to get a local nurseryman to help them set the plants.

The children recognized the value of Mr. Ranney's advice. They realized that there was little sunshine on their terrace; yet they

Mailing a letter for help with the terrace—A committee at work

were reluctant to give up the idea of multiflora roses. They learned that they could get the rose plants free and they knew that roses grew faster than barberry plants. Accordingly they decided to try both the additional barberry plants and the roses. They made a sketch of the terrace to guide them in setting out the plants in the proper location.

As the planning and work proceeded, the children needed money to buy barberry plants and fertilizer. They planned a white elephant sale and a seed, flower, and plant sale, and used the money to buy the plants and fertilizer needed, keeping careful records of money earned and spent.

Teacher and pupils talked about ways of letting the school and community know about the project so that many people would be interested in seeing the plants grow and bloom. The boys and girls made posters about the project. They put some of these in the hall in school, took some home, and sent others to friends like Mr. Eikenberry who might put them up for people to see. They helped the teacher take snapshots of committees working on the terrace.

The girls and boys planned ways of protecting the bank, including Please-Keep-Off signs which they made. They helped the younger children learn new games so that they would be engaged during recess periods and not walk across the terrace. One of the games was the old favorite, tag, played within certain boundaries that did not include the terrace.

An Arbor Day program was also planned. During the year the children had read poems about plants and had learned songs about nature. Since certain songs and poems were general favorites, some of these were selected to be read for the program. All grades were asked to have a part in the program in some way. The second grade sent notices and invitations to their friends in school and in the community and each day wrote news about the program on the blackboard. Here is a sample of what they wrote:

PLANTING TIME

Mrs. Pine's room will help with our program.
Our song is Planting Time.

As a part of the program the children planned for one member of the group to tell about the project and for another to thank those who had helped. The principal was asked to tell what the children's work meant to the school. As the children practiced the program the teacher made a tape recording and played it to help each one improve his performance.

After the program, the planting committee, boys from the fifth and sixth grades, with Tommy Harbin as chairman and Mr. Eikenberry as supervisor, prepared the soil with nitrogen donated by the Cambridge Glass Company for fertilizer. Then they transplanted 150 rose

bushes that Mr. Eikenberry had secured for them and the barberry plants they had bought. A few days later the fifth- and sixth-grade boys with Tommy Harbin and Mr. Eikenberry laid the straw mulch to retain moisture from the spring rains. In spite of the shade the roses are doing well and the children expect blossoms in the spring.

At the end of the year, it was evident to teachers and principal that this project had contributed to some of the improvements desired for the entire experiment. It had, for example,

1. Provided opportunities for the children to have experiences in planning together in groups.
2. Provided opportunities for the children to take part in a service of benefit to school and community.
3. Helped the children learn to work with older and younger pupils.
4. Brought about cooperation within the school and between school and community and helped all learn to live and work better together.
5. Made it possible for the children to use many resources outside the classroom, not merely to get isolated facts to memorize, but for a real purpose, the improvement of the terrace.
6. Gave the boys and girls and teachers ideas for more and better interclass cooperation in the years ahead.

The children realized that there would be problems in caring for the terrace during the summer and in taking up the work again in September. A committee from second, fifth, and sixth grades volunteered to care for the terrace during the summer. While the teacher was in town, this committee had her help and guidance.

The bank remained high in the interest of the children during the summer and the next year, 1952–53. When snow fell and sliding on the bank was a temptation, the original second-graders, now in grade four, went to each room to explain the need for keeping off the bank. The new children in grades 1 and 2 were noticeably impressed.

A Bible Story and Other Third-Grade Studies

During the first year of the experiment, Cambridge schools had a Bible teacher who served as a consultant in helping regular teachers integrate instruction in the Bible with other phases of curriculum. Sometimes she took charge of classes for instruction in Bible; at other times she worked with the regular teacher to make instruction in Bible a part of a major activity.

Through this Bible teacher, a third grade became especially interested in the story of Joseph. The children listened to the teacher read the story from the Bible and tell them about Joseph and his father and brothers before they went to Egypt. The boys and girls planned and

painted a mural with pictures of the things they could imagine Joseph seeing in Egypt. In connection with the story the children made a large map of Egypt. The Bible teacher in this instance took the initiative for the study in the beginning. The chief activities were developed later by the regular teacher and the children.

This story was one the children liked to write about. Their ideas also took form in their construction and ceramics, painting, and drawing. All the children felt themselves a part of things, asked questions, and made comments. Because of their enthusiasm, it was possible for the teacher to help them accomplish a well-organised study. The children brought Bibles to school so that they could read the story over and over as it was originally written. The teacher brought illustrated Bible picture books that told about Joseph and his brothers. Some of the children borrowed books from their church libraries and from the town library.

Both children and teacher found that they enjoyed the kind of study that continued from one day to the next. The children's ability to continue the trend of the story and to make suggestions out of school as well as during class was increased, and the teacher became more enthusiastic about helping the children organise experiences that reached beyond the book and included a variety of interesting activities. She developed more interest in planning with the pupils instead of for them and was able to make their schoolwork much more real and less bookish.

In addition to its character-building, literary, and artistic values for the children, the story was useful to this class because it showed them the fun there is in planning and working together as a group. The children also made progress in reading for a purpose and in original writing. The next year when they entered another classroom, they were prepared to do good work on their whole-school project, "Doing Something About Our School Terrace," described on pages 13–17.

In the second year of the trial period, the teacher had further opportunities to apply some of her skill in group work in helping her new third grade make a study of Indians. In Garfield School, the children look forward to study of Indians when they enter third grade. In preparing for such a study, the teacher usually makes a list of the activities in which she thinks the children will be prepared to engage. These include:

1. Taking a trip to look for arrowheads in the vicinity of the school.
2. Collecting pictures about Indians of the vicinity.
3. Making a display of beads, arrowheads, and other authentic Indian relics.
4. Reading and talking about the Indians that lived in the vicinity of Cambridge, including those near Schoenbrunn where the ancient colonial settlement has been restored.

5. Taking a trip to Schoenbrunn colonial memorial to study Indian relics as well as the colonial village restored at Schoenbrunn and earning and managing money for the cost of the trip.

6. Learning to write own stories about experiences.

Through such activities, children coming to the third grade are expected to learn new skills among which are ability to write brief original accounts of their experiences, improved skill in writing letters, and skill in buying, counting money, and making change. Most children have opportunity to give a short direct oral report of an experience, and take responsibility for tasks and assignments.

The study of Indians was started in this particular class with questions raised by the children and problems growing out of these. The children looked at the books and pictures that they and the teacher had collected, brought relics to school, tried to make pottery like that the Indians had made, and did creative posters and murals to express their ideas about the things learned. The high point of the study was a trip to Schoenbrunn, a State memorial about 45 miles from Cambridge. The pupils of this class had never had a trip together outside of Cambridge. A few of the children had visited the place with their parents and had questions that would be answered by the class trip.

