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# ORGANIZATION AND ADMINISTRATION OF THE DUPLICATE SCHOOL IN PHILADELPHIA, PA.

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# ORGANIZATION AND ADMINISTRATION OF THE DUPLICATE SCHOOL IN PHILADELPHIA, PA.

CONTENTS.—Introduction—Distinction between the "duplicate school" and the "platoon school" in Philadelphia—The duplicate school building—Organization—The roster—The auditorium and its usefulness—Special rooms—Assignment of teachers—Time allotment—Supervision—The duplicate school's advantages for the pupils—Economies effected—Conclusion.

The educational advantages and the housing economies effected by the work-study-play plan have led administrative officers to adopt some form of this organization in many school systems. The plan is variously designated as the "platoon plan," "alternating school," "companion class method," or "duplicate school." Although this form of school administration is operating under different names in the various cities of the country, there seems to be considerable agreement as to its purpose, namely, to improve the instruction and to make a more efficient use of the school buildings.

The adoption of the new plan has in some instances been necessitated by the rapid rise in the cost of building construction or an unusual increase in the local school population. In such situations it has frequently happened that the new method of organization has been applied in a building originally constructed for the conventional school. Minor alterations are made to convert the building for housing the desired system, and the school is reorganized in accordance with the purposes in view.

Some cities have adopted the work-study-play plan as a general procedure throughout the system, and all new buildings are especially constructed to accommodate this program. The practice has become so general throughout the cities of the United States that the Commissioner of Education has seen fit to call three annual conferences of school administrators interested in this system. These conferences have been held in conjunction with the annual meetings of the Department of Superintendence of the National Education Association. The Commissioner of Education has appointed eight special committees who are making a thorough study of the various phases of the new plan as it is being carried out in different parts of the United States. The committees are at work on the following studies: The auditorium, building programs, organization, special activities, music, play, education of public opinion, and the training

of teachers. Commissioner John J. Tigert, in appointing the committees, says:

> The purpose in organizing these committees is not to arrive at a common, uniform plan of conducting work-study-play or platoon schools, but rather to secure first-hand, concrete data on the different methods of developing the plan to meet the needs of different communities.

Since this method of school administration is receiving so much attention in city, State, and national organizations, it is the purpose of this study to examine into some of the main considerations involved in the introduction and administration of the new system.

## DISTINCTION BETWEEN THE "DUPLICATE SCHOOL" AND THE "PLATOON SCHOOL" IN PHILADELPHIA

In Philadelphia there are two forms of the above plan, which for convenience of designation, are called the "duplicate plan" and the "platoon system." The duplicate plan more nearly approaches the type of school administration that has had an extended introduction in many cities and is variously designated as the "platoon school," "Gary plan," "alternating school," etc. The Philadelphia platoon school simply divides the enrollment into two or three groups, and by an earlier and later time of arrival and departure the school makes a more extended use of the building during the day.

Since the platoon school in Philadelphia is only an expedient to be continued during the present building shortage, no further elaboration of this method will be attempted. On the other hand, the duplicate plan promises to be a more permanent organization because of its many educational, administrative, and housing advantages. Some of these advantages are set forth in the following outline.

The word "duplicate" in connection with this plan in Philadelphia refers primarily to the housing economy features contained therein. Under the duplicate plan an academic room, vacated while the class works in a special room, is occupied by an additional class. This, in a sense, duplicates the use of the academic classroom. In a similar manner, every other available room in the duplicate school is always occupied by a group of pupils while the home-room class is temporarily in another activity. The activity may be in the auditorium, gymnasium, shop, or on the playground, depending on the extent and variety of the accommodations available.

In another sense, the duplicate school makes a twofold use of its equipment in many departments. Textbooks such as those used in the music room, auditorium, and literature room; apparatus in geography and science rooms; paraphernalia and other supplies are used in turn by the different classes as they move from place to place in the departments of the school.

The amount of increase in housing capacity and the economy in use of equipment will depend upon the structure of the building and the organization of the school. Detailed plans and programs covering these points are treated under subsequent heads in this outline. However, the economies herein effected are secondary in importance to the educational opportunities enjoyed by the pupils in the duplicate organization.

## THE DUPLICATE SCHOOL BUILDING

Certain minimum building accommodations are essential to the proper operation of the duplicate plan. In addition to the regular academic classrooms, there should be an auditorium, a gymnasium, one or two shops for boys, a domestic-science room, a sewing room, and a library, or other special activity rooms. While these rooms are given as minimum requirements, it is not to be understood that the plan is impossible without the full allotment. A lesser number of *special* rooms will result in curtailed opportunities and possibilities.

