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# SCHOOLS IN THE BITUMINOUS COAL REGIONS OF THE APPALACHIAN MOUNTAINS

By

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# LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF EDUCATION,
*Washington, January 28, 1920.*

SIR: The education of the hundreds of thousands of children in mining villages and towns in various sections of the United States involves so many problems common to these communities, but different in character or in degree, or in both, from the education of the children of other communities, that I have felt it a part of my duty as Commissioner of Education to bring these problems to the attention of education officers in the several States in which there are mining regions and to the attention of students of education generally. For this purpose I have held or caused to be held in the last few years several important conferences, in which school officers, teachers of schools in mining centers, mine owners and operators, and mine workers have come together to discuss these problems. That we might have fuller and more accurate information of the needs of these mining villages and towns and of the present condition of their schools, I have asked Mr. W. S. Deffenbaugh, of this bureau, to make a careful first-hand study of some of them as he might have opportunity. The manuscript which I am transmitting herewith for publication as a bulletin of the Bureau of Education is the result of the study which he has until now been able to make of education in some of the mining villages of the bituminous coal region of the Appalachian Mountains. While this study has been neither so comprehensive nor so thorough as Mr. Deffenbaugh and I wished it might have been, this report will serve a valuable purpose as a basis for further studies by this bureau and other agencies.

Respectfully submitted.

P. P. CLAXTON,
*Commissioner.*

The SECRETARY OF THE INTERIOR.

# SCHOOLS IN THE BITUMINOUS COAL REGIONS OF THE APPALACHIAN MOUNTAINS.

This brief study is based upon several weeks' observation of schools and mining towns in what are considered the best districts in the bituminous coal region of Pennsylvania, West Virginia, and Alabama, and upon some years' acquaintance with mining town schools. No attempt is made to show poor conditions or to dwell upon them but rather to point out in a general way the type of school that should be maintained in every mining community.

*General background.*—Scattered from Pittsburgh, Pa., south to Birmingham, Ala., are hundreds of mining towns, or camps, varying in population from about 100 to 2,000 or 2,500. When a town, though located in the midst of a mining section, exceeds the latter number, it usually has other than mining town characteristics.

The purely mining town is made up of miners, pit and fire bosses, and other employees and their families. Nearly every race and nationality of south central Europe is represented in the popoulation of the typical mining town of western Pennsylvania and northern West Virginia. A greater proportion of natives is found in the southern part of the Appalachian region. Some years ago many of the foreign miners were direct from Ireland. Now there are comparatively few Irish miners. Most of the Irish about the mines are there in the capacity of bosses and superintendents. Following the Irish miners came the Italians, who have also to a great extent abandoned coal digging for positions about the mines or have taken up other occupations. Just preceding the World War the greatest number of miners came from Austria-Hungary. Whether these will continue to be diggers of coal remains to be seen. Experience has shown that as soon as the Irish and Italians become educated in the least degree most of them leave the mines as diggers. The same may be true of the Slavs. Thus far the digging of coal has been the work of the uneducated, often of the illiterate, many miners being illiterate not only in English but in their own language.

Most of the foreign miners, however, learn to speak English about the mines, but the wife of the miner has little incentive to learn English, since she has small need of conversing with the English-

speaking men and women in the community. The children of the foreign miner learn English around the streets and in the schools, but if the mother speaks her native language at home the conversation of the family is in a foreign tongue.

The buildings in a mining camp, or town, are the company store, the buildings necessary for the operation of the mines, as engine house and power plant, and the houses in which the miners, bosses, and superintendent live. The dwelling houses of the miners are small, usually of three or four rooms each, without bath or cellar. The lots are about 30 by 60 feet. In some districts they are larger, while in others they are much smaller.

While sanitary conditions in many mining communities are far from ideal, a few mining companies are doing much to care for the health of the mining population. In a few places the domestic water supply has been improved and the source of contamination removed or taken care of; deep wells have been drilled and properly protected by pipe casing and concrete pump base to prevent surface water from getting into the wells. Filtration plants have been installed and pure water furnished through a system of mains connected with a sanitary reservoir. The drinking water is analyzed monthly or oftener.

The sanitary disposal of garbage and ashes in the mining town is now recognized as an important factor in the improvement of health conditions. In a few towns there are garbage receptacles, the contents of which are removed weekly or semiweekly as occasion demands.

In some places sanitary outhouses with concrete vaults have been built to replace the old insanitary outhouses of former years. Open sewers have at times been constructed to remove the kitchen waste. Wash and change houses have been installed in a very few mining towns, near the mine entrance, so that the miner may take a shower bath and dress in his clean street clothes.

In several communities medical supervision has been made to include medical examination of new employees, medical examination of the children, sanitary inspection of the towns, instruction in first aid, instruction in personal hygiene and other phases of health inspection.

Most mining towns have what is known as a company doctor or a contract doctor, who is paid over the company pay roll a fixed sum. This is usually $1 a month for each married man and 50 cents a month for each single man employed. The amount is, however, deducted from the employees' pay. By this plan an employee may call the physician for himself or any member of his family at any time. Thus the miner may on the slightest symptoms of illness have proper medical treatment. If the company physician discovers a

contagious disease, he immediately reports the fact to the sanitary department through the superintendent of the mine.

In addition to the company physician, there are in some places company nurses, to give aid in the homes in cases of sickness and to instruct the miner's wife regarding the care of children. A few of the companies have established club houses for their employees and equipped playgrounds for the children.

The foregoing brief description of living conditions, however, does not apply to mining camps where the employer has not yet realized that a mining community should be made as attractive and as healthful as possible. There are still many camps in the Appalachian region that beggar description.

## THE SCHOOLS AS THEY ARE.

*Nationality of children.*—In the usual mining town school in the bituminous coal region a large percentage of the children are of foreign parentage. For illustration, in one coal mining township in western Pennsylvania there are, out of an enrollment of 2,373, only 786, or 33.1 per cent, American white children. Many of these live on the farms in the township. In a purely mining town in the same region where 682 pupils are enrolled only 125, or 18.3 per cent, are American white. It is not uncommon to find from 10 to 20 or more different races and nationalities in the same school. In the two school districts just referred to there are about 20 different races and nationalities in each, distributed as follows:

TABLE 1.—*Nationality of the children.*

| Nationalities. | Township including some few farm children. | Purely mining town. | Nationalities. | Township including some few farm children. | Purely mining town. |
|---|---|---|---|---|---|
| American | 786 | 125 | Serbian | 5 | ..... |
| Slav | 631 | 185 | Hebrew | 5 | ..... |
| Italian | 294 | 82 | Belgian and 5 others | 12 | ..... |
| Russian | 192 | 73 | English | ..... | 34 |
| Polish | 146 | 96 | Irish | ..... | 22 |
| Austrian | 94 | 4 | Scotch | ..... | 11 |
| Negro | 87 | 3 | Lithuanian | ..... | 14 |
| Hungarian | 85 | 6 | Four others | ..... | 8 |
| German | 20 | 11 | | | |
| Bohemian | 16 | 8 | Total | 2,373 | 682 |

*School attendance.*—School attendance is very good in some of the mining communities, but usually only where the compulsory attendance law is rigorously enforced. Data regarding attendance were collected in one township enrolling 2,680 pupils in the elementary schools. The compulsory attendance law in that township is enforced almost to the letter. Of the pupils, 83.4 per cent attend more than

three-fourths the term of 160 days and 51.2 per cent attended from 150 to 160 days, or about every day. The following table shows the distribution of school attendance in that township for the term of 1917–18:

TABLE 2.—*School attendance.*

| Days attended. | Number of pupils. | |
|---|---|---|
| 0– 10 | 0 | 1.9 per cent attended less than one-fourth the term. |
| 11– 20 | 13 | |
| 21– 30 | 13 | |
| 31– 40 | 26 | |
| 41– 50 | 20 | 3.9 per cent attended more than one-fourth but less than one-half the term. |
| 51– 60 | 20 | |
| 61– 70 | 33 | |
| 71– 80 | 33 | |
| 81– 90 | 67 | 10.5 per cent attended more than half but less than three-fourths the term. |
| 91–100 | 53 | |
| 101–110 | 53 | |
| 111–120 | 113 | |
| 121–130 | 120 | 83.4 per cent attended more than three-fourths the term. |
| 131–140 | 301 | |
| 141–150 | 442 | |
| 151–160 | 1,373 | |
| Total | 2,680 | |

