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A flexible schedule allows teachers to change group size, group composition, and class length according to the purpose of the lesson. This pamphlet presents various "master" schedules for flexible scheduling (1) Simple block schedules, (2) back-to-back schedules, (3) interdisciplinary schedules, (4) school-wide block schedules, (5) open-lab schedules, (6) rotating schedules, (7) block-modular schedules, and (8) flexible-modular schedules. Diagrams accompany each of the schedules. (H/W)

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# FLEXIBLE SCHEDULING

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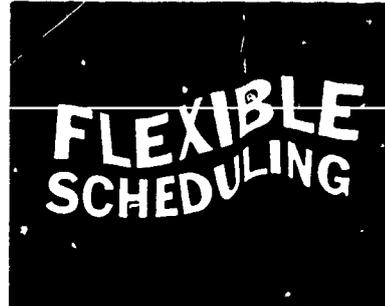
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There is nothing in this world so powerful  
as an idea whose time has come.

Victor Hugo



## INTRODUCTION

Developing the school schedule has long been the principal's most arduous task. The schedule brings order out of chaos and, hopefully, plan out of purpose. It is no wonder that the schedule is viewed with awe and almost with reverence by some. Unfortunately, fear and caution often pressure principals into designing schedules that hamper rather than help instruction.

In recent years, a growing number of educators have been asking penetrating questions about the traditional schedule:

Why must capable pupils be limited to four or five academic courses per year?

Why must all pupils complete a given subject in the same amount of time?

Why must all classes meet five times per week?

Why must all class periods be the same length?

Why must all classes be approximately the same size?

These and other such questions make it apparent that the typical school schedule has been designed for administrative convenience rather than for enhancing the instructional process.

In contrast, a flexible schedule allows teachers to change group size, group composition, and class length based upon the purpose of the lesson. Using their professional judgment, teachers allow pupils time for independent study and provide them with opportunities for self-expression in small groups. Concern is shown for meeting individual needs, and interest is expressed in the efficient use of time, space, and materials.

As difficult as it may seem, innovative principals have proven that the "master" schedule can be made the servant of the educational program. The following pages show several ways in which this may be done. A variety of alternatives are offered in the hope that each reader will find at least one that may be adapted to meet the needs of his particular school.

## SIMPLE BLOCK SCHEDULES

In departing from traditional scheduling patterns, many principals have found the simple block schedule an easy first step. Although such a schedule restricts teachers to a relatively short block of time, it does allow them to share students, facilities, and equipment. It also encourages cooperative planning, eliminates duplication of effort, and creates an opportunity for professional growth. The student benefits from more varied learning experiences such as large-group instruction, small-group discussion, and independent study. All of these activities are geared to give additional meaning and substance to his curriculum.

To accommodate teaching teams, one merely gives each member of a team an identical schedule. For example, if two teachers form a team to teach English, each should be scheduled to meet different sections of the same course during the same period, as indicated in Figure 1. Notice that this is a portion of the daily schedule and that somewhere during the day it is essential that teachers A and B share a common planning period. This avoids after-school planning sessions, which are generally non-productive because of fatigue and varying commitments of teacher time.

The simple block schedule gives teachers A and B flexibility in varying group size for different learning activities. In any given period they could combine classes for large-group instruction or regroup students for small-group discussions, remedial help, or independent study.

Figure 2 shows how teachers may work within the given period of time to accommodate various student needs. Obviously, many other patterns are possible, including that shown in Figure 3.

It is also apparent that the introduction of a student teacher or a paraprofessional aide would lend additional flexibility to the overall system. The principal may enlarge the team to include three, four, or more members. For example, eight sections of American history might be scheduled in only two periods and taught by a team of four teachers. The only problem would be to make certain that large-group space is available for all four sections at one time, and that ample independent study areas are provided.