New school buildings constructed with these appointments are naturally best suited for the duplicate plan. Nevertheless, many buildings intended for the prevailing grade school can readily be converted, by minor alterations, to serve the new organization. Any building containing 15 or more classrooms can be altered, without great expense, by removing the partition between two well-chosen rooms to provide a small auditorium. A raised platform extending across one end of these rooms will suffice for the stage, and fixed desks may be replaced with auditorium chairs. This improvised auditorium will double the seating capacity of the two former classrooms for such exercises as will be conducted here.

The basement of the building, if not otherwise entirely occupied, can frequently be rearranged to accommodate a suitable gymnasium and probably a shop or two. One or more classrooms can be given over for suitable departments to care for the sewing, domestic science, and library. The grade rooms which are sacrificed in remodeling will not reduce the aggregate seating capacity of the building under the new type of organization. This partly converted school will accommodate 18 classes, as follows:

10 classes in the unaltered rooms.
4 classes in auditorium.
1 class in reconstructed gymnasium.
1 class in library.
1 class divided between domestic science and mechanic arts shop.
1 class divided between sewing room and industrial arts shop.

If the original building is so constructed that the removal of partitions for auditorium is impossible, a single room may serve the purpose in a smaller way. Desks are replaced with chairs, and the appropriate exercises are conducted with two classes assembled in this room.

## ORGANIZATION

Schools having a considerable number of classes in grades 5 to 8 can be readily organized on the duplicate plan. Since many of the special subjects are a part of the instruction for the upper grades, it will be well to organize these on a departmental basis. Older children will make the change to new conditions without difficulty. There is considerable difference of opinion as to the wisdom of placing the lower elementary grades on the departmental program; hence in this draft we shall consider them with a single teacher except at the times when they go to gymnasium, playground, and auditorium.

In the departmental grades the children should be assigned so that each group will have an adviser, usually known as a home-room teacher. At first it is important that the children belonging to this teacher meet her each session. After one year's experience this interval may be lengthened to once daily and later to less frequent contacts, depending on the needs of the individuals. For obvious reasons, the departmental program for fifth or sixth grades should be as simple as possible. It will be advantageous to have the order of passing from room to room, for the academic subjects, the same each day in grade five, but in the following grades this plan may be modified to meet the contingencies of the situation.

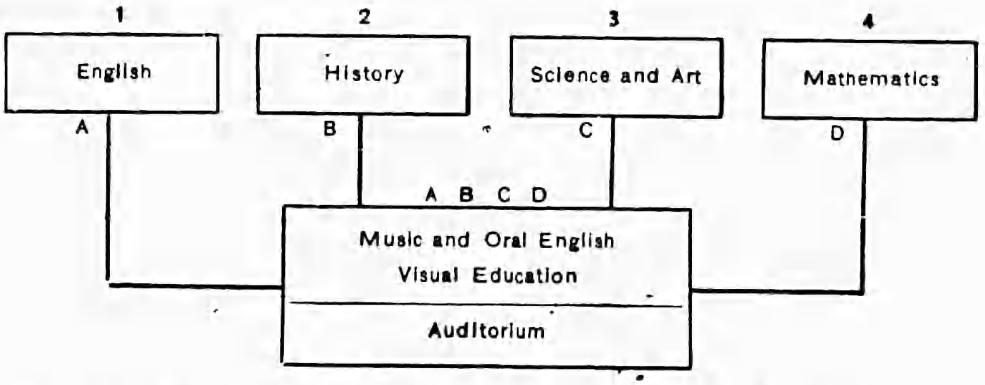
In assigning classes to the auditorium, it is advisable to have the entire group in the same numerical grade. When more than one grade must be assigned here, the divergence in grades should be limited, so that instruction will be within the comprehension of all concerned. Any attempt to make the auditorium simply an assembly of indiscriminate grades will defeat the purpose of this department and can be regarded as only an expedient.

The length of the periods in the departmental classes will depend upon the number of rooms included in each cycle of movement. Experience seems to approve of periods approximately one hour in length. On a five-hour day program this will give three periods in the morning and two in the afternoon. Periods of less than 40 minutes in length are too short, making for loss of time in frequent change.

Schools containing a larger number of classes in the upper grades will give less difficulty in organization. Each cycle of classes, in departmental work, should be limited to groups not larger than the

number of periods into which the day is divided. For example, if the day consists of five periods, then four classes should constitute a cycle. This will give each class a period in each of the four departments, and one period in the auditorium. The scheme of class movement in this event will be as follows:

CYCLE I




The four classes, A, B, C, D, spend one period in rooms 1, 2, 3, 4, and all report in auditorium together at the fifth period of the day.