When ways of going to Schoenbrunn were discussed, the boys and girls liked best the idea of going in a bus in a single group. One of the boys got an estimate of the cost of the trip—$40. The children suggested that they could save their "stamp money." In Ohio, stamps for the sales tax that patrons pay to stores are redeemable to schools and churches. In Garfield School, the children collect these stamps, redeem them in money, and use the refunds for books, trips, and other school activities—hence the possibility of using stamp money to pay the cost of the trip to Schoenbrunn.

Judging from the amount of money usually collected in this way by a class, the teacher said she thought they would need more money for the trip than they could get collecting stamps. One boy suggested a candy sale. Another suggested using the money the class usually made on the sale of class pictures. Each year in Garfield School a photographer makes pictures of the children. Parents buy them. Fifteen percent discount is returned to the school by the photographer. The class approved both these activities and planned together for them.

For the candy sale the mothers offered to supply the candy free of charge. The children arranged for a pupil committee to receive the candy on the day of the sale and to help the teacher to place it on display. Two girls who were good in making change and in working with figures were asked to sell the candy and to take in the money. On the morning of the sale, one of them was ill and could not come to school, but arranged for a substitute who was good at figures.

Three children were appointed by the class to help the teacher receive and keep a record of the refunds from the stamp sales. They did their work so well that they were able to report their balance at any time anyone asked how much money there was to date. Another committee helped with the money received from the sale of the photographs.

When the money from the three sources was totaled, the children saw that there was not enough for the trip. The teacher loaned the group $8, which the children agreed to repay with money collected later from the sales-stamp refunds. Borrowing money and being responsible for repaying it were new experiences to the children.

Since this was the children's first experience in handling money in school and for a group, the pupils selected the most capable children for the key jobs. The entire class, however, profited by these first experiences in money management. Each day the teacher talked with the class about the money the committees received. All the boys and girls helped work some of the problems related to the activity. At different stages in the earning, for example, the class added the amounts collected and subtracted from the amount to be collected. The teacher helped individuals who had trouble in understanding the work.

Meanwhile plans for the journey were discussed. The principal of the school and two mothers whom the children knew well were invited to go with the group. A day was set for the trip, parents were notified, and permission was requested for the children to go.

On the way to Schoenbrunn, the children sang. Neither the teacher nor the principal had realised that the group knew their school songs so well or that they could carry the tunes so accurately. Probably none of the children before had been so fully aware of the pleasure that comes from group or community singing.

At Schoenbrunn, in order to encourage the children to use initiative in seeing things and in getting information, the teacher suggested that the pupils first go around the grounds "on their own" getting as much information as they could by reading labels and deciding which places would be most interesting for detailed study or observation later by the class as a whole. Then they met to pool their information and make further plans. Among the things suggested for further observation and study were the mound that marked the grave of the first white child born in the colony, the log cabin schoolhouse, the place where 90 Christian Indians had been massacred, and the cabins in which the settlers had lived, including one that had an upstairs. The pupils saw that most of the cabins were one-room one-floor houses and that there was little equipment and no provision for running water such as modern houses of Cambridge have today.

When they returned to school after their trip, the pupils displayed the souvenirs they brought from Schoenbrunn, made murals and posters about the trip, wrote stories and made books, and visited other grades to give reports of their journey.

Through the activities connected with the study, the children learned to plan with others, to accept and carry out responsibility for tasks, to give interesting oral reports, to ask questions and to follow through in gathering facts to answer them, and to do better the tasks required in money management.

When the teacher was asked for high points of the trip that might be carried into other life experiences in the curriculum, she mentioned the following:

1. Providing opportunities for the children to have a part in planning the experiences of the curriculum.
2. Beginning with experiences in which the children are interested and with which they are familiar.
3. Inviting parents to have a part in the children's activities.
4. Providing opportunities for children to contribute to group projects as individuals as well as in small groups.
5. Helping children contrast the settlers' way of living with our own and to understand changes.

Our Community Helpers

One afternoon a third grade saw a film in which the work of a number of people who performed services for the community was highly praised. "Community helpers" was the term used for the people studied. Favorites among the community helpers were the policemen, the milkmen, the firemen, the grocer, the doctor, the ministers, the telephone operator, the baker, the street cleaners, and the school custodian.

Through their experiences, the teacher hoped the children would meet and become acquainted with some of the persons mentioned, learn more about the work of each, and understand and appreciate the value of such work for safety and good living in the community. She thought also that through good ways of working together in the study, the children would learn how to plan, develop, and evaluate their experiences. She felt that by having part in happy group experiences in school and community they would increase their own feelings of security in their school, class, and community.

The first of the community helpers that the children suggested for study was the policeman. They talked about the duties and services of the policeman. They talked with the safety patrol boys. As there were questions that no one could answer they wanted Walter Moore, a member of the Cambridge Police Department, to come to school and help them. Mr. Moore told the children about his work, answered their questions, and gave them helpful information about safety on the school bus. Someone said it would be interesting to "make" a

policeman; so they asked their art teacher to help them decide what materials to use and they began the work in art class. Their policeman was made of papier-mâché with attractive blue and black uniform. The children wrote poems and stories about the policeman and his work and brought to school picture books and stories about policemen and traffic control, which they eagerly read and discussed. A committee wrote a list of the songs the class had learned, and another made a list of the titles of stories and picture books that had been arranged on the table for reading.

Gene Hartman, the man who brought milk to school for mid-morning lunch, was invited to represent the milkmen of Cambridge in the children's study. Later the boys and girls asked questions, wrote stories, did art work and chart work, and collected picture books, just as they had done when they studied about the policeman. In addition, the group took a trip to the dairy.

Fire engines and trucks are especially exciting to third-graders, and to them every fireman is a hero. The fire department of Cambridge invited the third grade to visit the firehouse. The children looked eagerly at the trucks and were delighted when a fireman invited them to climb up on a truck and take turns sitting in the driver's seat. The discussion after this trip was one of the most interesting and practical in the study, for, in addition to exchanging ideas about the trip, the children gained important knowledge about fire safety and increased their understanding of reasons for the fire drill and other provisions for fire safety in school. There were opportunities for some children to improve safety practices in their homes and school and so make the study active and real.

Nearly every child in Garfield School lived near a corner grocery; consequently there was opportunity to exchange ideas about the way in which groceries were kept from spoiling and were packaged and sold. Through cooperation of the mothers, some of the children bought groceries for their homes, paid for them, and received change, which made this part of their study real.