## SIMPLE BLOCK SCHEDULES

Figure 1

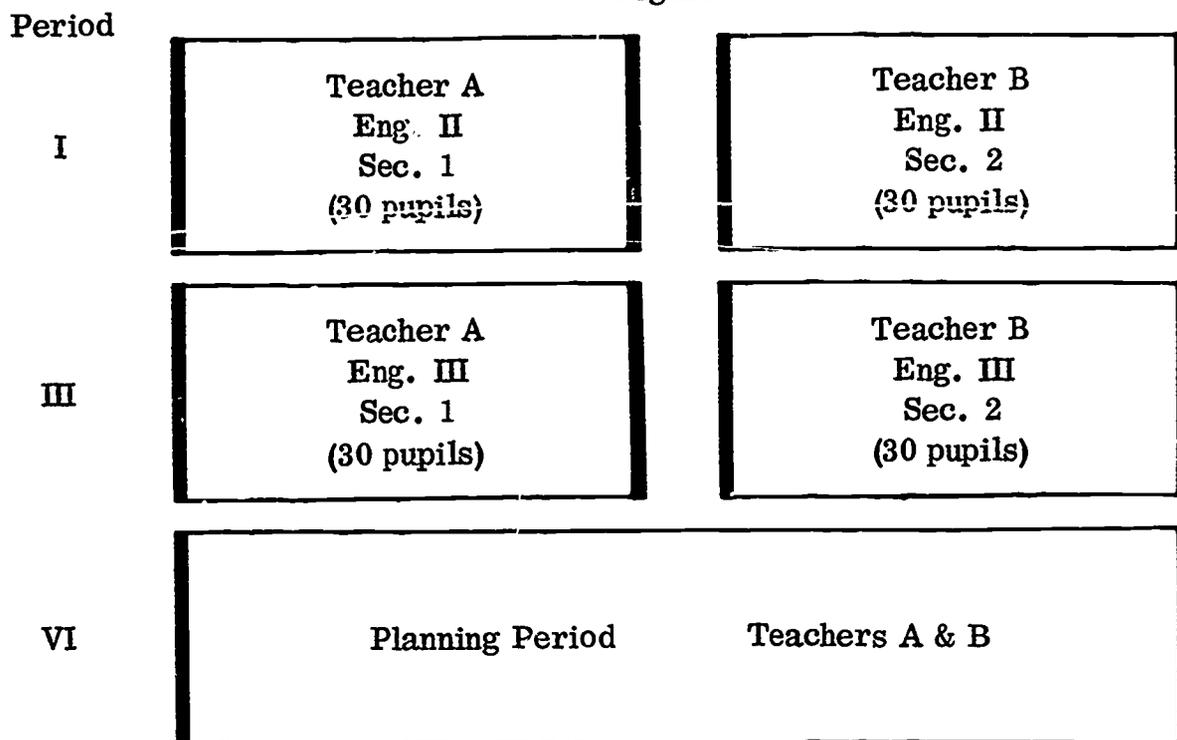


Figure 2

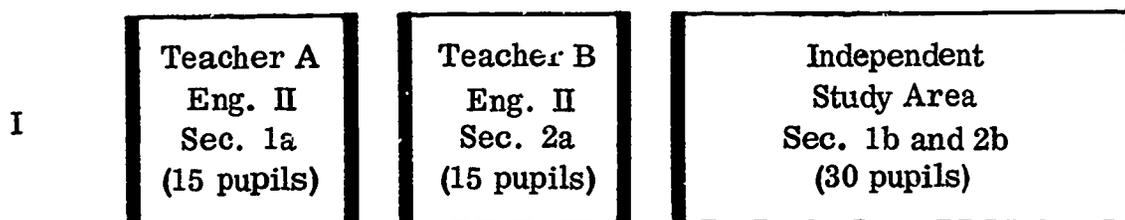
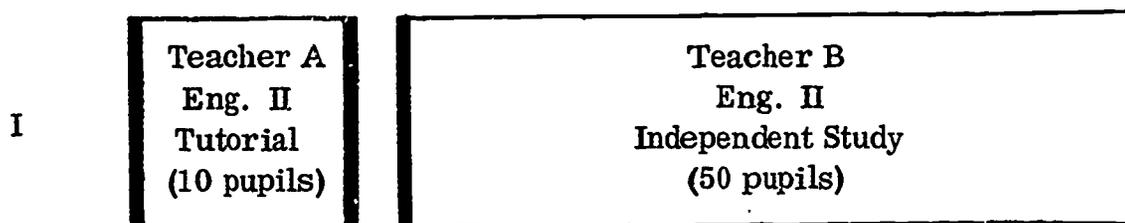


Figure 3



## Back-to-Back Schedules

Working within the framework of a traditional schedule, a principal may introduce considerable flexibility by increasing the number of time blocks from one to two. Shown in these diagrams are variations of structure involving two English teachers, two social science teachers, and 120 students scheduled "back-to-back" in a two-period time allocation (Figure 4). You will note that, although the schedule is similar to that shown in Figure 1, many additional possibilities are open to the teachers if they function as a team. For example, all 120 students could be assembled at one time (Figure 5) for any portion of the two periods or for the complete block of time. This means that one teacher, without repetition, could provide a lecture, film, demonstration, or field trip for all four sections without disrupting the school schedule.