The departmental organization in such a school could be extended to include 22 classes. There would be five groups similar to the above cycle, while two floating classes would occupy two rooms which would be vacated by groups going to handwork, sewing, mechanic arts, and cooking. Sixteen classrooms, and the auditorium, sewing room, cooking room, shop, and industrial-arts rooms, would be needed to provide the proper housing conditions.

## THE ROSTER

To facilitate the proper movement of classes in the duplicate school a well-planned roster should be supplied teachers and pupils. Every teacher should possess a roster of the entire school, and each pupil should be given a roster of the daily movement of his class. This schedule should be explained in detail on the first day of the term, or when the new program is put in effect. Copies of a suitable roster can be readily made on a mimeograph or duplicating machine, usually found in the office of a well-equipped school.

The accompanying section of a duplicate school roster indicates the number of the home classroom, the name of the teacher, the grade of the class, and the subject taught in each room. Under each day of the week are indicated the various rooms and departments to which each class reports in turn. The classes spend a double period in mechanic-arts and domestic-science rooms weekly.

## ROSTER OF THE FERGUSON DUPLICATE SCHOOL

| Teacher | Room | Subject | Grade | Monday | | | | | Tuesday | | | | | Wednesday | | | | | Thursday | | | | | Friday | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mr. Ross | 26 | English | 8A | 28 | MA | DS | 28 | 24 | 24 | 28 | 27 | 26 | G | 25 | 24 | 28 | 27 | 26 | S 26 | 25 | 24 | G | 27 | 27 | 26 | 25 | 24 | 28 |
| Miss Doman | 27 | Literature and drawing | 8B | 27 | 26 | G | 24 | 28 | 28 | MA | DS | 25 | 24 | 24 | 28 | 27 | 26 | 25 | G | S 24 | 28 | 27 | 26 | 26 | 25 | 24 | 28 | 27 |
| Mr. Bond | 26 | History, penmanship, and civics. | 8B | 26 | G | 24 | 28 | 27 | 27 | 26 | 25 | 24 | 28 | 28 | MA | DS | 25 | 27 | 24 | G | S 27 | 26 | 25 | 25 | 24 | 28 | 27 | 26 |
| Miss Hemming | 25 | Science, music, and hygiene. | 8A | 25 | 24 | 28 | 27 | 26 | 26 | 25 | 24 | 28 | 27 | 27 | 26 | 25 | G | 28 | 28 | 27 | 26 | 28 | 24 | 24 | MA | DS | G | 25 |
| Miss Nieweg | 24 | Mathematics | 8A | G | 28 | 27 | 26 | 25 | 25 | 24 | 28 | 27 | 26 | 26 | 25 | G | 28 | 24 | 27 | MA | DS | 24 | 28 | 28 | 27 | 26 | 25 | 24 |
| Miss Coons | 23 | History, civics, and penmanship. | 7B | 23 | 26 | 21 | 20 | 19 | 19 | 23 | 22 | 21 | 20 | 20 | 19 | 23 | 22 | 21 | MA DS | 20 | G | 23 | 22 | A | S 21 | 21 | 19 | G |
| Miss Hoog | 22 | Arithmetic | 7B | 22 | 21 | 20 | 19 | 23 | 23 | G | 21 | 20 | 19 | 19 | G | 22 | MA | DS | 20 | 19 | 23 | 22 | 21 | 21 | 20 | S 19 | 23 | 22 |
| Miss Levin | 21 | Drawing and literature | 7A | 21 | 20 | 19 | G | 22 | 22 | 21 | 20 | 19 | 23 | 23 | 22 | 21 | 20 | 19 | 19 | 23 | 22 | MA | DS | 20 | 23 | G | S 22 | 21 |
| Miss Mellon | 20 | English | 7A | 20 | 19 | 23 | MA | DS | 22 | 20 | G | 23 | 22 | 22 | 21 | 20 | 19 | 23 | 23 | 22 | 21 | 20 | G | 19 | 19 | 22 | 21 | S 20 |
| Miss Harris | 19 | Music, geography, and hygiene. | 7B | 19 | 23 | 22 | 21 | G | 20 | 19 | 23 | 12 | 21 | 21 | 20 | 19 | 23 | G | 22 | 21 | 20 | 19 | 23 | S 23 | 22 | 20 | MA | DS |
| Miss Fisher | 18 | Arithmetic | 6A | G | A | 16 | 1A | S | 8 | 18 | 17 | 16 | 9 | 9 | 8 | 18 | 17 | 16 | G | 9 | 8 | 8 | 17 | 17 | 16 | 9 | 8 | 18 |