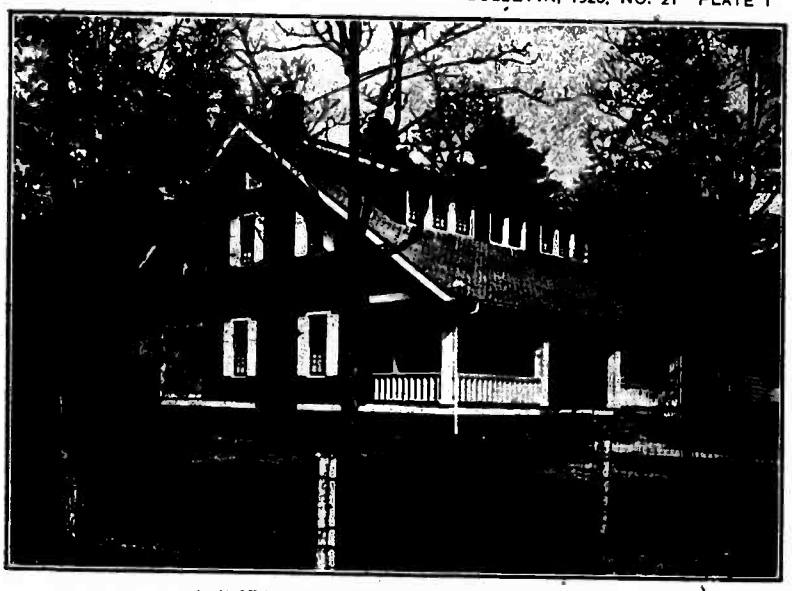
That the compulsory attendance law holds most of the children in school until they are 14 years of age seems evident from the following table based upon the enrollment of 5,634 children in two mining townships and in three independent districts in western Pennsylvania, representing in all about 20 mining towns:

TABLE 3.—*Continuance of children in school.*

| Enrollment. | Age. | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| Enrolled | 639 | 652 | 661 | 679 | 654 | 638 | 641 | 561 | 353 | 140 | 12 |
| Enrollment at each age for every 100 enrolled 6 years of age | 100 | 102 | 103 | 106 | 102 | 100 | 100 | 88 | 55 | 23 | 2 |

The enrollment in each grade is practically the same from 6 to 13 years. At 13 the enrollment drops off slightly and at 14 there is a decided decrease. Of course some few of those 14 years of age have completed the eighth grade.

The following table shows the number of pupils enrolled in each grade for every 100 enrolled in the first grade; also the percentage enrolled in each grade in mining town schools. The percentage enrolled in each grade in 14 States is also given. It may be noted that for every 100 enrolled in the first grade there are 13 in the eighth grade. If the number of beginners in the first grade were known exactly, it would be possible to present more nearly accurate data. Approximately, the number of beginners in the first grade equals



A. INSTRUCTOR'S HOME, EDGEWATER, ALA.

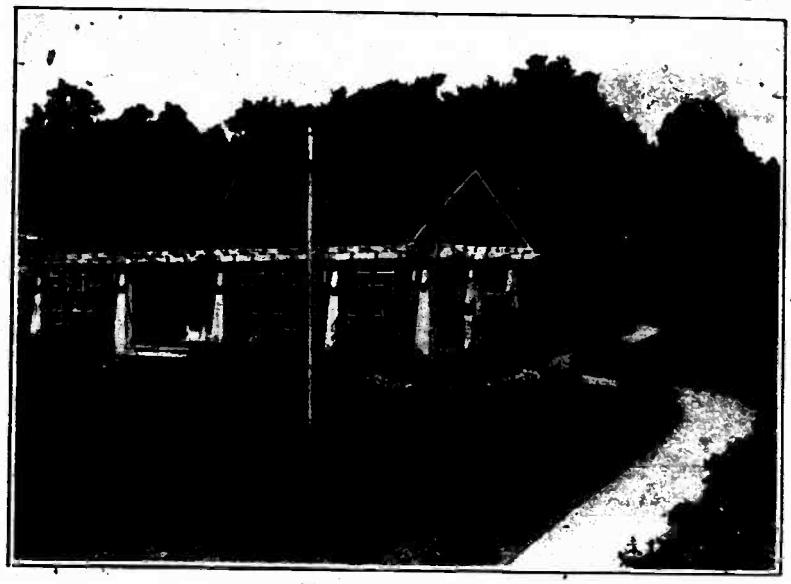
B. BEDROOM, INSTRUCTOR'S HOME, EDGEWATER, ALA.

A. TOOTHBRUSH DRILL, EDGEWATER, ALA.

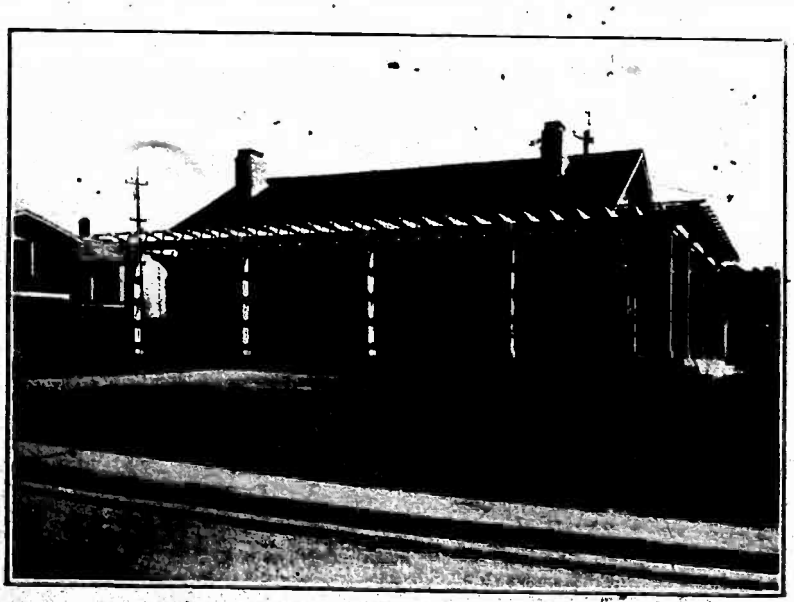
B. DOMESTIC SCIENCE CLASS FOR ADULTS, EDGEWATER, ALA.

A. DOMESTIC SCIENCE CLASS, BAYVIEW, ALA.

B. DOMESTIC SCIENCE HOUSE, BAYVIEW, ALA.



*A.* KINDERGARTEN, EDGEWATER, ALA.



*B.* KINDERGARTEN FOR COLORED CHILDREN, EDGEWATER, ALA.

the enrollment in the second grade. If this be the case, there are 19 in the eighth grade for every 100 beginners in the first. In other words, about 19 per cent of those entering school are in the eighth grade.

TABLE 4.—*Pupils enrolled in each grade for every 100 enrolled in first grade—Percentage enrolled in each grade.*

| Enrollment | Grade. | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Number enrolled | 1,399 | 910 | 907 | 782 | 641 | 508 | 311 | 176 |
| Number enrolled for every 100 in first grade | 100 | 65 | 65 | 56 | 46 | 36 | 22 | 13 |
| Per cent of total enrollment in each grade of elementary schools | 24.8 | 16.2 | 16.1 | 13.8 | 11.4 | 9.0 | 5.6 | 3.1 |
| Per cent of total enrollment in each grade in 14 States | 27.74 | 14.76 | 13.90 | 13.10 | 10.95 | 8.14 | 6.93 | 3.88 |

*Retardation.*—The following table shows that the amount of retardation is excessive, especially when the fact that two years are allowed for normal age is taken into account:

TABLE 5.—*Per cent of pupils young, normal, and over age for their respective grades.*

| Grade. | Young. | Normal. | Over age. |
|---|---|---|---|
| 1 | 0.4 | 75.0 | 25.0 |
| 2 | 2.6 | 54.3 | 43.1 |
| 3 | 2.0 | 44.4 | 53.6 |
| 4 | 2.7 | 38.3 | 59.0 |
| 5 | 3.1 | 40.4 | 56.5 |
| 6 | 2.1 | 40.5 | 57.4 |
| 7 | 4.5 | 51.4 | 44.1 |
| 8 | 9.1 | 58.5 | 32.4 |
| Total | 2.3 | 52.5 | 45.0 |

