

the BC teacher
MAY-JUNE 1962
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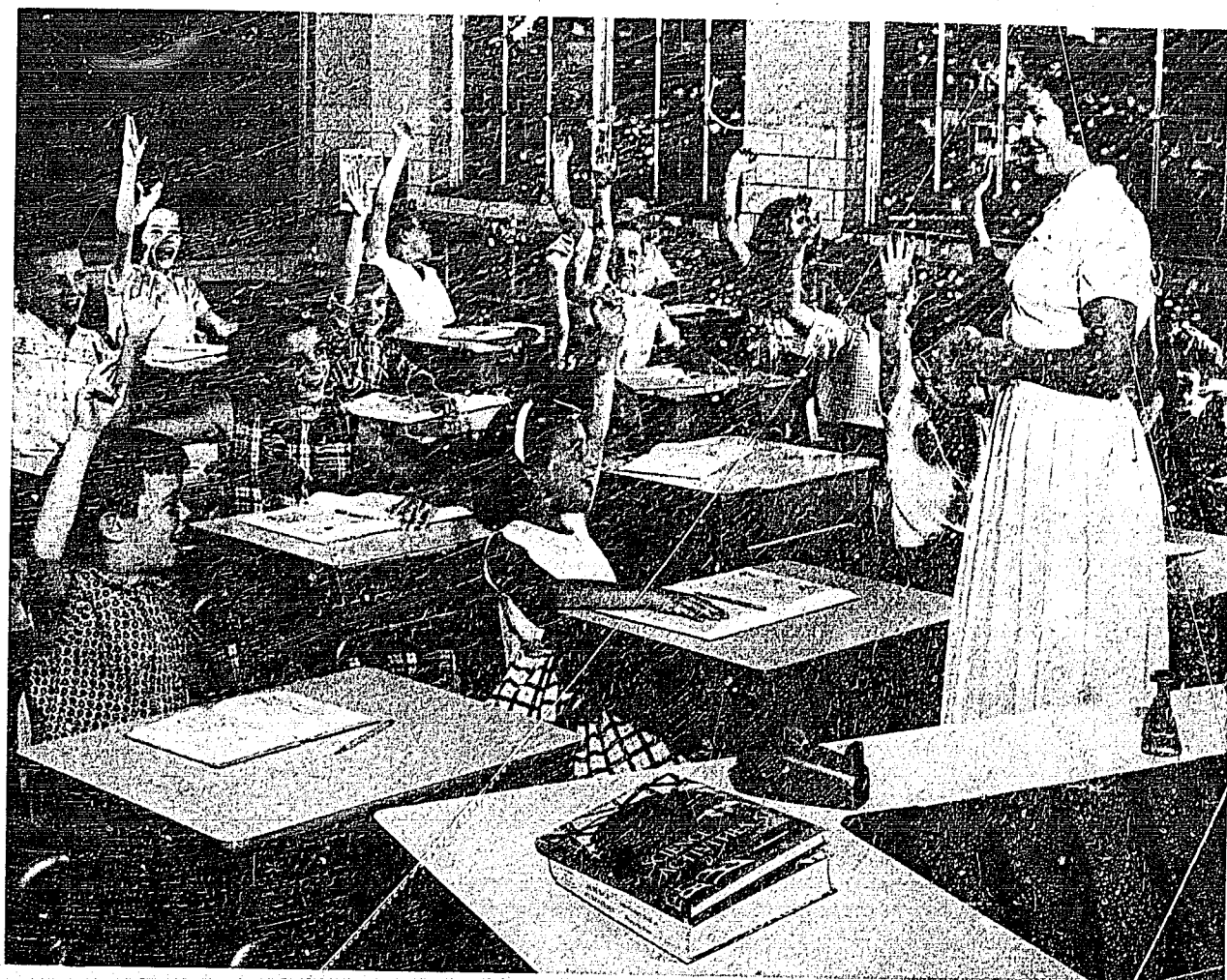
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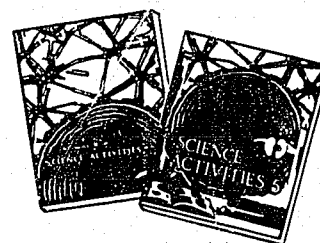
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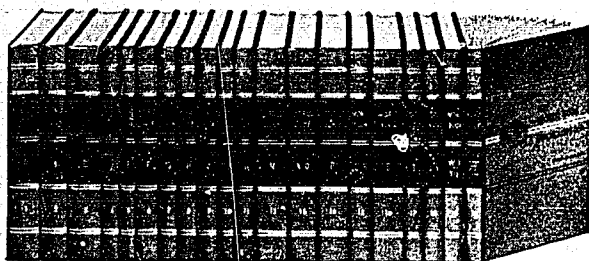
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IN THIS ISSUE

Commencing on page 330, Dr. F. G. Robinson continues his study of the research concerning programmed learning.

J. K. T. Taylor, who has been in Sarawak for a year, completes a series of articles on the school system in that country with a detailed description of the school in which he is serving. See page 332.

Teaching conditions in British Columbia and New South Wales are contrasted in an article by G. T. Caldwell. See page 335.

Ken Travers, of the University of B.C., conducted an experiment with some units of the new course for Mathematics 8. He reports his work on page 337.

A training ground for student leaders is the Executive Club. Miss Helen I. Barr outlines the organization of such a club, commencing on page 339.

Ability grouping will work, says Gerald Prevost. On page 355 he describes the organization of a school program based on ability grouping.

The 1962 Annual General Meeting is reported in this issue. See pages 342, 345, and 350 for the President's Report, the address by Dr. English and the summary of decisions made at the A.G.M.

THE COVER PICTURE

This month's cover picture shows a picnic spot on the shores of Lac la Hache. Photograph by courtesy of the Photographic Division, B.C. Department of Recreation and Conservation.

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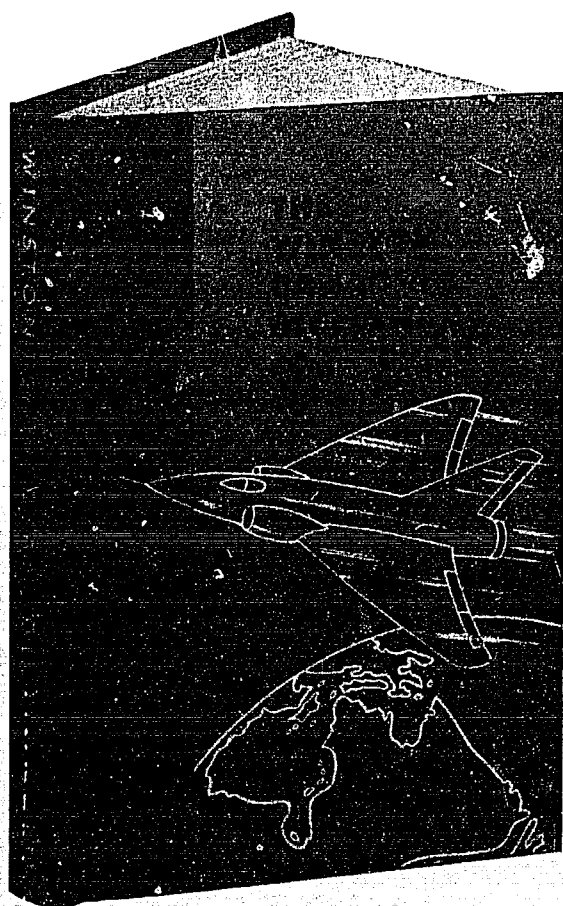
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the Editor comments

Department Publications

THE DEPARTMENT OF EDUCATION recently distributed a brochure describing the courses to be offered at the British Columbia Institute of Technology.

We congratulate all those associated with the production of this excellent publication. It is informative and attractive. The course descriptions are well written and provide information of great value to prospective students, their parents and school counsellors. The brochure is effectively illustrated and color has been used to advantage.

Another Department publication worthy of favorable comment is the revised edition of the guidance booklet, *Teaching in British Columbia*.

We hope that in the very near future we will have occasion to congratulate the Department of Education on the production of yet another publication—*The B.C. Schools*.

For several years teachers, and thus education, profited by the pertinent information provided in this journal. There have been numerous teacher requests that it be revived. At the insistence of many members the B.C.T.F. brief to the Chant Commission urged that *The B.C. Schools*, or a similar publication, again be issued regularly by the Department of Education.

The Chant Commission (page 433) recommended that publication be renewed.

The complaint we hear most frequently from teachers is that they are uninformed on Department of Education plans and policies. *The B.C. Schools* would provide an effective medium through which the Department could provide the teaching staff with the information it desires. More must be done to demonstrate to classroom teachers and principals that they are part of the educational team.

There can be only one reason why the recommendation of the Chant Commission with respect to the production of *The B.C. Schools* has not been acted upon—money.

We repeat our oft-expressed observation that the personnel of the Department of Education are very greatly over-worked and can not be expected to continue at their present rate of production without staff additions, let alone undertake additional duties. Immediate steps should be taken to appoint someone whose main duty would be editing *The B.C. Schools*. He would have to be provided with the necessary secretarial assistance.

Staff and printing costs would not be an expenditure. They would be an investment in an improved educational system.★

Cover Comment

"What makes a good cover for such a journal as *The B.C. Teacher*?" queries an editorial of this publication of British Columbia, Canada.

"Some people will practically insist that the subject of the cover design be directly related to some article. Others will argue that the main requisite is an attractive cover and whether or not its subject is related in any way to the contents is inconsequential." *The B.C.*

Teacher has chosen the latter viewpoint. Even those education editors who may prefer covers related to content, will approve *The B.C. Teacher's* choice.

Commencing the third four-color cover series in its September-October issue, this journal has dealt in turn with historical scenes in honor of British Columbia's centenary, original paintings by B.C. teachers, and, at present,

panoramas of the B.C. countryside. Teaching children to love and respect the land they live in is part of an educator's responsibility. Four-color covers are beyond the budgets of many educational journals, but attractive and useful designs are still possible in black and white.

—From February, 1962, issue of *Echo*, published by World Confederation of Organizations of the Teaching Profession, Washington, D.C.

This is the second section of a two-part article in which Dr. Robinson examines the research material on programmed learning.

Mechanized Teaching

F. G. ROBINSON

MUCH OF THE CURRENT literature centers on the claims and counterclaims of those who advocate one type of program in preference to another. However, despite the fact that these respective claims are made with considerable vigor, no evidence is available to suggest that the constructed response program is better or worse than the multiple-choice program, or that any conclusive opinion can be reached in favor of intrinsic as opposed to linear programs, and so on. In fact, many of the principles that are cited as gospel by adherents of the Skinner school have not been validated in experiments. Thus, there is no proof that "overt" response is superior to "covert" response, that the error rate of the learner should be extremely low, that there should be feedback on every trial and that it should always be positive feedback, or that mechanical or other means should be used to prevent cheating, and so on. On even shakier grounds, as far as proof is concerned, are the many rules of thumb (such as "fading," various "prompting" devices, and so on) advocated by some programmers.

This does not mean that there are no differences in the effectiveness of various types of programs, that overt constructed responses are not desirable, or that the rules of thumb are inaccurate. On the contrary, it simply means that they have not been "proved" effective—a fact which tells us more about the inadequacy of educational research than about the effectiveness of the techniques.

In view of the somewhat questionable nature of the many programming rules of thumb, what are we to make of the claims, particularly strong in the Skinner camp, that programming is an esoteric art which is definitely beyond the grasp of those uninitiated into the subtleties of Skinnerian psychology? These claims are difficult to substantiate, particularly in view of the fact that many of the people who are currently constructing what appear to be effective programs have not had special training for this work, nor do they possess characteristics which would explain why they should be among the "chosen few." In other words,

it seems reasonable to expect that any teacher with a grasp of his subject matter—and possibly a few hours instruction in the few genuine known "principles"—could construct a program of moderate effectiveness. I am heartened in this opinion by some advice offered to teachers by T. F. Gilbert:

"Assuming you are the teacher, you should begin with the most trustworthy facilities you have available: First, trust your common sense; next, use the approximations to principles of programming that have been set down by a few people. Remember, these people probably are not more expert than you, only more audacious. They may be mostly wrong. Use their principles only as a starting place."

The adequacy of the psychological theory underlying the programmed learning movement may not seem to be a crucial issue, especially when the thoughts of educators are turned toward questions of the effectiveness of programmed instruction and the role of the teacher. But taking the long view, modifications of present classroom practices are not likely to be very productive if we are off on a wrong tangent. Since the only well-developed theory in the field seems to be that of Skinner's "operant conditioning," which is employed as the experimental paradigm for the linear program, and since most of the classroom applications seem to involve linear programs, then the problem reduces to the adequacy of operant conditioning as a theory of learning.

There are many reasons for harboring suspicions about Skinner's theory. Consider first its origin. The advance notices of many programs suggesting that they are "based upon laws of learning recently discovered in the experimental laboratory" are not strictly accurate. Actually, there are many competing theories of learning, all based to some extent upon some experimental evidence (usually evidence manufactured for the specific purpose of verifying the theory). The typical experimental situation employed in the development and verification of Skinner's theory of operant conditioning involved a very hungry pigeon confined in a device known as a Skinner box.

Skinner and his associates found that the behavior of the pigeon could be controlled and predicted by applying appropriate "reinforcement" in the form of food pellets. Thus the rate at which the pigeon would peck a pushbar located in the box was higher if reinforcement was made on a "fixed rate" schedule (every fiftieth peck, for example) than if the pigeon was reinforced on a "fixed-interval" schedule (every minute, say).

In a second kind of experiment, the pigeon was made to perform very specific (and often complex) acts, by reinforcing only those responses which increasingly approximate the desired behavior. Thus in order to make the pigeon peck a particular spot on the wall, the experimenter begins by reinforcing any peck, then only pecks which are closer to the required spot, then only pecks which are still closer, and so on. Thus the pigeon is led to "successively approximate" the correct response.

Two Ways to Analyze

In the first kind of experiment, the fundamental unit of analysis is the rate of elicitation of responses of a given kind (e.g., pecking a bar); in the second, the unit is the degree of approximation to a desired response. It seems to me that the "rate of response" variable does not have relevance in any educational situation, and the "degree of approximation to a desired response" variable has relevance in a decidedly limited number of instances. For example, the behavior of a student who is engaged in the solution of a geometry problem cannot, in my opinion, be described in either of these units.

Several writers have carried this argument further; for example, Tyler analyzed some of the programs written by the Skinner school and argued that they do not represent an application of the principles derived from the laboratory research on operant conditioning. Zeaman argued that the mechanical arrangements in the various Skinner machines do not conform to the experimental conditions for operant conditioning. One would appear to be justified in concluding that many of the applications of Skinner's theory to human behavior seem little more than examples of reasoning by analogy.

I think we should also keep in mind that the behavioristic school has for some generations been characterized by an immense self-assurance, almost bordering upon arrogance. Probably the most notorious example of this was Watson's confident assertion that he could take a random selection of infants and train them to be anything he wished, doctors, lawyers—you name it!—conditioning would do the rest. Thorndike was almost as confident about his "law of effect" and Guthrie about the law of "contiguous conditioning." Some of the writings of Skinner's adherents

Dr. Robinson is Research Director for the Canadian Teachers' Federation. His office is in Ottawa.

have the same confident tone, assuring us that we now understand human learning and that we can throw away such outdated mentalistic concepts as "insight," "thinking," etc. And yet with a fairly lengthy period of behaviorism behind us, are we any closer to understanding or controlling the processes of problem-solving, or the subtleties of creative thinking, or do we have to evoke the work of Piaget, the Gestalt school and others to understand these phenomena? And does Skinner's theory really help us much with the all-important problem of school motivation? I think the answer to the latter question (which I take to be in the negative), can be found in the tendency in recent papers to throw the motivation problem back to the teacher by arguing that the presentation of correct answers will be reinforcing only if "correctness" has been previously endowed by the teacher with the properties of a "secondary reinforcer."

Consequently, we can expect that for some time to come the teacher who desires some kind of conceptual framework in which to order the complex phenomena of the classroom will still have to employ such terms as "level of aspiration," "insight," "ego involvement," "self-concept," and the like, despite the fact that the strict behaviorist sneers at these notions because they do not lie in the realm of "observables."

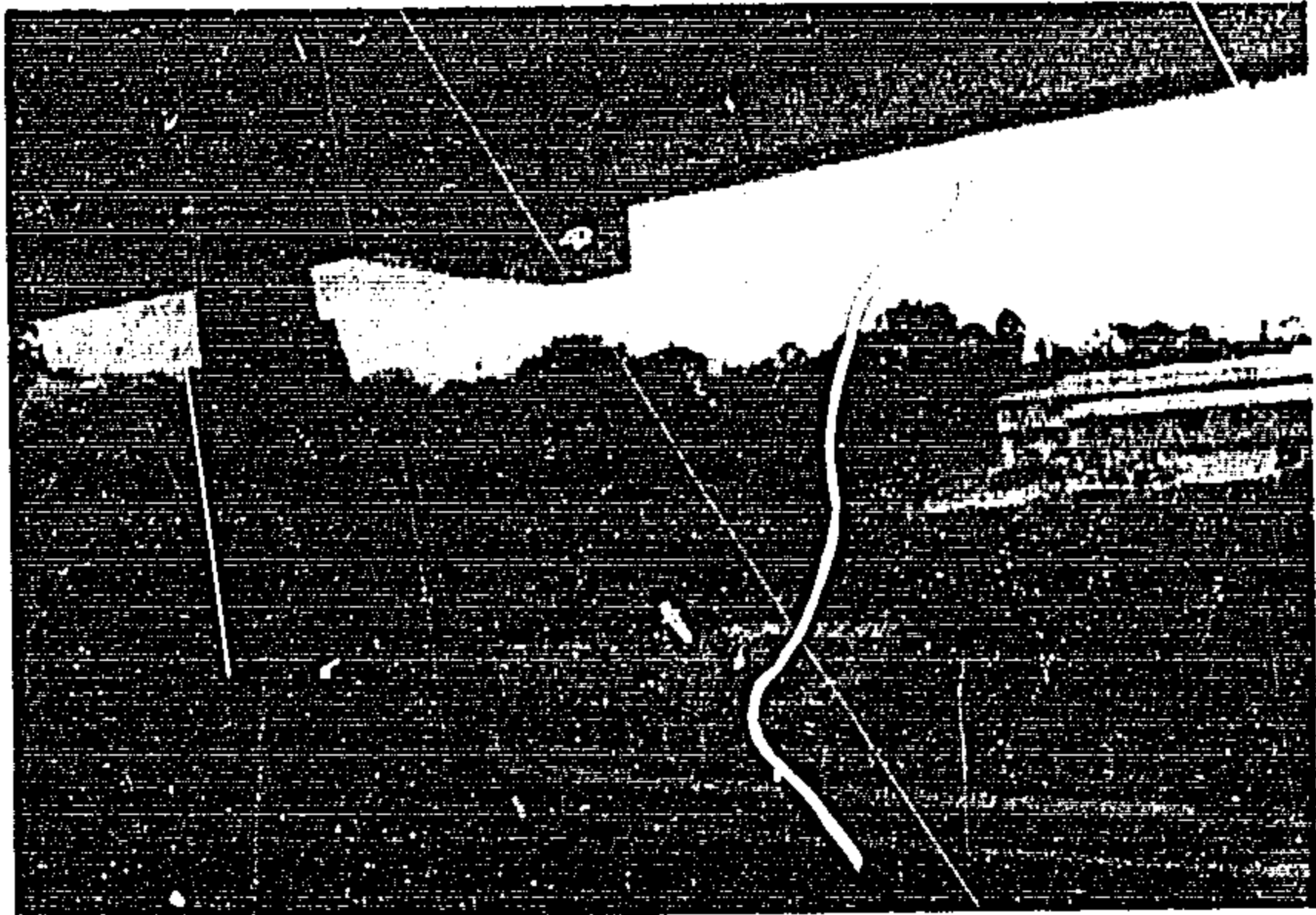
Present Material in Small Units

While it would appear that the adequacy of the human applications of Skinner's theory may be called into question, this could hardly be construed as meaning that the basic ideas in programmed instruction are false. On the contrary, the notion of feedback (or immediate reinforcement) is common to many theories of learning, and the advisability of presenting factual or sequential material in small, digestible units would not be widely disputed. In reality, the research now being conducted consists of the elaboration and interrelation of variables surrounding these two notions, which in themselves do not necessarily imply an acceptance of Skinner's theoretical orientation. For that reason, I do not feel that we need to dispute Skinner as vigorously as if the research followed directly from, and was constrained by, this theory.