| Miss Emsley | 17 | English | 6A | A | 16 | 9 | 8 | 18 | G | 17 | 16 | 9 | 8 | 8 | 18 | 17 | IA | S | 9 | A | 18 | G | 16 | 16 | 9 | 8 | 18 | 17 |
| Miss Jack | 16 | Literature, music, and drawing. | 6B | IA | S | 8 | 18 | G | 17 | 16 | 9 | 8 | 18 | G | 17 | 16 | 9 | 8 | 8 | 18 | 17 | 16 | A | 9 | 8 | 18 | 17 | 16 |
| Mrs. Biddle | 9 | Penmanship, geography, and hygiene. | 6A | 9 | 8 | 18 | 17 | 16 | 16 | A | 8 | IA | S | 17 | G | 9 | 8 | 18 | 18 | 17 | 16 | 9 | 8 | G | 18 | 17 | 16 | 9 |
| Miss Gelehrter | 8 | History, civics, and penmanship. | 6B | 8 | 18 | 17 | 16 | A | 9 | 8 | 18 | G | 16 | 16 | 9 | G | 18 | 17 | S 17 | 16 | 9 | 8 | A | IA | S 17 | 16 | 9 | 8 |
| Miss John | 37 | Adviser and gymnastics | 7A | 24 | 25 | 26 | 22 | 21 | G | 22 | 19 | MA | DS | A | 23 | 26 | 24 | 20 | 21 | 28 | 25 | A | 20 | G | 28 | 27 | 20 | 19 |
| Miss Slack | 38 | do | 6B | 18 | 27 | 25 | 23 | 17 | 18 | 27 | 26 | 17 | 25 | 18 | A | 8 | 16 | G | 16 | 26 | 19 | A | 18 | 8 | G | 23 | IA | 8 |
| Miss Trotter | 39 | All regular subjects | 5A | 16 | 11 | 11 | 9 | 8 | 12 | IA | S | 18 | G | 10 | 27 | 13 | 21 | 22 | 10 | A | 10 | 21 | R | 18 | 17 | 5 | 26 | 23 |
| Miss Oldach | 40 | do | 5B | 10 | 6 | 14 | 11 | 20 | 23 | 10 | 13 | 12 | 17 | IA | S | 24 | 11 | 9 | 25 | A | G | 28 | 9 | 10 | A | G | 10 | 12 |
| Miss Olsen | 41 | do | 5A | 17 | 17 | 5 | 13 | 9 | 10 | 9 | A | 13 | 15 | 6 | 16 | 6 | A | 14 | IA | S | 6 | 17 | 19 | 22 | A | 15 | 11 | 14 |
| Mrs. Medlar | 43 | Classes in auditorium | | 10 | 18 | 5 | 11 | 8 | 10 | 9 | 41 | 12 | 15 | 10 | 38 | 6 | 11 | 14 | 10 | 39 | 6 | 38 | 16 | 38 | 40 | 15 | 11 | 12 |
| | | | | 17 | | | 13 | | 16 | | | 13 | | 37 | | | 41 | | | 40 | | 10 | 8 | 10 | 39 | 5 | 10 | |

Symbols: IA—Industrial arts; MA—Mechanical arts; G—Gymnasium; DS—Domestic science; S—Sewing.

A close inspection of this roster will show that each class spends one period in each department daily except at times when the class reports in special rooms, such as shop or gymnasium. It will also be noted that the daily schedule is arranged in a so-called progressive order, that is, the period for each subject is advanced as the week progresses. For example, class 25 reports in room 25 the first period Monday; the same class reports in room 26 the first period on Tuesday; and in room 27 the first period Wednesday; and so forward. This equalizes any advantage or disadvantage in early or late hours, short periods, recess intermissions, or other inequalities in the weekly program.

All departmental programs in elementary schools give some difficulty in the care of books and clothing of the pupils. Some programs instruct pupils to place their clothing always in the dressing room of the class-advising teacher. This brings the pupils in contact with their adviser more frequently, thus preserving the mothering influence of the early grade experience. Other programs require pupils to place clothing in dressing rooms where they will report just prior to leaving the building at the close of the session. Both of these methods necessitate considerable passing and repassing in the halls and stairways and make for some confusion at the opening of each session. A third method permits pupils to take clothing from room to room as they pass, and deposit it in the dressing room before being seated for the period. Although this method consumes a little more time, it prevents meddling with clothing when pupils are at distant points from the place of deposit, and it also makes for less confusion in assembling for the session.