TABLE 6.—*Age grade distribution.*

| Grade. | Age in years. | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | Total. |
| 1 | 5 | 613 | 431 | 194 | 92 | 42 | 13 | 4 | 3 | | | | | 1,399 |
| 2 | | 24 | 203 | 291 | 197 | 119 | 43 | 25 | 8 | | | | | 910 |
| 3 | | | 15 | 153 | 248 | 208 | 121 | 97 | 45 | 12 | 3 | | | 907 |
| 4 | | | | 21 | 121 | 178 | 208 | 146 | 68 | 24 | 10 | 1 | | 782 |
| 5 | | | | | 20 | 96 | 183 | 167 | 123 | 55 | 17 | | | 641 |
| 6 | | | | | 1 | 10 | 81 | 125 | 133 | 92 | 45 | 1 | | 508 |
| 7 | | | | | | 1 | 15 | 62 | 90 | 109 | 25 | 2 | | 311 |
| 8 | | | | | | | 1 | 15 | 82 | 81 | 49 | 7 | 1 | 176 |
| Total | 5 | 639 | 652 | 664 | 679 | 654 | 668 | 641 | 551 | 253 | 149 | 11 | 1 | 5,634 |

By referring to Table 5 it will be seen that the greatest amount of retardation is in grades 3, 4, 5, and 6. The per cent of retarda-

tion decreases after the 6th grade because those who are over age and who have completed the sixth grade as required by State law drop out of school. A child more than 2 years too old for its grade as a rule remains in school only under compulsion.

*High-school enrollment.*—Since the amount of retardation in the elementary schools is large, the enrollment in high schools is small in comparison, being only 370 for the 5,634 pupils enrolled in the elementary grades. For every 100 children enrolled in the first grade of the elementary schools there are 10 in the first year high school, 6 in the second, 7 in the third, and 5 in the fourth. After the pupils have entered high school there is comparatively little elimination after the first year.

*Education of teachers.*—Of 180 elementary grade teachers in a mining district in western Pennsylvania, only a few have gone beyond a four-year high-school course, as may be seen in Table 7. Data regarding the education of 300 elementary teachers in Jefferson County, Ala., which contains many mining town schools, are also included.

Of the 180 teachers, only 15 per cent have attended school more than four years beyond the eighth grade. Of the 300 teachers, 36 per cent have attended school more than four years beyond the eighth grade. The better showing made by the teachers in Jefferson County, Ala., may be due to the fact that the Tennessee Coal & Iron Co. supplements the regular school funds of the county by many thousands of dollars each year, thus making it possible to employ teachers who have had a normal-school course in addition to a four-year high-school course and to the fact that teachers in some of the steel-manufacturing towns just outside of Birmingham and in suburban residential towns are included.

TABLE 7.—*Number of teachers.*

| Years of education beyond the 8th grade. | 180 teachers in western Pennsylvania. | | 300 teachers in Alabama. | |
|---|---|---|---|---|
| | Number of teachers. | Per cent. | Number of teachers. | Per cent. |
| 0 year | 34 | 18.9 | 2 | 0.7 |
| 1 year | 15 | 8.3 | 15 | 5.0 |
| 2 years | 13 | 7.2 | 23 | 7.3 |
| 3 years | 32 | 17.8 | 90 | 30.0 |
| 4 years | 59 | 32.8 | 63 | 21.0 |
| 5 years | 15 | 8.3 | 93 | 31.0 |
| 6 years | 12 | 6.7 | 2 | .7 |
| 7 years | | | 13 | 4.3 |
| Total | 180 | 100.0 | 300 | 100.0 |

*Experience of teachers.*—About one-fourth of the 180 teachers are teaching their first term, and about half are teaching for the first time in their present position, as may be seen in the following table:

TABLE 8.—*Experience of teachers.*

| Term. | Experience anywhere. | Experience in present position. | Term. | Experience anywhere. | Experience in present position. |
|---|---|---|---|---|---|
| | *Per cent.* | *Per cent.* | | *Per cent.* | *Per cent.* |
| First | 26.7 | 55.0 | Sixth | 5.0 | 3.8 |
| Second | 16.7 | 19.5 | Seventh | 3.9 | 2.8 |
| Third | 10.0 | 8.9 | Eighth | 3.9 | 0.0 |
| Fourth | 7.2 | 2.8 | Ninth | 2.8 | 0.0 |
| Fifth | 6.1 | 3.8 | Tenth or more | 17.7 | 3.4 |

*Course of study in elementary schools.*—The elementary course of study is eight years and comprises the subjects taught in most small town and rural schools, there being but little or no attention given to manual training, cooking, sewing, music, drawing, and physical training. The chief emphasis is placed upon arithmetic, spelling, reading, penmanship, and English grammar. In nearly all districts arithmetic for a long time was a fetish, but it has been made less so in a few by the elimination of some useless topics. Spelling and reading have a large share of attention. Composition, oral and written, is not accorded a prominent place in any of the elementary grades, while formal grammer receives much attention in the intermediate and grammar grades. Many of the useless technicalities are dwelt upon, and material belonging to the high school is introduced. For example, several sixth-grade classes were observed struggling with the intricacies of the infinitive.

In brief, the usual mining town course of study is bookish and not based in any way upon mining town life. Arithmetic, for instance, does not draw any problems from the mines but from the bank, stock exchange, and commission merchant. What few language lessons there are are based upon books and not upon what is at hand in the mining camp.

In many mining communities home gardening by the children is encouraged, but thus far it has been largely a matter of planting, weeding, and harvesting. Few, if any, correlations with other subjects have been worked out.

Play as a part of the school work receives no attention except in a few towns. Recess periods are provided, but there is no supervision of the play. Neither has physical training been given any prominent place except calisthenic exercises for a few minutes and these in only a few schools.

As already mentioned, music instruction, drawing, manual training, cooking, and sewing are rarely found in the elementary grades. The kindergarten is seldom found in mining towns. It is doubtful whether there are any in the mining towns of the Appalachian region, outside of Jefferson County, Ala., and Ellsworth, Pa.

*High-school course.*—The usual mining town high-school course of study is made up of algebra, plane geometry, Latin, a modern foreign language, ancient, medieval, modern, and United States history, physics, chemistry, and English. Out of this list there are a few electives or substitutions, as a modern foreign language for Latin. In some high schools there are commercial courses which prepare pupils for stenographic and other positions in the offices and stores in the mining camps.

Manual-training and home-making courses have not been generally introduced. Some schools are, however, now giving more attention to these subjects. Vocational home economics and vocational courses in mining are almost unknown in mining communities. In a few schools, as at Ellsworth and McClellandtown, Pa., a beginning in vocational work has been made.

*School buildings and grounds.*—School buildings in the mining region under discussion are of all kinds from the one-room box type to the modern well-lighted, well-ventilated, sanitary building. School buildings in some mining communities can not be surpassed in planning, equipment, and in sanitary conditions. There are, however, too few of these. More often the opposite type is found, but as new buildings are erected they are of the more modern type. The school grounds are almost without exception small and not well adapted for games. Some few are equipped with play apparatus.

*School term.*—The school term varies from 5 months, 100 days, in some sections to 9 months, 180 days, in other sections of the Appalachian region. The usual term is 7 or 8 months.

*How children employ their time.*—In mining communities there is little for boys under 14 or 15 years of age to do when they are not in school or helping with the few chores about home; so they collect in gangs, loaf about the mines and in box cars, and often commit petty infractions of the law. They are free from authority or try to outwit the authorities. In either case they are at an early age learning to disrespect and to disregard law and order. The girls have more chores about home than the boys. They have to help wash the dishes, scrub, wash, and take care of the babies; so they are not so likely to loaf around the stores, in the alleys, and on the vacant lots, but even with more chores at home they do not have all their time profitably occupied.

The foregoing statement is based upon replies made by several thousand school children to the question, What do you do during vacation? Upon replies of parents to the question, What do your children do when not in school? And upon replies of teachers and others to the question, What do the children in this community do during the summer vacation and at other times when school is not in session?

## THE SCHOOLS AS THEY SHOULD BE.

In the preceding pages a brief outline is presented showing conditions in mining communities in respect to school attendance, preparation of teachers, the course of study, and other things. In the following pages the aim is to point out in what respects schools in mining towns may be improved. It is only a platitude to say that schools in the mining regions should be as good as those anywhere else, that the children of miners are entitled to as good school facilities, as good buildings, as well prepared teachers as are the children living in the most cultured section of the most cultured city in the United States. Any lower ideal would be un-American.

What is outlined in the following paragraphs are ideals which are attainable. In some respects they have been attained, but no one mining community has attained them all. If the good things in education in all mining communities could be brought together into one school system, it would approach an ideal.