### BACK-TO-BACK SCHEDULES

Period

Figure 4

I	<b>Teacher A</b> Eng. II Sec. 1 (30 pupils)	<b>Teacher B</b> Eng. II Sec. 2 (30 pupils)	<b>Teacher C</b> S.S. II Sec. 3 (30 pupils)	<b>Teacher D</b> S.S. II Sec. 4 (30 pupils)
II	<b>Teacher A</b> Eng. II Sec. 3 (30 pupils)	<b>Teacher B</b> Eng. II Sec. 4 (30 pupils)	<b>Teacher C</b> S.S. II Sec. 1 (30 pupils)	<b>Teacher D</b> S.S. II Sec. 2 (30 pupils)

Figure 5

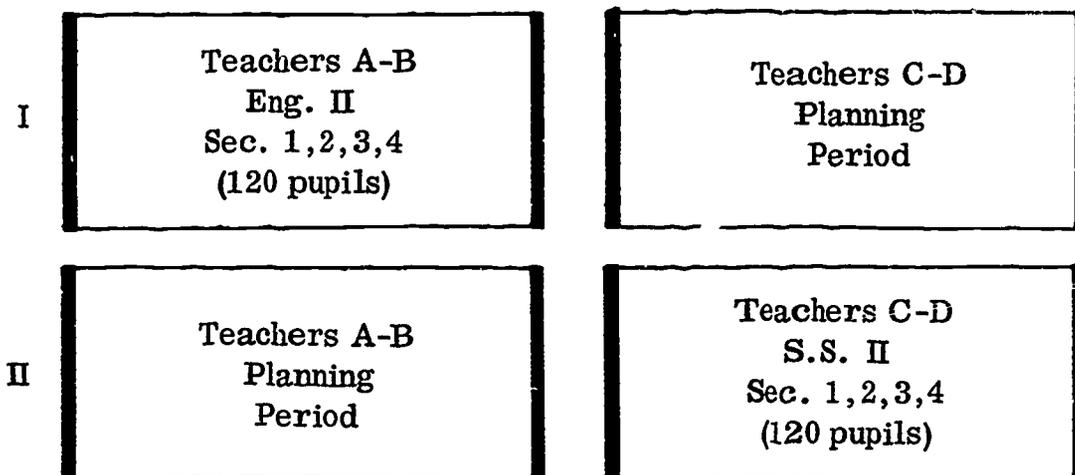
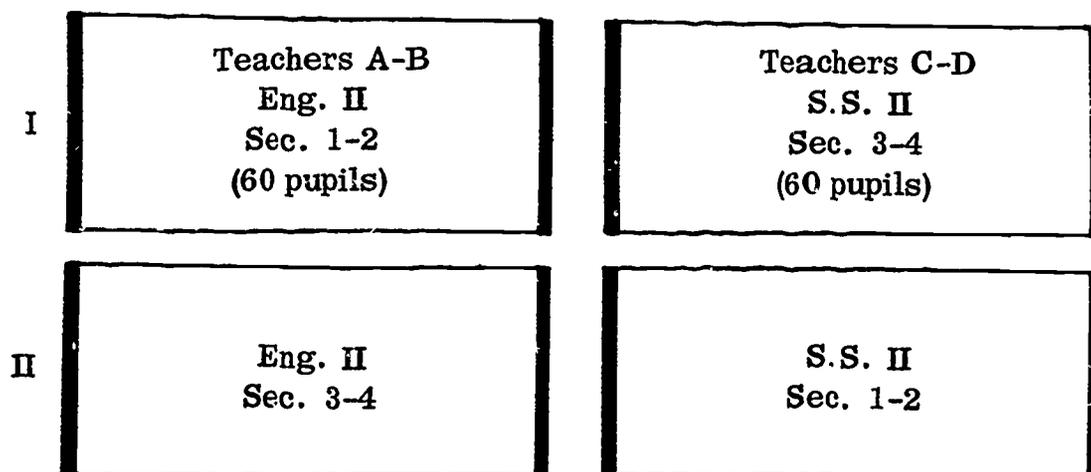


Figure 6



Figures 5, 6, and 7, illustrate ways of grouping the students to allow for large-group instruction activities and teacher planning. Using the structure in Figure 8, the teachers are able, on alternate days, to provide small-group experiences for all students. Para-professional help for students going to a learning center is again recommended; however, where the budget does not allow for such help, a team member may accompany them.

Figure 9 is an illustration of how a plan could be developed over a three-day period. There are, of course, many alternatives to the cycle. The large-group meeting could be for a double period to show a film or to see a play. Or, small group and independent activities could be scheduled for a week or more without any large-group instruction.

It is also possible for the two teams of two to operate independently. If this is done, large-group presentations would ordinarily be limited to two sections and would have to be repeated (Figures 6 and 7).

The important thing to remember is that time arrangements are left to the professional judgment of teachers, who can adjust the schedule to fit the educational purpose.