## THE AUDITORIUM AND ITS USEFULNESS

Since instruction in the auditorium will be given to large numbers of pupils assembled together, it is important that they be of the same grade. If this is not possible, then the divergence of grade should be made as small as the situation will permit. The maximum number of pupils in any one group will depend largely upon the nature of the teaching to be done. If the subject is visual instruction, it is possible to include several hundred pupils at one time when the stereopticon or motion-picture projector is used. However, if music instruction is attempted to such a large group, some difficulty will be experienced, particularly if note reading and part singing are being taught. Chorus singing will be more inspiring when given in the auditorium well filled.

Oral English can be conducted very satisfactorily in the auditorium. Declamation, public speaking, formal and informal talks, debates, and symposiums have the proper setting in groups somewhat

larger than those of the classroom. The auditorium gives the peculiar audience situation which acts as a stimulus to the best efforts on the part of the pupils. Here the child learns to stand before his classmates and address an audience of his peers. The success of his efforts will be measured by the attention and interest which he draws from his listeners. This is a socialized democratic environment, quite different from the classroom, where he is more accustomed to the autocratic judgment of the teacher for his criticism.

Similarly, we have the proper equipment and surroundings in the auditorium for dramatic work. Many of the subjects in literature, history, civics, and hygiene can be taught effectively by dramatization. The counsel and cooperation brought into active participation by the presentation, on the stage, of an incident in history, an eterprise in civics, or a drive for better health will motivate the instruction to the highest degree attainable.

When conventional classroom teaching is necessitated in the auditorium, the number of pupils assembled should be more limited. Two classes, or three at the most, should be the maximum. The teacher will find it difficult to reach more than 100 pupils in this manner. No record of individual progress should be attempted in this mass instruction, since questioning or examination of the results of teaching can not be satisfactorily accomplished. Some schools have made the auditorium period a study hour, but it can hardly be regarded as a profitable use of this portion of the building. In most instances this is a mere expedient to take care of overcrowding and other unusual building conditions. The tendency in school construction seems to be in the direction of comparatively small auditoriums to be used for purposes of instruction, and any attempt to make this place a study hall can only be regarded as a makeshift.

## SPECIAL ROOMS

The special rooms in the duplicate school contribute an important share to the enriched training enjoyed by the pupils under this newer plan. The number and variety of these special rooms will depend upon the aims in view and the resources of the local educational authorities. A mechanic arts shop for boys of grades seven and eight and an industrial arts room for boys of grades five and six usually suffice for manual training, while the girls of the seventh and eighth grades should have a domestic science room, and the girls of grades five to eight a sewing room.

Every well-appointed school should have a commodious gymnasium. Preferably this should be constructed with a movable partition separating boys' work from that of the girls. When a school re-

ception is held or other gathering of a social nature is contemplated, these rooms can be converted into a large reception hall.

A library will be a splendid addition to the special rooms in the organization. It would be well to have this room large enough to accommodate an entire class at one time. In this event a library teacher can be assigned to this department and the roster provide one or more periods per week for literary study and reference reading.

## ASSIGNMENT OF TEACHERS

The principal of the duplicate school will find little difficulty in securing teachers for the academic subjects. On the other hand, considerable care must be exercised in selecting the special teachers who are to take charge of the several departments. Naturally, a teacher will do better work in a subject in which she may have had particular training and experience. If possible, these preferences should be taken into consideration in making the assignments. The auditorium teachers should be selected not only for their special ability in the subjects taught in this department, but they should be of compatible temperament and capable of working together in perfect accord. Persons of special personal eccentricities, or who are temperamentally peculiar, or markedly individualistic, should not be assigned to the auditorium. Two, three, or four classes with their teachers must work here, each teacher leading in her turn. For obvious reasons, there must be no friction or cross-purposes in carrying out the work in hand. The auditorium teachers should be leaders and be enthusiastic about the work of the whole school. They will meet and influence a large number of the pupils and be an important factor in building up school spirit and morale. They should have a broad educational vision and have a very well-defined understanding of the aims and purposes of the duplicate school.

The duplicate school should not be made the excuse for increasing the size of classes. Standards acceptable for the conventional school in this respect should be preserved for the new organization. If a maximum of, say, 30 pupils per teacher is large enough in the prevailing grade school it should be the same for the duplicate school. In Philadelphia the minimum number of pupils is 40 for each academic teacher in all types of regular elementary schools. In addition to this corps of teachers there is an allotment of special teachers to schools where sewing, domestic science, mechanic and industrial arts are taught. In the duplicate school there should be, in addition to the above, at least one auditorium teacher who will lead the work in this department and one or two gymnasium teachers.