*The school and the leisure time of children.*—One of the great needs in mining towns, and in other places for that matter, is some means of keeping the children busy at play, study and work. If a child attends school 5 hours a day for 160 days, he is in school only 800 hours a year, while there are 5,110 waking hours for children who sleep 10 hours a day. Children who attend regularly are in school a little less than one-third of the waking hours of a school term of 160 days, and for 205 days they are not in school at all.

In order to help provide profitable employment for these children, the school term should be lengthened to 48 weeks a year. This would allow four weeks' vacation. In addition there would be the usual holidays. If the term were 48 weeks of 25 or even 30 hours a week, a child attending 30 hours a week would be in school only 1,440 hours a year or about one-fourth of his waking hours. No all-year schools have been organized in the bituminous mining regions; so no conclusions as to their value as shown by experience can be given. But judging from the success of such schools in a city where there is nothing for the children to do during out-of-school hours, they would be just as valuable in a mining town.

In Newark, N. J., where all-year schools have been in operation for five years in the crowded section of the city it has been discovered that they solve the problem of street loafing to a large extent. Several policemen report that since the organization of the all-year schools in that city they have had but little trouble during the summer months with gangs of boys and that there are fewer street accidents.

What the mothers in Newark say is without doubt equally applicable to mining towns. A few replies are quoted:

1. "A shame to let children run our streets during the summer. We people can't send our children away; our homes are not what they should be. They are not comfortable like the schoolhouse."

2. "The children if left to run the streets would be fighting and learning bad things. Some parents take up the quarrels of their children, and then there is a general row among the parents in the flat. There is less of this since our children attend school."

3. "I lived in another city where there was no school in the summer and I found the children got into more trouble than they do in this section of Newark where the children are in school all day."

4. "If there were no summer schools we would not know where our children are. They would leave home early in the morning and run all over the city. Now we know that they are safe in the schoolhouse and in no danger of being run over by automobiles or street cars."

The children themselves favor the all-year term, for they realize that they can complete more school work by the time they are 14 years of age. The following are typical replies of school children in Newark to the question, "Why do you attend school all year when you are not compelled to do so?"

1. "It (the summer term) keeps you from hanging around the streets and saves you from trouble."

2. "I am kept from bad company."

3. "If I hadn't come to school in the summer I would be in 5 C, and I am in 7 A."

4. "One day I heard my mother say to a friend of ours, when she said that children ought not to go to school during the summer, 'Why not? At home they sit around asking me every now and then what they should do. In school they would have plenty of work to do.'"

5. "In my home it is not very comfortable during the summer, as the sun shines in, making it very warm, and in the streets it is warmer; so I go to school rather than get heated up."

6. "When the all-year school started I decided to try out the plan by going to school in the summer. After being in school for about two weeks I found it more comfortable in school than out of doors. During the hot days of summer I attended to my work just as if it was a cool day."

The health of the children who attend school the entire year is not injured. The school physicians and nurses at Newark report that there is less sickness among children and teachers during the summer term. This is only what would be expected, because of the fact that there is better ventilation of school buildings.

If the school term were 48 weeks, the work now done in 8 years could be done in 6. Children who now complete the grades at 14

years of age could attend high school one or two years by their fourteenth birthday, when they are permitted to leave school. Others who now complete only six grades would have completed by the time they are 14 the entire elementary course of eight grades. If the school year were 48 weeks there would be no necessity for spending a month or two reviewing the work of the previous year, as is now the custom with a three or four months' vacation, during which time the children get out of the habit of studying and forget much that they have learned.

A term of 48 weeks can be conveniently divided into four terms of 12 weeks each. Then, if it is not possible for a pupil to attend four terms he may attend three and have as much schooling as he would in a term of 36 weeks, which is more than is now offered in most mining communities. But a term of 48 weeks can not be recommended if the school is organized from a purely academic standpoint. Under this type of school a moderately short day and a moderately short year are no doubt best, for such school is an interruption in a child's life, and not a part of it. Only when the school adapts itself to the life of the child, so that his life is not interrupted, should the day and the year be lengthened. This may be brought about by providing for work, study, and play.

*The course of study—work, study, and play.*—The mining town course of study should be based as far as possible upon a mining town life, not that the course is to be so narrow that it fits pupils only for mining, but it should use the material at hand for teaching arithmetic, language, and other subjects. To know thoroughly what is at home is to know the world. As already mentioned, the course of study as it is in most mining town schools directs the attention of the children away from the life of their own community, and, besides, it does not start with the familiar and known. The unknown is jumped into without any basis in the known for its comprehension.

Among the subjects not now generally included should be home-making courses for girls, courses related to mining for boys, gardening, music, drawing, and physical training through play and more formal exercises.

There should be courses in home making, because most of the girls marry and have homes of their own. As it is, few receive any instruction in cooking, sewing, and the general management of a home; hence there is a waste not only in money but in physical efficiency. The work should begin at the fourth or fifth grade and continue through the elementary schools and should be offered for four years in the high school.

Constructive work should begin in the lower grades. In the intermediate and grammar grades manual training based upon the simpler manual operations in the community should be required. In the high school a vocational course based upon the occupations about the mines should be offered. There are, however, many limitations to this, because boys under 16 years of age are not permitted to do certain work in connection with mining. There are, however, many occupations above ground which they can learn. At least they can learn some of the principles of mine operation. For an analysis of the mining occupation and for suggestions for vocational work in mining, see Bulletin No. 38, Trade and Industrial Series No. 8, Federal Board for Vocational Education.

A subject much needed is vocal music. From 20 to 30 minutes a day should be devoted to it, not simply to technique but to singing. Music is a common language that all can understand, since it deals with the broad universal human moods. A group of pupils made up of Americans, Slavs, Italians, and others exhibit under the appeal of music a closeness of sympathy and a unity of feeling not exhibited in any other school exercise. The music period may be the only time in the day when complete social solidarity is attained. Nothing will do more to Americanize the foreign element, also the American, in the mining town schools.

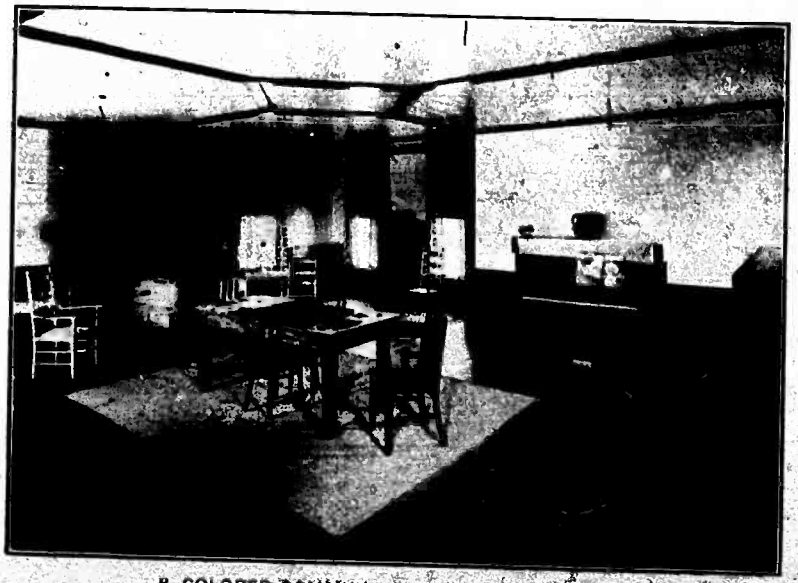
One reason that music receives but little attention in mining communities is that there is no supervisor to help the teachers. Provision for supervision could be made by several communities employing the same supervisors. Where the township or the county is the unit of administration and supervision, it is an easy matter to provide supervisors to go from school to school. This plan is in operation in several counties and is well worth a trial. Another way, where there are several teachers, is to so departmentalize the school that music may be taught by one teacher. Every teacher should, however, be able to teach music.

Another neglected subject is drawing and art. If art instruction were introduced into the mining town schools, it would be only a few years until the whole community would take on a different appearance, because the pupils who had received instruction in the subject would demand more beautiful surroundings and better decorated homes. At least two 30-minute periods a week should be given to the subject in each of the elementary grades.

Supervision could be provided in the same way as suggested for music.