It has been pointed out by several speakers at the C.T.F. seminar on programmed learning that very few things have been definitely "proved" about programmed learning. However, I would like to reiterate my opinion that complete proof is not possible in educational research, because outcomes are so dependent upon such "local variables" as characteristics of particular teachers, students, and situations.

It would seem, therefore, that in education we will always find ourselves somewhere between the states of complete ignorance and complete proof, and it follows that at some point between these two extremes the responsible person must take a calculated risk

Continued on page 377



Looking from Classroom Block over Woodwork and Science Block to soccer field and dormitories.

Simanggang Secondary School

Simanggang Sentinel IV

J. K. T. TAYLOR

THIS IS QUITE a school as you can see by the photographs. Certainly you would not expect to see such grand buildings in the middle of the jungle ordinarily, but since 1957 the Sarawak Government, with aid from Great Britain and the Colombo Plan countries, has been able to build several new Government secondary schools.

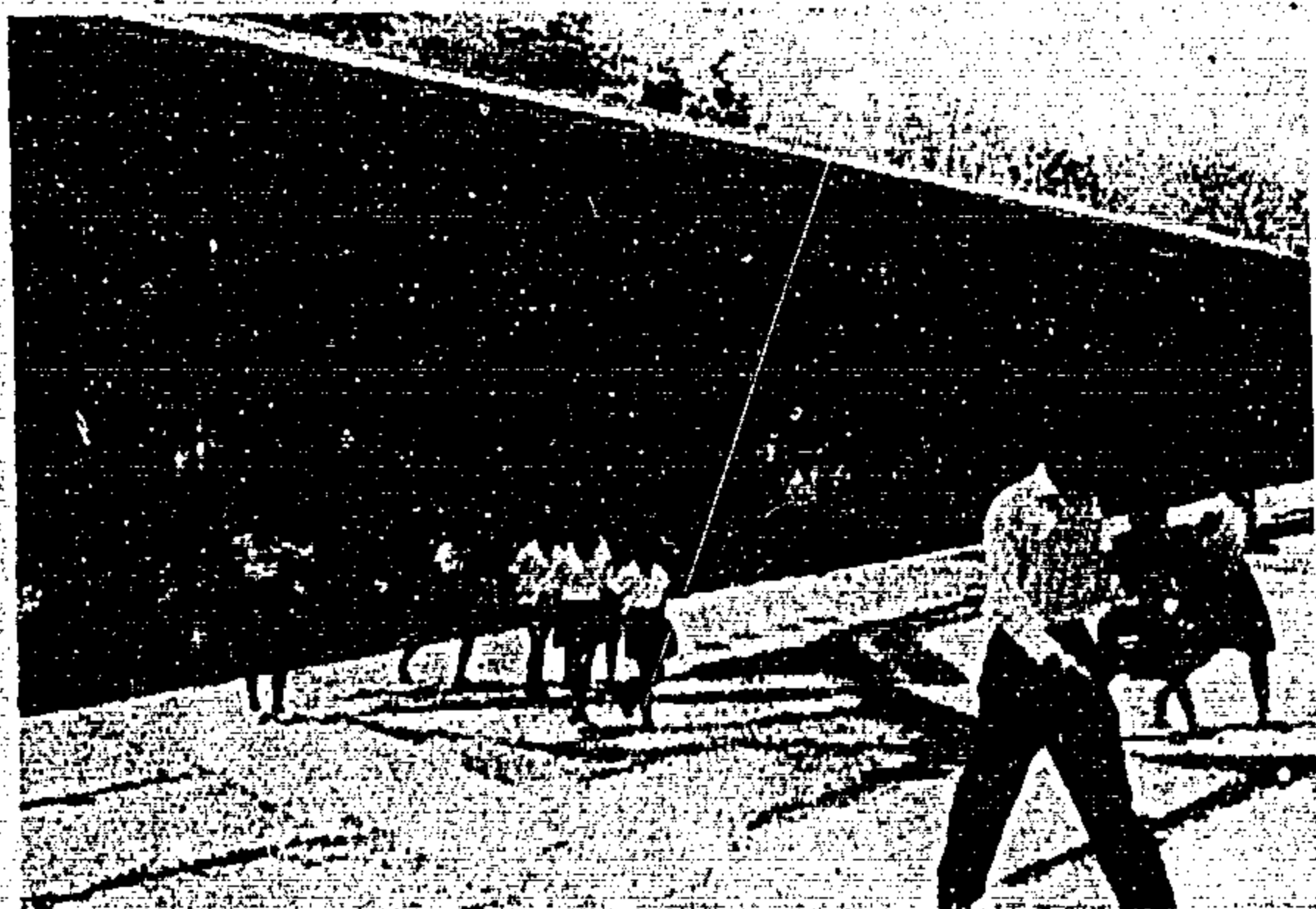
Prior to 1957, secondary education in Sarawak was obtained in mission and private secondary schools. Now, however, provided he is "selected," that is, one of the top 30% of the graduates from the primary schools, a student may obtain a secondary education at one of the new, well-equipped, well-staffed Government secondary schools. This Simanggang school is one of five new Government secondary schools now

in operation. It is not yet fully equipped nor has it grown to its full complement of staff and students.

The photographs in this article show that there are many differences between B.C. secondary schools and this one. The first thing that one notices different is the color of the students' skins. Very soon, however, this difference disappears in one's mind as one sees the students as individuals and learns to know them as friends. The second difference one notices is the casual dress of the staff—open shirts and shorts—a very sensible dress for the tropics.

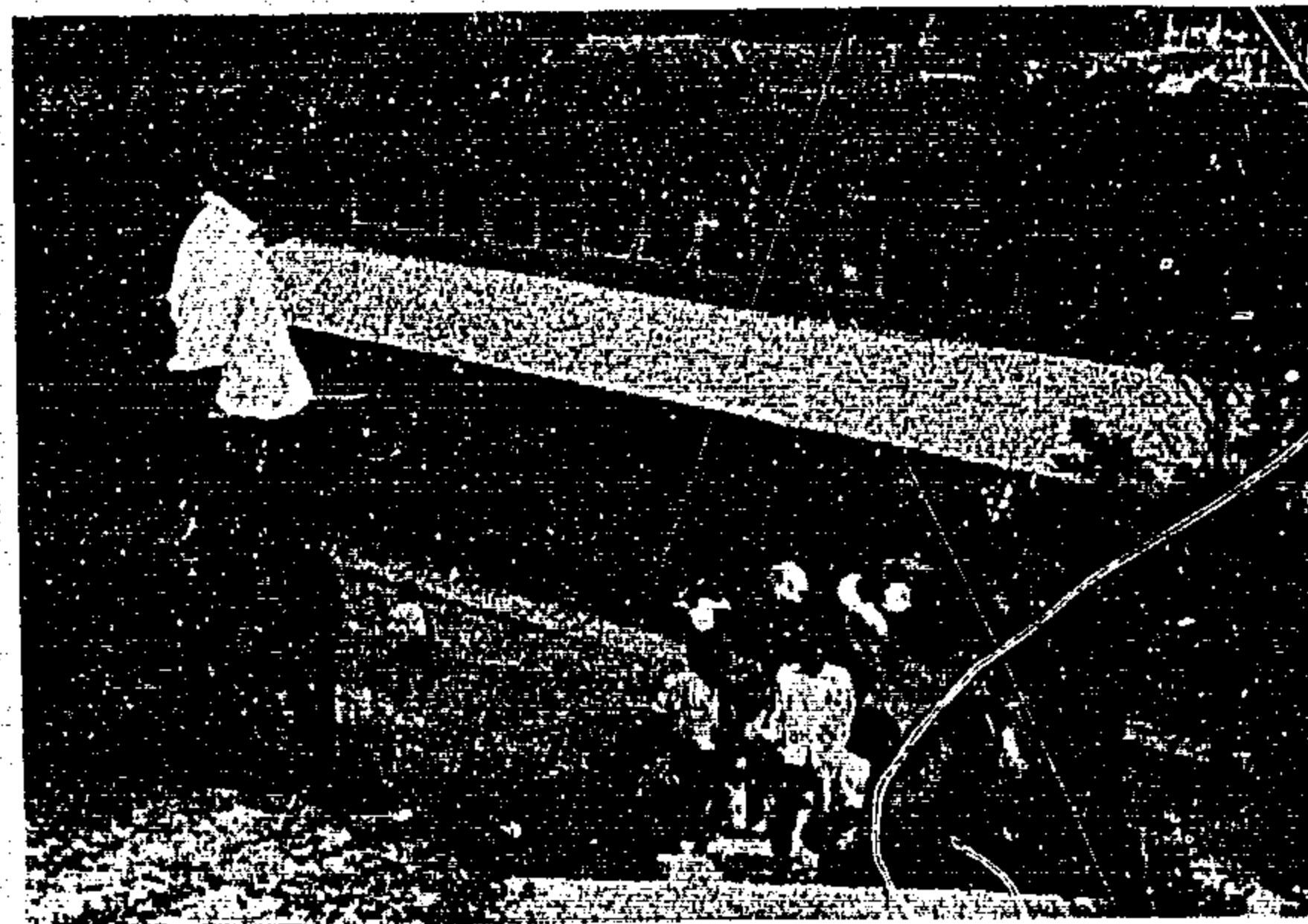
The site of the school is very different from those we find in B.C. This school is built on a hilly section of ground surrounded by rubber trees and jungle growth. Instead of the whole area being levelled off,

Pupils leave the Classroom Block at the day's end.



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Woodwork and Science are in a separate building.



THE B. C. TEACHER

the natural contours of the land have been left and the only levelling done is that which was necessary for the siting of the buildings, courts, and playing fields. The school is made up of several buildings, each well away and separate from the others. This separation is mainly the result of the climate. In the temperate zones of the world, where heating is necessary in the schools, it is economical to keep the whole school within one building. But in the tropics, it is necessary to try to keep the buildings as cool as possible. To keep the buildings cool, the school is divided into separate blocks—administration, assembly, woodwork-shop, science laboratory and classroom blocks—which are placed in the best position for deflecting the sun's rays and for catching any breath of wind that blows. As well, the buildings are constructed very open to allow as much air circulation as possible. Usually, these buildings are connected by covered walkways for protection against the sun's hot rays and the frequent torrential downpours. Our school, however, and other new secondary schools, will have to do without this luxury until more money is available. Boarding houses, teachers' quarters, and students' gardens, as well as employees' quarters, are other sights that we in British Columbia are not familiar with. I have dwelt on the differences, but there are many similarities, too. However, these, I will leave to the reader's imagination.

Certainly, it is no hardship for the students to come to this school. Indeed, they are very lucky to have been "selected." What a difference this selection makes in the attitude of the children and in the tone of the school. However, as it is with the U.P. students in our schools in B.C., it is sometimes necessary to impress upon the "selected" students here, that they are the future leaders of their country and therefore they must try even harder than they are doing. If they do not work hard enough, they may find themselves "unselected" and then they will have to choose one of three alternatives:

(a) to pay higher fees and go to a mission or private

Mr. Taylor is the Vancouver teacher sent to Sarawak by the British Columbia Teachers' Federation.

school if it will take them;

(b) to try to get jobs in the towns as clerks, policemen, secretaries, shopkeepers' assistants, agricultural assistants, nurses' aids, or laborers, etc.; or

(c) to return to their kampongs and longhouses (if Malays and Dayaks) to work on the farms planting padi.

Many of the Chinese students who become "unselected" can continue their educations in private schools because their parents can afford to send them, but the Malays (Muslims) and Sea Dayaks usually have to return to their kampongs and longhouses to farm. It is becoming more and more difficult to obtain a government job (other than laborer) unless one has at least a Form III (Grade IX) education. This school will give the students the opportunity to obtain University Entrance if they have the capability and desire to learn. Any student who is capable is assured of a scholarship to go to a university in Malaya, Great Britain, the Colombo Plan countries, or elsewhere.

The following tables show the make-up of the staff and students:

Table I.—Staff

English	E. C. Hicks	M.A. (Oxon)	Ag/Headmaster
Canadian	J. K. T. Taylor	B.A. (U.B.C.)	Ag/Assistant Master
Indian	C. P. Abraham	B.S. (Madras)	Science Master
Sea Dayak	Ralph Garai	Christchurch Technical College, N.Z.	Woodwork Master
Chinese	Vincent Wong	Sibu Teachers' Training Col.	Transition Class Specialist
Chinese	Paul Teo	Batu Lintang Teachers' Training Col.	Teacher
Sea Dayak	Dunstan Ludan	Batu Lintang Teachers' Training Col.	Teacher
Chinese	Miss Au Yi Chin	Batu Lintang Teachers' Training Col.	Teacher

The Library is an airy, well-lit room.



MAY - JUNE, 1962

A work crew tidies the grounds.



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Table II.—Enrolment February 1962

FORM	BOARDERS		DAY PUPILS		TOTAL		
	B	G	B	G	B	G	
Transition	5	5	10	5	15	10	25
IA	11		12	5	23	5	28
IB	24	6			24	6	30
IC	27	3			27	3	30
IIA	15	3	1		16	3	19
IIB	13			5	13	5	18
	95	17	23	15	118	32	150

Table III.—Races

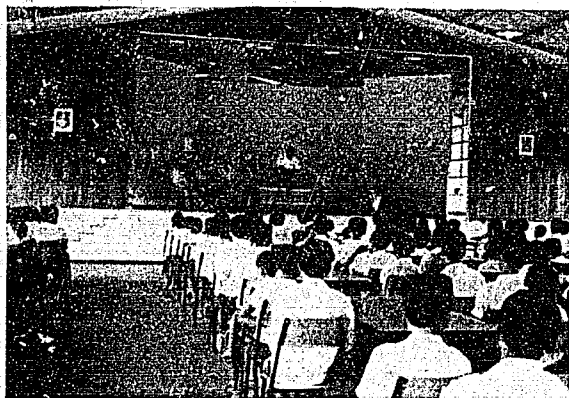
	Iban (Sea Dayak)		Chinese		Malay (Muslim)		Others		TOTAL		
	B	G	B	G	B	G	B	G	B	G	
Transition	2	1	13	9					15	10	25
IA	9		11	5	3				23	5	28
IB	21	3	3	3					24	6	30
IC	25	2			2	1			27	3	30
IIA	12	3	1		3				16	3	19
IIB	11			2	2		3		13	5	18
	80	9	28	19	10	1	3		118	32	150

The photographs give you some idea of what life is like at the Government Secondary School, Simanggang. The day starts at 3:00 a.m. every Monday through to Saturday. Wednesday and Saturday afternoons are free. Classes continue from 1:30 p.m. to 3:00 p.m. the other weekdays. Sunday is free all day. Every Monday to Friday after school nearly 1/3 of the school children work from 3:15 p.m. to 4:15 p.m. on the grounds and buildings, cleaning up, burning, cutting grass and bush. At 4:30 p.m. every weekday there is an activity: Monday—Red Cross; Tuesday—Boy Scouts; Wednesday—Junior Soccer; Thursday—Senior Soccer; Friday—Girls' Games and Boys' Softball; Saturday—Girl Guides. For those people not

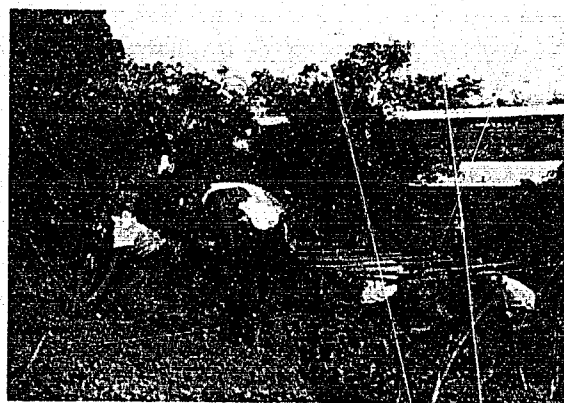
partaking in group activities, the library is open every day except Saturday for an hour after school. Other children may clean their rooms; sing and play instruments (some quite good home-made ones); work in their gardens; play games—badminton, volleyball, chess, checkers, etc.; listen to the radio; or take a walk to the bazaar to shop. From 7:00 p.m. to 8:30 p.m. every evening except Saturday, the boarding pupils have Preparation in their classrooms. At 9:00 p.m. it is "lights out." The meals are taken in the Assembly Hall-cum-kitchen at 7:15 a.m., 12:15 p.m., and at 6:15 p.m. with a drink of cocoa, tea, at 4:15 p.m. for the workers. These meals consist mainly of rice, a bit of dried fish or meat, and some local vegetables. Sometimes eggs and fresh fruit are served. However, each child is being fed on \$1.00 Malay, that is, about 35c Canadian a day, and therefore the fare must be simple. Nevertheless, it is adequate and as good or better than most of the students would be getting at home.

The staff's day is as long as the students'. Most of the staff lives on the school compound and are responsible for many facets of the school's activities. Apart from their teaching duties, the staff members supervise workcrews, meals, library, games and Preparation; sponsor group activities; work with community groups; advise on school organization; attend monthly School Council meetings and direct and take part in its activities such as Open Day Concert and displays, inter-school games; and generally take responsibility for the well-being of the students from dawn until "lights out" at 9:00 p.m. In their duties, they are very capably aided by the prefects who are chosen by the Headmaster for their capability and responsibility. During the day, the Government Secondary School, Simanggang, is a hubbub of purposeful activity. When "lights out" time arrives, silence settles over the whole school compound and only the chirps of thousands of crickets and cicadas break the stillness of the jungle night.★

Pupils attend assembly each morning.



Gardening is an after-school activity.



*The author describes differences between
British Columbia and New South Wales*

Teaching Conditions Contrasted

G. T. CALDWELL

ONE OF THE MOST enriching experiences in a teacher's life is to live in another country and teach in an educational system which is considerably different to his home educational system. I am an Australian school teacher with four years' experience in a New South Wales secondary school. I met an elementary teacher, who also wanted to travel. We married, set off for British Columbia, and we began teaching here in January, 1961.

We seem to be spending more hours per day at the job than we were used to doing in New South Wales. The demands on a teacher's time appear to be heavier here. It should be worthwhile for us to compare the teachers' position in British Columbia and New South Wales.

First of all, what are the teacher's hours of duty? Departmental regulations state that he must be at school half an hour before lessons begin, and *may* be required to stay half an hour after the conclusion of lessons, or even longer in special situations. In the secondary schools, lessons commence at 9:00 a.m. and usually end at 3:20 or 3:30 p.m. Elementary instruction begins at 9:30 a.m. In practice, teachers often arrive at school just before 9:00 a.m., and leave before 4:00 p.m. It is practically unknown for teachers to be at school from eight to five or six p.m. in the afternoon—except, perhaps, some principals.

At the secondary level, there are eight periods of forty minutes per day, except on the weekly sports day, when there are usually four or five. One period per week is a Scripture period, when ministers from the local churches of the various denominations instruct pupils in their own faith. Thus there are 35 to 36 teaching periods per week. The Department does its best to try to arrange it that teachers do not offer instruction for more than 28 periods per week. Quite often, teachers are asked to teach more periods than this number. However, normally, the teacher receives about seven spare periods per week—for marking, lesson preparation, etc.

Generally speaking, teachers instruct for no more than four and a half hours per day, and this would include time between periods when teachers or classes move. Department heads teach for a lesser number of periods. Their job of organizing the respective subject departments and assisting new teachers is an important and very useful function. The work of department heads leads to sound co-ordination within the teaching and organization of that subject; the setting and marking of examination papers can be distributed reasonably equitably. The inexperienced teacher turns to the department head constantly for advice in his new profession. Thus the teacher is being helped by a colleague within the school the whole time, who is not, in addition, inspecting him. It seems that the new teacher in B.C. either sinks or swims. What staff member has time to help him with his individual problems?