Since few school systems have as yet given special attention to the training of teachers for the duplicate school, most of the workers must get their preparation through experience in this new type of organization. The principal will do well to assign new teachers to the less vital places at first, or let them work with the more experienced teachers who are leaders. Frequent conferences are necessary in the various departments in order that the work of the school may be coordinated and unified. This cooperation brings about a practical training in service and is of greater value than that acquired in the average training school.

The question of salary for teachers in the duplicate school will probably need some consideration. There will be some who will advocate special salaries for auditorium teachers because of apparent added responsibilities. It would be better, perhaps, to care for the matter of salary difference on some other basis. It will be difficult to justify special salaries on the score of added responsibility in a particular place in a school of this kind. Some principals have taken care of this situation by making the important posts lead to promotion and appointment to higher places in the school system; others have made the number of free periods for these teachers more numerous in order to lighten the work and conserve energy throughout the day.

## TIME ALLOTMENT

An accepted time allotment for the various subjects of the course of study should be adhered to in the duplicate school. This apportionment is usually the same as that required for all schools within the local system. The principal must provide for this in extreme detail in making up the roster for the term. Classes in departmental grades will give considerable difficulty unless the divisions into departments are such that the number of periods per week articulate in minute detail with the time allotment required. In making this roster it is a good plan to make a rough draft for the entire layout of the departments for each day of the week. A sheet of ruled paper, with quarter-inch squares is convenient for this purpose, each block to represent a period of the day. In this case departments of instruction can be indicated by room numbers, and a glance over the entire course of a class for the week will indicate at once whether the time allotment has been satisfied or not.

The following time allotment for the subjects of an accepted course of study can be approximated in the roster for a duplicate school. The distribution is based on a five-hour school day covering 1,500 minutes in the week.

*Allotment of time (in minutes) for elementary grades*

| Subjects | Grades | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Opening exercises | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Recess | 150 | 150 | 150 | 150 | 75 | 75 | 75 | 75 |
| Arithmetic | 90 | 150 | 205 | 205 | 225 | 225 | 225 | 225 |
| Art education | 135 | 135 | 135 | 150 | 90 | 90 | 90 | 90 |
| Civics | 20 | 20 | 40 | 40 | 50 | 50 | 50 | 50 |
| English, including reading and spelling | 1 B 240 | 240 | 290 | 480 | 480 | 480 | 405 | 405 |
| Geography and nature study | 20 | 20 | 105 | 105 | 105 | 105 | 105 | 105 |
| History | 20 | 20 | 40 | 60 | 90 | 90 | 90 | 90 |
| Music | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Penmanship | 90 | 90 | 90 | 90 | 75 | 75 | 60 | 60 |
| Physical training | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| Hygiene | 15 | 15 | 15 | 40 | 40 | 40 | 40 | 40 |
| Reading | 1 B 540 | 480 | 250 | ------ | ------ | ------ | ------ | ------ |
| Home economics (cooking) or mechanic arts | ------ | ------ | ------ | ------ | ------ | ------ | 120 | 120 |
| Home economics (sewing) or industrial arts | ------ | ------ | ------ | ------ | 90 | 90 | 60 | 60 |
| Total | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 | 1,500 |

## SUPERVISION

The principal of the duplicate school should be given adequate clerical and office help that he may be free to exercise close supervision of the instruction and operation of the entire organization. Office details, routine matters, supplies, reports, and other customary standardized practice can be handled by competent clerical assistants, and the principal will find it necessary to train his office force to relieve him of these duties in order that he may give his attention to the larger things of the school.

Until the new organization is in good working order, he will naturally counsel with the teachers in crucial places, such as the auditorium, special rooms, and departmental grades. Many try-outs may have to be made and frequent conferences held. In these contacts he will set up his ideals of achievement and formulate school policies and standards. In strengthening these focal points in the school, the principal should economize his available time, since it is here that he will reach a large portion of the school enrollment. In the conventional school organization, the classroom must of necessity be the unit of supervision, but in the duplicate school the department, auditorium, or other group center is the unit. A good procedure set up for the teacher in one of these centers reaches many classrooms; hence supervision is more effective because it is concentrated and specialized. For example, the principal who desires to improve the instruction in, say, music or drawing in the traditional grade school is obliged to visit every classroom in his building while these subjects are under way; in the duplicate school he may enter the music or drawing departments at any period, and in suggesting methods for one class he accomplishes the purpose of many visits

under the older system. The principles of economic supervision which obtain for the administrator of the duplicate school apply to all school supervision operative in most large school systems. The city supervisor of a special branch can do much more effective work with schools organized departmentally, and the number of such officials can be correspondingly reduced.