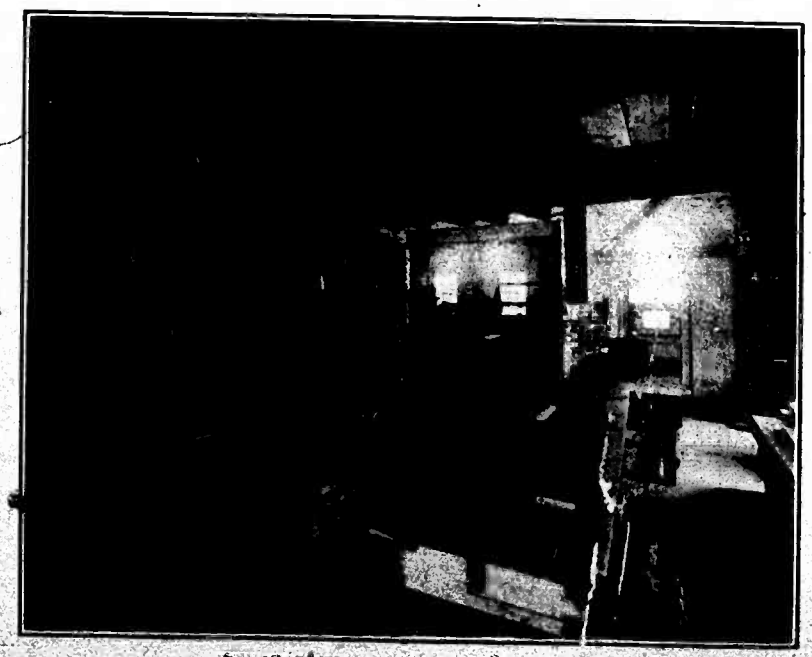
Home gardening under the direction of the school should be made an integral part of the elementary course of study, since there is need of suitable educational, purposeful, productive occupation for

A. COLORED INSTRUCTORS' RECREATION CLASS, MUSCODA, ALA.



B. COLORED COMMUNITY HOUSE, MUSCODA, ALA.

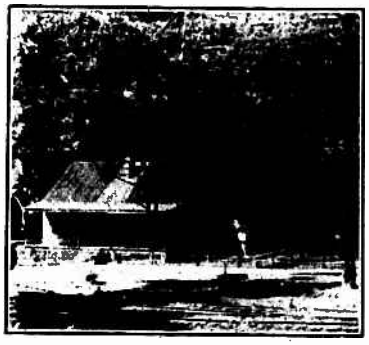
A. LIVING ROOM, TEACHER'S HOME, ELLSWORTH, PA.



B. VOCATIONAL SHOP, ELLSWORTH, PA.

A. BOY'S HOME GARDEN, BLOCTON, ALA.

B. HOUSEHOLD ARTS DEPARTMENT, ELLSWORTH, PA.



*A*. TEACHER'S COTTAGE, KAYFORD, W. VA.

*B*. TEACHER'S HOME, LANGELOTH, PA.

*C*. VISITING NURSE'S HOME, LANGELOTH, PA.

the thousands of school children in mining communities. To delve in the soil is a primitive instinct. When a teacher takes advantage of this instinct and sees that children delve intelligently, he is educating them physically, mentally, and morally.

Garden work is one of the most direct and practical ways of teaching about nature. It furnishes not only the material but a motive for nature study. Much of the material for number work, English composition, art, domestic science, and other subjects can be drawn from the home garden.

Home gardening is an asset to any mining community considered only in its economic aspect, for every mining village can practically become independent in its supply of vegetables by proper gardening, drying, canning, and storing of its garden products, thus adding to the wealth of the community. For illustration, in one mining town 245 school children raised, on a conservative estimate, $10,000 worth of vegetables last summer.

The practical operation of home gardening so as to relate it to the school requires that a supervisor be employed for 12 months in the year. This supervisor could teach nature study or elementary science during school hours and could supervise the gardening after school hours, on Saturday, and during the summer vacation. The additional expense would be small compared to the returns. If $500 were added to the salary of the teacher, and he should direct the work of 150 children, the return to the community would be at least $5,000, or a profit of $4,500 on an investment of $500. Any business man would hasten to invest $500 if he thought that he could make a profit of 900 per cent. Many would even gamble with $500 for such profits.

But all work and study make Jack a dull boy. A child can not live his life fully and completely without playing. The play instinct is too strongly rooted in the race for him not to play. The schools should, therefore, not ignore one of the deepest-seated instincts, but should utilize it in all physical, mental, and moral training.

When children play they are not only making good use of their leisure time now but they are forming the play habit which will enable them to make good use of their leisure time later in life. As Prof. James says:

> If a boy grows up alone at the age of games and sports, and learns neither to play ball, nor row, nor sail, nor ride, nor skate, nor fish, nor shout, probably he will be sedentary to the end of his days; and, though the best of opportunities be afforded him for learning these later, it is a hundred to one that he will pass them by and shrink back from the effort of taking the necessary first steps, the prospect of which at an earlier day would have filled him with delight.

The great need in many mining towns is a place for the children to play under proper supervision. They will run, they will throw, they will congregate, but where are they going to run, to throw, and to congregate? Many of the boys brought before the courts are there for the crime of playing, but for a perverted form of play. Not the boys but the town is to blame for not providing means whereby the instinct for running, throwing, climbing, and congregating may be turned to good account in group games and in games that require running, throwing, dodging, and a score of other activities in which children delight.

There should be not only free play but such systematic physical training—not necessarily military—as will give correct carriage and physical endurance, since the child in the mining town has but small opportunity for physical development aside from the games that he plays. He does no work that tends to build a strong body as does the farm boy, and even the farm boy, it has been found, needs certain kinds of exercises in addition to those he has in his round of farm duties.

The school should provide suitable playgrounds well equipped with play apparatus and large enough for baseball, football, basket ball, and other games. A supervisor should be employed for the entire year to supervise the playgrounds not only during the school term but during vacation. When school is in session he should have charge of all the physical work. In the smaller towns he might have time to teach a few classes.

*Kindergartens.*—Many children in mining towns live in an environment savored with Old World ideals. They hear foreign languages spoken at home and on the street. They think in these languages until they start to school or even until after they have been in school for several years. It is impossible to measure the influence of this upon their character and habits of thought. Since the words of no two languages have exactly the same meaning, the boy or girl brought up in a home where a foreign language is spoken does not think in quite the same way as the child brought up in a home where English is spoken.

If this be true, children who hear nothing but a foreign tongue and who speak it all or part of the time in early childhood should at the earliest possible moment be taught English. When they enter school they are taught to pronounce words. Frequently children in the primary grades read fluently without understanding what they read, just as one of us may learn to read Italian, Spanish, and other foreign languages; that is, to pronounce words, after a few weeks' instruction in the sound of letters, but this is not learning the lan-

guage. We must know for what idea each word stands. The foreign child soon learns to pronounce words in his reader, and after associating with English-speaking children and by gaining some experience in the world he may in a year or two after he enters school or by the time he is 7 or 8 years of age have a fair knowledge of what he reads in a primary book. The number of failures in reading and other subjects in the first grade in mining communities would indicate that they are caused to a great extent by a lack of understanding of English.

But why defer the teaching of English to foreign children until they are 6 or 7 years of age? The time ideally to teach the foreign child the use of our language would be when he begins to imitate sounds, but this is impractical. However, he can be taught English at 4 or 5 years of age if he is sent to a kindergarten.

If kindergartens were established in mining towns, children would not enter the first grade almost wholly ignorant of the use of English. They would have stored up a body of concepts that would make it possible for them to understand what they read and to advance normally through the grades. As it is, they often spend two years in the first grade, largely because they do not understand the language of the schoolroom. Having failed in the first grade it is easy to form the failing habit, which many do. The final result is elimination.

A year or two in kindergarten, where there is freedom, where the children may express themselves in action and in word, would so add to their mental and language equipment that not so many would have to repeat the first grade. Instead of adding the one year of kindergarten work to the child's school life, several more would be added.

There are other reasons for kindergarten training which apply to mining town schools as well as to other schools. These reasons are so well known that they need not be repeated.

*Teachers.*—In a preceding section it was shown that few teachers in mining communities have had more than two or three years' schooling beyond the eighth grade. This is undoubtedly a weakness, since elementary teachers should have not only four years of high-school work, but in addition two years of normal-school work. Even those who have had normal-school training have not been instructed regarding mining town conditions. They have been given little or no instruction in regard to the teaching of English to foreign children, and have made no study of mining town sociology.