In this eight period day, there is a recess of approximately fifteen minutes, and lunch hour is usually 45 to 50 minutes. On the weekly sports afternoon, usually Wednesday, most teachers supervise at one sphere of sporting activity. All pupils who are medically fit attend sport. How well I remember taking a group to the golf course each Wednesday afternoon; after I had given them some golf instruction, and supervised their hitting off, I would follow them round—with a set of golf clubs. However, sports supervision was often more demanding than this. Pupils would take a winter and a summer sport. Summer sports would include cricket, tennis, golf, swimming, etc., while winter sports would include rugby, soccer, tennis, golf, basketball, track, etc. Thus the whole school participated in school sport. This helps to account, in part, for Australia's comparatively good showing in international sporting events. I am of the opinion that time spent on the sports

Mr. Caldwell is at present a member of the staff of Queen Elizabeth High School, Surrey. Prior to coming to B.C. he taught in New South Wales.

field does not in any way detract from the academic achievement of the school population generally. In fact, it would seem that the reverse may apply. Pupils begin algebra, geometry, French, Latin, in Grade VII; Shakespeare in Grade VIII; the study of the novel in Grade VII; in Grade XI many mathematics pupils are studying calculus. These are not isolated examples, for it is generally true to say that in the secondary school, subject material is presented to the New South Wales student two years earlier than to the British Columbian pupil.

A New South Wales teacher, then, can expect to teach about four and a half hours per day. The rest of the time is his own. This allows the teacher (who is not continuing studies) much more time for professional and personal reading, and pursuit of his own interests. I think that it is important that a teacher be an interesting person. If anyone in a community should be well read, informed, knowledgeable, stimulating and talented, surely it should be the teacher. If a teacher's energy and time are absorbed by routine matters in and out of the classroom, how is it possible for him to develop the above desirable characteristics? It seems to me that pupils are being robbed of the intellectual stimulation which B.C. teachers have the obvious potential to give—but cannot give—because teachers' time and energy is well nigh exhausted at the end of a very long school day. Furthermore, objective examinations demand that teachers overload pupils with a mass of facts and this is a contributing factor to the rarity of classroom intellectual stimulation. In addition, there is so little time left within lessons to promote interest in worthwhile leisure-time activities to occupy students in their adult years. It seems our system fails here—school clubs foster the interest of the converted.

Are Teachers Overworked?

It would seem that the community must realize the fallacy of the following theory—that if a teacher instructs pupils for a longer period, then the situation is thus more productive educationally. A teacher is not a machine which can produce more by operating longer. In a sense, teachers are teaching pupils how to live, and should be experts in living. If a teacher is burdened with routine chores and preparation, it is not possible for him to observe life, to keep abreast of world affairs, to be aware of over-indulgence, conformism and materialism, and other such things.

My contention, then, is that teachers are overworked. Everyone agrees that teachers form an absolutely vital part of any educational system. If teachers are overburdened, it follows that the achievements of that educational system are diminished.

Let us return now to the N.S.W. system. Is the workload any lighter there? The total length of vacations is the same. The school year begins at the end of January or the beginning of February; there are five days' vacation at Easter; ten days in

May; eighteen days in August and September and nearly seven weeks at Christmas. However, there are only two examinations each year (in May or June, and November) and therefore only two report cards. After the November examination, pressure relaxes. In many schools in New South Wales, two weeks of this post-examination month would be spent at swimming pools or beaches, where pupils undergo thorough training in life-saving classes, and finish this training with awards as high as the Bronze Medallion and even higher—the teachers are the instructors, incidentally.

University Sets Final Exam

In N.S.W. the final examination in Grade XI is called the Leaving Certificate examination. As it is a matriculation examination, it is set by the University of Sydney. These papers are marked by university authorities. All other school exams are set and marked by the schools themselves.

Because this university sets the final examinations, there is a marked contrast in the nature of the papers that are set in B.C. and N.S.W. N.S.W. secondary students, throughout most of their schooling, bring writing pads, and all their examination answers are done on these pads. There is a much greater demand for subjective answers especially in English, history, social studies and economics. A typical Grade XI history paper might consist of twelve essay type questions, and students would be required to write four or six essays in three hours. The types of questions are typified by the following example—"Italy as a nation is the legacy of Cavour. Discuss this statement in an examination of the struggle for Italian Unification." In nearly all examinations, there is considerable choice. It is worth noting that in the Leaving Certificate the literature texts are changed each year; some of the texts, of course, recur in later years.

The whole N.S.W. system is geared to the setting of essay questions and the N.S.W. teacher finds difficulty reconciling himself to the type of examinations set here. I get the impression that B.C. pupils are being taught to memorize, but their ability to think, organize and present their knowledge is rarely tested. I have found that unless I concentrate more on teaching facts rather than trends and general principles, my pupils' results will not match their capacity. Thus the nature of examinations is dictating the nature of my teaching.

But how, if there are more essays given in N.S.W. schools, do teachers manage to mark them? I have mentioned that N.S.W. teachers spend less time in the classroom, thus freeing them for marking. Furthermore, teachers of academic subjects teach a fewer number of classes and generally, a fewer number of people.

In my last year in Australia, I taught four classes containing about 160 pupils. This year I have seven

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An Experiment in Math 8

In an attempt to discover whether or not the new Math 8 program would be easy or difficult for children to understand, the author conducted the experiment he reports in this article

EVEN THOUGH THE 1961 mathematics issue of *The B.C. Teacher* joined a host of other voices which were predicting the advent of extensive revisions in the mathematics curriculum, few of us dared to suggest that such changes could be expected within the next year or so. But, as a publication of the National Council of Teachers of Mathematics observed earlier this term, a "revolution" is taking place throughout the continent.¹ What is happening now is but an indication of future trends in mathematics education. This year we have a new Grade VIII course. In succeeding years, we have been given to understand, similar innovations will be introduced at other levels of the school until the entire curriculum features a "new look."

Certainly, then, we as teachers must be concerned with the implications of these developments in terms of the nature of the subject matter involved, classroom technique and pupil response and capability. This article reflects a few of the reactions which the author had in this regard as he taught several topics from the new course to low and average ability groups in the schools.

One aspect of the program which could be called revolutionary is the absence of a need for rote memorization of formulae and other gimmicks which produce correct answers to problems. No formal rules are given for performing operations with signed numbers, for solving equations, or even for dividing by fractions. Instead, the child is encouraged to notice relationships and patterns which exist in mathematics.

In other words, the emphasis is on the "why" rather than the "how" of mathematical thought.²

For example, the following approach was used in presenting the notion of solution sets (Unit IV in the new course) to a group of slow learners.³ The concept of a "set" was introduced by asking the class, "Think of the collection, or set, which consists of all persons in this room who brought lunches to school today. Now let's give it a name. Call it the set L. Then using the sign language of mathematics we can write $L = (\text{Bill, Ralph, Peter, Harry})$." The children then made up sets of their own, some using less concrete examples such as, "S is the collection of all outdoor sports."

Now the group was asked to consider the set of all whole numbers less than 6. If this set is called N, it may be written $N = (0, 1, 2, 3, 4, 5)$. Another symbol was then introduced by writing the statement " \square is an odd number." The new symbol is a "box" or "window" in which each member of the set N may be placed, one at a time. If this is done, some true and some false statements will result, for example:

- $\boxed{1}$ is an odd number. True.
- $\boxed{2}$ is an odd number. False.
- $\boxed{3}$ is an odd number. True.

Each member of the set N (hereafter called the

Mr. Travers is a lecturer in the Department of Mathematics at the University of British Columbia.

"reference set") is placed in the box, and a new collection of numbers called a "truth set" or a "solution set" is formed which consists solely of those members of the reference set which make the given statement true. If the solution set is called S , then for the above example, $S = (1, 3, 5)$.

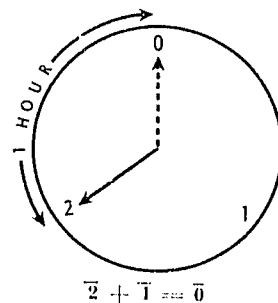
It now took little effort to convince the class that if the box was replaced by another symbol, say "b," then "b" could still be thought of as a box, and the given statement could be written "b is an odd number."⁴ Practice was given in making up reference sets and statements and then finding the corresponding solution sets. Toward the end of the lesson, more interesting statements such as "a plus a equals two times a," "m + 1 is in the set N" and "4 is greater than x" were considered. None of these examples was too difficult for the majority of the class and one or two pupils were able to find all solutions for the statements "b \times b = b" and "a \times a + 2 = 3 \times a." Keeping in mind that these equations are quadratic form, most readers will agree that the approach of the text greatly simplifies a topic which in the past has dimmed the aspirations of countless prospective students of mathematics.

Zero is a Number

Further refinements of this topic were possible when it was presented to average ability classes. It was noticed, for example, that given the reference set N the solution sets for the statements "a + 2 = a" and "2 \times a = a" are different. The solution set for the first statement is empty (i.e., it contains no members) since no number in N will make the statement true. The solution set for the second statement, however, contains one member, the number zero.

This extremely important distinction between "zero" and "nothing," so often glossed over, is further brought out in the chapter on modular arithmetic (sometimes called "clock arithmetic"). Here the youngster is asked to consider the set of all numbers which when divided by 3 have a remainder of 0. This set is called "zero bar" and is written $\bar{0} = (0, 3, 6, 9, 12, \dots)$. It is noted that the child is required to think "6 is in the set $\bar{0}$ because when 6 is divided by 3 the remainder is 0." Mathematically, it is not correct to say "when 6 is divided by 3 there is no remainder." There is a remainder—it is zero!

It should be mentioned here that an approach to modular arithmetic that was more readily understood by the youngsters was to interpret operations with bar numbers as movements of the hour hand on the face of a clock. The modulus, the number by which each member of $\bar{0}$ was divided in the example above, determines the number of hours shown on the clock face. If the modulus is three, then the problem $\bar{2} + \bar{1} = ?$ may be thought of as "one hour after two o'clock is what time?" From the diagram below, it is seen that the answer is $\bar{0}$.



A student who is bothered by the fact that he ordinarily would say "3 o'clock" rather than "0 o'clock" may be helped if he sees that using $\bar{3}$ he gets such statements as $\bar{3} + \bar{1} = \bar{1}$ and $\bar{3} + \bar{2} = \bar{2}$. It now appears that $\bar{3}$ behaves much the same way as does 0 in the usual number system, hence we choose to call $\bar{3}$ by the name $\bar{0}$. The marvels of the space age assist the child in imagining such a curious timepiece being in use on some unknown planet.

A quick check at this point reveals that bar numbers, like the "ordinary" numbers, have the commutative and associative properties.⁵ But it is even more instructive to notice that while the existence principle does not hold with respect to subtraction for the whole numbers, it does hold for the bar numbers. Since subtraction is thought of as the inverse operation of addition, the problem " $\bar{1} - \bar{2} = ?$ " is recast in the form of the addition problem " $\bar{1} = ? + \bar{2}$," and the answer $\bar{2}$ is found. The fact that there are only three different bar numbers when the modulus is three makes it easy to prove that for this particular system the answer to any subtraction question exists. Some pupils find it interesting to discover in what other ways bar number arithmetic may be compared and contrasted with the usual number operations. It was found throughout this study that youngsters of average ability are able to grasp these ideas, even though words like "modular" and "commutative" are troublesome.

Another feature of the course is now evident. The trend is to bring down to lower levels of the school, concepts which conventionally have been reserved for the senior high school or even the college level. Research has shown that there is some merit in this practice. For example, topics from set theory which appear formally nowhere in our present school curriculum, and have only in recent years been treated at the college freshman and sophomore level, have been introduced with some success in Grade I.⁷

A commonly heard justification for this trend is that recent developments have been so great that the student must learn more mathematics earlier so that he will be able to master the body of knowledge which is rapidly accumulating at the university level. But in the light of our philosophy of "an education for everyman's child," a more realistic and satisfying

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A School Executive Club

This is a description of the operation of a club for giving training and experience to students who will be or are interested in being officers of various school clubs

IT HAS BEEN suggested that sponsors of school clubs and activities might be interested in a plan we use at our school for training school executives to hold their positions in our various school clubs. We call our club the Executive Club. It has operated in our school for many years now, and we have found its benefits to be twofold. First, the executives of any school club have some place to bring their problems and to learn how to handle their club affairs. Secondly, over the years, there has been a definite improvement in the tone and performance of all school executives so that now we rarely have a student who does not perform in a reasonably formal and satisfactory manner. There are two important factors contributing to this. One is that formal procedure is now the fashion at our school and the students have seen many others carrying on club business in this way. The other factor concerns the type of student who may become a school executive. It is school policy that any student who accepts an executive position in any club must have maintained a satisfactory record of marks so that we have every assurance that he will be able to spare the time for his executive duties and yet not endanger his chance of passing his grade. We stress this because we realize that any student who gives time to executive affairs must be able to lose that time and still keep up a satisfactory performance in the classroom. Otherwise we feel the school would be to blame, if it allowed him to use much needed study time for extra-curricular duties.

We find time to give this training during one of our two assembly periods. Our school is a large school, and hence we find it necessary to have two assemblies—one for the Seniors and one for the Grade X students plus a few Grade XI's. During the time

one assembly is on, the other half of the school has a study period in their homerooms. Thus, as most school executives are in the senior half of the school, it is possible for them to meet during the time given to the junior assembly. Student executives therefore do not lose school time, the sponsor always has all of them present, and no teacher loses them from a classroom period.

Student executive meetings do not continue all year. We have found that about ten meetings a year are sufficient. We usually have two in each of the months of October, November, January, February and March. This means that we do not have meetings close to exam times, so students are not hampered by attending when they should be studying.

In our school the number of student executives taking part in this training in any one year is about 35-40. This number is chiefly made up of presidents and secretaries of clubs, along with certain other important members of the Students' Council.

The rules for operating the club are precise and faithfully practised. They are as follows:

(a) All student executives must participate in the activities of the Executive Club whenever they are called upon to do so. They must be willing to take an active part in any discussion and, if they seem reluctant to do this, the student chairmen are urged to call members by name and ask for their opinions. As some students are very vocal while others are shy, there is a club ruling that no member may speak more than twice on any one point. This stops the extroverts from taking up all the discussion time, and

Miss Barr is Head of the English Department at West Vancouver Senior High School and sponsor of the Executive Club.

encourages the quiet ones to express their viewpoints.

(b) It is a school rule that, if a student wishes to be an executive in his particular club, he must consent to take the training offered by the Executive Club. Therefore attendance is compulsory. If a student does not wish to comply with these two requirements, he cannot hold office in a club.

(c) Each student member must agree to be reliable at all times. If he has promised to take on some task, he must measure up to his responsibility to the best of his ability. Here the sponsor must decide what is to be done to a defaulter. However, these are rare, and we think that the reason is that the meetings can be, and usually are, enjoyable. This is because we encourage the students to debate any point or to say what they really think by promising that their statements never will be held against them outside of the meeting. As the Executive Club has no power under the school constitution, no rules are broken by this, and frank opinions encourage the art of discussion and do no harm to school affairs. Also, as all opinions, no matter how contradictory, must be expressed in a formal way, there is no rowdiness or lack of control, yet humor is often present.

(d) All motions, speech topics, etc., must be of a sensible nature. We long ago ruled out the silly type of motion or speech, as it prevents real discussion.

New Leaders for Each Session

The activities undertaken in the training period of this club are quite simple and follow a pattern. At the first meeting the sponsor outlines the work which will be covered and gives each student a mimeographed outline of some simple parliamentary rules and other pertinent details. Each student is asked to bring this little booklet to each meeting thereafter. For all subsequent meetings there is always a student chairman and a student secretary, and these change each time. In this way at least nine or ten presidents and secretaries have an opportunity to function and to learn, and the others (usually those of the smaller clubs) learn by seeing the repetition of the pattern.

The business is conducted in the usual manner, with the secretary reading the minutes of the previous meeting, and the president bringing up each matter which arises from the minutes. As part of each meeting is to plan the work for the following meeting, there is always business arising from the minutes. It is the duty of each chairman to make all the arrangements for the meeting at which he is to preside. He gets speakers, arranges for motions, and presides over the discussion. Opportunities arise when the sponsor can suggest that a committee be struck to look into some matter which has been brought up through the discussion of a motion. When this happens the committee presents a report at the next meeting. This shows students how to cope with issues

or decisions for which sufficient background information is lacking.

After the "old" business has been dealt with, the sponsor is called upon as "new business" and at this time does two things. First, he criticizes each speaker or performance for any defects and makes suggestions for improvement. Here frankness is necessary and the sponsor must make it clear that there need be no hurt feelings, as all are there to learn, and therefore any criticism is for helpful purposes only. Secondly the sponsor outlines the work for the next meeting and helps the incoming chairman to make suitable arrangements.

Practice in Parliamentary Procedure

Motions of all kinds are dealt with at the first two meetings, and the sponsor explains such things as withdrawn motions, and amended motions, and arranges that some of each type be practised at succeeding meetings. At the third meeting the sponsor teaches how to make speeches of introduction and of thanks suitable for use when a guest speaker is to appear at a club meeting. For their first efforts in making these speeches the students are allowed to introduce anyone, not necessarily someone they really know, and the choices they make are often very interesting and revealing, for we are introduced to famous movie stars, athletic stars, and so on. They choose someone they admire and about whom they know some facts. Similarly, they are trained to thank this imaginary guest. This is done by having students work in pairs, one to introduce and one to thank. Two meetings are usually spent on this part of the work.

During the fifth or sixth meeting the students work in threes, with one introducing a real student, that person speaking (usually on some school problem, activity, or interest with which he is associated or on some trip or unusual experience he has had) and the third student thanking him for his speech. This becomes a very real situation, and it is interesting for the sponsor to see what a variety of background experience the club members have. Choices for main speakers are made by the student members who often know of the special interests or experiences some members have had. This keeps the subject matter far from routine and adds zest to the audience participation.

In addition to speech training, and parliamentary procedure practice, if time permits, the sponsor usually takes at least one lesson on each of the following:

1. How to write a letter of invitation to a speaker.
2. How to write a letter of thanks to that speaker after he has been a club guest.
3. How to inquire about or order goods or supplies, such as sweaters, pins, etc., for school or club use.

Any one of these points may be handled quickly at the end of a meeting in which the speeches of in-

roduction, etc., have been explained, and the difference in the oral and written forms of each skill may be pointed out. Club members are then asked to write a suitable letter, which will be turned in at the next meeting, marked by the sponsor, and returned at the following meeting. General errors may then form part of the sponsor's critical comment.

All the activities outlined require about eight or nine meetings, and the tenth meeting is usually devoted to a review of all the things learned. Each type of motion is illustrated, and several "guest" speakers are featured, each of whom is introduced and thanked. Perhaps the principal himself, or some other teacher, can be induced to attend this final meeting and act as the last guest speaker. This usually adds a little extra zest to the review.

After this the Executive Club ceases to function for the year, but its members may be constantly used in school life to introduce or thank real guest speakers who come to address student assemblies, or to give reports to the student body on some major school activity. At our school the principal makes a point of featuring at least two or three student speakers at each assembly, and their example is most beneficial to all student leaders.

To sum up, then, the main objectives striven for in this training may be tabulated as follows:

1. To give each student executive a knowledge of and practice in the skills necessary for his extra-curricular job as a student executive.
 2. To improve the tone of club and school activities by stressing that the formal approach is never wrong and always desirable.
 3. To give each Executive Club member practice in public speaking.
 4. To teach the basic requirements of letters of invitation, letters of thanks, and letters enclosing an order for supplies.
 5. Finally, and not the least important, to provide extra help for teacher sponsors of all student activities so that the time of club meetings may be used to the fullest and most beneficial extent, free of the difficulties which arise from ignorance of procedure or from a slipshod attitude or approach to club affairs.
- In closing it should be mentioned that the principal makes it clear to the students that the Executive Club is the most important club in the school, because it influences all other clubs. This club therefore has prestige in the eyes of the students and this is most helpful to the club sponsor. ★

The New Code of Ethics

as approved by the 1962 A.G.M.