Most of the children in the third grade attend church. They learned where many of the churches of Cambridge were located and talked about their services, such as Sunday school, young peoples' meetings, and vacation Bible schools. There were questions, and Louis Swa .s, one of the ministers, was invited to talk with the children about church and help them answer some of their questions about how the church helps people.

A sister of one of the boys in the class was a telephone operator. She could not come to school to talk with the children, but to help the class answer some of their questions, she wrote them a report, in which she emphasized the importance of courtesy and a pleasant voice in

telephone conversation. She said that conversation should be brief in order that the line be free for more important calls.

Getting acquainted with the baker led the group to talk about the importance of eating the right kind of food. The children made a tour of a bakery and gathered ideas for stories, reports, and posters.

The teacher aroused the children's interest in observing how the streets and parks were kept clean. One morning they reported what they had seen, such as wire baskets and iron containers in parks and on street corners downtown. The children also observed people's yards and mentioned those that looked particularly clean and attractive. All of the children had been asked to help keep litter off the school ground, and they noted that it was clean that morning. They invited Mr. Davis, the school custodian, to talk with them about ways of improving the cleanliness of their schoolroom and playground. He said he appreciated the help that many of the children had given.

The children were familiar with the mailman's job of delivering letters to their homes. But what happened in the post office? They asked Mr. Bircher, the school mail carrier, to talk to the group about his work, beginning with the post office, but he replied that mail carriers while on duty were not permitted to stop and talk about their work. Accordingly the boys and girls learned as much as they could from books and then made a tour through the post office.

In connection with each of the community helpers with whom the children had become acquainted, each pupil read books, and wrote stories and reports for the class to read, as is explained in connection with the policeman. When a child discovered an interesting book he showed it to the class and then placed it where the other children could read further in it if they wished. Committees worked together frequently.

At the close of the study the teacher and the children talked about their experiences. Those who wished mentioned ways in which the study had been especially interesting or useful to them. They talked about ways of working and skills of study that they would like to have more experience with in their next project.

A Book About Our Work and Play

Beginning with an interest in flowers, one of the fourth-grade classes engaged in a number of outdoor activities and wrote a book about them. These fourth-grade boys and girls frequently brought flowers to school. The teacher liked flowers. She helped the children paint containers and arrange the bouquets they brought. She taught them to pick the flowers so that the stems would be long enough to arrange well. She helped them learn to make their bouquets look interesting with variety and emphasis through shape, length of stems, and contrast

that it has, for example, certain minerals that help produce healthier and stronger bones and teeth and contains vitamins that add to one's vitality and resistance to disease. Their teacher furthermore warned that they should not jump to conclusions about gaining weight when they had only one boy in their experiment.

Meanwhile the class made a list of all those who were drinking milk regularly. They thought they might make a discovery by comparing the gain in weight in this group with the gain made by those who were not drinking milk. There was some gain by all with a greater increase for those who drank milk, but neither teacher nor children felt that it was enough to help them answer the question. Through their reading and discussion, the children concluded that mere gain in weight is not important unless a person's weight is decidedly above or below normal.

The teacher aroused the children's curiosity about the many ways in which milk could be served. They made inquiries at home and listed the following foods which most of them had eaten: Custard, ice cream, junket, cottage cheese, pudding, and a dressing for vegetables.

The boys and girls kept records of the discoveries they made and of the facts learned in their investigations. They posted news notes about the study on the bulletin board.

The greatest value of the study was in giving reality to the children's experiences. It helped them see that experimentation and observation were as valuable as "book learning." It aroused their curiosity. It provided experiences in working and planning with others in committees, and in keeping records of facts from investigations. The ways of working were important, and the emphasis on nutrition was helpful to the children.

The boys and girls of the next year's fifth grade in this room showed progress in ability to think of things to do and to plan and work together. The teacher reports that the finest project this class developed was on pioneers, a topic suggested by the course of study; another was on inventors. The boys and girls learned to form committees and work co-operatively to gather information, make reports, and do art and construction work.

This class next turned its attention to a study of the industries in Cambridge, in which one committee visited a plastics factory, one the glass factory, another a furniture store, and another a pottery plant. The committees interviewed managers and other officials, who answered their questions and gave them bulletins, pictures, and sample products to show to the children who were working on other committees and to use for exhibits and collections.

Teacher and pupils developed such a spirit of cooperativeness that everyone, slow or quick, aggressive or shy, reserved or friendly, had opportunity to do something in which he could excel, such as bringing

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Teacher and pupils developed such a spirit of cooperativeness that everyone, slow or quick, aggressive or shy, reserved or friendly, had opportunity to do something in which he could excel, such as bringing

a newspaper clipping, reporting on a radio program, showing pictures, or making maps.

Along with the more socialized activities in the different projects, the boys and girls improved their skill in studying. The class carried on a letter-writing project with the fifth grade of a Columbus, Ohio, school, which was an incentive for some to improve their skill in writing letters and spelling. In one class period the pupils learned how to select books and look up facts to answer questions. They practiced using tables of contents, indexes, and charts and other illustrations. Often it happened that a child who was skimming books for facts related to his own questions would discover information related to the questions of another committee and call attention to them. The boys and girls improved their ability to listen courteously and to remember and talk about things heard as well as things read in books.

Our Community—Its Services and Resources

Over the 2-year trial period, a fifth grade and their teacher gave particular attention to improving their understanding and use of the home community and its services. Three types of community service were the children's activities and study: the telephone, reported from county farm, and conservation of soil. Below is a summary account of the way the teacher and children planned and worked together.

A fifth-grade Christmas greeting.

The Telephone

The children's experiences with telephone services grew out of their discussion of ways in which people, particularly the children themselves, exchange ideas with one another. They mentioned language. They emphasized the importance of conversing interestingly with people around them. Then they discussed their writing, including letters, reports, and stories. Newspapers, radio, television, and telephone received attention. Ways of communicating in early times were listed and compared with the present, including carrier pigeons, drums, smoke signals, lights, flags, sign language, and whistles. Of modern ways of exchanging ideas, the children decided that they used the telephone most. They thought it would be interesting to study the telephone and learn how it came to be important.

First thing, the children agreed, they should find out how many had telephones in their homes. They wrote the family names on the blackboard and counted the Yes's and No's. Fifteen of the children's homes had telephones and 14 homes did not have telephones. The people who had no phones in their homes often used phones in their neighbors' homes or in pay stations.

The group thought two things should be done first. Those who had never used a telephone should be given opportunity to do so. This was provided by each taking a turn at answering the telephone in the principal's office. Those who had telephones in their homes and the others, too, needed to study their use of the phone to see if there were ways they could improve. The teacher's sister agreed to call the office frequently at stated times so that all the children who wished would have a real experience. The principal, when out of the office, now and then called back to give the children experience. After a turn at the phone, each child reported to the class any experience he had that might be of interest to the other pupils in answering rings and in making calls.