After many teachers have begun work in a mining community they learn nothing about the life of the community, for they

do not live in the mining towns but in some city connected by trolley. These teachers, therefore, are of little service in community work. Even many of those who do board in the mining towns take no interest in its life. The mining town teacher should be more than a pedagogue teaching reading, writing, and arithmetic. She should learn the habits and customs of the different races and nationalities, so that she may have a starting point in her work.

*Teacher's home.*—The reason many teachers give for not rooming and boarding in the town where they teach is that there are no suitable rooming places. A teacher in a State normal school says that after getting all the information she could from the teachers in regard to living conditions in mining camps she herself went out into the field and lived exactly as the teachers in order to learn what they had to contend with. "My first experience," she writes, "was in a 'model' camp. It was during January, and for one long week, with zero weather every day, I had to bathe, dress and sleep in a badly ceiled room, with the north wind whistling through the cracks and the large openings around the loudly protesting windows, and not a spark of heat. The only warmth I had was when I pressed my numb fingers against the electric-light bulb to thaw them enough to enable me to comb my hair and fasten my clothes." Many other teachers report similar conditions. They say that they expect to endure some inconveniences, but that they should not be required to endure any more than other persons in the mining camp. The miner's home, though small, is well heated, and it is not necessary for him or any of the family to have separate rooms for reading. This is necessary for the teacher. There is no place for her to receive callers if she is fortunate enough to find a rooming and boarding place. Her social life is thus very limited.

Since there are no suitable rooming and boarding places in the average mining town, it is difficult to obtain teachers. Often only those who can not find positions elsewhere consent to teach in a mining camp, and the ones who do teach there are, with the exception of those in a few districts, looking for positions elsewhere.

The solution of the rooming and boarding problem in the mining town is the teacher's home, such as may now be found in several communities, where the teachers can be comfortable and happy, be more efficient in their regular school work, and be a part of the community.

## EXAMPLES OF MINING TOWN SCHOOLS.

In the preceding pages an attempt is made to show in what respect mining town schools may be improved. To show that what is

outlined is not impossible of accomplishment, concrete examples of what several mining communities are doing in their schools are given. These communities are Langeloth and Ellsworth, Pa., and the 21 mining towns of the Tennessee Coal, Iron & Railroad Co. However, the schools at these places are financed in part by the companies. This plan can not be commended. All public schools should be supported by public taxes. The schools at these places are given as examples of what might be if the public would supply sufficient funds for its schools.

*Langeloth, Pa.*—Langeloth is an unincorporated town of 1,500 population, situated 30 miles west of Pittsburgh. It is both a manufacturing and mining town.

The educational, social, recreational, and health work is in charge of a director who is also employment manager of the company. He is known as the educational and social director. His task is to correlate all the activities of the community—educational, recreational, health, and social.

The school is so organized that classes in the first three grades are taught in small groups averaging about 12 pupils each. There are on an average 36 pupils to each teacher, who usually has one or two groups in her room at a time, and teaches each group for a period of 20 minutes. Each child thus gets almost individual attention, and has at the same time the stimulation of other pupils in the group. Each group goes just as fast as it can. If a pupil can not maintain himself in his group, he is dropped back to the next lower group, which is only a few weeks behind. If a child has been out of school for a few weeks, he is upon his return to school placed in the group where he can maintain himself, and thus does not become a dead-weight to his class; nor does he have to repeat the work of an entire half year or year.

The children who are not in the regular classroom are taking music under a special teacher, or are on the playground or in the playroom under the supervision of a play instructor. In the grades above the third the groups are larger, but the children are given opportunity for special work in music, manual training, home economics, and play.

In the primary grades 1 hour a day is allowed for play and 20 minutes a day for music. The school hours are from 9 a. m. to 3.55 p. m., with 1 hour and 45 minutes for the noon recess. In the elementary grades above the third each child has 40 minutes for play, 20 for music, and 60 for manual training or home economics each day. The school hours are from 8.25 a. m. to 4.55 p. m., with 1 hour and 40 minutes for noon recess. The program in practice is about

as follows: After a recitation period there is a play period, or a period in music or in handwork, then back to the regular classroom. Study and play or handwork are thus alternated throughout the day.

There are two special teachers of play, a man and a woman, employed for the entire year. These instructors have charge of the recreational activities of the entire community.

There is a psychological clinic in the schools. The year this clinic was established it was under the direction of the head of the psychological clinic of the University of Pittsburgh, who spent part of each week at the Langeloth schools. At present the clinic is in charge of one of the teachers who made special preparation for this kind of work.

A dental clinic is also maintained, where every school child is examined. A physician is employed to look after the health not only of the school children but of the entire community. A school nurse or home visitor is employed. She visits the schools once each day, and spends the rest of her time in the homes, giving instruction in home hygiene, sanitation, and household economy.

An evening school provides instruction for adults. Any subject is provided if five persons ask for it. A class of women is taught home economics. The school building is open practically every night for recreational purposes. The Langeloth band has its headquarters and does its practicing in the school. Numerous parties are held in the school building; several clubs use it for dancing. Pool tables are part of the equipment.

Several houses completely furnished are provided for the teachers and the school nurse, the proportionate share of the rent per teacher amounting to five or six dollars per month.

The motion-picture house of the town is in charge of the director of schools. The usual admission price is charged, but no attempt is made to secure a profit. If a profit is made on any show, additional films or other features are provided at the next show.

*Ellsworth, Pa.*—Ellsworth, Pa., is a purely mining town located about 24 miles south of Pittsburgh. The schools are organized in almost the same way as those at Langeloth, except that there are a kindergarten, a high school, and a home economics and an industrial vocational school.

The physician employed by the company is the school physician. The company nurse is also at the service of the schools. The nurse gives a course in home economics, in sanitation, and in the care of children. There is an evening class on care of children for the adult women. About 30 are enrolled in the course. The home economics teacher has a class of women in cooking and sewing two evenings a

week. There are evening classes for men in mathematics and English and in subjects pertaining to mining.

Much attention is given to directed or supervised play for children below the seventh grade, two 35-minute periods a day being given to it. A special supervisor is employed.

The program is arranged on a departmental plan, so that instruction in music, drawing, play, and construction may be given by special teachers. The program as arranged in February, 1919, was as follows:

## NEW PROGRAM, FEBRUARY, 1919.

| | 9.00–9.15. | 9.15–10.35. | 10.35–11.15. | 11.15–12.00. | 1.15–1.55. | 1.55–2.35. | 2.35–3.15. | 3.15–4.00. |
|---|---|---|---|---|---|---|---|---|
| 1-C | *Regular Room No. 1.* Devotional, phonics, reading, numbers, spelling. | | *Special Room No. 3.* Writing, drawing, and construction. | Playground. | *Regular Room No. 1.* Phonics, reading, numbers, spelling. | | *Special Room No. 13.* Oral English, stories and memory work, music. | Playground. |
| 1-B | Playground. | *Special Room No. 13.* Writing, drawing, and construction. | *Regular Room No. 1.* Phonics, reading, numbers, spelling. | | Playground. | *Special Room No. 13.* Oral English, stories, and memory work. | *Regular Room No. 1.* Phonics, reading, numbers, spelling. | |
| 1-A | *Regular Room No. 2.* Devotional, phonics, reading, numbers, spelling. | | Playground. | *Special Room No. 13.* Writing, drawing, and construction. | *Regular Room No. 2.* Phonics, reading, spelling, numbers. | | Playground. | *Special Room No. 13.* Oral English, stories and memory work, music. |
| 2-C | *Special Room No. 13.* Writing, drawing, and construction. | Playground. | *Regular Room No. 2.* Phonics, reading, numbers, spelling. | | *Special Room No. 13.* Oral English, stories and memory work, music. | Playground. | *Regular Room No. 2.* Phonics, reading, numbers, spelling. | |
| 2-B | *Regular Room No. 3.* Devotional, phonics, reading, spelling. | | *Special Room No. 14.* Oral English, stories and memory work, music. | Playground. | *Special Room No. 13.* *Regular Room No. 3.* | | *Special Room No. 1.* Writing, drawing, and construction. | Playground. |
| 2-A | Playground. | *Special Room No. 14.* Oral English, stories and memory work, music. | *Regular Room No. 3.* Phonics, reading, spelling, numbers. | | Playground. | *Special Room No. 14.* | *Regular Room No. 3.* Phonics, reading, spelling, numbers. | |
| 3-B | *Regular Room No. 4.* Devotional, phonics, reading, spelling, arithmetic. | | Playground. | *Special Room No. 14.* Oral English, stories and memory work. | *Regular Room No. 4.* Phonics, reading, spelling, history, and health stories. | | Playground. | *Special Room No. 14.* Writing, phonics, and construction. |
| 3-A | *Special Room No. 14.* Oral English, stories and memory work, music. | Playground. | *Regular Room No. 4.* Phonics, reading, spelling, arithmetic. | | *Special Room No. 14.* Writing, drawing, and construction. | Playground. | *Regular Room No 4.* Phonics, reading, spelling, history, and health stories. | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4-B | *Regular Room No. 5.* Devotional, arithmetic, history. | | Playground. | *Special Room No. 15.* Writing, drawing, and construction. | | *Regular Room No. 1.* Phonics, reading, numbers, spelling. | | *Special Room No. 15.* Oral English, stories, and memory work, music. | | Playground. | |
| 4-A | *Special Room No. 15.* Writing, drawing, and construction. | | Playground. | *Regular Room No. 5.* Arithmetic, history. | | Playground. | *Special Room No. 15.* Oral English, stories, and memory work. | *Regular Room No. 1.* Phonics, reading, numbers, spelling. | | | |
| 5-B | *Regular Room No. 6.* Devotional, arithmetic, geography. | | | *Special Room No. 15.* Writing, drawing, and construction. | Playground. | *Regular Room No. 2.* Phonics, reading, spelling, numbers. | | Playground. | *Special Room No. 15.* Oral English, stories, and memory work, music. | | |
| 5-A | Playground. | *Special Room No. 15.* Writing, drawing, and construction. | | *Regular Room No. 6.* Arithmetic, geography. | | *Special Room No. 15.* Oral English, stories, and memory work, music. | Playground. | *Regular Room No. 2.* Phonics, reading, numbers, spelling. | | | |
| 6-B | *Special Room No. 7.* Devotional, arithmetic. | *Room No. 7.* History 4, physiology 1. | | *Room No. 19.* Music, reading, and memory. | Playground. | *Special Room No. 15.* *Regular Room No. 5.* | | *Special Room No. 14.* Writing, drawing, and construction. | Playground. | | |
| 6-A | Playground. | *Room No. 16.* Music, reading, and memory work. | | *Room No. 7.* Arithmetic. | *Room No. 7.* History 4, physiology 1. | Playground. | *Special Room No. 14.* | *Regular Room No. 5.* Phonics, reading, spelling, numbers. | | | |
| 7 | *Room No. 8.* Arithmetic. | *Room No. 8.* History, physiology. | | Study Hall. | *Room No. 16.* Music, reading, and memory work. | *Regular Room No. 4.* Phonics, reading, spelling, history, and health stories. | | Playground. | *Special Room No. 14.* Writing, phonics, and construction. | | |
| 8 | *Room No. 16.* Music, reading, and memory work. | *Study Hall.* Study period, spelling. | | *Room No. 8.* Arithmetic. | *Room No. 8.* History, physiology. | *Special Room No. 14.* Writing, drawing, and construction. | | *Regular Room No. 4.* Phonics, reading, spelling, history, and health stories. | | | |

WORK IN HOME ECONOMICS.

One of the school buildings is used for all community activities, as dances, and orchestral and band concerts. The superintendent of schools decides when the different organizations may use the buildings and has general supervision of community affairs held in the school building.

There is a teacher's home which is in charge of the teacher of home economics, who also lives there and who conducts her classes in connection with the management of the home. The work in home economics is practical, as may be noted from the following description by Mrs. Marion S. McDowell, superintendent Ellsworth-Cokeburg Schools:

Practice house is a familiar term to those engaged in home economics. There are many such houses scattered through the country, especially as part of schools training teachers for home economics. I refer you now to such an apartment used in the training of high-school girls and those of upper grades; also used for evening classes for the women of the foreign born, and the well educated American type. The practice house by its name implies an attempt to reproduce home conditions, so far as possible for students of home making. It is obvious to anyone that home conditions can not be adequately reproduced in the school. The family group has a unity and a purpose that must be lacking in any student group, yet this practice apartment is so much nearer the conditions of the family life that it far surpasses the old plan of trying to teach these subjects in the laboratory kitchen and school kitchen and school sewing room. The physical care of the house can be excellent student practice. While it is more carefully ordered and less interrupted than in an ordinary house, yet is that not a good fault to fail to present the most complicated and trying of household problems to young girls, in order not to discourage them with the whole process, but rather let them see it in a well-ordered way and practical for their station? As the girl matures and actually faces the problem, then she can work from the real situation toward her ideal. Then she is facing the problem with greater purpose in view, is more mature, and has greater experience in life. She is better able to cope with the situation if she has first had her experience in the well-ordered, well-arranged practice apartment. The idea is to make the training typical, to offer such practice as can naturally be given to advantage to the student and will prepare her effectively for the home pure and simple. This preparation for housekeeping and home making used to be given in the school laboratory. The jump from the laboratory work to the cooking in the home was a big one, one too great for many to accomplish. Parents and children look upon the typical school kitchen as a fine-looking place with all the modern cooking-school tables and up-to-date equipment, but impossible to adapt the work done there to use at home. I well remember some of my first experiences in the school kitchen.

The practice apartment, to which I referred before, we are using for high-school girls and those of the seventh and eighth grades. It is a second-floor suite of rooms in a house containing four apartments. There are five small rooms, in which we teach all of the household arts subjects. The two rooms in the front are used for a combination of living and sewing rooms. These are furnished with comfortable straight-back cushioned chairs, a few wicker rock-

ers, a cot which is used for a davenport, and several folding sewing tables. These little tables are not nearly as convenient as the regulation school sewing-room table, but they can be moved about and put away when not in use. This is exactly what would be used in the home, therefore the girls have less trouble in adapting their methods to home use. When one of these little tables is not large enough for cutting, she will find a larger table in the kitchen. This is also what she would do at home. In these two rooms, at different hours of the day, are taught sewing, dressmaking, drawing and design, housing, planning and furnishing, millinery, textiles, and home management. Next is the bedroom, furnished with a bed, chiffonier, and dresser. Across the hall from the bedroom is the bathroom, and with these two the classes are taught in home nursing, sanitation, and hygiene. Again, this is not the hospital equipment, but the ordinary home equipment. At the end of the hall the kitchen is located, the very small dining room leading out of the kitchen. The kitchen is furnished with the ordinary kitchen table, kitchen cabinet, and family size stove. It is very little if any better in furnishings than any of the girls will find in their own homes. While it has been enlarged by removing partitions, in order to accommodate larger classes, still it has suggestions of divisions, which make it appear like the small kitchen with which we started. Here the girls are taught cooking, food study, meal planning and serving, home management, production, transportation, household accounts, dietetics, and other kindred subjects. They are taught in their natural environment. The meals which are planned are served in the little dining room. The girls are taught to serve as members of the family, and as they would serve at home, not as the one out of a thousand might, by having a maid. There is in every part of this work the home atmosphere, for the teachers of this course make their home in this apartment. One year we had a 3-year-old child as a part of the home life in the apartment.

SOME OF THE PRACTICAL WORK WHICH HAS BEEN DONE BY THE GIRLS.

Turkey dinner served to the basket-ball girls. The number being too large for the dining room, they were served in the sewing room. Dinner served to the returned soldiers. Dinner served to the school directors. Refreshments prepared for a teachers' party, refreshments prepared for a high-school party, punch prepared for 400 servings for a community dance. Several of the girls offered their services in the kitchen during the season of the "flu." One dinner for over a hundred guests served on the business proposition by one small class. In all cases the girls prepared their own market orders, figured the cost of the dinners as a whole, and the cost per plate. In household decoration we have taken as practical problems the official club room and all of the rooms of the Ellsworth Inn. In their sewing classes they have furnished the apartment with the necessary linen and curtains, made much of the linen for the Cokeburg teacherage, and otherwise made numerous garments for themselves, such as undergarments and dresses. By way of evening classes for adult women we find them much more willing to come to the school apartment, and they enjoy the work there very much better than in the school laboratories. We have one cooking class and one sewing class for the foreign women, another cooking and another sewing class for the American women. The foreign women occasionally teach us how to prepare one of their dishes, and exchange work with us in that way. For our Christmas kindergarten party the foreign women will prepare the refreshments in their cooking class. Parents and girls can not say of our work that such can not be done at home (as is often said from the school kitchen and sewing room), for here they are working in the home conditions, not under laboratory conditions.