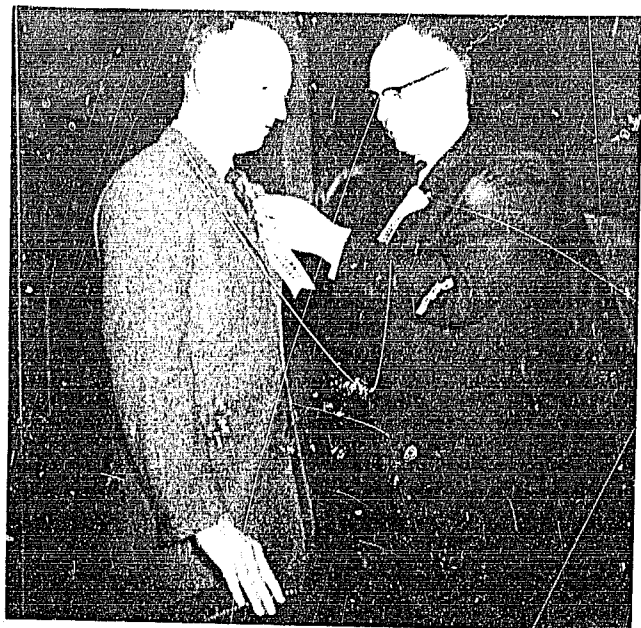
THE TEACHER'S primary concern is for the quality of service rendered by himself and his profession.

1. The teacher shall speak and act towards pupils with respect and dignity, and shall deal judiciously with them, always mindful of their individual rights and sensibilities.
2. The teacher shall respect the confidential nature of information concerning pupils and may give it only to persons or agencies directly concerned with their welfare.
3. The teacher shall recognize that a privileged relationship exists between the teacher and his pupils, and shall refrain from exploiting this relationship.
4. The teacher shall honor his contract with the School Board, as prescribed in the Public Schools Act, until the contract has been legally terminated or has been cancelled by mutual consent.
5. The teacher shall apply for positions or promotions only through proper channels, and shall insure that any information given in support of an application is truthful.
6. The teacher shall not apply for or accept a position arising from an unjust dismissal or an unresolved dispute.
7. The teacher shall accept remuneration in accordance with the salary agreement adopted by his

local association. He shall not accept offers of pay higher or lower than called for in the agreement unless in exceptional circumstances a special rate of remuneration is agreed to by the local association.

8. The teacher shall avoid derogatory criticism of an associate except when it is directed to a person or an authority who is in a position to rectify its cause, and the associate has been informed of the nature of the criticism.
9. The teacher shall examine the conduct of all Federation business, and within the Federation make such criticisms as the facts may warrant, but shall refrain from making damaging charges against a local association, the Federation, or their officers by public utterance.
10. The teacher shall acknowledge the powers and obligations of local associations and the Federation and shall refrain from making individual representations to the Board of School Trustees, District Superintendents, the Department of Education or other bodies regarding any matters that are properly to be dealt with by associations or by the Federation.

The teacher at all times shall so conduct himself that no dishonor may befall him or, through him, his profession.



Mr. Aitchison received his Past President's pin from Mr. W. H. Janzen.

Presidential Report to the 1962 A.G.M.

K. M. AITCHISON

*Extracts from the report to
the membership made by the
President on April 23, 1962*

I AM PLEASED to report that the year has been one of significant progress. I shall not detail the various accomplishments here, for you will be given this information in other reports. I think I should record, however, a few of the "firsts" that have occurred during the year.

My first week in office was a very valuable one for me because it was spent in a conference of our elected and staff officers. Such conferences had been held before, but several years had passed since the last one. During the week-long session we surveyed the past, present, and future of our organization. We attempted to evaluate the Federation's activities in terms of our general objectives, to determine how closely our present practices were related to the objectives, and to assess to what extent any given activity was furthering progress towards our goals. This searching analysis was an invaluable preparation for my year as president; the experience made it possible for me to undertake the duties of the presidency with a minimum "breaking in" period. The conference was important to me, too, in that many of its recommendations were adopted by the Executive Committee, and formed the basis for our operations this year.

Perhaps the most important "first" was the appointment by the Minister of Education of the two Professional Committees on Curriculum. I regard the formation of these two committees as the most significant advance we have ever made in the field of curriculum.

Another first was the make-up of the Consultative Committee. This committee carries on for the Executive Committee between Executive meetings. As a result of the constitutional amendment approved at last year's Annual General Meeting, the Consultative Committee this year was made up, for the first time, of the table officers and four members of the Executive Committee elected by the latter committee. (Formerly, the Consultative had been composed of the table officers and the chairmen of certain specified committees.)

The revision in the make-up of the Consultative Committee was part of a revision in the number of representatives on the Executive Committee. Last year some areas were given increased representation on the Executive Committee. Under the new arrange-

ment some areas have one representative one year, two the next. Areas which this year had two representatives for the first time were: Burnaby, Central Lower Mainland, Fraser Valley East and Southern Vancouver Island.

The *B.C.T.P. Newsletter* was another innovation which was appreciated by many. There having been only two issues so far, it is too early to tell whether or not this publication will be of real value.

Although not a "first" in the strict sense of the word, the Canadian Conference on Education held last month is worthy of being included in this list of new developments. Only one other such conference has ever been held (in 1958) and this year's was bigger and better. I had the honor of being asked to address the 2,000 delegate gathering. I was happy to accept, for the conference afforded me an opportunity of giving teachers' views national prominence.

New Federation Activities

Just three weeks ago the Federation sponsored a very successful conference on educational television. Most of the organizations involved in education in the province were represented, and much interest was expressed in forming a continuing body (such as Toronto's Metropolitan Educational Television Association) to "do something" about educational television in the province.

During this week, too, another important first will occur. Dr. J. F. K. English, Deputy Minister of Education, kindly invited me to attend the conference of District Superintendents to be held in Victoria from Wednesday to Friday. I regretted that I could not attend because of our own convention, but Dr. English honored my request that Mr. W. V. Allester be invited. For the first time, therefore, teachers will be represented at a conference which will undoubtedly have a great deal of influence in shaping the future development of education in our province.

The final "first" I want to mention is the in-service education project being held next week at the university to prepare resource people for the new arithmetic and mathematics courses. I am proud that the profession took the initiative in organizing and paying for this effort to keep teachers up to date in a fast-moving field.

As I mentioned earlier, I believe we have made significant progress during the year. In three areas particularly we have made important gains. Perhaps the most important of these is the Department's consultation of the Federation before making educational decisions. Despite the fact that we had occasion during the year to criticize the Department for its lack of consultation with teachers, I am pleased to be able to report that the Department now seems genuinely interested in obtaining our point of view. The two Professional Committees on Curriculum, the frequent meetings between our curriculum directors and Mr. John Meredith, Director of the Division of Curri-

culum, Federation representation at the conference of district superintendents, and generally improved relationships between the Federation and the Department all point towards success in our achieving one of our most important goals, that of having the Department consult the Federation before making educational changes.

The second area of achievement is that of class size. I believe we are beginning to influence public opinion generally. During the year your officers have seized every occasion to stress the need for smaller classes to the government, school boards, P.T.A. groups and "outside" organizations. Although we still have a long way to go, I believe opinion is beginning to rally to our side. One P.T.A. group, for example, bombarded the legislature with letters and telegrams about the need for smaller classes. Moreover, the fact that the government reduced the entitlement figure for the elementary grades for the second successive year is indicative of a general concern, for these reductions were made *in spite of the fact that the Chant Report recommended no change in pupil-teacher ratio*. This last point is all important, for it would be difficult to exaggerate the importance the government attaches to the Chant Report recommendations.

Professional Status Ahead

The third area of success is our drive towards full professional status. Here, too, the road ahead is long, but I believe we have made encouraging progress during the year. Minimum certification requirements have been upgraded, a move we have been seeking for years. At the Canadian Conference on Education the delegates reached "universal agreement" on the statement that "Teaching is a professional task." Two other points of substantial agreement were:

"Teachers, through their professional organizations must be assured of strong representation on policy-making committees dealing with such vital school matters as curriculum, teacher education, and teacher certification. While the state should continue to issue the basic licence to teach, it is both feasible and desirable for teachers, through their professional organizations, to issue some credential of their own which could clearly mark the truly professional teacher."

"In order to attract and retain the best candidates for the teaching profession remuneration must be such as to enable the teacher to meet the social standards of a professional person."

Moreover, my plea at the conference for more freedom for the teacher—i.e., giving to the teacher far more responsibility—received widespread support.

Another indication of support for our drive to make teaching a true profession is the very favorable reaction to our membership classification plan adopted last year. Representatives of the Department, trustees, the press, and "the general public" have praised the plan. The profession's ready acceptance of the res-

possibility for keeping its members up to date also contributed to the public's support of our professional aspirations. Reactions to our plans for the mathematics in-service education project have been most favorable.

Perhaps these illustrations would be sufficient to justify my claim that we have made real progress towards our professional goal. Perhaps the most significant advance, however, is the one I referred to earlier in this report, the appointment of the two professional committees on curriculum. At last the teachers of the province are playing an important role in helping to determine educational changes. The Federation representatives on the two committees have influenced many decisions which have been made, and in some cases even more important, have forestalled decisions which might have been made. The profession's representation on the committees constitutes a most important recognition of the fact that teachers are professional people, and that as such they should be entrusted with responsibility and consulted on educational matters.

Visited Many Local Associations

I should like to turn now to a brief account of my stewardship during the year.

My position as president privileged me to represent you at many functions and as a member of several organizations. I should indicate, however, that I was most conscious of the fact that I was representing more than twelve thousand people on such occasions. I can only hope that my appearances reflected the profession favorably.

A president of our organization has many duties, some more pleasant than others. One of the things I enjoyed most during the year was the many visits I was able to make to local association gatherings all over the province. Some of these were induction ceremonies, some of them dinners with invited guests, some of them association meetings at which I had the opportunity of talking about what was going on in Federation affairs.

I had the privilege (and I use the word sincerely) of attending several district conventions during the year. I was impressed by the detailed planning which had gone into the conventions, and by the evident interest of the teachers in the proceedings. In addition I have been able to meet with some local association executives and individual school staffs.

I have tried to show some positive leadership as president, rather than merely to occupy the position. Inevitably some of my statements and actions have brought mixed reactions. I can only state that whatever I said or did was said or done in a sincere effort to further the interests of teachers. I take pleasure in the fact that most of my efforts drew enthusiastic reactions, whether favorable or unfavorable.

My efforts to lead have not been confined to "external affairs" only. During the year I have attempted, wherever I visited, to make the Federation more mean-

ingful to its members. Furthermore, I initiated an Executive Committee study of our organization and activities in an effort to improve our services to teachers wherever possible. This evaluation, coupled with the studies done by the table officers last summer, will, I hope, do much to make the Federation of maximum benefit to its members. The new format of this convention is the result of ideas I submitted to the Convention Committee, in an attempt to make the convention both more enjoyable and more effective.

Committee Members Commended

It has been my pleasure to meet, as often as my schedule would permit, with the various committees of the Federation. I have been impressed anew with the dedication of the committee members, who so unselfishly devote so much time and effort in behalf of their colleagues. One result of the conference of table officers was a tightening up of our committee work. Some committees were discharged, some combined with others, and some given revised terms of reference. Moreover, each committee will be required to submit each spring a proposed program for the following year together with a budget for carrying it out. The Executive Committee will then approve or disapprove the committee's plans. The reports of the committees to this meeting reflect the good work being done this year.

This account would be grossly incomplete if I did not pay tribute to the Federation's permanent staff. We are most fortunate to have such capable and dedicated people in our employ. Every member of the staff takes an obvious pride in his or her section of the work, and each contributes "above and beyond" on many occasions. Loyalty such as that shown by our staff cannot be purchased at any price.

I must pay special tribute to our staff officers. There are just not superlatives enough to describe the work being done by these people. They live the Federation, and are completely devoted to the interests of teachers. I am indebted to them personally for helping to make my year so enjoyable. I appreciated the sincere respect they always show the president, and the fact that they never fail to consult him on any decision or action. I stress this last point because many teachers do not seem to be aware of it. The executive staff carries out policies and instructions set by your elected representatives, but the president is always consulted. Indeed, he makes the final decision; I cannot recall a single instance this year of any suggestions being carried out with which I disagreed.

In summary, I have sincerely tried to do what I promised to do one year ago—to serve you as president to the best of my ability. Whether or not that best was good enough, only you can judge. I am grateful to you for an unforgettable year; I hope that in return I have been able to make some small contribution to the growth of our profession.★

Dr. J. F. K. ENGLISH

Current Developments in Education

*An address to the members of the B.C.T.F. by the
Deputy Minister and Superintendent of Education*



Dr. English addressed the delegates. Mr. Palsson and Mr. Aitchison were on the platform.

ON YOUR PROGRAM this period is called The Department Hour. I appreciate the opportunity of appearing here today to review the changes which have occurred in our educational system during the past year or so and to explain as well as I can, the reasons for action being taken in a number of areas. In the first place may I say that the Royal Commission on Education has prompted all of us to have a really good look at education in this province. In this Report the Commission submitted some 158 recommendations. We have considered already a number of these, especially those relating to the curriculum, the reorganization of the schools and examinations. These matters are of vital interest, of course, to all teachers. It should never be forgotten however, that there are other groups in the community concerned with general education, and these groups through the Royal Commission have expressed their opinions, sometimes conflicting but nevertheless sincere. You are close to the classroom situation and probably know what the problems are better than anyone else, but we in the Department have to take into account the complete picture of the province—a fact which should not be overlooked. I am here today not to defend the Department for the measures which have been taken in our attempts to improve the educational structure of the province, but rather to explain what has been done because I am sure there are many persons present who are not well posted respecting the changes which have been proposed. It is quite natural that there should be some confusion and doubt in your minds, but it is not possible to reach out to 13,000 teachers and keep them informed as to day to day, or even week to week progress in developments

which are now being implemented.

Before I come to the main text of my address the Federation office asked me to deal with a few specific topics about which questions have been asked in recent months.

First, two important professional advisory committees were set up in June of last year, one to deal with the elementary school curriculum and a similar one at the secondary school level. Members of these committees are representative of the University, of District Superintendents of Schools and of principals and teachers. More specifically the composition of these committees is as follows: On the Secondary Committee there is one representative from the Faculty of Arts and Science, one from the College of Education, one District Superintendent, one secondary school principal, one person representing the Curriculum Division of the British Columbia Teachers' Federation and also one "member at large" from your Federation, as well as three members from the Department of Education—making a total of nine persons. Similarly the Elementary Committee consists of one member from Victoria College, one representative of the College of Education, one District Superintendent, one elementary school principal, one member of the B.C.T.F. Curriculum Committee, one "member at large" from the Federation, along with three persons from the Department of Education—a total of nine members in all.

Practically all matters affecting curriculum will be brought before these committees for their advice and recommendation. It is true that before the Committees were set up some matters received attention without

much prior consultation. However, it was not possible to set up these Committees earlier, but in future and as a matter of fact ever since these Committees came into existence virtually all matters in the field of curriculum have been referred to them.

We feel that the B.C.T.F. and the teachers of British Columbia are pretty well represented on these two Committees. I don't think we can do better. If the Committees were larger they would become too cumbersome to handle and if they were smaller they would be neither representative nor effective. I wish to state once again that it is impossible to consult everybody on pending changes. We feel if we meet with the B.C.T.F. Curriculum Committee occasionally, as Mr. Meredith has done, and if we consult the Provisional Curriculum Advisory Board as we have periodically and report on current developments, we have gone a long way towards informing and consulting people engaged in education at all levels.

Second: Ever since the new plan of reorganization was announced there has been considerable concern by some teachers over the objectives of education. There is a feeling, I know, in certain quarters that we should be formulating a basic statement of the aims of education. We could work on this for the next hundred years and I doubt if we would reach unanimity or uniformity in our thinking. I am told that at the National Conference on Education held at Montreal where 2,000 delegates were present, this question of the Aims of Education was carefully studied and I understand there were 2,000 aims as a result of it! Obviously this is an exaggeration. Our current statement of aims and objectives of education was outlined

about four years ago by the Department as well as by the Provincial Curriculum Advisory Board and was published for all to read. Since the Royal Commission thought this statement should be more specific there may be some revision of it, but I do not think there should be any doubt regarding the fundamental objective which is to produce competent citizens for British Columbia and Canada generally—who will lead useful and purposeful lives and who will make a contribution to the society in which they live.

Third: I know that the placing of Grade VII in the elementary school has been criticized. The Department is fully aware of the arguments advanced both for and against this change. It was, in general, a reflection of the views of the public and the Royal Commission who felt that pupils at this age were too young and immature to be entering secondary education, particularly if Grade VII was in a large departmentalized high school. It has been stated in some quarters that this action was taken without careful consideration of the administrative problems and dislocations which would result at the school district and school level. I am not convinced, however, that the return of Grade VII to the elementary school has resulted in any great catastrophe. About 50% of the province is so organized now. The transition has been smooth and inside of another three or four years virtually every part of the province will include Grade VII as part of the elementary school structure. We were aware that there would be problems, but if we had studied the implications for five years it wouldn't have made very much difference. There would still have been difficulties of transition. Furthermore, school boards

Staff members Joan Legge and Julia Robinson took minutes as General Secretary C. D. Ovans followed the debate presided over by K. M. Aitchison.



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Some topics provoked lively discussion and delegates from all parts of the province lined up at the microphones to speak to the question.



THE B. C. TEACHER

all over the province were urging the Department to make a decision because of building programs currently under way. Consequently we made the change as expeditiously as possible. Educationally I do not believe it matters much where Grade VII is. I think that the physical placement of Grade VII is not as important as the type of instruction or the program that goes on at the Grade VII level, both of which can be carried out as readily in the elementary school as in any other type of school.

Fourth: I fully realize that the in-service training of teachers for the teaching of new courses is important. I am happy to say that the mathematics program in Grade VIII, as well as the new arithmetic approach in Grade III is being handled this year by co-operative effort between the B.C.T.F., the College of Education and the Department of Education with the support of the school boards involved. We shall keep in mind the necessity for adequate preparation as future changes in programs occur.

Fifth: As you know, teacher certification has undergone a change. Commencing in September, 1962, three years of training at the Colleges of Education will be required before permanent certification for the E.A. will be granted by the Department of Education. I must emphasize this change does not affect anyone now in training. For the time being teachers may teach at the end of two years on an interim certificate but this will not be made permanent until a third year, either in residence, or in summer school, has been completed. In due process of time a fourth year will be added with a B.Ed. degree as the culmination of

the training program. A four-year program leading to a Bachelor of Education Degree in the elementary field is a desirable goal. I do not support a five year compulsory program leading to this degree, although some persons advocate this. If in the light of experience a fifth year should become necessary it should not be difficult to extend the training period.

Sixth: The length of the school day, the instructional hours for teachers and the ratio of authorized staff to number of pupils are points which have come up from time to time. I wish to assure you that these matters are gradually being adjusted.

If the school day is too long or if the instructional hours for teachers are unfair or causing problems I am sure the Department will listen to representations that are made, but we must be convinced that there is some real point to the complaint. We wish to have specific information as to the schools and the school districts where such difficulties have occurred. You are quite well aware that gradually the ratio of staff to pupils is being reduced. Last year we moved from the ratio of 40:1, to 39:1. Recent legislation has reduced this to 38:1, and I have no doubt in time there will be some further reduction in the ratio.

I have touched on half a dozen points, but time does not permit further elaboration. May I remind you that we are going through a transitional period and time will be required to correct difficult situations in the schools as a result of the reorganization. These problems have to be solved through actual practice on the job. They cannot be foreseen. We ask you now, as I did in a circular letter to District Superintendents, principals and teachers in April, 1961, to co-operate

First Vice-President H. M. Palsson was chairman of the Committee of the Whole. President Aitchison listened as the debate proceeded.



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Mr. Thomas Woodcock, Vancouver, was granted Honorary Life Membership. He is shown here with his wife and his daughter, a Vancouver teacher.



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as well as you can in giving effect to the changes advocated.

I propose next to deal with four areas which I think are important from your standpoint:

- (1) The general structure of the proposed organization.
- (2) The curriculum, course revisions and textbooks.
- (3) The current developments in vocational and technical education.
- (4) The occupational program.