Figure 7

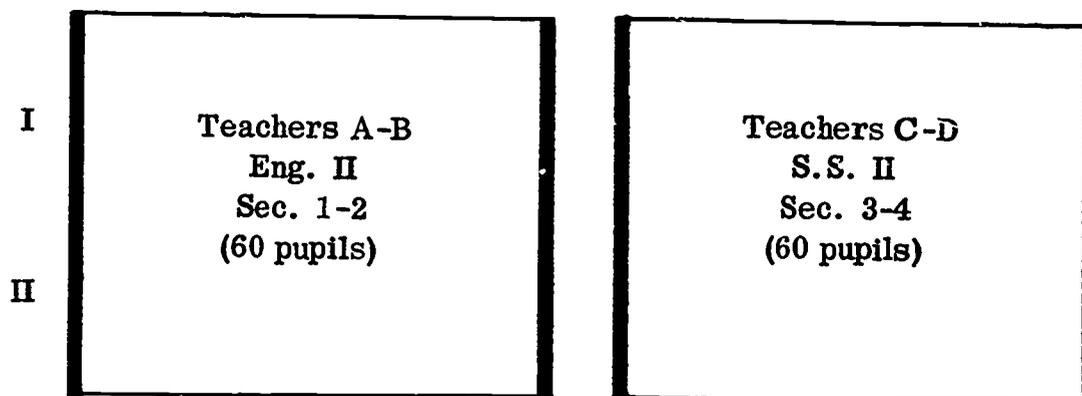


Figure 8

Period	Teacher A	Teacher B	Teacher C	Teacher D	Independent Study
I	Eng. II Sec. 1a (15 pupils)	Eng. II Sec. 2a (15 pupils)	S.S. II Sec. 3a (15 pupils)	S.S. II Sec. 4a (15 pupils)	Sec. 1b, 2b, 3b, 4b (60 pupils)
II	Eng. II Sec. 1b (15 pupils)	Eng. II Sec. 2b (15 pupils)	S.S. II Sec. 3b (15 pupils)	S.S. II Sec. 4b (15 pupils)	Sec. 1a, 2a, 3a, 4a (60 pupils)

Figure 9

Period	First Day	Second Day				Third Day					
	Large Group Sec. 1, 2, 3, 4 Teachers A-B or C-D	I. S.	S. G.				I. S.	S. G.			
		Sec. 3-4	A	B	C	D	Sec. 1-2	A	B	C	D
I		1a	1b	2a	2b		3a	3b	4a	4b	

## Inter-Disciplinary Schedules

Principals of small schools often complain that flexibility is difficult because they have only one teacher for each subject. They say it is impossible to implement "team teaching" in such a situation. The answer here, for both efficiency and flexibility, may be through the use of inter-disciplinary teams. As shown in Figure 10, two teachers of different disciplines have a three-period block of time in which to operate.

If large-group instruction is given during period I, independent study or small-group work may be pursued during periods II and III. On any given day, teachers A and B have the option of using all three periods as they see fit.

Notice that this arrangement is not limited to a single block of time nor to two sections of pupils. As shown in Figure 11, the only requirement is that teachers and pupils be scheduled together one period per day. Obviously, consecutive period scheduling creates a larger block of time and permits greater flexibility.

Figure 12 shows how the inter-disciplinary schedule may be extended to three teachers and three sections of pupils. If appropriate facilities are available for large-group instruction and independent study, this system may be enlarged to accommodate four or five sections of pupils.

Another bonus of inter-disciplinary teaming is that teachers may be encouraged to correlate their subjects and provide a common "core program."

### INTER-DISCIPLINARY SCHEDULE

(2 Teachers)

Figure 10

Period	
I	Teachers A-B Study Period Sec. 1-2 (60 pupils)
II	<div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">                     Teacher A                      Eng. I                      Sec. 1                      (30 pupils)                 </div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">                     Teacher B                      Math I                      Sec. 2                      (30 pupils)                 </div>
III	<div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">                     Teacher A                      Eng. I                      Sec. 2                      (30 pupils)                 </div> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 45%;">                     Teacher B                      Math I                      Sec. 1                      (30 pupils)                 </div>

Figure 11

Period	Teachers A-B Study Period Sec. 1-2-3 (90 pupils)	
I		
II	Teacher A Eng. I Sec. 1 (30 pupils)	Teacher B Math I Sec. 2 (30 pupils)
III		Teacher B Math I Sec. 3 (30 pupils)
IV	Teacher A Eng. I Sec. 2 (30 pupils)	
V		Teacher B Math I Sec. 1 (30 pupils)
VI	Teacher A Eng. I Sec. 3 (30 pupils)	

INTER-DISCIPLINARY SCHEDULE  
(3 Teachers)

Figure 12

Period	Teachers A-B-C Independent Study Period Sec. 1-2-3 (90 pupils)		
I			
II	Teacher A Eng. 1 Sec. 1 (30 pupils)		Teacher C S.S. I Sec. 2 (30 pupils)
III		Teacher B Math I Sec. 1 (30 pupils)	Teacher C S.S. I Sec. 3 (30 pupils)
IV	Teacher A Eng. I Sec. 2 (30 pupils)	Teacher B Math I Sec. 3 (30 pupils)	
V	Teacher A Eng. I Sec. 3 (30 pupils)	Teacher B Math I Sec. 2 (30 pupils)	Teacher C S.S. I Sec. 1 (30 pupils)

## School-Wide Block Schedule

When a principal and his staff decide to make a school-wide scheduling commitment to better take advantage of time, talent, and space, one of the easiest to implement is the block schedule. Figure 13 shows one type which makes use of team teaching in the "core" subjects. This schedule also introduces the idea of time modules in lieu of the traditional periods.