By way of conclusion, do I consider this practice apartment an experiment or a luxury? It has been an experiment for these young girls, but I now consider it a necessity, the most practical and efficient way that they can be taught, not only by precept but by way of example.

## HOUSEHOLD ARTS, VOCATIONAL SENIOR HIGH SCHOOL.

### TENTH YEAR.

*First semester.*

| | Recitation. | Practice. | Units. |
|---|---|---|---|
| English | 5 | 0 | ½ |
| Elective | 5 | 0 | ½ |
| Drawing and design | 0 | 5 (90 min. periods) | ½ |
| Dressmaking | 0 | 5 (90 min. periods) | ½ |

*Second semester.*

| | | | |
|---|---|---|---|
| English | 5 | 0 | ½ |
| Elective | 5 | 0 | ½ |
| Cookery (food study, production, transportation) | 0 | 5 (90 min. periods) | ½ |
| Home management, housekeeping, planning and serving meals, laundry and household accounts | 0 | 5 (90 min. periods) | ½ |

### ELEVENTH YEAR.

*First semester.*

| | | | |
|---|---|---|---|
| English | 5 | 0 | ½ |
| Elective | 5 | 0 | ½ |
| Household chemistry | 3 | 4 | ½ |
| Clothing design, house planning, household furnishing | 0 | 5 (90 min. periods) | ½ |

*Second semester.*

| | | | |
|---|---|---|---|
| English | 5 | 0 | ½ |
| Elective | 5 | 0 | ½ |
| Household chemistry | 3 | 4 | ½ |
| Sanitation, hygiene, home nursing | 0 | 5 (90 min. periods) | ½ |

### TWELFTH YEAR.

*First semester.*

| | | | |
|---|---|---|---|
| English | 5 | 0 | ½ |
| Elective | 5 | 0 | ½ |
| Household physics | 3 | 4 | ½ |
| Millinery, dressmaking, textiles | 0 | 5 (90 min. periods) | ½ |

*Second semester.*

| | | | |
|---|---|---|---|
| English | 5 | 0 | ½ |
| Elective | 5 | 0 | ½ |
| Household physics | 3 | 4 | ½ |
| Home management, dietetics | 0 | 5 (90 min. periods) | ½ |

One of the features is a vocational school which aims to give instruction regarding some phases of mine operation. Some part-time work is given. The course of study is as follows:

Four hours per week, woodwork.

Prevocational work is to familiarize the boys with the tools and their use. Average age, 18 years.

General industrial course entrance requirement, graduation from grades. This course is two years in length. Average age, 15 years.

Plan of course, ninth and tenth grades: One-half year woodshop, carpentry; one-half year machine shop; one-half year blacksmithing; one-half year electricity.

Forty periods per week, of 45 minutes each, as follows: Shopwork, 20 periods per week; mechanical drawing, 4; trade mathematics, 4; English, 4; trade theory, 2; history, 4; civics, 2.

Cooperative course: One-half time every second week during school terms spent working at a trade in the mine shops, the other half time (or every second week) at school studying related subjects and academic subjects. Entrance requirement, graduation of general industrial course. Average age, 17 years.

Plan of course, eleventh grade. 20 periods per week, of 45 minutes: English periods per week, 5; mathematics, 3; mechanical drawing, 3; physics (mechanical and heat), 3; mathematics (trade), 3; shop methods and trade theory, 3; total, 20; 40 per cent academic, 60 per cent related.

Plan of course, twelfth grade: English periods per week, 3; mathematics, 3; history, 2; drawing, 3; physics (electricity), 3; mathematics (related), 3; modern shop practice, 3; total, 20; 40 per cent academic, 60 per cent related.

The director of the vocational course says:

Ellsworth is a coal mining town, and the only industry is coal mining; consequently there is a great demand for the better grade of miner and mine bosses. The education of the boys is to guide them in their work along these lines. The mining man has to know something about all trades, the more the better; he has to be a good "jack of all trades" so to speak. The boys first meet with this work in the seventh and eighth grades of the grammar school, where they are introduced to the proper use of tools, devoting four hours per week to woodworking. This is their prevocational period. Upon graduation from the grades the boy may prepare for college. The majority of boys will not be entering college after leaving school, but will go to work. Our aim is to prepare him for useful occupation in life, as well as to teach him how to use to best advantage his leisure hours. Or he may enter the general industrial course of two years. He is given a good foundation in the trades he will meet at work at the mines. Upon graduation from this course he enters the employ of the coal company as an apprentice in his elected trade, and works at the same for every second week, the other week being spent at school studying subjects that will make him more proficient in his trade, also the regular high-school academic subjects which broaden his knowledge. He spends two years at this work, and upon graduation he is employed full time by the company. His education need not stop here, however; he may continue to attend evening school, taking mining subjects and work that will lead to the State examinations for mine boss, fire boss, etc. This work is carried out in the evening because State requirements for mine boss and fire boss are such that he must have spent a certain number of years in the mines. His age in the cooperative and general industrial course would not permit

him to work inside of the mines. Hence his further education on mining is taken at night. The whole plan may lead the progressive boy to be a mine official.

*Tennessee Coal, Iron & Railroad Co. schools.*—One of the most interesting educational experiments in the bituminous coal region of the Appalachian system is conducted by the Tennessee Coal, Iron & Railroad Co. in Jefferson County, Ala. There are 21 of these schools. The company furnishes buildings, employs a superintendent and special teachers, and supplements the funds of the county for running the schools. The work is done in complete cooperation with the county school board, which apportions funds to the mining town school on the same basis as to other schools. The superintendent of the schools in the mining towns is an assistant county superintendent, but is paid entirely by the company.

Special emphasis is placed on the work in physical education carried on in the schools by the regular teachers supervised by a specialist in the subject. Cooking and sewing are also stressed and are taught in the welfare cottages located near the schoolhouses, with a special director in charge. These cottages are duplicates of those built by the company for its employees and are furnished simply but in good taste with such furnishings as the workmen can afford. They serve as demonstration cottages for the community, as well as classrooms for the children. Schoolhouses are built by the company and fitted into the scheme of landscape artistry adopted. Sites are carefully selected. The architecture harmonizes with the village scheme, to which the schoolhouse and grounds often add the finishing touch. Buildings are particularly attractive and conform to the best modern ideas of school architecture, both outside and inside. The grounds are laid out with trees, shrubbery, school gardens, inclosed tennis and basket ball courts, and other equipment for recreation. The majority of the buildings visited have auditoriums, cloakrooms, supply closets, and other school conveniences. There are adjustable desks, supplementary reading material, and good working equipment in all schools.

The school housekeeping and general upkeep are worthy of special notice and may well serve as a model for other schools in and out of the county. Janitors are furnished in all cases, and the work is supervised by the teachers. Floors are clean and well kept. Blackboards and windows are washed with soap and water regularly. The walls are decorated in good colors, and the interior of the rooms presents a pleasant appearance.

The salaries furnished by the county for teachers are supplemented sufficiently by the company to enable the superintendent to secure professionally trained and experienced persons. Social work

is required by the company, and special stress is placed on personality and fitness for this additional service. The classroom work is of splendid quality. The teaching staff shows good organization, enthusiasm, loyalty, and a high degree of professional spirit. As an example of this, the May Day program of the colored schools held at Westfield, May 3, may be cited. The program consisted of a pageant, introducing setting-up drills, folk dances, and the like. Children marched and drilled with soldier-like perfection. They showed splendid training, all of which was given by the regular teachers—none of whom had had previous experience or training in this kind of work—under the direction of the supervisor of physical education. The interest of the community was shown by an attendance of probably 2,000. The program was carried out without a hitch, and order on the ground was perfect throughout the day.

This is one example of the organization and supervision which prevails throughout the system. As a whole it is an object lesson in efficiency which may well be studied by other mining communities. It shows conclusively what can be done by the expenditure of reasonable funds, business management, and professional service. Conditions are not different in any essentials from those of the surrounding territory. What can be accomplished here can be accomplished elsewhere with similar management and expenditure.

If private corporations can get value received from the money spent on schools as just described in the added efficiency and happiness of its employees, surely a community, a county, or a State will benefit at least in the same proportion from similar methods in school improvement. These schools demonstrate conclusively that what is advocated in this respect is possible of achievement if sufficient funds are provided; that education is a good business investment; that schools in mining towns can be as good as those in cities; that mining town people appreciate good schools and good buildings; and that children under trained teachers do good work and are happy in doing it.