First, I shall indicate in a very general way the proposed structure of the school system. It has been decided that Grades VIII, IX and X will constitute a *Junior Secondary Division* while Grades XI, XII and XIII will comprise a *Senior Secondary Division*. As you know, the Royal Commission recommended this type of reorganization but used terms with which we did not entirely agree—Grade X was to be the end of the high school period, while Grade XI, Grade XII and Grade XIII would constitute the Collegiate Academy. This nomenclature was not acceptable. It was felt that the terminology suggested was not important so long as the principles enunciated in the Report were maintained. The general names, Elementary and Secondary will replace present names as applied to various types of schools and we shall use Junior Secondary and Senior Secondary to cover the area from Grade VIII to Grade XIII inclusive. The terms Academic, Technical, Vocational and Occupational will take on new significance. Grades VIII, IX and X will be progressively exploratory, preparatory and qualifying years for any program which may be undertaken subsequently in Grade XI and Grade XII. Strictly speaking no vocational education will take place until the student enters Grade XI. In Grades IX and X there will be a considerable variety of courses not unlike those we have now, but these will be pre-vocational "without vocational significance." For instance, while the Industrial Arts and Home Economics courses will be revised for VIII, IX and X they will still be similar to the present programs. The same approach will apply to typing, agriculture and some of the other fields. However, by the time a student has reached Grade X he should have made a choice as to whether or not he is going into the Academic-Technical Program or the Vocational Program and it is expected there will be qualifying examinations at the end of Grade X, one set for those who are going into the Academic-Technical side and another for those who will be going into the Vocational Program. The nature of these examinations has not yet been determined.

As you know, there will be tests and examinations at the end of Grade VII to enter Grade VIII. Elementary schools throughout the province have already had the survey tests given during the first week in April. Other Departmental examinations will be made available in June to those districts that require them. All of this information will merely support and confirm what

the schools already have in terms of records covering the first six or seven years of a pupil's life. The survey tests and the examinations themselves are not the sole deciding criteria.

The next topic I wish to refer to is Curriculum. New courses in use this year include Physics 101, Physical and Health Education, Guidance for all secondary school grades, and Latin 10 for Grade IX. At the present time other course revisions are under way in the following fields: Mathematics for Grade III and Grade VIII; English from Grade VIII up; Latin in all secondary grades; French for Grade VIII; Industrial Arts and Home Economics; as well as certain sciences at the secondary school level including Grade XIII. At the same time experimental work is being continued or carried on in Russian in Grade IX, French in Grade X, and Mathematics in Grade XII. This is quite a wide variety of subject fields and for your information more than 200 teachers are involved in one way or another in these revisions. Probably no other province employs teachers in course revisions and in textbook selection to the extent that we do here in British Columbia. In this regard at least, we have endeavored over the years to work closely with the British Columbia Teachers' Federation and the teachers of the province.

I might mention that in order to expedite the work of the Curriculum Division in 1962-63 the services of two additional people will be sought. We propose to engage two teachers, one at the elementary level and one at the secondary, to assist in curriculum development under the Assistant Superintendent in charge of Instruction and the Director of Curriculum. Each teacher will be on loan to the Department for a school year. Their salaries will be paid by the Department but they will still be in the employ of the Board. At the end of the year they will return to their classrooms and two other teachers may be employed for the following year in different subject areas, and so on, until most of the revisions have been completed. We feel that by employing practising teachers who are specialists in their subjects a forward step has been taken.

Before leaving Curriculum a brief reference will be made to Art and Music. There is no doubt that musical activities will continue, particularly those involving participation in activities outside of instructional time. Recently a Permanent Committee on School Music has been set up and its first responsibility will be to assess the present program. Both Art and Music may have potentials for study in later levels in academic as well as in vocational programs. The provisions presently in effect can and perhaps should be reduced but this would not materially affect the subjects or the pupils because in actual fact they were rarely applied as extensively as they could be.

In the field of Vocational and Technical Education great developments have occurred, or are about to occur. In a year or so from now six Provincial Voca-

tional Schools will be in operation. At the present time the Vancouver Vocational School, the Burnaby Vocational School and the Nanaimo Vocational School are functioning. In September we hope that Prince George Vocational School will be open. By 1963 it is expected that two other Vocational Schools, one at Nelson to serve the West and East Kootenays, and another at Kelowna to serve the Okanagan, will also be in operation.

I might mention too, that Vocational Training programs (exclusive of Commercial) within a composite secondary school have not yet been designed. These will have to be developed within the next two or three years. The "Vocational Schools Assistance Act" passed at the 1962 Session of the Legislature, will also make it possible, when we are ready, to proceed with a secondary school program. Up to this point we have devoted our energies and considerable money to developing Provincial Schools because we feel at this level greater service can be given to the province at the present time.

Finally, as a related area of training I wish to refer to the proposed Institute of Technology which will soon be under construction on the site of the Burnaby Vocational School in Burnaby. The Institute will cost between \$5,000,000 and \$6,000,000 and will be capable of accommodating about 1,200 students. A brochure is now being issued. Secondary school principals as well as counsellors should have this when they return to their schools next week. The brochure will outline the subject areas which the Institute will offer as well as the entrance requirements for students.

The programs, of which there are seventeen, are being developed by technical committees at the present time. Each one is of two years' duration beyond University Entrance and cover the following fields: Architecture, Broadcasting Communications, Chemical and Metallurgical, Civil and Structural, Electrical and Electronics, Food Processing, Forestry, Forest Products Utilization, Gas and Oil, Hotel, Motel and Restaurant Administration, Instrumentation, Land Surveying, Marketing and Business Administration, Mechanical, Medical Laboratory and Medical Radiography as well as Mining. Following a Canada-wide search, Mr. Cecil Roper, B.Sc., M.B.A., was appointed Principal as of April 1. Mr. Roper may not be known generally, but he was formerly prominent in mining circles and after a career in that field returned to the University to take a course in Business Administration and Finance. During the current year he has been on the staff of the University in the Faculty of Commerce.

In conclusion I would point out that standards will be high and the very best type of training will be given. There will also be personnel on the staff to assist in job placement, in public relations, and in general to promote the widespread use of this Institute in the service of the people of British Columbia.

Finally I wish to say something about the Occupational Program. The Royal Commission Report refers to this as a junior vocational program. However, in order to avoid confusion of terms since vocational education has another connotation, we use the name "occupational program." It is intended for a small group of students who are either two or more years retarded at the end of Grade VI or who are not promoted to Grade VIII of the regular course after their second attempt in Grade VII. For these the Commission recommended a junior vocational school. We have accepted this concept and we are proceeding to develop a program. The first year has already been established on an experimental basis in many schools of the province and the committee working on it hopes to have it ready for all schools by September of this year, and also to have the second year experimental program drafted. In any event completion of two or three years of the occupational program should produce a young person of value to his employers in tasks within his ability. The program will be oriented towards practical learnings. Its educational aim is to equip certain young people with useful skills and knowledge necessary for the early entry into the occupational and general life of the community. Not only will it provide certain skills but also certain attitudes towards employment; the necessity for good grooming, for courtesy, how to deal with the public. Examples might include service station operators, elevator operators, caretakers of buildings, typists, waitresses, cash register operators, etc. The attitude towards a job or towards work in general will be emphasized throughout the program.

During this Departmental Hour I have endeavored to answer some of the questions which I know are troubling you. I have also attempted to cover certain areas for your information. In conclusion, I am well aware that everyone, including teachers, members of the University staff, and the Department of Education has ideas, theories and prejudices in education. But remember, the Department of Education is responsible for any program of education which is developed. We are quite willing to listen to ideas from whatever source, but in the final analysis it is the Department, the Minister of Education, or the Council of Public Instruction which has to assume full responsibility. We have consulted members of the teaching profession, the College of Education, and professionally trained people at every level and we are prepared to do even more in the future provided we can find ways and means of doing it but the more people who get into the act the more confused and the more difficult it is to get on with the job. I wish to assure you, however, that a lot of serious thinking about educational matters is now taking place, not only in the Department of Education but also within the teaching force of the province. I feel sure that out of all this concentrated study we will develop a more effective school system to meet the needs of the future.★

Below is given a report of the action taken on the reports and resolutions which were dealt with during Easter week

1962 Annual General Meeting

THE SEVEN SESSIONS of the 1962 Annual General Meeting were held in the Hotel Vancouver from April 22 to 26.

The following principles were affirmed as Federation policy:

That we recognize the prerogative of school boards to decide what posts of administrative and supervisory responsibility are required in the school district.

That every member of the local association has the right and the obligation to have the whole of his remuneration determined by negotiation between the association and the board and covered by collective agreement.

Where, upon creation of a new post of responsibility, it is not feasible to establish by negotiation the salary initially offered, the matter should become the subject of negotiation at the earliest subsequent opportunity.

A recommendation re compulsory retirement age was considered and the following passed: That we do not request any change in the Public Schools Act concerning compulsory retirement age.

The Federation will seek an amendment to Section 151 of the Public Schools Act to permit a teacher at age 65 to seek deferment of his retirement on a yearly basis to age 70.

The Federation will also press for an amendment to the Pensions Act which will delete the increases in the rate of pension determination after age 65 and decrease the differential in rates between ages 60 and 65. At present the Pensions Act makes retirement at age 60 costly for teachers and gives a premium pension to those who retire between ages 65 and 70.

The Finance Committee reported that there are

many methods of collecting fees and this fact has made Federation bookkeeping difficult. It was agreed that, as a matter of policy, local associations would be requested to remit fees on behalf of their members in one lump sum on or before December 31 or in a series of ten equal monthly payments.

The recommendation of the Teacher Education Committee, submitted through the Executive Report, that a properly qualified person be selected to examine the field of teacher education and provide the committee with his findings as to whether there is or is not a specific body of knowledge unique to the field of teaching and, if so, what specific items make up this body of specialized knowledge was passed.

The General Secretary and his assistants were asked to make a study of the professional, working and fringe benefits enjoyed by teachers in other provinces, either by statute or by local by-law arrangements, and of the respects in which those benefits may be considered superior to those which apply in British Columbia. The results of this survey are to be distributed to all local associations and district councils.

The Department of Education will be asked to change the regulations which refer to the scale of grants so that full credit for previous experience will be given to all qualified teachers who have taught in any state-run English-speaking school outside the province.

It is now contrary to Federation policy for local associations to discriminate between SA and PA certificates and between SB and PB certificates for purposes of salary negotiation. The Department will be asked to grant PA and PB certificates to holders of SA and SB certificates respectively.

A new Code of Ethics was approved. The full text of this Code appears elsewhere in this issue of the magazine. The Guide to Professional Conduct which was proposed was referred back to the committee for further study.

The Federation will protest, vigorously, to the Department the policy of implementing some of the recommendations of the Royal Commission on a piecemeal basis before giving adequate consideration to the total pattern of school organization and course sequence.

The Department will be requested to consider and to plan an outline of its total school organization and course sequence before proceeding further with the implementation of recommendations of the Royal Commission.

A request will be made to the Department to amend the Rules of the Council of Public Instruction (6.07) to permit local districts, if they desire, autonomy to draft and use pupil report cards designed to serve the particular needs of the community.

The Department will also be asked to make a grant to local districts in lieu of providing textbooks and to prepare an approved multiple list of textbooks for the various courses, from which the local district or school might select.

The Federation reaffirmed the desirability of proposed course revisions or new textbooks being used on a trial basis in a few districts for a year before being put into final form.

The Federation reaffirmed the principle that the bulk of curriculum revision should be done by selected teachers, with the advice of expert consultants, in summer workshops.

The Federation will request the Department to implement the practice of relieving teachers who are serving on Departmental revision committees from their regular school duties, without loss of salary, for a considerable amount of the time in which they are involved in committee meetings and study sessions.

The Federation will conduct a second curriculum seminar in connection with the Summer Workshop.

A number of changes in the Constitution and By-laws were approved. These dealt with Honorary Associate Membership, Honorary Membership, and membership in Provincial Specialist Associations. Also approved for inclusion in the Constitution were the new regulations concerning Membership. These are summarized as follows:

ARTICLE I

There shall be three membership categories:

1. Professionally Certified Teacher
2. Teacher
3. Probationary Teacher

ARTICLE II

1. Membership cards showing the category assigned

shall be issued annually to all members. Members who are granted a change of category during the year shall be issued a new card forthwith.

2. In the case of a teacher in respect of whom a decision is made that no category be granted or the previous category withdrawn, that member shall be issued forthwith a membership card with the category rating omitted.

ARTICLE III

There shall be a Board of Admissions and Review which shall administer the regulations herein contained. The Executive Committee of the British Columbia Teachers' Federation shall act as an Appeal Board to which decisions of the Board of Admissions and Review may be referred.

ARTICLE IV

Each person holding membership in the British Columbia Teachers' Federation at the inception of the plan shall be assigned the category appropriate to his qualifications and experience by the Board of Admissions and Review without formal application by the member.

ARTICLE VI - Requirements for Membership Categories.

1. Professionally Certified Teacher

- (a) A minimum of three years' teaching experience acceptable to the Board of Admissions and Review.
- (b) Possession of an SB, SA, PC (Elementary Degree), PB, or PA Certificate.
- (c) Evidence of competence satisfactory to the Board of Admissions and Review.

Or

Possession of an EA or SC certificate at the date of inception of the plan, together with twenty-five (25) years of teaching experience, acquired either

- i. before the inception of the plan, or
- ii. within the five (5) years following that date, if the teacher is forty-five (45) years of age or older at the inception of the plan, and

Evidence of competence satisfactory to the Board of Admissions and Review.

2. Teacher

- (a) A minimum of three years' teaching experience as in 1(a) above.
- (b) Possession of a Permanent British Columbia Teaching Certificate.
- (c) Evidence of competence satisfactory to the Board of Admissions and Review.

3. Probationary Teacher

- (a) Less than four years' teaching experience except as provided in 4 below.
- (b) Possession of a British Columbia Teaching Certificate.

4. In the following cases a minimum of one year shall be served but the member may be required to serve a further period at the discretion of the Board of Admissions and Review.
 - (a) Any teacher previously employed in the teaching service of the British Columbia public schools not previously accepted under this plan who re-enters the teaching service in British Columbia public schools. (Teachers on leave of absence are considered to be still in the teaching service of the British Columbia public schools.)
 - (b) An academically qualified and experienced member from outside the province.
5. Notwithstanding the foregoing the Board of Admissions and Review may at its discretion, modify the above regulations if in their opinion an injustice would be done by their rigid application.
6. It is the responsibility of each member to apply for category changes.

Representations to Government

The Government, the Minister, and the Department of Education will be asked to continue to consult with the Federation before making changes in the existing educational system.

The Department is to be requested, before further implementation of the recommendations of the Royal Commission, to evaluate very carefully the sources of reference used by the Commissioners and to give significant weight in its planning to the submissions of those groups most fully qualified by reason of training and experience to assist in the planning of future education in British Columbia.

Mr. and Mrs. R. G. Kaser view the Charlesworth Memorial Scholarship certificate presented to their daughter Linda at the Convention dinner.



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It was agreed that excellence in textbooks should be sought from all sources and that a qualified committee should thoroughly examine each textbook for suitability and accuracy before it is adopted for use. If no existing text proves suitable, some qualified person or persons should be commissioned to write one.

It was agreed that the Federation would oppose any further increase in the length of the school day or in the length of the school year on the ground that such increase would be educationally unsound and against the best interests of the pupils. The Federation will recommend that the lengths of the school day and the school year be returned to those in effect prior to the 1961-62 school year and that the Christmas vacation be of at least two weeks' duration.

The Supervision Practices Committee presented an outline of its study of the position of Department Heads and described the conditions which it believed should govern the appointment, the qualifications, the remuneration and the duties for such persons in a school, all of which were approved. The suggested duties, which will necessarily have to be adapted to fit the specific school situation, are as follows:

1. Generally to assist the principal in the administration of the school as it applies to a particular subject area and to keep him informed of developments in the subject area.
2. Specifically to assist the principal with the following routines:
 - (a) Leading members of his department with the objectives, philosophy and requirements insofar as they apply to the subject field.
 - (b) Supervising the preparation and administration of the subject area.

Miss Elsie Roy, recently retired as Primary Supervisor in Vancouver, was presented with the Fergusson Memorial Award by Past President W. H. Janzen.



THE B. C. TEACHER

tion of examinations and recommending grading procedures.

- (c) Assisting new staff members to become oriented, i.e., explanation of routines, availability and use of equipment, etc.
 - (d) Consolidating statistical information where applicable.
 - (e) Ordering supplies for the department, supervising distribution of these and maintaining an inventory of equipment.
3. To assist teachers with their work by helping with problems of instruction.
 4. To organize, in co-operation with the members of his department, the subject matter to be taught, and to co-ordinate the work where more than one teacher handles the same course and to set course limits for examination periods.
 5. To assist the principal in selecting courses to be offered.
 6. To guide the preparation of special courses for accelerated, enriched or slow learners.
 7. To be aware of course changes, new techniques, departmental circulars, supplementary texts, audio-visual aids available, etc., and to acquaint the members of his department with such information.
 8. To guide members of his department in a continuing co-operative scheme of evaluation and improvement of teaching objectives, methods and techniques.

The Department will be requested so to amend its grant structure as to enable school boards to reduce drastically the pupil-teacher ratio in schools which have a relatively small secondary enrolment and in

Elections are held for the positions of President, First and Second Vice-President and Secretary-Treasurer. Here the scrutineers count ballots.



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which extensive double programming is therefore necessary.

The Executive Committee was instructed to seek an amendment or amendments to the Public Schools Act which would restore to principals and other administrative and supervisory personnel the same rights of appeal as those at present enjoyed by other teachers. The 1961 amendment to the Public Schools Act provided that such personnel could appeal only to the Deputy Minister. They were denied the right of appeal to a Board of Reference.

The C.T.F. Affairs Committee had referred to it, for action, the resolution which asked that the C.T.F. make representation to the Federal Government to have the Income Tax Act amended so that all people employed in professional occupations who have university or college graduation (e.g., doctors, dentists, lawyers, and teachers) are permitted to deduct the cost of depreciation or additions to their professional libraries from their taxable income.

The Federation, in Convention, went on record as favoring the establishment of a reserve fund.

Federation policy on class size was amended by adding that kindergarten classes be limited to no more than 25 pupils per teacher per session.

The Department is to be requested to rule that the afternoon session of kindergarten be of two hours' duration instead of 2½ hours.

A resolution re Grade VII final examinations was considered and approved:

Whereas the Department of Education Directive has either overlooked or ignored a number of factors, and

Whereas there is a risk that many schools may pay

Officers for 1962-63 are F. J. Cairnie, 1st Vice-President; Mrs. I. A. Cull, Secretary-Treasurer; H. M. Palsson, President; and D. J. S. Smith, 2nd Vice-President.



only nominal attention to the Directive and fail to mark or make use of these final examinations—a very unfair treatment of pupils who have worked hard to study for them and to write them,

Be it therefore resolved that the Annual General Meeting register its strongest objections to the plan ordered by the Directive and that it suggest either of the following alternatives:

1. That the whole matter of Grade VII final examinations be left in the capable hands of the teachers, administrators, and superintendents of the school districts, or

2. That the final examinations for Grade VII be written a week earlier than the date prescribed by the Directive, thus to commence not earlier than Thursday, June 14.

(Because of its length, much of the preamble of this resolution has been omitted in this report.)

The P.S.A. committees and the Executive were instructed to ask the Department for more freedom to acquaint the membership with all possible and probable changes in curriculum, including revisions of courses and changes in texts.

The Federation will make strong representation to the Department requesting the establishment of the following practice when radical changes in any aspect of the curriculum are planned:

That the plans for such changes be submitted to the teachers of the province through the B.C.T.F. so that it is possible for teachers to have a thorough understanding of the reasons and objectives underlying such changes well in advance of their actual inception; the purpose of this procedure to assure teacher understanding and support where such is possible, or to provide ample opportunity for suggestions and criticism in order to indicate what changes are necessary before teacher support can be expected.

The Annual General meeting went on record as being opposed to the continuation of nuclear weapons' testing.

The Annual General Meeting also resolved to urge the Government that education in the province be given the necessary recognition of a full-time Minister of Education who has responsibility for no other department.

Honorary Life Membership was granted to Mr. Thomas Woodcock, Vancouver, retired school principal.

Elected as officers for the year 1962-63 were the following: H. M. Palsson, President; F. J. Cairnie, First Vice-President; D. J. S. Smith, Second Vice-President, and Mrs. Isobel A. Cull, Secretary-Treasurer.★

Dean Andrew Honored by B.C.T.F.