The group discussed telephone courtesy and made a set of rules for themselves. Ordinarily guidance in the use of the telephone would be provided for children younger than these fifth-graders, but for this, their first experience in developing a project together, the pupils were encouraged in making the activity broad and varied.

The community aspect of the children's experiences came next. Several copies of the Cambridge telephone directory were brought to school and the sections of the book were studied—the classified section in the yellow pages, the main directory on white paper with names listed alphabetically, and the emergency numbers in the front of the book that every user should know without looking up. One girl explained the kind of long-distance calls provided; another explained the classes of service, such as private line, party line, business phone, and long-distance service. Telephone rules for users were mentioned.

Two of the pupils volunteered to visit the telephone company's offices with their parents who went to pay bills. In class the next day they reported what they had seen and answered questions.

One of the boys has become fascinated [redacted] the mechanism of the telephone. He has made a hobby of the [redacted]n of telephone parts. He brought to school and explained to t[redacted]a number of the telephone parts he had collected. One day the principal took him to the telephone office where he remained nearly half a day asking questions and sketching. His report in class the next day was especially interesting. The other pupils arranged to visit the telephone company's offices in three separate groups as the offices were too small to accommodate a visit from the entire class at once.

Following the visits to the offices, the class composed an invitation to the manager asking him to send a representative to the school to answer further questions. This visit was considered one of the high points of the study and the children wrote invitations asking their parents to come and hear the visitor, Robert F. Kah. As Mr. Kah answered questions, some of the ways in which a telephone helps a community were brought out. He showed a film on courtesies to be observed in business conversation. The group invited the sixth, seventh, and eighth grades to look at the film.

Throughout the study were opportunities for the children to learn facts about the history of the telephone. Mr. Kah added to what the boys and girls read about the history of the telephone and made interesting statements about the wide extent of telephone service in the world today.

Four of the children dramatized a play suggested to them by their textbook in English and elaborated on by the boys and girls. In this, one pupil played the part of Rip Van Winkle visiting Cambridge today and asking about the new inventions, including the telephone as one of the most useful.

The telephone project afforded the children new experiences in reading. The teacher took care to guide individuals and small groups in locating books she knew they would like and be able to read. As they studied about the invention, development, and improvement of the telephone, the children made comparisons with the invention of other conveniences for better living, and with other events of importance. A boy reported that before Alexander Graham Bell's first crude telephone was patented in 1876, the United States had purchased the Louisiana Territory and the Territory of Alaska, and the war between the North and the South had occurred; that since the invention of the telephone, history has seen extension of its lines across the ocean, and the airplane, radio, and television have entered American life.

The invitations and letters that had to be written in the project

made it necessary for the children to consult English books for punctuation and dictionaries for spelling. The costs of local, long-distance, and party-line telephone service were compared. Attending a party given by the principal and her friend, answering the telephone in the principal's office, and other social activities helped the children gain in poise in meeting other people and in reacting with courtesy in various social situations.

The County Farm

Another community study began in connection with the children's regular social studies work on the North Central States, one of the curriculum areas outlined by the course of study. When the children learned that farming was an important industry in the North Central States, the discussion turned to farms that they knew about. Some of the children had relatives living on farms. In order to get first-hand information as a basis for setting up the problems that they wanted to do further reading and study about, the pupils and their teacher decided to take a trip to the county farm.

Teacher and pupils together discussed ways of reaching the farm, since it was too far to walk. When told about the children's need for transportation, some of the parents offered to take the boys and girls to the farm in cars.

The question of a specialist was raised because the teacher wanted the children to have the opportunity to talk with a specialist and ask him questions. She thought she would not be able to answer all the questions that might arise on the visit. The boys and girls said that Dow Inskeep, superintendent of the farm would answer many of their questions. They also decided to ask Mr. Eikenberry, the agricultural specialist who was also helping the children improve the school terrace, to go with them.

The trip was a new experience not only for the children but also for Mr. Eikenberry. The children were curious about the kinds of crops they saw along the way. They wanted to know the names of weeds they found and what harm they did. The girls especially eyed the cows with curiosity and hesitation. The cows just stared. Mr. Eikenberry usually knew the answers to the children's questions about the cows and other animals as well as about the crops, and when he did not know an answer he challenged the pupils all to help him find the answer and to report to one another at school. The entire group of parents, teachers, and pupils returned to school feeling that the trip had been worth while and that all had a broader idea of what happens on a farm and what farm activities can contribute to the welfare of a community.

After the trip and during the reading, study, and discussion that followed, the children were prepared to look with interest and under-

standing at the films entitled *Grassland Farming* and *Ohio River Valley* and compare the facts with observations they themselves had made at the county farm. The murals the children made on dairying, corn production, and on farming in general had freshness and interest the children would have missed had they confined their study to books and not had the trip as a basis for comparison.

Among the general aspects of the children's study were the crops grown in the North Central States; other industries of these States, such as lumbering and production of iron and steel products; potteries and glass and plastics factories, such as those of Cambridge; and manufacture of furniture and farm machinery. Among the cities of the region in the children's study were Minneapolis, a center for the production of flour; Detroit, the automobile center; Chicago, the Nation's meatpacking center; Cleveland, known for its steel production; Cincinnati, a soap-producing center; Indianapolis, which produces much farm machinery; Akron, known for its rubber; and historic Marietta, the oldest permanent settlement in Ohio. In this phase of the study, the children had valuable experience in planning together and in getting personally acquainted with the adults who helped.

Conservation

The children's trip to the farm provided a setting for learning about another problem of Ohio and other North Central States. That was the problem of conserving the soil. The children had learned that the

Clearing brush from future picnic grounds.

North Central States contain the chief corn belt of the United States. Mr. Eikenberry and Mr. Inskeep had helped them learn how important to the production of a good corn crop is the condition of the soil. On their trip to the county farm, the children's attention had been called to effects of erosion and also to the practices that were being followed on the farm to prevent the soil from washing away. Among the questions that the children asked and among problems that they discussed on their trip to the county farm was how Mr. Inskeep protected the soil. This question seemed to the teacher to warrant an organized study of conservation.

The visit to the crops and the emphasis that Mr. Inskeep placed on the value of good soil and the importance of protecting and building the soil aroused the children's interest. With Mr. Eikenberry's help, pictures were gathered on methods of conserving the soil, including strip farming, contour plowing, crop rotation, tree and grass planting, and fertilizing.

Had the children been living in the country they might have taken more trips to farms to find answers to their questions about conserving the soil. Some of them might have planted a crop in garden or field and tried ways of protecting the soil themselves. Since most of their experimenting had been done in the classroom, however, the boys and girls tried such experiments as the following:

1. Demonstrating runoff and absorbency by pouring water on the rough and smooth side of a blotter to see where the water runs off more quickly.
2. Building mounds of soil on the work table, one with furrows running around and the other with furrows up and down and sprinkling the same amount of water on both to see which hill had the most runoff and washing.
3. Comparing amount of growth of oats sown in rich soil with oats sown in claylike subsoil.