The principal will find it a splendid practice in supervising this type of school to meet with teachers in cycle groups to discuss problems common to all who teach the classes under consideration. For example, if certain teachers give instruction to eighth-grade pupils only, then these teachers will constitute a cycle who need to know of the progress of pupils in each of the respective departments. This is important in making up reports of the pupils and determining those who need especial attention. The individual pupil must not be lost in the mass of departmental teaching, and by such group conferences will the interests of each child be conserved. Pupils' work should not be judged, nor should reports be made, on the basis of cold figures turned in to the record-keeping teacher at the end of the month or at the time of report making. Many valuable and contributing factors will be brought to light in the conferences where each child's ability and work in each department are under advisement. In the supervision exercised by the counsel and advice of principal and teachers, the pupils have a better opportunity to get a fair and impartial estimate of their ability and effort in the school.

## THE DUPLICATE SCHOOL'S ADVANTAGES FOR THE PUPILS

The pupils in the duplicate school become more self-reliant and resourceful in consequence of their experience with the varied program. Happily the transition from grade to grade and to junior and senior high schools is much easier and less disconcerting when pupils go by way of the duplicate plan. While this plan introduces the pupil to a more complex program, the change is very gradual and in easy stages. Formerly pupils were suddenly transferred from a one-teacher, one-grade schedule in elementary school to a complex departmental roster plan in high school. The change was so unsettling that many pupils were seriously handicapped for a great part of the first high-school term.

Instruction in many of the subjects in the duplicate school is on the departmental plan. For this reason the instruction is better because it is in the hands of teachers who are more interested and specially trained. Furthermore, the teacher who specializes in her particular subject is likely to bring an enthusiasm into her work that would be lacking were her interests scattered over all the studies of the curricu-

lum. The departmental teacher will have little difficulty in finding numerous associations which are studying common problems in the local and national fields. Affiliation with other workers in her chosen field gives inspiration to the teacher and assists in the accumulation of a wealth of material and equipment in the special classroom.

The duplicate plan centralizes the interests of the pupils and helps to socialize the school. The children have many departments and teachers in common, and they do not think of a faculty member as "my teacher" but as "our teacher." This is especially noticeable in rooms where a large number of pupils report during the course of the week, namely, the gymnasium, auditorium, arts and science rooms, and library. The gymnastic teachers are also playground supervisors when children congregate here before school, at recess, and at lunch intermissions. The auditorium teachers are dramatic club leaders who meet with children in a more intimate relationship when rehearsals are necessary. Domestic science pupils prepare and serve lunch to teachers and pupils, thus living the friendly hospitality and intercourse of family companionship. Cooperation between industrial arts, sewing and drawing departments in preparing for demonstrations in the auditorium brings about a healthy school spirit and socializes the project in obvious ways. At the same time work in each department is motivated by the desire to accomplish the end in view. This makes work-study-play purposive, democratic, and social.

Closely allied with the socializing appeal of the duplicate school is the fact that the varying program and multiple activities maintain the interest of the child throughout the day. The change from room to room, and the anticipation of special studies yet in store as periods advance, conserve the energy of the pupils. There is a certain enervating monotony in sitting in the same room and listening to the same teacher for the entire school day. The very act of moving to another place in the building is a relaxation, and to come into the presence of another teacher with a new environment is refreshing. This sustained interest, with the consequent saving of physical energy, must have its influence not only on the efficiency of the school work but also on discipline, promptness, and regularity of the pupils.

Children in the duplicate school enjoy a larger experience in literary and dramatic instruction suited to training the youth for performance on the stage and before smaller groups in the auditorium. This practice makes for a fuller appreciation of the life and ideals in human conduct, and at the same time prepares the pupil to participate in wholesome and clean leisure-time activity. In the conventional school the dramatic instruction is likely to be only incidental and given in an improvised auditorium where stage

setting, costumes, and other paraphernalia are assembled with considerable difficulty and with more or less interference with the school routine.