Looking at the mathematics-science team, we find that team members have four modules of time allotted for both subjects. These may be divided equally or scheduled in a different manner daily. Some teams correlate content, and work together at all times. Others may prefer to work as separate math and science teams. In any case, these teachers are responsible for pupils in different grade levels in three of the four academic blocks of time. The remaining time block (modules 17-20 for math-science) is free for planning. Similarly, other teams have a daily block of time for professional planning and preparation. As mentioned before, planning time for teams during the school day is essential for effective teaching.

Although modules 13-16 are reserved for extra-curricular activities as well as independent study, a portion of this time may be used for individual conferences with students, additional small-group work, remedial work, or any other purpose planned by the staff or pupils.

As a reminder, the term "independent study" should not be construed to mean only non-scheduled time in this program. As in all team situations, classroom time should be allocated for independent study as well as for small-group work.

## BLOCK SCHEDULE

Figure 13

20 Minute Modules	Grade 7	Grade 8	Grade 9
1 - 4	Mathematics Science	Language Arts Social Science	Humanities Foreign Language
5 - 8	Occupational Ed. Physical Education	Mathematics Science	Language Arts Social Science
9 - 12	Humanities Foreign Language	Occupational Ed. Physical Education	Mathematics Science
13 - 16	Lunch, Band, Choir, Club Meetings, Independent Study		
17 - 20	Language Arts Social Science	Humanities Foreign Language	Occupational Ed. Physical Education

### School-Wide Block Schedule (Variation)

In contrast to the block schedule shown in Figure 13, most teams in the second type of block schedule (Figure 14) teach only one grade level. This schedule is designed to allow cross-discipline teams to function with groups of students within generally longer blocks of time. For example, the Unified Studies Team 7 teaches English, social studies, mathematics, and science to only 7th grade pupils. The team makes its own decisions as to the amount of time to be spent in the various subject areas. These decisions are based upon the educational needs of their students. Thus, when language arts skills are lacking, more emphasis on corrective procedures is possible by allowing additional time to meet this particular need. Also, by working together, the team can correlate units of work and can develop in their students a sense of relationship between otherwise fragmented parts of the curriculum.

In this particular schedule, the academic teams remain within their grade levels while the physical education and fine arts teams travel through the grade levels at different times during the day. While these special teams operate, the unified studies team is free for planning. Again, group size and types of activities can be changed by the team to allow for large-group instruction, small-group work, and independent study.

## SCHOOL-WIDE BLOCK SCHEDULE (VARIATION)

Figure 14

	Grade 7	Grade 8	Grade 9
1	Fine Arts Team F	Unified Studies Team 8	Unified Studies Team 9
2			
3	Physical Education Team P	(English, Social Studies, Mathematics, Science)	
4			
5			
6	Unified Studies Team 7	Physical Education Team P	
7			
8			
9	Lunch	Lunch	Lunch
10			
11	Lunch	Fine Arts Team F	Unified Studies Team 9
12			
13	Unified Studies Team 7	Unified Studies Team 8	Physical Education Team P
14			
15			
16			
17			
18			Fine Arts Team F

## Open-Lab Schedule

Some scheduling arrangements are so uncomplicated that they often go unnoticed and hence unused. Shown here in Figure 15 is such a schedule. English-social studies, and math-science teams meet with all grade levels at different times during the day. Again, the use of time during any instructional block is left up to the teams involved, but this schedule allows for another dimension: student decision making. Notice that each student has a block of time called Related Arts, and this period occurs at different times during the day for the three grade levels.

Related Arts refers to such areas of the curriculum as music, physical education, industrial arts, typing, home economics, foreign language, and others not included in the basic subjects. Several alternatives for the use of this time are available. First, the student may be scheduled into a given subject or subjects. Second, he may be allowed to select an area of interest. Third, a part of this time could be scheduled, as in foreign language, and the remainder spent on alternate days in industrial arts or typing. This kind of schedule is ideally suited for exploratory programs because of its provision for a wide range of student experiences.

For example, two typing sections scheduled on alternate days will give twice as many pupils an opportunity to learn to type than one section scheduled to meet every day.

Notice also that the last four modules daily are available for teacher-pupil conferences, independent study, tutorial work, special projects, or additional lab work in any of the related arts.

## OPEN-LAB SCHEDULE

Figure 15

20 Minute Modules	Eng. -S.S.	Math-Science	Related Arts-I.S.
1 - 4	Grade 9	Grade 7	Grade 8
5 - 8	Grade 7	Grade 8	Grade 9
9 - 10	Lunch		
11 - 14	Grade 8	Grade 9	Grade 7
15 - 18	Student Non-Structured Time for "Core," Related Arts, Band, Choir, and Independent Study.		