The class had collected many pamphlets, pictures, and books on conservation of the soil. These the children organized. Pages of pertinent information were noted or marked in some way. New materials brought each day were placed with similar materials on the worktable.

The children felt that some of the ideas that individuals and small groups were getting should be put on posters or murals in order that the entire class might profit from them. Reports were written, corrected, and placed in folders or booklets. There were letters to write to publishers for more free materials.

Committees either volunteered for some of the work or were appointed by the class to be responsible for the kinds of work listed on the blackboard. These committees did their work at any hour of the day that they had time. Some of the children arranged to come to school early and do work for which they had taken responsibility.

This study of the conservation of soil had a direct relation to the

terrace project described on pages 13–17, because conserving or protecting the soil on the terrace was one of the children's most serious problems. Along with the county farm and the telephone studies, it provided a number of closely related experiences with community services. The three projects also included general activities of value to the school such as:

1. Experiences in planning with the teacher and other pupils.
2. Experiences in using a community service, such as the telephone.
3. Opportunities to talk with helpful resource people, such as Mr. Eikenberry, Mr. Inskeep, and Mr. Byers.
4. Opportunities for the parents to have a part in their school by using their cars to take the children to the farm and by helping them make better observations and find answers to their questions.
5. Many real experiences in reading informational bulletins to find answers to specific questions.
6. Practice in using encyclopedia to look up specific information.
7. Practice in selecting and organizing pertinent facts to answer questions and in presenting these to the rest of the class effectively.

Water and How We Get It in Cambridge

In working toward more real and lifelike curriculum experiences in the sixth grade, one teacher made a list of problems in which her pupils were interested in their regular social studies program. Boys and girls and teacher discussed the possibilities of each problem from the standpoint of what they already knew about it and its interest for them. They finally agreed that they would be most interested first in studying how Cambridge gets its water.

Parts of two class periods were used to make general plans for the study. The children discussed the uses of water for households, for livestock, for keeping the city clean, for crops, and for industries. Questions came from discussions and planning sessions throughout the project. The children and the teacher planned ahead for some of the things they would do in order to answer their questions. Among the activities suggested were interviews with Walter Turner who had charge of the supply of city water, with the chemists who took regular tests of the water in order to insure a safe supply of water for drinking, and with Harry Greene, the engineer of the water plant of Cambridge.

For interviews with the specialists and officials in the children's list, the boys and girls appointed committees. The class as a whole then

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We visit the station where water is pumped from river to reservoir one-fourth mile away.

stated some of the questions that they thought important for their committees to ask the people interviewed, and one of the pupils wrote these on the blackboard. After each interview, the committee reported to the rest of the class. They also wrote a report for their record of the project.

Interesting excursions that the whole class took included trips to the water plant, to Wills Creek, a small stream used by part of the people who did not have access to the main city water system, to the pumping station, and to the filtering plant. From their trip to the water plant, the children learned how the water was transferred from the reservoir to the water plant in a large pipe about a mile long. They secured a diagram showing the beginning of the stream that supplied the reservoir with water. They saw the city chemists set up cultures to show the degree of purity of the water. They saw the means used in the laboratory to test ways of purifying the water and of filtering it.

The class also visited different places around town where the water was stored in tanks. They borrowed the high-school "rayoscope" and observed slides to see the various forms of bacteria in "raw water." The boys and girls kept records and diaries of these activities. Some of them made sketches to illustrate the reports given to the rest of the class.

For some of the work on the study, the children formed committees. There were two or three committees, for example, to organise the clippings and pictures that boys and girls contributed to the study. All of the children contributed. The two or three who were unable to discover appropriate clippings did original art work or reported unique observations or experiences on the trips. On their trip to the reservoir, the children took cameras and made snapshots of some of the views and of the location of the reservoir and the source of its water.

Much reading was done by the entire class to get facts to help answer the questions that arose. Some of the children improved their ability to write letters of inquiry and requests for material for the study. Most of the class learned how to make a bibliography of materials. Most improved their ability to take notes on one another's reports of information needed to answer questions. Many improved their skill in using the index and table of contents of books. Some had their first experiences in using the public library. A number of boys and girls gained needed experience in raising money to meet expenses of trips and in selling and in counting change.

All pupils had experience using the large figures required in computing the capacity and size of the reservoir, the number of gallons of water pumped into the reservoir, per minute, per hour, per day,

and per week. They discovered the usefulness of such new terms as diameter, circumference, cylinder, and rectangle.

The teacher and children together evaluated the project by listing the new experiences it brought them, not only for gathering information but for working with one another in committees, in small teams, and in large class meetings. Some noted ways in which they might improve their skill in study and in group work. All had greater understanding of the value of water and of the importance of any community's keeping its supply of water safe and sufficient for household and industrial use. All increased their ability to locate published information and to select and organize the facts useful in answering their questions. They made note of experiences to be improved in their next project.

The project gave the children an opportunity to find answers to questions in which they were interested. As the teacher said, the emphasis of the project was on the development of understanding and improvement of skills required for study.

Teachers, Pupils, and Parents Take School Enumeration

In the last year of the project, the teachers planned and prepared the school enumeration for Ward 2 of Cambridge, which comprises two-thirds of the Garfield School District. This activity proved to be a useful project for unifying teachers and pupils across grades and a means of raising money for films and lyceum programs. Teachers, older pupils from different grades, and some of the parents joined in the activity, which consisted of calling on people in their homes and registering more than 700 children between the ages of 4 and 17. The enterprise was so satisfying that teachers, pupils, and parents entered into a second year's planning for a similar undertaking with even greater enthusiasm than they had the first year. Teachers' calls in the homes won the appreciation and cooperation of parents and so aroused the interest of teachers that they studied permanent school records for changes in family conditions and kept accurate records for their own reports. Pupils, too, were pleased that the community considered their help in the project worth-while and began to look about for other ways of improving their service to school and community.

Reviewing Results

The curriculum activities just described represent broad areas of experience or problems, such as health, nutrition, sanitation, conservation, and communication in schools that try to help pupils have better living. As indicated by their reports, teachers selected these areas of experience for various reasons. In some instances, they realized that the pupils needed them. In other instances, the teachers them-

selves had an interest in certain projects. In still other instances, pupils suggested activities in such fields. Some of the teachers said that certain activities "gave the boys and girls opportunities to learn important subject matter."