GEOFFREY C. ANDREW, B.A., M.A., who has been Dean and Deputy to the President of the University of British Columbia, left Vancouver on February 28 to take up new duties in Ottawa as Executive Director of the Canadian Universities Foundation and the National Conference of Canadian Universities and Colleges.

Dean Andrew came to the University of British Columbia in 1947, after service with the Canadian government. He has served education in British Columbia in many capacities, having been a member of the University Senate and the Joint Board of the College of Education.

The Canadian Universities Foundation, to which Dean Andrew has gone, is the organization which distributes federal aid to Canadian universities and colleges.

Dean Andrew is a graduate of both Dalhousie and Oxford Universities.

To honor Dean Andrew on his leaving the University, the Federation held a reception on April 6. At that time he was presented with an authentic totem pole, suitably engraved, as a souvenir of his time in British Columbia.



C. D. Ovans and K. M. Aitchison (left and right) join Dean Andrew in admiring the Federation's gift to him.

Making Ability Grouping Work

There are four conditions, all of which must be met, which will ensure that ability grouping can work. This article describes the conditions and points out that hard work and adjustment of techniques lead to success

IF YOU WANT to hear many a B.C. secondary school principal sound off, just suggest that maybe ability grouping would be worth trying in his school.

"It's not worth it," he'll tell you. "Man alive, you expect me to put even more effort into my timetable than I do already? You expect us to teach different lessons to almost every class? And give 'em different exams? Boy, what a lot you expect! And how do you get comparable grades out of a mess like that? It just won't work, I tell you, not in a secondary school."

Though our principal is imaginary, his doubts are natural. His conclusion, however, is very, very wrong, for there are secondary schools in B.C. that have made ability grouping work and that daily reap their reward in a more vital program, more interested teachers, and more successful students.

One such school is West Vancouver Senior High. With more than 1,200 students in Grades X to XIII, this school presents all the typical secondary problems. Yet it uses a complete system of ability grouping with success.

The reason for this success is the staff's recognition that effective ability grouping depends on four conditions being met:-

1. The timetable must provide specifically for different levels.
2. Each level must receive different teaching.
3. Each level must receive different exams.
4. Each level must receive suitable grades.

Unless these conditions all exist, the ability grouping, even if attempted, remains only a pious hope. It's no use just dividing the students. You have to bring timetable, teaching, exams, and grading all into harmony with your intention. So let's take them one by one, and see how one school does it.

The difficulty that ability grouping creates with timetabling is that it reduces the number of slots into

Mr. Prevost is Secondary Consultant for the West Vancouver school system. He was formerly on the staff of West Vancouver Senior High School.

which a pupil of given ability may be fitted. For example, the Grade X social studies timetable of many schools might show 12 classes of SS 20 and two classes of SS 21. This amounts to two levels: one for the university program student, and one for the general program student. West Vancouver offers its students nine levels of Grade X social studies:-

- One class, SS 20 accelerated, top ability
- One class, SS 20 accelerated, second ability
- One class, SS 20 regular, very good
- Two classes, SS 20, good
- Four classes, SS 20, average
- Two classes, SS 20, poor
- One class, SS 20, very poor
- One class, SS 21, geography emphasis
- Two classes, SS 21, history emphasis

The more levels provided, the more difficult the timetabling becomes. The bane of the timetabler is the singleton, the course that has only one class, into which all students taking the course must be fitted and which therefore cannot be allowed to conflict with any other course that any of the same students may want to take. A compulsory course like Grade X social studies ordinarily presents no problem of singletons, but in West Vancouver it is broken up into what in effect are five singletons and three doubletons. And the same goes on in other courses, as will be seen when we come to exams. The consequence is that the timetable becomes tremendously more complicated because of the introduction of ability grouping, just as our imaginary principal said it would.

But it is not too complicated to be handled if ingenuity and good will are applied. The following four procedures especially help:-

1. *Use conflict sheets:* These show in graphical form what conflicts will exist if two courses are scheduled at the same time. In West Vancouver they are applied to all accelerated and general program courses, and to all other singletons and doubletons. They are relatively easy to make out, and save the time spent on them a dozen times over by making trial-and-error fumbling unnecessary. Starting usually with Grade XII and working downward, the timetabler begins by putting in his singletons and doubletons so that conflicts shown by the conflict sheets are avoided or minimized. He doesn't guess; he knows. And he doesn't worry at this stage about keeping the number of classes in each block balanced. He knows he can attend to this later when placing courses whose many sections make conflicts of little concern.

2. *Use signalling devices:* The West Vancouver timetable is not a wall-sized cloth filled with pockets and slips of paper. It is just a piece of tackboard about half the size of a desk blotter, so firm yet light that the principal can take it home to work on. (Maybe that is not an advantage.) On the long side of a

sheet of paper pinned to the board are the names of the teachers. On the short side the letters A to G designate the blocks. To indicate that a teacher has a class in a block, a thumbtack, with the name of the course written on it, is stuck into the square where block and teacher's name intersect. It is possible to write on the thumbtack (with India ink) because it has first been enamelled. The enamelling is a different color for each grade, thus providing the first built-in signalling device, one which makes the whole timetable much easier to use and read. Small, round-headed map pins, stuck beside the thumbtacks, carry the signalling further by indicating any class not of "average" ability. A blue pin signifies that this is a class for top accelerated students only; a yellow pin means the class is for the second-best accelerated; two red pins show a very good non-accelerated class; one red pin, a good class; one black pin, a poor class; and two black pins, a very poor class. Below each pin, in the bottom half of the square, there is room to tally the number of students assigned to each class; and here two other colored pins are used as signals, white warning that the class is full and green that it needs to be filled.

3. *Place students individually:* When he gets the last pin in the board, the principal heaves a sigh of relief. The magic is accomplished; the seemingly impossible puzzle has been worked out. But the hard slogging is just beginning. The timetable is in existence, but not in effect; it still has to be transferred to the students' course cards. Some schools let the students do this themselves; others give the job to stenographers. But you can't do that if you want ability grouping. It takes experience and care to place every pupil in the subject-class best suited to his ability in that subject. To put every student good in the subject into a "red" class, and every student poor in the subject into a "black" class, and at the same time to keep from involving him in conflicts, takes all the skill of an administrator or counsellor thoroughly acquainted with the timetable and its objectives and with the record and potential of the pupil. To make it easier, the pupil's record is summarized on his course card. His subject marks are there, his scholastic aptitude letter grade, and his rating on skill tests in reading, vocabulary, arithmetic fundamentals, and arithmetic reasoning. Even with this help, and with the best-constructed timetable, it still is a frustrating and time-consuming job to find for every student the one place suited to his ability in every subject. Yet, unless this is done, and done thoroughly, all the rest is sham. Ability grouping doesn't come into effect through a statement of intention; it doesn't even come into effect through a timetable full of red and black pins. These are just window dressing until some one who knows how takes each pupil and places him in the class where he belongs. Then, and only then, can the teacher go to work with some surety that he really

is dealing with a homogenous group.

4. *Put your beliefs into action:* Many will say that making and applying such a timetable is not worth the undeniably great deal of extra work entailed, but the viewpoint at West Vancouver Senior High is that it saves work. A smoothly functioning timetable helps immeasurably to produce a smoothly functioning and productive school; it pays off every day of the year, replacing fumbling and frustration with purposeful progress. Besides, the timetable is the best vehicle the principal has for bringing his ideals to life. What he wants to give his students he must first put into the timetable. In short, *the timetable embodies the philosophy of the school, and is the means of converting that philosophy into action.*

Yet a timetable that provides specifically for different levels is only the first of the four essentials for effective ability grouping. The second essential is that each level receive different teaching. Obviously the best timetable provisions will be wasted if a teacher uses the same lesson plan and assignments for his low-ability class in Block D as he did for his high-ability class in Block C.

Teacher Must Adjust

According to the ability of his class, the teacher must adjust his expectation of how much they can do and how their work should be marked. He must also adjust his methods, emphasizing or not emphasizing drill, and deciding between laying stress on facts or reasons.

He may be able to go farther still and adjust his materials. English and social studies classes in West Vancouver, for instance, use pocketbooks to obtain a variety of subject and treatment not available from the rental texts. An English 21 class bases much of its work on newspaper study. Every two weeks it receives a class set of one of the Vancouver dailies, developing much of its reading and composition from a critical study of stories in that edition.

To suit the interests and ability of his class, a teacher may even adjust the whole course. The best known example of this in West Vancouver is the accelerated program by which the top 15% of students cover four years' work in three. Actually they get more enrichment than acceleration, for every course they are given has been drastically revised to trim out waste and repetition and replace it with material of real challenge. The science program affords just one example. Instead of having just one year each of chemistry and physics, the accelerated students with a scientific bent take each subject for two years.

The general program is another field where West Vancouver is very actively experimenting in an effort to develop courses that will have more meaning and value for students who are not academically gifted. The boys' course in Sc 21, for instance, is based on

mechanics, the girls' course on biology. Ma 21 students learn the slide rule to give them a useful skill and a feeling of prestige. They also do simple surveying with class-made instruments. The SS 21 course has also been modified. One class makes a geographic approach, mainly through an intensive use of large-scale maps. The other class uses a history text that is less difficult than the prescribed one, and has developed its own units.

These are just a few of the ways in which West Vancouver Senior High teachers are changing the approach, materials, and even the content of their courses to try to make them truly fit ability grouping. Yet they would never do this were it not for their assurance that the school would support them by meeting the third essential for successful ability grouping, namely that each level receive different exams.

Exams for Each Group

Why this is essential should be obvious. It simply is not fair to teach students different material and still subject them to a common exam. If you have real ability grouping, you must have different exams for each group. If you don't have different exams, you don't have ability grouping. You may say you do and think you do, but you don't; for teachers preparing pupils for a common exam are going to teach all of them the material that will be in the exam, and use the methods most suited to success on the exam. But if they know Class A is going to have a different exam from Classes B and C, then they will teach Class A differently. Thus it is that the easiest way to measure how much ability grouping a school does is to count how many different papers it needs to test its students at an exam period.

West Vancouver Senior High is a case in point. This Christmas it gave 89 different examinations in its 47 courses of English, social studies, mathematics, science, and languages.

Part of this multiplicity comes from the accelerated program and the strong effort the school is making to try to improve the general program. For instance, Grade X science would not likely require more than two exams in most schools, one for the university program classes and one for the general program classes. In West Vancouver, however, acceleration and general program grouping demanded five different exams: Bi 91A, Ph-Ch 91A, Sc 20, Sc 21 boys, and Sc 21 girls.

Further exams are necessary because of grouping within the university program itself. In Fr 91 this year, for example, there are two good classes, two average classes, and one poor class. The poor group had an exam of seven pages, the average group had an extra page to do, and the good group two extra pages to do, but all did them in two hours, for better groups are expected to work more quickly.

English affords similar examples. For one thing,

there is a striking difference between the accelerated exams and regular exams. Both the Grade XI and XII accelerated English classes had two-hour papers in which the questions occupied less than two pages; the regular UP classes had two-hour papers in which the questions occupied 10 pages. This was because the questions for the accelerated students were purely subjective, this being the only kind of question which will demand from the student the desired qualities of thinking and organization.

This is not to suggest that only the accelerated students had subjective questions. It is the policy of the school that all papers be 50% subjective. These subjective questions, of course, lend themselves well to variations in difficulty to suit classes of different ability. Here, for example, are four questions on *Essays for Yesterday and Today*:-

1. (The Mystery of Migration) List the three main preparations birds make for migration.
2. (Meridian) According to the author, what are the advantages of daylight meditation?
3. Why is it wrong, according to Cicero, for a man to have one code of ethics for his behavior in his family, and another for his behavior in society?
4. Consider some of Emerson's declarations on nonconformity and consistency, and try to assess the validity of his views.

It should not be hard to guess that the first two questions were from the paper for the poorer En 40 classes and the last two questions from the paper for the better En 40 classes. Notice the difference in vocabulary, and see how the first two questions require only recall, while the last two require reasoning and judgment. These show that the ability grouping has produced a real difference in teaching, which in turn is reflected in examination expectations.

Class Work Counts Greatly

These are but two or three of the many illustrations afforded by the West Vancouver examinations this Christmas that different examinations must be given if ability grouping exists, and, similarly, that without different examinations ability grouping cannot really exist. Nor are the examinations the whole story. If ratings of class work can be included in the report-card mark, the chance for different treatment of different groups is better still. In West Vancouver this is regular procedure, with class work counting up to 40 or 50 percent of the final mark.

So we come to the last of the four essentials for successful ability grouping: Despite all the differences in teaching methods, material covered, class work counted, and in the exams themselves, there must be some means of giving to all levels marks that are not only suitable to the level, but which can be compared with one another, and which recognize both effort expended and results achieved.

The method used in West Vancouver is by no means unique. It fits the needs of ability grouping

particularly well, has been tried and proven in many other situations, and was recently recommended to the whole province in a circular by the director of the division of examinations. It consists of using provincial IQ norms to decide *how many* A's, B's, etc., a class should have, and using the achievement rank to decide *who* gets them. This need not condemn low-ability classes to nothing but low marks. Nor need it give high-ability classes high marks no matter whether they are working or not. It merely sets a fair and reasonable pattern for the majority; the principal can always authorize individual variations which a teacher thinks wise. West Vancouver for instance, makes a regular practice of boosting general program students one letter grade if they are doing their best, thus relieving somewhat the discouraging effect of the low marks which otherwise would be all most of this group could hope for because of their low scholastic aptitude.

The prescription for successful ability grouping, then, has four ingredients, not one of which can be omitted. We must not only incorporate grouping into our timetable; we must teach the groups differently and test them differently; and yet find a way to grade them equitably.

Where this is done enthusiastically and completely, as this article has tried to show by citing West Vancouver, the result is worth many times the effort involved.★

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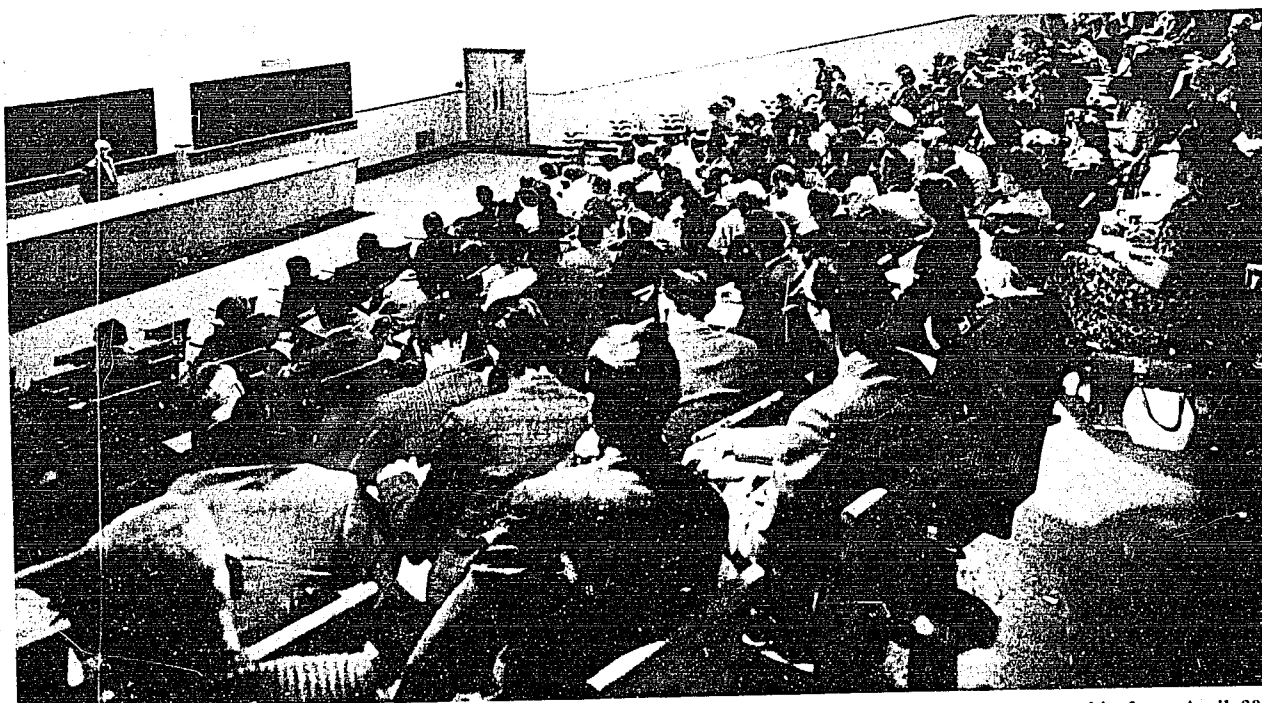
To all P.T.M.S. Members

Please notify the P.T.M.S. office when you:

1. Change your address
2. Transfer from one School District to another
3. Change your marital status
4. Increase or decrease the number of your dependents.

We require the name and birthdate for any new dependent — this includes husband or wife of the teacher-member. Notification must be received in this office within thirty days of such person becoming eligible for enrollment if coverage is to be given from date of eligibility.

THE B. C. TEACHER



The B.C.T.F.-sponsored Mathematics and Arithmetic Workshop was held at the University of British Columbia from April 30 to May 4. Our picture shows the group at one of the lectures.

A Significant Professional Project

THE WORKSHOP in Arithmetic and Mathematics, officially opened by President Kenneth Aitchison on April 30, was one of the most significant professional development projects ever undertaken by the Federation. The fact that it was a co-operative activity involving the Department of Education, the University of British Columbia, Victoria College, and the School Boards of eighty districts, was stressed by Mr. Aitchison. Among the 172 teachers and supervisory personnel who participated in the Workshop were representatives of the Department of Indian Affairs and of the two provincial organizations of teachers of private schools. The lecturers and group leaders included members of the Faculties of Victoria College and of the University. The project thus involved representatives of all

levels of education in the province.

In looking for the "beginnings" of this important in-service education activity, we could point to the 1955 Annual General Meeting of the British Columbia Teachers' Federation when professional growth through in-service education was declared to be a major emphasis of the Federation. Another "beginning" was the appointment by the Department of Education, in 1956, of a Mathematics Appraisal Committee of ten members which was instructed to review the whole secondary school mathematics program. Changes in the mathematics course at the University and at Victoria College, both in the Mathematics Departments and in the Colleges of Education, had their influence. Moreover, the "missionary" work done

by Dr. Ralph James, Head of the U.B.C. Mathematics Department, and by others in a long series of lectures and workshops in all parts of the province prepared teachers for significant changes in the field of mathematics. The two Curriculum Revision Committees of the Department of Education, reporting through Mr. John Meredith, Director of Curriculum, in the fall of 1961, recommended new mathematics textbooks and courses at both the elementary and secondary levels. These recommendations in turn led to the decision of the Department of Education that the textbook and course changes for September, 1962, would be in Grade III Arithmetic and Grade VIII Mathematics.

It was in the light of all the foregoing that the Philosophy of Edu-

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for Your information

New Executive Assistant



Mr. Aitchison

Kenneth M. Aitchison, B.A., B.Ed., M.Ed., was appointed Executive Assistant at the post-Easter Executive meeting. His duties will commence August 1.

Mr. Aitchison has been teaching for thirteen years, seven of them in New Westminster at New Westminster Jr. High School, T. J. Trapp Technical High School and Lester Pearson High School, and six at Burnaby South High School, where he has served as head of the English Department and senior counsellor.

He has been very active in Federation affairs since he began teaching. At the local level he has served on and been chairman of many committees and has been Public Relations Officer. He has also held various executive positions at local association level. He initiated and edited the local association bulletin in New Westminster. He also helped organize and conduct workshops and fall conventions, and served as consultant. He was local

representative for the Credit Union and the Co-operative Association.

At the provincial level, he has been member and chairman of both the Public Relations and Workshop committees, and has been assistant director of the B.C.-T.F. Workshop. He has also served on the Convention Committee. After election to Table Office, he served as chairman of the Scholarship Committee and Committee on Personnel, has been member of the Ethics sub-committee, the Honorary Awards Committee, and, as president, is chairman of the Professional Relations Commission and C.T.F. Affairs Committee. He is a Director of C.T.F. and chairman of its Finance Committee.