## Rotating Schedules

The schedules shown on the following page demonstrate how a conventional schedule may be re-arranged without changing the basic design. These schedule arrangements are ideal as initial steps to make a staff aware of the advantages of a flexible schedule.

Figure 16 is an alteration aimed at relieving monotony and fatigue. Last hour classes, when teachers and students are most tired, are rotated. Note that the fourth period remains constant. This is to allow for schedules that have the lunch period assigned to a particular hour of the day. If this is not the case, then the fourth period also may be rotated.

Figure 17 introduces another dimension. This is the inclusion of a seventh period into a six-period day. Provision of x and y periods opens up many possibilities. These periods can be placed anywhere in the schedule and may be used for activity periods, pep rallies, or assembly programs. If the x or y period is placed at the end of the day, pupils may be dismissed early to allow time for staff meetings.

Figure 18 uses the rotating schedule as a base and adds variable period lengths. The rotation allows each teacher to experience a variety of time blocks and to plan appropriate activities. For example, 90-minute periods are excellent lab periods, 45-minute periods are more than ample for large-group presentations, and 60 minutes is adequate for small-group work. Such time blocks may be of any length and can be placed through the day as the principal and his staff feel appropriate.

Figures 19 and 20 further illustrate how a traditional schedule can be made more flexible by combining class periods on various days instead of rotating. Where teachers are already scheduled "back-to-back" this offers further flexibility. Each two-period block becomes an entity and can be re-arranged by the teachers without altering the remainder of the schedule.

## ROTATING SCHEDULES

Figure 16

Period	M	T	W	T	F
I	1	2	3	5	6
II	2	3	5	6	1
III	3	5	6	1	2
IV	4	4	4	4	4
V	5	6	1	2	3
VI	6	1	2	3	5

Figure 17

Period	M	T	W	T	F
I	1	7	6	5	4
II	2	x	7	6	5
III	3	2	1	7	6
IV	4	3	2	1	7
V	5	4	3	y	1
VI	6	5	4	3	2

Figure 18

No. of Minutes Per Period	M	T	W	T	F
45	1	6	5	4	1
45	2	1	6	5	3
60	3	2	1	6	4
60	4	3	2	1	5
90	5	4	3	2	6

Figure 19

Period	M	T	W	T	F
I		1	1	1	
II	1	2	2	2	2
III	3		3		3
IV	4	3	4	4	4
V	5	5		5	
VI	6	6	6	6	5

Figure 20

Period	M	T	W	T	F
I					1
II	1	2	1	2	2
III	3				4
IV	4	3	4	3	4
V			5		
VI	5	6	6	5	6
VII				7	
VIII	7	8	7	8	8

## Block-Modular Schedule

To increase flexibility, it is possible to combine an alternate day schedule with blocks of time and modules, as shown in Figures 21 and 22. This schedule, designed for a junior high school of 1200 pupils, could be modified to fit the needs of most schools. Each Roman numeral (I through IV) refers to a group of approximately 100 pupils. This grouping system permits the offering of different courses within a given grade. For example, groups I and II in grade 7 may take algebra and groups III and IV may have general math.

By using an alternate-day plan, pupils have the advantage of taking more subjects than in conventional programs. In this schedule, health, typing, physical education, and occupational education are offered on alternate days. Thus, the same facilities and teachers serve twice as many pupils.

For example, a seventh, eighth, or ninth grade student in Group I, on a given day (Figure 21), could have health and physical education. The next day (Figure 22), he would replace health with typing and physical education with occupational education. In a ten-day cycle, each alternating subject would meet five times.

Note that in addition to the four subjects offered on alternate days, six other subjects (i.e., English, social studies, mathematics, science, foreign language, and the humanities) are offered daily. Therefore, it is possible for each pupil to take as many as 10 subjects plus orchestra, band, or choir.