Many other broad areas of interest or experience leading to a better balanced curriculum might have been selected, including safety, buying and managing money, reading and getting acquainted with books, gardening, helping to improve community service, making friends, understanding one's own development, learning to understand people from other countries, keeping the schoolhouse clean and attractive, and learning to work with clay, paints, reeds, and other art or craft materials.[5] Related to the broad areas of experience were the activities the teacher and children planned and developed as a part of each day's living together, such as selecting the plants for the school terrace. In trying to do such things better, the boys and girls learned to read, write, and spell for immediate purposes, rather than merely for some vague future use, to express themselves more clearly and effectively as they worked with committees, to get along with classmates and schoolmates, to keep themselves well and safe, and to be happier and more useful individuals. That there was simplicity and spontaneity in the activities is shown in the children's planning and in some cases in the informal titles given their projects. "Doing Something About Our School Terrace" is an illustration.

Along with what they learned from books, the boys and girls learned many things not in books. Through having a part in planning, they had new opportunities to use initiative and to take responsibility. They learned to do things for their school and community and so had experience in active citizenship. They began to feel that they were valued members of the school. They increased their ability to get along with others. Some had opportunities to work with older or with younger children as well as with boys and girls their own age.

Did the teachers feel that through these initial steps toward a more functional curriculum the school and the boys and girls as individuals were making progress? Among results that could be observed were the use of more community resources in learning, more curriculum activities that gave children opportunities to take part in community service, and greater spontaneity in pupil planning and responsibility for school experiences. In general, the children were getting more experiences in real living, both in the school and in the homes and community, and were apparently better adjusted socially and emotionally. On standard tests in the 3 R's and other school subjects given at the end of each year, the boys and girls made higher achievement scores through the new curricular experiences than the pupils did who

[5] See also: Strutemeyer, Florence B., and others. *Developing a Curriculum for Modern Living*. New York, Bureau of Publications, Columbia University, 1947. 559 p.

worked in the formal regime that preceded the survey referred to in the beginning of this report.

Some of the teachers especially emphasized that boys and girls who once seemed slow or uninterested in school were different during the projects. They made contributions that interested their classmates. They performed their tasks with greater alacrity and won the respect of their classmates. It is possible that the children were helped through the project because of the freedom it gave them to choose work they liked and to change to new tasks when old ones became tiresome. The variety of resources for many of the studies could have been a factor in the children's increased interest.

More participation in community services is needed by most of the children in Garfield School. One project carried on with another room or for the Parent-Teacher Association does not give the children all the experience they need to overcome their almost innate shyness and their dependence on others to do their thinking for them. Some of the teachers realize this and are gaining skill in evaluating the possibilities of excursions before planning them and ability in helping the children to use the ideas they get in such activity.

The results of such an experiment would seem worth while IF the effective practices are continued and extended gradually until ways of living really change. On the other hand, if the teachers and the children drop back into the ways of a school program made for the early 1900s, the experiment has probably gained little for the children now or in the future. The activities carried out experimentally have been only part of the children's work for 2 years. A portion of the time was used for a program completely teacher-planned. In any revised program, teachers will probably attempt to guide the children into more activities which, like those described, will have meaning and usefulness to them, and to understand each child and meet his needs as an individual.

Gradually meaningless practices in the school program are being dropped or changed. Among these are such practices as "doing" long lists of arithmetic problems which the children can already work well, merely because the work keeps them busy, or of writing hundreds of times spelling words that they already know or never use, or of reciting parrot-like ideas memorized without real experience and understanding. Most of the newer projects and activities bring interest even into monotonous tasks.

Some of the teachers already are becoming independent of workbooks, using textbooks and many other materials effectively, and beginning to do creative and original thinking and to encourage their pupils to do so. One trip or two trips each year merely to gather more isolated facts to be memorized for a study of some community problem, while good as a beginning, do not provide enough experiences for the children to improve their understanding of the community or their

skill in using its services effectively or their ability to work together as a cooperative group. Teachers and pupils realize this and are beginning to arrange for trips in close relation to community activities and services.

Our Bus Ride

On the Tuesday before Thanksgiving our teacher surprised us. She told us to get our coats and hats on and follow her. Then she told us we were going on a bus ride. The bus came along and we got on. We went to the end of the line at Holiday's garage. We saw many interesting things. . . .

We saw the Children's Home . . . it looks like a school building. On the playground there were slides, swings, and a sand pile.

We saw the post office on Wheeling Avenue. There we can buy stamps and mail letters and packages. . . . On Wheeling Avenue we saw many kinds of stores, shops, and buildings.

Whenever the bus was crowded we got up and gave our seats to other people. The bus driver was polite and courteous. He brought us back to school safe and sound.

—From "*Work and Play.*"

Progress Ahead

As someone has said, progress begins where we are and moves forward, not in leaps, but gradually. Each year, as the Garfield teachers and the principal reviewed and reported informal descriptions and lists of activities that their pupils had completed, they noted both achievements and inadequacies in the children's experiences. To reduce the inadequacies, they considered curriculum improvements that seemed desirable for the year ahead.

Regular Teachers' Meetings

Following the second year of the experiment, the possibility of a series of weekly or biweekly study or planning meetings was discussed in a group conference. Teachers pointed out that their knowledge of the problems of individual children could be increased by meetings in which the teachers pooled their understanding of individuals. Someone said that a child's problems often have beginnings in earlier grades. In regular meetings, teachers can pass on what they know about individual children to teachers in the next grade.

Cooperative study of individual pupils and of the experiences afforded them through the curriculum is needed to improve teaching. Regular meetings sometimes insure opportunities for teachers to talk over situations they dislike or disagree on and to compare opinions, and are usually conducive to a wholesome and democratic spirit and feeling of emotional security in staff relationships. A planned program of child study with teachers taking turns as leaders is also needed in order that the group may work for professional and personal development.

An obstacle to meetings was lack of time. No time was set aside in the regular school day for such meetings. Should there be? Is a regular day or hour for meetings desirable? Teachers who have home or community responsibility said they were unable to use after-school time for professional meetings. How long should teachers expect their day to be?

Group Planning and Committee Work

Teachers' reports of the children's curriculum activities revealed the need for more pupil participation in planning. Some of the teachers expect to achieve more pupil planning in the year ahead. Only a few of the children now know how to make suggestions. Many seldom think of things to do, possibly because they are too accustomed to having teachers tell them what to do.

Children so far are not accustomed to looking around at home and in the community for usable ideas or things they might learn to do better in school, such as helping to buy groceries, planting flowers or shrubs or gardens, making collections of stamps, minerals, or pictures, taking hikes, or observing birds. Besides, teachers in the past seldom asked the children for ideas, but planned work for them and made assignments without the children's help. As the children develop ability to cooperate in planning, as well as in doing, the curriculum can be expected to have more effect on living.