Instruction in the school auditorium provides abundant opportunity for the pupils to learn how to direct public opinion through the forum style of discussion. The socialized method organizes the group into a public forum, with pupils conducting the meeting in formal parliamentary procedure. Children quickly learn how to conduct, direct, and manage large assemblies; and the group organization necessary for the proper conduct of such exercises gives splendid practice in self-government. Student assemblies and school-club meetings in the auditorium are some of the many activities in which experience in public speaking will have a practical application. In these interests the pupils develop a healthy attitude toward the school; and its welfare, pupil-leadership, and pupil-responsibility are encouraged; and a good morale is established.

Finally, the duplicate school plans to improve the health of the children in its special facilities for exercise and recreation and in its interest-conserving program. The gymnasium period is never neglected when pupils are assigned here at regular periods. Under the conventional system, gymnastics taught by the grade teacher are often regarded as incidental, and the exercises are given in a perfunctory way with pupils remaining in the classroom. No free play is possible here, and the formal exercises are of little health-giving value. The special teacher in the gymnasium can put vigor into this work, and with the pupils suitably dressed for the period a real program of physical training and corrective gymnastics can be consistently carried out. Furthermore, the relaxation enjoyed by pupils in change of activity and in passing from room to room throughout the day conserves the health of the children.

## ECONOMIES EFFECTED

It has been variously estimated that from 10 to 30 per cent increase in pupil accommodations can be provided in a building in organizing it under the duplicate plan. This saving justifies the adoption of the plan, particularly since the educational advantages go with it. Boards of education and administrative authorities find it profitable to keep this system in mind in planning new buildings, especially where the school population is growing rapidly, necessitating capacity use of the present accommodations. As pointed out in this paper, the duplicate plan makes a more efficient use of the entire building and equipment. When completely organized there are no idle rooms, no waste space, no duplication of expensive equipment to

accommodate parallel classes. The classes use the rooms, the apparatus, the textbooks, and equipment in turn.

The James G. Blaine School, erected 1895 in Philadelphia, is cited here to illustrate the possible economies effected by converting an older building to accommodate the new plan. This three-story building contained 27 classrooms. In January, 1919, the school, operating on the conventional 1 room per class system, had 23 classes on full time and 8 classes on part time. The part-time classes shared 4 rooms one-half day each. To give these 8 classes full time under the system then in vogue, it would have been necessary to enlarge the building by adding 4 classrooms. At prevailing prices the cost would have been approximately $40,000. At the request of the principal and the district superintendent, the building was altered by removing a partition between two wing rooms on the second floor and replacing fixed desks with auditorium chairs. This made a small auditorium to accommodate 4 classes at one sitting. A basement storeroom was converted into a gymnasium to care for 2 classes at one time. The entire cost of these two alterations, including a small stage, auditorium chairs, and some minor equipment, was less than $1,000.

On February 1, 1919, the school was reorganized on the duplicate plan, and the 8 part-time classes were advanced from a three-hour part-time schedule to full time. Furthermore, by reason of the constant use of all rooms throughout the day, 2 additional classes were accommodated by floating from rooms to rooms vacated while classes were in the special activities. In addition to providing full time for 33 classes, after reorganization this 27-room building also took care of 18 classes from three near-by schools for one period each week in the various shops and domestic-science room. In this instance the school district is saving annually the interest on $39,000, or approximately the yearly salary of one teacher. At the same time the pupils are enjoying the educational benefits of the new organization.

Again, the duplicate school building meets the community needs in supplying a place for public gatherings when the school is not in session. The school building to-day is properly regarded as the civic center of the local population, and the people have a perfect right to see that this public investment is not idle when it can satisfy a common want. The auditorium of the duplicate school is splendidly adapted for these community meetings. The gymnasium will serve for adult recreation; and the library, domestic-science room, and sewing room can be used for evening study classes. In making the school serve the entire community, the educational authorities will find it much easier to justify school expenditures for new and improved activities.

## CONCLUSION

The school as it has existed in the past can no longer satisfy the demands of the present-day enriched and expanded curriculum. Administrators have tried to preserve the former type of organization by adding each new activity introduced to the ever-growing number of subjects taught by the grade teacher. It is very evident that some specialization must take place or the teachers will scatter their interests over too many subjects of instruction. The duplicate school meets this situation and at the same time it ministers in the largest way possible to the physical, intellectual, moral, and social needs of each individual child. This school organizes and relates his knowledge, interests, and habits to the life outside of school, that he may fit readily and effectively into his place in society.

To-day school authorities are so organizing their systems that the schools shall not only teach the fundamentals, but that they shall also assume responsibility for the health of the children. The schools must further train pupils for leisure time, for citizenship; for industry, and for life. The work-study-play, or duplicate, plan embodies this far-reaching, educational program, and it is based on principles of sound school administration.

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