## BLOCK-MODULAR SCHEDULE

First Day Schedule

Figure 21

15 Minute Modules	Grade 7				Grade 8				Grade 9			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1	Lang.	Health	Math		P. E.	Occ.	Humanities		Math Science		English S. S.	
2	English S. S.		Science		Humanities	P. E.	Occ.	Lang.	Health	Lang.		Type
3			Lang.							Type	English S. S.	
4	Math Science		English S. S.		English S. S.		Math Science		P. E.	Occ.	Humanities	
5			Lang.		Type	Lang.		Type				
6	Clubs Orchestra Band		Choir I. S. Lunch		Clubs Orchestra Band		Choir I. S. Lunch		Clubs Orchestra Band		Choir I. S. Lunch	
7			P. E.		Occ.	Humanities		Health Lang.		English S. S.		Math Science
8	Humanities		P. E.		Occ.		Math Science		Health Lang.		Math Science	
9			Lang.		Type	English S. S.		Type		Lang.		Humanities
10	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
11			Lang.		Type	English S. S.		Science		Humanities		P. E.
12	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
13			Lang.		Type	English S. S.		Science		Humanities		P. E.
14	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
15			Lang.		Type	English S. S.		Science		Humanities		P. E.
16	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
17			Lang.		Type	English S. S.		Science		Humanities		P. E.
18	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
19			Lang.		Type	English S. S.		Science		Humanities		P. E.
20	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
21			Lang.		Type	English S. S.		Science		Humanities		P. E.
22	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
23			Lang.		Type	English S. S.		Science		Humanities		P. E.
24	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
25			Lang.		Type	English S. S.		Science		Humanities		P. E.
26	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
27			Lang.		Type	English S. S.		Science		Humanities		P. E.
28	Humanities		P. E.		Occ.		Math Science		Humanities		P. E.	
29			Lang.		Type	English S. S.		Science		Humanities		P. E.

Although the school day has been broken up into 15-minute modules, the basic schedule design is in two-hour blocks. The time within each two-hour block has been adjusted to accommodate classes of varying length. For example, foreign language, health, and typing meet for only two modules of time, while physical education, occupational education, and humanities have four modules.

The "core" teams (English and social studies, math and science) share blocks of time and may vary the number of modules daily as desired. All the possibilities inherent in a "back-to-back" schedule are present in each block with an added feature—the schedules for different grade levels are interlocked. This means that at any given time only two of the three English-social studies teams (or math-science teams) are scheduled with pupils. This gives the third team a large block of time for planning or an opportunity to reinforce either or both of the other grade-level teams.

In contrast, there is only one humanities team, which is scheduled continuously throughout the day. Since teachers cannot be expected to teach at all times, extra team members or paraprofessionals are added to provide relief. Careful planning will provide free time for each team member and will reduce the pupil-teacher ratio whenever desired. The foregoing comments about the humanities schedule also apply to foreign language, physical education, and occupational education. Health teachers, who are scheduled only a fraction of each day, are available to provide extra support to the physical education program. Similarly, typing teachers are available several modules per day to add clerical support to teams, or better, to maintain an "open lab" for pupils wishing to use the equipment.

Alternate Day Schedule

Figure 22

15 Minute Modules	Grade 7				Grade 8				Grade 9			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
1	Lang.	Type	Math		Occ.	P. E.	Humanities		Math Science		English S.S.	
2	English		Science		Humanities		Occ.	P. E.	Lang.	Type	Lang.	Health
3	S.S.		Lang.	Health	Humanities		Occ.	P. E.	Math Science		English S.S.	
4	Type	Lang.	English		English S.S.		Math Science		Occ.	P. E.	Humanities	
5	Math		S.S.		English S.S.		Health	Lang.	Humanities		Occ.	P. E.
6	Science		Health Lang.		Lang.	Type	Math Science		Humanities		Occ.	P. E.
7	Clubs		Choir		Clubs		Choir		Clubs		Choir	
8	Orchestra		I.S.		Orchestra		I.S.		Orchestra		I.S.	
9	Band		Lunch		Band		Lunch		Band		Lunch	
10	Occ.	P. E.	Humanities		Type	Lang.	English		English S.S.		Math Science	
11	Humanities		Occ. P. E.		Math Science		English S.S.		Type	Lang.	Health	Lang.
12	Humanities		Occ. P. E.		Math Science		English S.S.		Type	Lang.	Math Science	
13	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
14	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
15	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
16	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
17	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
18	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
19	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
20	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
21	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
22	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
23	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
24	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
25	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
26	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
27	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
28	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	
29	Humanities		Occ. P. E.		Math Science		English S.S.		English S.S.		Math Science	

## Flexible-Modular Schedules

As teachers and administrators accept the fact that learning does not have to take place in groups of 30, they generally develop flexible schedules which provide opportunities for large-group instruction, small-group discussion, and independent study.

Similarly, as they question standard lengths of periods, they often turn off the bells and adopt modular schedules that provide periods of variable length. In some cases, a faculty will go even further and discard the idea that a class must meet daily. When this happens, two or more schedules may be required to show the activities for a given week.

When all of these ideas are combined, the product is called a "flexible modular schedule." Because such schedules are too complex for most administrators to build by hand, computer generation of the schedule becomes a necessity. The two best known computer schedules of this type are those developed by Stanford University and by M.I.T.'s "GASP" program. Each uses the computer as a tool to handle the data, but relies upon the principal for initial instructions as to utilization of staff and facilities.

In contrast to the single-sheet "master schedule" found in most schools, the computer produces an individual schedule for each teacher and pupil. Examples of such schedules are shown in Figures 23 and 24. Notice that no class meets five days per week, nor does any one day resemble another. Some classes are longer than others: art meets for four modules, but a physical science large group meets for two. The efficiency of the large group frees teachers so they can devote most of their time to helping individuals and small groups.