Cooperation and Unity

In some grades, it will be noted that two classrooms worked together in short activities of interest to each. In two or three instances, first and second grades and third and fourth grades cooperated. Different classes, for example, invited other classes to share experiences that were part of major activities and problems, as Hallowe'en activities and parades, Easter programs, and Christmas parties. In the terrace project, while the second grade 'took leadership' or major responsibility for the undertaking, they asked the pupils of all grades to have a part.

To achieve greater cooperation and unity throughout the school, teachers will do well to try more curriculum projects that cut across grades and permit committees of pupils and teachers to be made up from different classrooms. Such work will require more staff meetings for planning. Records will need to be kept of children's progress and of activities completed. A greater variety of appropriate materials will need to be provided. Although modern curriculum ways mean thought and study on the part of teachers, the challenge and stimulation that come from seeing children improve themselves and become happier, better adjusted, and more interested in the work are compensation for the teacher who enjoys doing a creative job.

Freedom for Children To Move About

When the experiment began, little physical freedom was provided for the children. With formal classrooms, stationary desks, and few if

any separate work tables, it was not easy to give children freedom to use initiative, to encourage them to think for themselves, to help them learn to work together in committees, even to help them learn to read and write efficiently enough for modern democratic living.

Some of the teachers made improvements in their classrooms. They brought tables into the rooms and encouraged the pupils to gather around these to work or study together, hold committee meetings, and gradually develop a few of the ways of democracy. It is to be hoped that next year arrangements can be made for the desks to be unscrewed and that teachers and children will have developed ability to use freedom and to take the responsibility that goes with freedom.

Community Activities and Service

In the first year's program, resource people from the community provided information and guidance as the children took excursions and in other ways learned about their community. In a few instances, pupils did more than learn *about* the community. In one instance, for example, a class helped remind parents and others about the election in which the people voted on bonds for a new schoolhouse. Older children (junior high school pupils taught by the elementary school principal and housed in the same grounds as the elementary pupils) served as babysitters while parents left home to vote.

For the year ahead, it is hoped that more opportunities will be provided for boys and girls to take part in community service or activities, not merely walk around and look. The class that becomes responsible for the school paper, for example, may solicit advertisements from business and industries. The boys and girls who decide to paint the halls of the school building or Sunday school classroom, or a room in their home a fresh new color have incentive to learn the relation between the color of the walls of a room and the amount of light reflected, to study the suitability of different kinds of paint, and to learn how to mix and apply the paint selected. These are ways in which service and activity provide learning that mere excursions do not.

To avoid sending large groups of pupils on excursions too frequently with no other purpose than to "look for something to report," teachers may help the children to decide what kind of information they need and then organize committees to go downtown, see things, interview the people who can help, and report to the class. When business people and government officials see that children are learning and that they want help from the community, assistance is generously offered.

Services of Specialists and Resource People

More classroom teachers are hoping to develop ability to learn from specialists how to improve the children's work from day to day, instead of sitting by to observe while the specialist teaches her "subject," usually only one or two periods a week. To make the best use of the services of an art teacher, for example, a classroom teacher analyzes the work which she and the children expect to do each day and discovers thereby the kind of help they all will need in art. How, for example, can the children make their mural on conserving wild flowers more attractive through blending colors, filling space, balancing effects, or establishing the mood for the work? In which of the other experiences the children have will this type of help be useful—in gardening, making aprons or blouses, or in stenciling and hanging curtains?

Boys and girls who traveled to Schoenbrunn, for example, wanted to make replicas of some of the historical landmarks they had seen. Their teacher asked the art teacher to help them, and she showed them how to make objects with crushed paper and how to plan their posters and murals to present their ideas most effectively. The art teacher helped the boys and girls who visited the glass factory to arrange and label their displays attractively.

This bulletin has described how parents contributed to school excursions, to the children's improvement of the terrace, and to taking the school enumeration. As the school activities take on more of the aspects of good living, parents are likely to be invited to serve as resource persons and to take part with the teachers or with the children in more and more of the school planning.

Activities That Make Sense to Children

One of the questions asked by teachers new to the child-experience kind of school program sometimes is: How can I "cover the curriculum" if I take time for the children to take trips, interview people, study their community, or paint the walls of the classroom? Of course the answer may be that the curriculum is not "covered." It is often held to consist of experiences and is developed, rather than covered, by children and teachers together. The experiences described afford opportunities for the children to learn to use arithmetic, reading, writing, and all the other school subjects in practical ways.

In the experiences described, several steps have been made beyond memorization of isolated facts which the survey (page 2) held to be inadequate to achieve the goals sought. But a still more functional program is needed, one that grows out of the children's real needs and life problems.

Can arithmetic and reading and geography and history be made *meaningful and useful* to each child? What progress can be made next year and the year after and the year after that toward more functional learning? Perhaps the answer to such questions for all subjects lies in what the Commission on the English Curriculum of the National Council of Teachers of English has said about the teaching of English:

> The problem is not so much one of looking at English and determining the order of topics to be studied as it is of looking at the learner and the society of which he is a part and aiding his growth both in and through the elements of reading, listening, and expression necessary to effective living today.[6]

Our Garden

On Wednesday, February 15, our room started our seeds project. Each pupil took 10 packages of seeds to buy or sell. There were both vegetables and flowers. The vegetables were radishes, beets, carrots, tomatoes, lettuce, cabbage, cucumbers, and peppers. The flowers were morning glories, marigolds, nasturtiums, sweet peas, petunias, calendulas, and bachelor's buttons.

Some of us will plant some of the seeds ourselves. We will have vegetables and flowers. We will draw the plan of our garden on two pieces of paper before we plant the seeds. The flowers will be beautiful and working in the garden will give us fresh air and exercise. The vegetables will have the vitamins that we learned about in our chart. The flowers will be nice for our homes and to take to sick people.

Our plants will need care. We will see that they get enough water and we will keep the weeds pulled.

—*From "Work and Play."*

[6] From the preface to the report of the Commission on the English Curriculum of the National Council of Teachers of English, *The English Language Arts*. New York, Appleton Century-Crofts, Inc., 1952. p. v.

Resource Services

Elementary schools of Cambridge have no instructional supervisors. The principal of Garfield School teaches half time, while administrative tasks require the remainder of her time. She has no secretary.

Specialists and Resource Persons

An art specialist serves all elementary schools. Interested local citizens are resource people on invitation. In the program just described consultants contribute somewhat as follows: The city's specialist in art education serves as a consultant for some teachers and teaches classes in art for other teachers, depending somewhat on how ready and able the teachers are to use the services of a consultant in teaching art in a program of closely related learning experiences. As a group, the teachers are learning to use the art specialist as an adviser in all their work, and not as a teacher of an isolated special subject.