In the term of his presidency, Mr. Aitchison has been an indefatigable traveller throughout the province on behalf of the Federation. He has visited a great many local associations in all areas for discussions of Federation affairs.

In his new position, Mr. Aitchison will be concerned with the professional development of teachers, with particular responsibility for P.S.A. journals and Lesson Aids. In this field he will work with Mr. Allester, Director of Curriculum.

B.C.T.F. Scholarships Won

T. Douglas M. McKie, of Salmon Arm, has won a B.C.T.F. Post-Graduate Scholarship for winter session study proceeding to a post-graduate degree. Mr. McKie will go to the Graduate School of the University of Illinois, where he will work on a Ph.D. in Educa-

tional and Psychological Measurement, minoring in Mathematical Statistics.

Mr. McKie, born in Herefordshire, England, attended school there and graduated from the University of Bristol, with a B.Sc. in Pure and Applied Mathematics, in 1942. From 1942 to 1946 he served with the Royal Air Force as a pilot, during which period he spent some time as an instructor at flying schools in Manitoba. After demobi-



Mr. McKie

lization, he returned to the University of Bristol for teacher training and received the Diploma in Education in 1947. After a short time of teaching in England, he returned to Canada and taught for eight years in Manitoba. In 1951, after study by summer sessions, he earned a B.Ed. from the University of Manitoba, and was awarded the University Gold Medal in Education. While teaching in Manitoba, Mr. McKie served on the provincial executive of the Manitoba Teachers' Society for two years, as Salary and Finance Chairman.

Mr. McKie came to B.C. in 1955, having been appointed head of the Mathematics Department of the Salmon Arm Junior-Senior High School. He is now teaching mathematics in the new Salmon Arm Senior High School. Mr. McKie has been president of the S.A.T.A., on various of its committees, and on the O.V.T.A. Executive. He has also been a corresponding member of the Special Committee on Membership. In his community, he has been an alderman of the Salmon Arm City Council for two years and a Commissioner on the Village Council. He is at present completing his thesis for the degree of M.A. in Education.



Mr. Ashley

Leslie Frederick Ashley, of Clearwater, has been named winner of the B.C.T.F. Undergraduate Scholarship for study during winter session, proceeding to the degree of B.Ed.(Elementary). He will attend the University of British Columbia.

Mr. Ashley, born in England, took teacher training at Coventry, England, with majors in History and Physical Education. He has been engaged in instructing and teaching since 1937. During World War II he served with the Royal Air Force, largely in Africa and the Middle East and was an instructor with the Empire Air Training Scheme, with specialization in Physical Education. Most of his teaching career he has been engaged in elementary schools, with special responsibilities for remedial physical education, reme-

dial reading and library services. At present he is School District Librarian - Relieving Teacher in School District #26 (Birch Island), and is responsible for the formation and maintenance of district library services.

Mr. Ashley came to B.C. in 1959 and was in Chilliwack for a year. Since his arrival he has continued the studies he has undertaken for many years, by correspondence and in art and technical colleges in England. His teaching load, at the present time, includes English language and literature, art, library and social studies. He hopes, at a later time, to earn a Library degree, with special emphasis on school library services.

Mr. Ashley is also active in local association affairs, being Secretary-Treasurer of the local association. He has also served on the Central Mainland zonal negotiation committee.



Mr. Dahlie

The winner of the B.C.T.F. Undergraduate Scholarship for winter session for a teacher proceeding to the B.Ed. (Secondary) is Jorgen Dahlie, of Smithers. Mr. Dahlie, born in Norway, has lived in the Smithers area most of his life. He completed his Junior Matriculation at Smithers High School in 1941, and then worked on construction and as a seaman at Prince Rupert, until he volunteered for service with the R.C.N.V.R. Illness, however, prevented him from actually serving. After recovery, he owned and operated a business in Smithers, until he went back to his

studies. He has attended summer and winter sessions from 1959 until he took his present position in Smithers Junior - Senior High School, where he teaches a special class of Grade VII students.

Winners of B.C.T.F. Undergraduate Scholarships proceeding to a B.Ed. (Elementary or Secondary) at Summer Session are: Mrs. Marie Elizabeth Slessor, North Vancouver; Mrs. Barbara Landauer, Vancouver; Mrs. Enid V. Hardman, Enderby; Mr. J. R. Stickney, Rossland; Miss I. Barbara Kallus, Creston; Mr. H. R. Kendrick, Victoria; Mr. D. W. Davidson, Vancouver; Mr. A. E. K. Philip, Fort St. John.

B.C.T.F. Post-Graduate Scholarships for Summer Session study have been awarded to Mr. K. G. Pedersen, North Vancouver, and Mr. J. S. Clark, Sidney.

Head Graduating Class

Marion Myfanwy Powell, Vancouver, has been awarded the Maxwell A. Cameron Memorial Medal and Prize for heading the graduating class in the Secondary field. The Elementary field award has been made to Sandra June Frisby, Langley.

Tentative Secondary Curriculum Outline Prepared

Upon instructions of the Executive Committee, the Curriculum Directors have prepared a "Tentative Outline of School Organization, Various Programs and Course Sequence for the Secondary Grades." Copies will be sent to local and specialist association officers for their consideration. Additional copies are available from the Federation office.

Amendments to this tentative outline will be considered by the Federation Curriculum Committee in October.

Membership in Provincial Specialist Associations

The procedure followed last September of sending lists of the provincial specialist associations to schools for distribution to all teachers will be followed again next fall.

All teachers will thereby have an opportunity to renew their membership fees in associations in which they are interested—or to join an association for the first time.

Lectures on U.B.C. Library

To help Summer Session students make the best use of the University Library, a series of lectures will be given by members of the Library staff. All lectures will be in Buchanan 106.

The first lecture, on July 10 at 8:15 a.m., 10:25 a.m. or 1:30 p.m., will be a tour of the Library by color slides and an introduction to the card catalog. Lecture 2, on July 11 at the same times, will deal with the use of the periodical indexes. The third lecture, on July 12, also at the same times, will discuss types of reference books.

The Library staff urges Summer Session students to attend these lectures.

Readership Survey — Provincial Specialist Publications

In March the Committee on Provincial Specialist Association Publications sent questionnaires to members of the various P.S.A.'s. In the case of those associations with a small membership a copy of the questionnaire went to all members. In other cases only a sampling of the members received the forms. Over one thousand returns were received and these have been carefully studied by the committee. Appreciation is expressed to all those members who completed a copy of the survey form.

At the time that this note is written detailed reports are being prepared for the editors of P.S.A. journals and newsletters. It is expected that the editors will receive considerable guidance, for future policy, from the survey. Moreover, a full report of the overall findings will be made to the Executive Committee of the Federation.

When asked for an "overall rating" of the newsletters they received, 159 members said "Very

Good," 380 replied "Good," 89 considered the publications "Fair" and 12 replied "Poor." The journals were rated "Excellent"—2, "Very Good"—149, "Good"—242, "Fair"—30 and "Poor"—7.

The editors of the various publications have worked very hard to keep the members of their associations informed of P.S.A. activities. They have solicited articles of lasting interest to their colleagues in specific subject fields or in particular positions in education. It is quite clear from the questionnaires that the efforts of the editors (and of those who write articles for them) are very much appreciated by the great majority of their members. There were many complimentary comments.

Have You These Books?

The librarian of the Burnaby Teachers' Library, Mr. C. D. Nelson, is interested in securing copies of old textbooks formerly issued or prescribed for B.C. schools. In particular, he would like to find books of the *Canadian Readers* series, Books 1 to 6, and the *British Columbia Readers*.

If any teachers have copies of these and other titles they would be willing to part with, Mr. Nelson would be most happy to give them a new home. His address is Burnaby Teachers' Library, 390 S. Holdom Avenue, Burnaby 2, B.C. (Telephone CY 8-9414).

Memorial to Miss Langridge

In recognition of one who made an outstanding contribution to the teaching group to which she belonged, the Secondary Association of Teachers of English wishes to set up a memorial in the name of Marian Langridge. The suggestion is that the memorial take the form of a lectureship, the idea being that each year a lecture on a subject of interest to English teachers would be given by a distinguished speaker. The lecture would be given at an appropriate time, such as the week of the Annual Convention.

Marian Langridge gave devoted

service to the English teachers throughout her teaching career: she served as president of the English Section and was secretary of S.A.-T.E. for its first three years.

Friends and associates who would like to assist in establishing this memorial are asked to send donations to Miss Phyllis Dover, Secretary of S.A.T.E., c/o B.C. Teachers' Federation, 1815 West 7th Avenue, Vancouver 9, B.C.

A Full-time Job

A survey conducted by the Research Division of C.T.F. in which a large sampling of B.C. teachers was used, reports the following information:

The average yearly workload of B.C. classroom teachers is in the vicinity of 2,100 hours.

B.C. classroom teachers spend an average of 50 hours a week on tasks directly related to their jobs.

The breakdown of the average B.C. classroom teacher's workload for the school year is: Instruction 48.1%; Preparation 20.0%; Professional 7.3%; Testing 8.9%; Extra-curricular 6.2%; Supervisory 6.3%; and Other 3.2%.

Shaughnessy Residential Club

The Shaughnessy Residential Club is sponsored by the Retired Teachers' Association. It is situated in the Kerrisdale district of Vancouver, at 1638 West 41st Avenue (at Adera), and offers room and board to active and retired teachers.

The building is a fairly large house, set in well-kept grounds, and accommodates twenty guests. The rooms are nicely furnished and each has hot and cold water in it. There are adequate bathroom facilities. A large lounge, for the use of all guests, is also nicely furnished and has television installed. Breakfast and dinner are served, and lunches will be put up if necessary. The club maintains a staff of three, a cook and two maids.

Inquiries may be addressed to Miss Olga Elliott, #206, 6026 Tisdall Street, Vancouver 13.

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PA	— \$5,000 to \$8,250 (increments, \$250)

Teachers with PA certification and Master's degree, teaching 50% or more of time in field of major in Master's degree, receive extra \$200 per annum.

Application forms may be received from and interviews arranged with the Superintendent of Schools, 721 Chesterfield Ave., North Vancouver. Telephone YUkon 7-8141.

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An Experiment in Math 8

Continued from page 338

reason could well be that the new approach offers something for everyone.

Good teachers have always found scope in the curriculum to meet the needs of their more able students, but it seems that the new course offers the less gifted child opportunities to create, discover and experiment with ideas. The basic notions of modular arithmetic and solution sets are not beyond the grasp of the majority of our low ability pupils. Further refinements of thinking are found to be challenging and rewarding by many children of average intelligence. For the gifted youngster, of course, the possibilities of enrichment afforded by topics in real numbers, plane and space figures and the graphing of solutions sets are limitless.⁸

The well-known scholar, G. H. Hardy, has said that the mathematician is "a maker of patterns."⁹ He sees him as an artist who through the manipulation of ideas adds something of value to the world. Educators and mathematicians are hailing the new course as a significant step forward. Perhaps it is because it affords the child a better introduction to what mathematics is all about.★

¹ National Council of Teachers of Mathematics, *The Revolution in School Mathematics*, Washington, D.C., 1961, p. 1.

² This approach to the teaching of mathematics, known as the "discovery method" is dealt with in an excellent article by Gertrude Hendrix in the *Mathematics Teacher*, May, 1961, pp. 290-99.

³ This was the low ability group (mean Stanford IQ of 92) in a large school.

⁴ At this stage of the lesson, some of the more sophisticated of the class members will prefer (and indeed should be encouraged) to use other symbols for the box such as "x" or "y."

⁵ The commutative principle with respect to addition states that: If a and b are whole numbers, then $a + b = b + a$. The associative principle states: If a , b , and c are whole numbers, then $(a + b) + c = a + (b + c)$.

⁶ The existence principle with respect to addition states: If a and b are whole numbers then $a + b$ is a whole number. The existence principle with respect to subtraction does not hold for the whole numbers, since if $a < b$, $a - b$ is not a whole number. For example, $2 - 3 = (-1)$ and (-1) is not a whole number, but an integer.

⁷ P. Suppes and B. McKnight, "Sets and Numbers in Grade One," *The Arithmetic Teacher*, Vol. 8, No. 6, Oct., 1961, pp. 287-90.

⁸ Teachers of pupils of all ability levels will find a great deal of resource material in Donovan Johnson's *Exploring Mathematics On Your Own*, Webster Publishing Company, Pasadena, Calif., 1960. The material is available in booklet form for student use.

⁹ G. H. Hardy, *A Mathematician's Apology*, Cambridge University Press, 1941, p. 24.

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1. Hardy, G. H., *A Mathematician's Apology*, Cambridge University Press, 1941.
2. Hendrix, Gertrude, "Learning by Discovery," *The Mathematics Teacher*, Vol. LIV, No. 5, May, 1961, pp. 290-99.
3. Johnson, Donovan and Glenn, William H., *Exploring Mathematics On Your Own*, Webster Publishing Co., Pasadena, Calif., 1960, 303 pp.
4. National Council of Teachers of Mathematics, *The Revolution in School Mathematics*, Washington, D.C., 1961, 50 pp.
5. Suppes, P. and McKnight, B., "Sets and Numbers in Grade One," *The Arithmetic Teacher*, Vol. 8, No. 6, Oct., 1961, pp. 287-90.

Teaching Conditions Contrasted

Continued from page 336

teaching blocks, and have 210 pupils under my supervision. Because there are only the two exams and reports, exam marking is considerably reduced in N.S.W. In the elementary school, reports are the exception rather than the rule, and in all grades in the elementary school, oral reading tests are given.

Mention should be made of the inspectorial system. In the secondary sphere, inspections are subject inspections rather than regional. An English inspector would see one's English periods; a mathematics inspector would see one's mathematics periods—and so on. In the elementary schools and more remote country areas, inspectors are regional.

Teachers are always advised beforehand when they are to be inspected. In some cases teachers know six months ahead. In other cases, the teacher might know only two weeks ahead, the date of his inspection.

There are some further interesting features of the N.S.W. system. As far as sick leave is concerned, 22 days sick leave on full pay is granted, and a further corresponding period on half pay to each teacher per year. As years of experience grow, so do provisions for sick leave.

In contrast to B.C., N.S.W. teachers are paid at the end of each two-week period throughout the calendar year, so that they receive 26 pay cheques.

As far as I can gather, there is no provision for sabbatical leave in N.S.W., except for teachers who win scholarships in open competition. Although we vigorously pointed out that we would return to the Department of Education in N.S.W., we still had to resign. Apparently, this is the dictum of the N.S.W. Public Service Board, which controls all civil or public service departments that are operated by the State Government (e.g., transport, electricity, etc.). N.S.W. teachers are civil servants.

If a teacher is away for a day, week, or even longer, no substitute teacher is provided, and other teachers perform his duties. Only when a teacher is absent for a prolonged period is a substitute sent.

The B.C. teacher undoubtedly earns considerably more money than his N.S.W. counterpart. The higher cost of living here diminishes this difference, of course. Canadian teachers working in N.S.W. apparently find the difference in salary substantial. Nevertheless, Australians have a high standard of living and would rank within the first five nations of the world. The fact remains, however, that B.C. teachers are better paid, but that N.S.W. teachers are subject to much less pressure and have more free time. In fact, the demands made on teachers in many school districts should cause the whole teaching profession serious concern. It appears that the tendency to make the teacher work for longer periods of time in school, at school and at home is, surprisingly enough, growing. ★

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K. M. Aitchison and H. M. Palsson chat during a break at the Easter Executive Meeting.

on *Your* behalf.

OUR RECORD this month will have to bring our readers up to date from as far back as mid-March. During this long period, many committees have met in the Teachers' Building: Agreements, Community Colleges, Consultative, Convention, Curriculum, Curriculum Directors, Education Finance, Executive, Finance, In-service Education, an In-service sub-committee planning for Arithmetic and Math Workshop, Membership, Pensions, Philosophy of Education, Property Management, P.S.A. Publications, Public Relations, Reserve Fund, Teacher Education, Television and a sub-committee of the Television Committee planning for the Workshop on Educational T.V., and Workshop. A few meetings have already been scheduled for June: Executive, Finance, In-service Education, a joint meeting of the In-service Education Committee and presidents of P.S.A.'s, and Teacher Education.

March 15

This was B.C.T.F. Day at Victoria College. Lectures were presented on Professional Ethics and on the Organization and Services of the B.C.T.F. by Messrs. F. J. Cairnie, H. N. Parrott, D. A. Smith, H. O'Donnell, C. D. Ovans and S. Evans. Discussion group consultants were Victoria teachers: R. J. Wunderlich, Mrs. C. Dibb, Wm. Cross, Miss E. Creighton, S. Per-

kins, Miss G. Watchorn, P. C. Glover, Mrs. M. Sinclair, R. McKee, Mrs. G. Welch, B. Mee, Miss S. McGill, T. Temple, Mrs. A. Pudsey, W. Damer, Miss P. Bell, J. Crowther, Mrs. H. Hodson, R. Lister, Miss M. MacKay, E. Oakley, Mrs. E. Millhouse, R. Berod, Miss O. Heritage, W. Kitley, Mrs. D. White, F. Jarvis, Mrs. M. Wiley, W. Boyes, Miss K. Thompson, D. Jones, Mrs. B. King, and D. MacKinnon. Mr. J. E. Smith, president of the Greater Victoria Teachers' Association, was responsible for all the organizational details. Mr. C. F. Goulson was the liaison between the teachers' association and the Faculty of the College of Education. Mr. H. M. Palsson, First Vice-President, was host at the dinner which followed the sessions.

March 17

F. J. Cairnie, Secretary-Treasurer, R. B. Cox, a past president, C. D. Ovans, General Secretary, and W. V. Allester, Executive Assistant, took part in the Vancouver Island Workshop held in Victoria. Assistant General Secretary S. Evans was in Ottawa for a meeting of a C.T.F. Public Relations Committee. This meeting came about because the B.C.T.F. had requested C.T.F. to consider means by which it might assist provincial associations in educational public relations, particularly in working with national news media.

March 22

Mr. Ovans attended a meeting of the Provincial Board of the Junior Red Cross in Vancouver.

March 27

Mr. Allester, with Mr. B. G. Webber and Mr. J. S. Church, attended a meeting of the Professional Committee on Secondary School Curriculum in Vancouver. Mr. Ovans represented the Federation at the graduation dinner of the Education Undergraduate Society.

March 28

K. M. Aitchison, President, travelled to Campbell River for discussions concerning a professional problem which had arisen there.

March 29

Mr. Evans spent the afternoon at Victoria College so that the student teachers might seek information on the details of salary agreements and teaching conditions in different school districts. In the evening he served on a panel of five delegates to the Canadian Conference on Education reporting to a public meeting sponsored by the Nanaimo Education Council.

March 31

Mr. Allester participated in the sessions of the Conference on Educational T.V. held at the University of B.C.

April 2

Mr. Aitchison, Mr. Ovans and Mr. Allester met with the staff of

Delbrook High School, North Vancouver, for a discussion of Federation affairs.

April 4

Mr. Aitchison was in Abbotsford to attend a meeting of the Teachers' Association.

April 5

Mr. Ovans, as its president, attended a meeting of the executive of the B.C. Council on Educational Research. Mr. Evans attended a meeting of the B.C. Division of the Canadian Association for Adult Education.

April 6

Mr. Aitchison was host when the Federation honored Dean Geoffrey Andrew, who has retired from his position at the University of British Columbia. To the reception were invited representatives of the Senate, the Joint Board of the College of Education, the B.C. Trustees' Association, the Federation Executive Committee, Vancouver local associations and the office staff.

April 9

J. A. Spragge, Executive Assistant, attended a meeting of the Teachers' Pensions Board in Victoria.

April 10, 11

The president made a series of visits to local associations. He was at Ganges for a meeting of the Gulf Island Teachers' Association, and at Saanich.

April 12

Mr. Evans attended a meeting of the UNESCO Committee of the United Nations Association in Canada. Mr. Allester and Mrs. Bekius,

Office Manager, met with treasurers and membership chairmen of P.S.A.'s to discuss problems of fee collection and membership records.

April 12, 13, 14

Mr. Aitchison was in the north to visit local associations at Fort Nelson, Dawson Creek and Fort St. John.