Note that a portion of the student's day is unscheduled. This time may be used in many ways: independent study, conferences with teachers, meetings with counselors, relaxation in the student lounge, skills practice, or research in an "open lab." These "open labs" are the result of reducing the number of times per week that a class meets. Any facility not in use during a given module may become an open laboratory, where students, with a teacher or paraprofessional present, are allowed to pursue work in which they are interested. For example, chemistry students scheduled for one large group and two small groups per week may wish to use the chemistry lab to complete experiments, to receive extra help, or to conduct

## FLEXIBLE-MODULAR SCHEDULES

Computer Generated Master Schedule  
(Pupil Sample)

Figure 23

	Monday	Tuesday	Wednesday	Thursday	Friday
1	World Geography Small Group Room 110	World Geography Small Group Room 110	Biology 2 Small Group or Lab Room 126	World Geography Small Group Room 110	English 3 Small Group Room 111
2					
3					
4	I.S. (Pupil Options) Open Lab I.M.C. Lounge Art etc.	I.S.		I.S.	I.S.
5			I.S.		
6		Art 1 Room 118	Physical Science Large Group Room 203	Art I Room 118	Physical Science Small Group or Lab Room 206
7					
8					
9			I.S.	I.S.	
10	Lunch	I.S.	Lunch	Lunch	Lunch
11					
12	I.S.	Lunch	I.S.		
13	Math 2 Large Group Room 119			Language Lab	I.S.
14		I.S.	Math 2 Large Group Room 119		
15					
16	I.S.	English 3 Large Group Room 121	I.S.	English 3 Small Group Room 111	Math 2 Small Group Room 201
17	Physical Science Small Group or Lab Room 206			I.S.	World Geography Large Group Room 126
18					
19		Biology 2 Small Group or Lab Room 126			
20	I.S.			Biology 2 Large Group Room 126	I.S.
21					
22	French I Room 109	Math 2 Small Group Room 201	French I Room 109	Math 2 Small Group Room 201	French I Room 109
23					
24					

an experiment of special interest. Similarly, other facilities such as art, gym, shop, sewing, cooking, typing, music, etc., provide excellent "open lab" experiences for boys and girls.

Under a flexible system, some students take as many as eight, ten, or twelve courses in contrast to the traditional five or six.

Although the computer-generated schedule is not truly flexible in the sense that it can be changed during the school year, it will take care of almost any special demand placed in advance. For example, if the band director is available only in the morning, or if an art teacher can meet with students only three days per week, the information is stored in the computer's memory bank and the schedule is made to meet these specifications.

No schedule, including that generated by a computer, guarantees better education. Before "changing for the sake of change" a responsible faculty will determine whether or not the present school schedule enhances the attainment of sound educational objectives. If not, then the schedule should be changed to fit the program, rather than forcing the program to fit the schedule.

Computer Generated Master Schedule  
(Teacher Sample)

Figure 24

	Monday	Tuesday	Wednesday	Thursday	Friday
1	Team Planning Math I	Math I Large Group Sec.1,2,3,4,5,6 (90 pupils) Room 119		Math 1 Large Group Sec.1,2,3,4,5,6 Room 119	Team Planning Math 2
2					
3					
4	Math I Small Group Sec. 1 Room 203		Math 1 Small Group Sec. 1 Room 203		Math 1 Small Group Sec. 1 Room 203
5					
6					
7	Math I Small Group Sec. 2 Room 203	Math I Small Group Sec. 2 Room 203		Math 1 Small Group Sec. 2 Room 203	
8					
9	Math 1 Small Group Sec. 3 Room 203		Math 1 Small Group Sec. 3 Room 203		Math 1 Small Group Sec. 3 Room 203
10					
11	Lunch	Lunch	Lunch	Lunch	Lunch
12					
13	Math 2 Large Group Sec. 1-4 Room 119	Team Planning Gen. Math	Math 2 Large Group Sec. 1-4 Room 119		
14					
15					Math 2 Small Group Sec. 4 Room 201
16					
17					
18	Gen. Math Large Group Sec. 1-6 Room 119		Gen. Math Small Group Sec. 6 Room 201		Gen. Math Small Group Sec. 6 Room 201
19					
20					
21					
22					
23		Math 2 Small Group Sec. 4 Room 201		Math 2 Small Group Sec. 4 Room 201	
24					

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(Brockton, Massachusetts)  
Brooklyn  
Chardon  
Cuyahoga Heights  
Fairview Park  
Independence  
Lakewood  
Laurel School  
Lutheran Schools  
(Greater Cleveland)  
Mayfield  
Muskegon Public Schools  
(Muskegon, Michiga..)  
Niles Public Schools  
(Niles, Michigan)  
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Olmsted Falls  
Owatonna Public Schools  
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