Specialists from organizations outside the schools are invited to take part in school activities when their special skill or knowledge is needed. Among such specialists recently invited to Garfield School are:

George Eikenberry of the United States Soil Conservation Service in Cambridge, who helped with the terrace project.

D. C. Stark, Ohio State Highway Patrol, who helped with one of the excursions.

Esther Van Brockern, the Bible teacher, who worked with the teachers in 1949.

Harley Davis, the school custodian, who talked with the children in the community helpers' project and helped with the terrace project.

Robert C. Ranney, State Division Landscape Architect, who gave advice about plants for the terrace and helped with the work.

Arthur B. Orme, of the Cambridge Glass Factory, who gave the boys and girls materials and answered their questions about the manufacture of different kinds of glass and the use of fertilizers for plants.

Walter Moore, a member of the Cambridge Police Department, who answered some of the third-grade children's questions when a study was made of community helpers.

Gene Hartman, the school milkman, who answered third-grade pupils' questions.

Dow Inskeep, Manager of the County Farm, who showed fifth-grade boys and girls over the farm and answered their questions about farming and conservation of the soil.

Robert F. Kah, representative of the telephone company, who answered questions about the telephone service and showed a film on telephone courtesy.

Louis Swartz, the minister who was invited to talk with third-grade children about the church and how it helps people.

Harry Byers, a student teacher from Muskingum College, who assisted with a fifth-grade study of soil conservation.

Randall Ross, the dairy farmer visited by the first grade, who answered the children's questions about the cows and the work of the farm.

Sources of Study for Teachers

Services to help teachers improve curriculum included the following:

Suggestions from the principal.—At the request of the teachers, the principal answered questions, made suggestions, and provided professional books and materials.

School visiting.—Principal and teachers visited the Samuel B. Long School in session in Dearborn, Mich., discussed the work observed with the staff of the host school, and evaluated the experience from the standpoint of its value for Garfield School.

Extension courses.—Some of the teachers attended evening classes given by neighboring colleges. Certain of these courses have been helpful in Garfield's improvement of curriculum the past 2 years.

Workshop.—Robert E. Lucas, Supervisor of Elementary Education, Ohio State Education Department, served as consultant and director of a general workshop for teachers on community resources after the close of the project and was received with enthusiasm and cooperation.

Individual and group conferences.—The writer of this bulletin, visited the school three times and spent about a week conferring with teachers, pupils, and principal each time.

EDITH AND ILA VISIT THE KINDERGARTEN

The kindergarten children are seated in a half circle. There are about 20 children in the class. The children all look at books until time to call the roll. After that they sing their songs and their teacher reads to them. It is then time for their recess. Their free period follows. They play with crayons, books, teeter totter, dolls. Lunch time finds them at their seats where they are served graham crackers and milk... Edith and Ila enjoyed their visit very much. They want to be teachers when they grow up and their visit and story are their part in our project "What I would like to be when I grow up."

—From "Work and Play."

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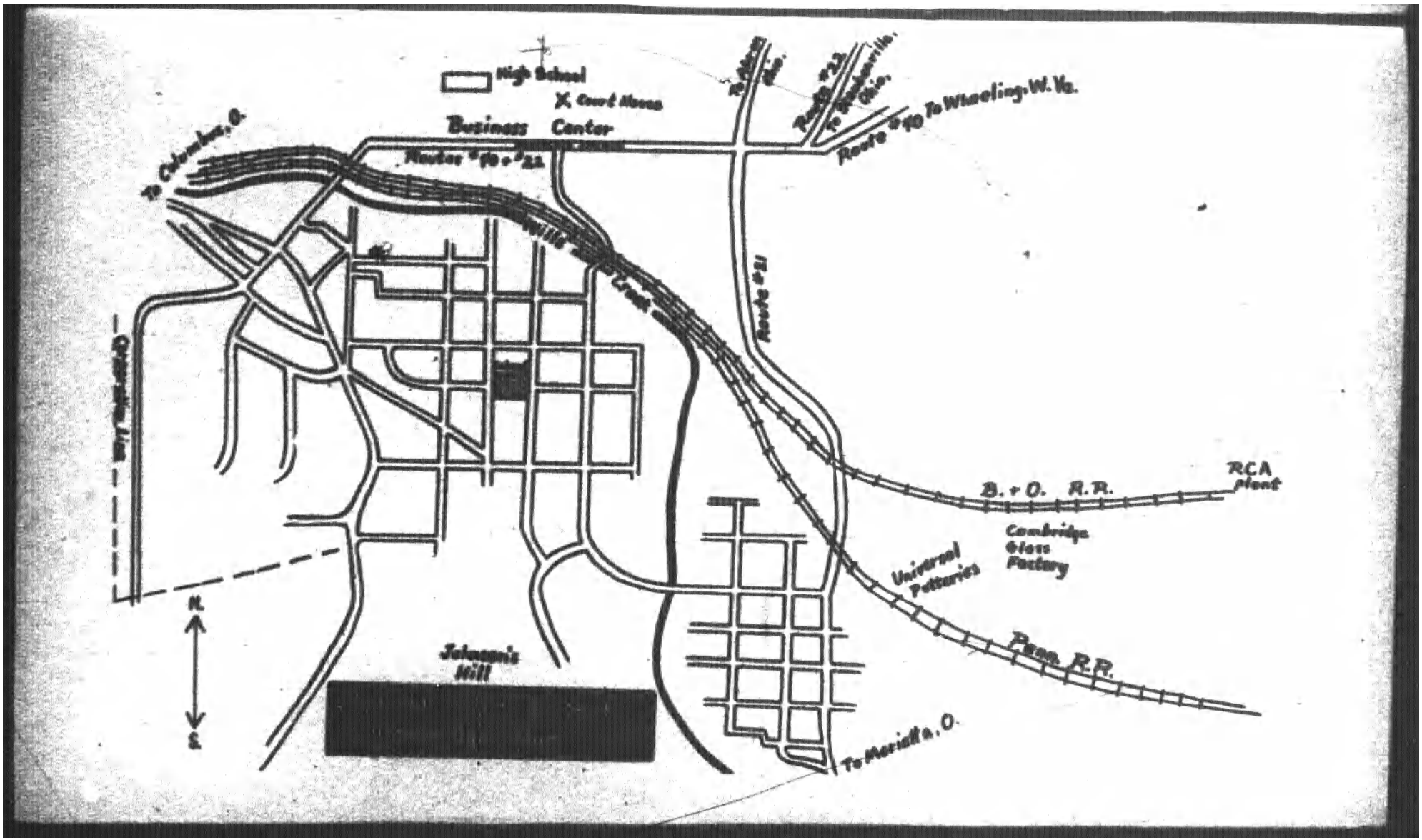
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Routes #40 & #22
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Route #21
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RCA plant
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Universal Potteries
Penn. R.R.
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