April 13

Mr. Palsson and Mr. Evans were in Nanaimo for a meeting salary representatives of all Vancouver Island teachers' associations, at which it was agreed that all teachers' associations, except Lake Cowichan and Victoria, would approach the Vancouver Island school boards in regional salary negotiations. Mr. Allester addressed Industrial Arts teachers-in-training at the Burnaby Vocational School on Federation affairs.

April 16

Mr. Palsson addressed the Happy Valley P.T.A. on the new Grade VIII program. Mr. Evans addressed a general meeting of the B.C. Agrologists' Association on the topic of public relations.

April 18

Mr. Evans attended a meeting of the Alumni Board of Management, representing the graduates in Education. Mr. Allester, Mr. Church and Mr. Webber were in Victoria for a meeting of the Professional Committee on Secondary School Curriculum.

April 19

A meeting of the Professional Committee on Elementary School Committee in Victoria was attend-

ed by Mr. Allester, Mrs. Hanney and Mr. J. S. Young.

April 25

Mr. Aitchison addressed the Parent-Teacher Federation delegates at their meeting in North Vancouver.

April 25, 26, 27

Mr. Allester represented the Federation at the Department of Education conference in Victoria. Mrs. M. Ricker represented the B.C. School Trustees' Association at the meeting. This was the first time that representatives of either the B.C.T.F. or the B.C.S.T.A. have been invited to this conference.

April 28

Mr. Aitchison represented the Federation at the Canadian Music Educators' Association luncheon.

April 30

The Workshop on Arithmetic and Mathematics was officially opened by Mr. Aitchison.

May 2

Mr. Ovans and Mr. H. N. Parrott attended a meeting of the Joint Board of the College of Education.

May 3, 4

Visits to local associations took Mr. Aitchison to Birch Island and Barriere.

May 4, 5

Mr. Evans attended the B.C. Conference on Social Work and served as a discussion leader for one of nine groups. Mr. Evans also represented the B.C.T.F. at a luncheon at the U.B.C. Faculty Club, given by Dean Scarfe, of the College of Education, for the secretary and three of the nine mem-

OFFICE SUMMER HOURS

Teachers planning to call at the B.C.T.F. office during the months of July and August should note the following hours:
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bers of the Quebec Royal Commission on Education. The Commission has divided itself into three groups, one visiting Western Canada and California, one Eastern Canada and New England states, and one Ontario and mid-western states. The Commission members asked the luncheon group to comment on such questions as: Do you think education in B.C. is too greatly centrally controlled? To what extent is research in education undertaken in B.C.? What is the relationship in educational matters of such groups as the teachers' organization, the trustees' organization, the Department of Education and the University? What do you think of the recommendation of the Chant Commission that a school planning board or commission be set up? How adequate are the provisions for technical and vocational education in the B.C. school system?

May 6

Mr. Aitchison visited the teachers' association in Bralorne and took part in discussions of Federation affairs.

May 9

Mr. Aitchison attended the annual dinner meeting of the Delta Teachers' Association. Mr. Spragge was in Victoria gathering information for the Pensions and Education Finance committees.

May 10

Mr. Aitchison continued his visits to local associations by meeting with the Quesnel Teachers' Association.

May 11

Mr. Ovans attended a meeting of the Provincial Board of the Junior Red Cross. Mr. Evans travelled to Squamish for consultations concerning a personnel problem.

May 12

McBride Teachers' Association held a meeting at which Mr. Aitchison was present to discuss Federation affairs.

May 15

Mr. Evans was in Nanaimo to meet with the negotiation committee of the Vancouver Island teachers' associations who are prepared

to consider again zonal negotiations. The purpose of the meeting is to determine terms of reference to submit to trustees.

May 15 - 18

Mr. Aitchison was in the East Kootenay and visited teachers' associations in Fernie, Kimberley, Cranbrook and Windermere.

May 16

Mr. Spragge travelled to Nakusp for consultations concerning a personnel problem.

May 17

Mr. Evans attended a meeting of the B.C. Division of the Canadian Association for Adult Education, of which he is serving as Second Vice-President. Dr. B. E. Wales, Director of Adult Education, Vancouver, is president and Gordon Selman, Associate Director of Extension, U.B.C. is First Vice-President. R. E. Reeve, Victoria school trustee, is Treasurer and Mrs. Margaret Brunette, Vancouver Public Library, is Secretary.

May 18

The Professional Committee on Secondary School Curriculum met in Vancouver. Mr. Allester, Mr. Webber and Mr. Church attended.

May 21 - June 1

As a representative for C.T.F., Mr. Aitchison attended the C.E.A. Course for School Superintendents at Banff.

May 24

Mr. Evans represented the Federation at Spring Convocation, U.B.C.

May 25

Mr. Palsson, as President-elect, addressed the graduating class of Belmont Senior Secondary School, Sooke.

May 26

Mr. Palsson was in Campbell River to attend a dinner honoring Mr. E. H. Whittingham, who is retiring this year.

May 28

Mr. Allester was in Duncan to address the Parent-Teacher Association on "Changes in Elementary School Curriculum and Organization."

May 29

Mr. Ovans was in Golden for dis-

cussions concerning a personal problem.

May 31 - June 2

Mr. Ovans attended the Western Canada Regional Conference of Teacher Educators at Banff.

During June Mr. Aitchison will visit teachers' associations in Prince Rupert, Terrace, Smithers and Kitimat. He will also address the graduating class of North Vancouver High School.

Mr. Evans will make two trips to Nanaimo in connection with zonal negotiations on Vancouver Island, will attend a meeting of the directors of the B.C. Council on Education and will attend a conference of magazine editors, sponsored by the Educational Press of America, of which he is a vice-president for the area of B.C., Alberta and Alaska. The conference will be in Boulder, Colorado.

Mr. Spragge has been assigned to make two surveys—one on pension plans and the other on salaries and fringe benefits in other provinces. He will spend a good part of the month of June visiting with provincial affiliates as far east as Ontario.

Mr. Allester and the other members of the Professional Committees on Curriculum will attend meetings in Victoria during June.

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The notice now on the order forms and catalogs may therefore be ignored.

A new catalog with revised prices will be issued in the fall. In the meantime, the prices charged will be those outlined in the present catalog, with only the handling or postage charge added.

Across the desk

Mr. Peter's Article Appreciated

Bellevue Public Schools,
Bellevue, Washington.
April 13, 1962.

The Editor,
Dear Sir:

I should like to request permission to reproduce the article by L. J. Peter, "Prescriptive Teaching for the Emotionally Handicapped Child," published in the March 1962 issue of *The B.C. Teacher*, for distribution to the guidance and elementary school administrative staff of this district.

I believe the approach Mr. Peter outlines may be quite appropriate for adoption within this district's elementary school guidance structure. I would like to give our key

personnel an opportunity to read this article to acquaint themselves with Mr. Peter's point of view.

Sincerely,

WILLIAM E. MATTICK,
Director of Guidance and
Research

211 Fourth Avenue South,
Saskatoon, Sask.
April 4, 1962.

The Editor,
Dear Sir:

One of our principals has drawn to my attention a very fine article entitled "Prescriptive Teaching for the Emotionally Handicapped Child" which appeared in the March 1962 issue of *The British*

Columbia Teacher. This principal believes that an article of this quality should be in the hands of all of our principals.

Would it be possible for me to obtain from your office a copy of this issue? Would you give us permission to mimeograph this article for distribution to our principals?

Yours sincerely,

F. J. GATHERCOLLE,
Superintendent of Public
Schools

Editor's Note: With Mr. Peter's approval, these requests were granted. We are pleased when authors of articles in our journal receive such recognition.

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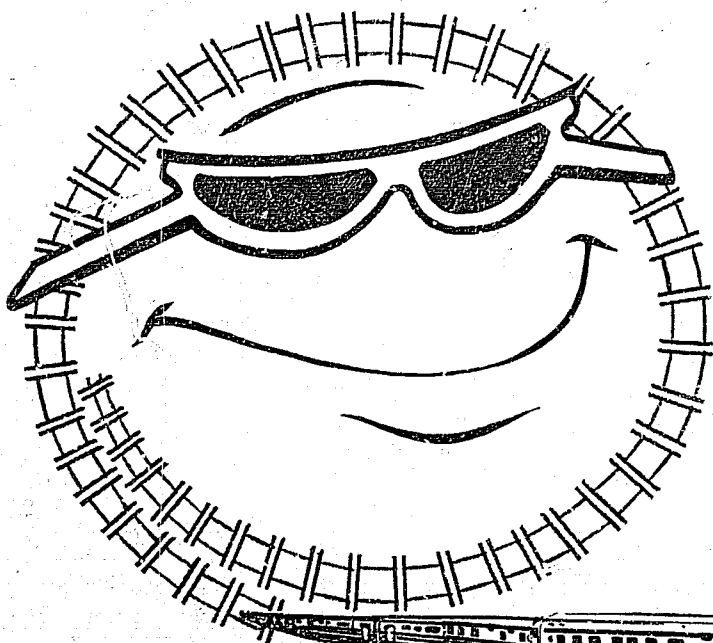
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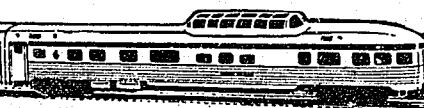


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new Books

ESTHER G. HARROP, Book Review Editor

GEOGRAPHY

A Regional Geography of North America, by George S. Tompkins and Theo L. Hills. W. J. Gage, Toronto, 1961. 689pp. and end papers. \$5.00

In this source-text of North American geography the aims of the British Columbia courses in geography, that is, to teach future citizens the knowledge and understanding that will enable them to imagine accurately the conditions on all parts of the great world stage and to think sanely about the political and economic problems of their day, are most adequately fulfilled. It is the stimulation of the mind and the imagination of the student that has been the prime concern of the authors. That these authors are both Canadian educators (Mr. Tompkins at the U.B.C. College of Education and Mr. Hills an associate professor of Geography at McGill University) makes it doubly valuable.

All the modern approaches to geography teaching have been utilized: vivid, realistic data and statistics, regional and typical studies, fact-filled geographic pictures and the first use, in a Canadian text, of excerpts from the National Topographic Sheets. In many instances large scale maps are coupled with aerial photographs.

Although this is primarily a geography text, the authors emphasize the historical background without which, all good social studies teachers realize, geography cannot be taught.

The approach is unique in that the extensive assignment material requires much more than factual recall. Rather, it is designed to encourage the student to do his own thinking, to describe and to analyze data and to draw conclusions (i.e., generalizations) with the aid of the teacher.

Material is related to the lives of Canadian students although it refrains from elaborating on any one area of the North American continent to the relative exclusion of others.

Although this book does not parallel any present full-term course in the British Columbia Programme of Studies it should prove valuable as a teacher-source book in Grades V, VI and VIII while filling the need for a pupil reference in Social Studies 10, 30, 31, 32, 33 and Geography 91. Particularly valuable source suggestions at the end of chapters and the appendix of useful teaching materials from both published works and original sources.

This is 689 pages of solid geography for Canadian schools.—A.J.W.

Understanding Maps, by F. C. Hardwick and Cyril Midgley. Clarke, Irwin, Toronto, 1961. \$1.25

This paper-bound booklet of 60 pages provides a valuable supplement to the teaching of map reading at the intermediate grade level. The booklet deals with compass directions, drawing to scale, the reading of map symbols, and the understanding of topography. The colored illustrations are excellent and the vocabulary is appropriate to the grade level. Each phase of the text is accompanied by exercises which insure an understanding of the subject matter.

A set of these books would be a great benefit to the social studies program of any school.—R.P.H.

GUIDANCE and COUNSELLING

The Counsellor's Handbook. State of Minnesota, Department of Education, 1962. Obtainable from Documents Section, Department of Administration, Room 140, Centennial Bldg., St. Paul 1, Minn. No price mentioned.

This handbook, prepared with funds made available under the National Defence Education Act of 1958 (U.S.A.), demonstrates the increasing emphasis placed on counselling by governmental and educational authorities. The Report of the Chant Commission on Education in B.C. and Dr. Conant's report, "The American High School," both stress the importance of counselling. The book examines both the work and problems of the counsellor. It discusses his ethical obligations in his relationships with others, and his use of sources and resources. Other topics treated are career information and planning, co-ordination of group guidance activities, the counsellor and the testing program, the counsellor and the curriculum.

Very practical and down-to-earth, the handbook would be valuable to classroom teachers, counsellors and educational administrators.—S.R.L.

Architect, by Robert W. McLaughlin. (Macmillan Career Series). Brett-Macmillan Galt, 1962. Illus. Photos. \$3.50

A good book for any person interested in the phases of architecture, and the training needed to become an architect. The Table of Contents shows clearly the details of this training including the sub-

jects listed in the curriculum of study in a School of Architecture. Headings given in the divisions in the Architect's training, practical points demonstrated in the early steps following a student's education in secondary school; and illustrations included are really "down-to-earth" for the young man just beginning his career after leaving the School of Architecture.—E.G.H.

Secretarial Careers, by R. I. Anderson. H. Z. Walck, Inc., New York, 1961. Illus. Reading List, Index, 106 pp. (In Canada, Oxford University Press) \$3.50

Here is a valuable little book which gives a comprehensive view of the field of the opportunities for women in the secretarial field. The book should be within easy reach of teachers planning the careers for girls especially on the General Program.—W.D.M.S.

HEALTH and PHYSICAL EDUCATION

The Philosophic Process in Physical Education, by Elwood Craig Davis. Lea & Febiger, Philadelphia, 1961. \$6.25

After a rather vague and sketchy commentary on philosophy in general, the book traces a few of the principal contributions to thought by representative philosophers beginning with Plato and Aristotle. Although it may have a limited appeal to a small segment of advanced students, the book has little relevancy for the undergraduate and the teacher of physical education in the public schools.—R.F.O.

Conquest of Disease, by Lealon E. Martin. Coward-McCann, New York, 1961. (Can. Agt. Longmans, Green, Toronto.) Illus. \$3.50

The heroes of medicine in the conquest of disease are presented in a very readable manner. The prospects for a longer life in the future are favorable if individuals make health a habit. Particularly commendable is the way the author encourages young persons towards careers in health. Suitable for pupil use in Grades VI to IX.—D.G.N.

Health and Fitness for Modern Living, by Hollis F. Fait. Allyn and Bacon, Boston, 1961. (Can. Agt. Macmillan, Toronto.) Illus. Appendix, Glossary, Index. \$4.80

This is an excellent basic textbook for health instruction in the secondary schools. The range of topics discussed is adaptable to the curriculum and would provide a comprehensive course for high school students. Particularly noteworthy is the quality of photographs and line drawings utilized throughout the text. A praiseworthy feature of the book is the appendix consisting of "A Pictorial Study of the Human Body." Here the various body systems are detailed through a series of colored graphic illustrations.—D.G.N.

Hygiene for Girls, by Dora Seton.
Evans Bros., London, England,
1960. Illus. \$1.50

This book provides excellent supplementary reading material for the Health or Home Economics program in all the junior-senior high school grades. It deals with the basic rules upon which good health and good appearance depend. There are numerous tasteful illustrations and diagrams.—S.L.

MISCELLANEOUS

Owls in the Family, by Farley Mowat. Little, Brown, Toronto, c1961. Illus. \$3.50

Mr. Mowat, a Canadian writer, who understands life on the prairies, has created a tale about two owls captured by Bruce and his brother and brought to live among their other pets. It is a story that all young readers will enjoy

and is full of amusing and un-planned incidents. Set in and around Saskatoon, it is a real prairie adventure.—E.G.H.

The Lost World of the Kalahari, by Laurens van der Post. Edited and abridged by Ingaret Giffard. Clarke, Irwin, Toronto, c1961. (Queen's Classics edition). Map. \$1.15

Here is one of the most interesting "abridgments" of all time, for this editor is the wife who, knowing her husband had long yearned to seek out the almost vanished Bushmen who were the first Africans, said, "You must go and do it at once." This he did and here is the story, with a wonderful insight and affection in it enhanced rather than diminished by a wife with a pair of sympathetic scissors cutting away any non-essentials.—G.H.C.

Play with Paper, by Thea Bank-Jensen. Brett-Macmillan, Galt, c1961. Illus.

Here is a practical and very useful book for the kindergarten or Grade I teacher. Directions that are very easy to follow are carefully given. The author has had teacher-training in Denmark in arts and crafts for children. Therefore her book can be highly recommended.—E.G.H.

Flying the Atlantic, by Henry Lent. Brett-Macmillan, Galt, c1962. Illus. 60c

A very interesting, informative and well-illustrated booklet which pupils of Grades V and VI will enjoy because of its descriptive material. They will see all the work done by the officers and crew of a jet-liner. Especially fascinating will be the orders given from the control towers at the take-off and landing terminals at the air-ports. It would be better for Canadian schools if the information had dealt with a Canadian airline.—E.G.H.

SOCIAL STUDIES

The Young Historian Series and *The Young Explorer Series*. Published by Weidenfeld & Nicolson, London, 1961. (Can. Agt. Clarke Irwin Co., Toronto.) 9/6 each.

Ancient Persia, by E. Royston Pike. Young Historian Series.

Ancient India, by E. Royston Pike. Young Historian Series.

The Aztecs, by C. A. Burdard. Young Historian Series.

Saxon Britain, by H. E. L. Medlersh. Young Historian Series.

Sweden, by Lars Helander. Young Explorer Series.

The *Young Historian* and *Young Explorer Series* are intended for Grade VI-VII readers in search of supplementary material for Social Studies. The print is clear; there are plenty of illustrations; and there is a good index and table of dates where needed. These books would be excellent additions to a school library.—E.G.H.

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Professional Project

Continued from page 359

cation Committee, after two meetings with officers of the provincial specialist associations, recommended an "immediate workable plan" of provincial co-ordination of professional development related to the curriculum changes in arithmetic and mathematics. The Federation Executive, in December, 1961, accepted this recommendation and instructed the Professional Growth through In-service Education Committee to work with representatives of the B.C. Association of Teachers of Mathematics and of the B.C. Primary Teachers' Association to implement the plan.

The Honorable the Minister of Education and members of his Department received the Federation recommendations very sympathetically. Thus began a series of meetings in which officials of the Department, members of the University and Victoria College Faculties, and representatives of the Federation, worked out the details for the April 30 to May 4 Workshop. Through the kindness of their respective School Boards and District Superintendents, Mrs. Roberta Chivers of Richmond and Mr. Lloyd Costley of Burnaby took charge of the program. They were assisted by Mr. Claire Morris of Penticton, chairman of the Professional Growth Committee and by Mr. Norman Preston of Victoria, president of the Teachers of Mathematics. Lectures and demonstration lessons were given by Mr. Costley and Mrs. Chivers, by Dr. R. D. James, Dr. H. Stein, Miss J. Kilgour and Mr. E. MacPherson of the University, and also by Mr. E. L. Thomas of Burnaby. During much of the time the Workshop members met in small groups under the leadership of Mr. P. Smith of Victoria College, Mrs. G. Dewar, Mr. J. M. Lydiard and Mr. C. Etchell of Vancouver, Mr. J. E. Smith of the University, Mrs. M. Ten-Broeck of Abbotsford, Miss D. Smith of North Vancouver, and of the lecturers listed. The secondary

teachers travelled to Burnaby on four afternoons to see demonstration lessons conducted by Mr. R. McMaster, Mr. G. Ensing, Mr. A. H. Pride, Mr. D. Heise, Mr. R. Charlesworth, Mr. W. Abercrombie, Mr. K. McAteer, Mr. G. L. Humphry, Miss A. Lazzarotto, Mr. J. Hall, Mr. M. Deane, Mr. E. Greenius and Mr. C. G. Norman-Martin. The elementary demonstration lessons used pupils from University Hill Elementary School. Mr. W. V. Allester, Executive Assistant, co-ordinated the numerous details necessary to the smooth operation of the Workshop.

Emphasis during the Workshop was on the nature of the curriculum changes and the reasons for them. The teachers were told that the new courses should result in more pupil interest, better understanding, improved powers of retention, and increased independence in applying mathematics to the solutions of problems. It was stated that the new courses stress ideas but do not exclude the practical applications of arithmetic and mathematics. Dr. C. Verner and Mr. B. E. Curtis of the University spent two sessions with the Workshop members in order to assist them to plan for local in-service activities which will follow the provincial Workshop. The success of the whole plan will be measured by the degree to which Grade III and Grade VIII teachers, in all parts of British Columbia, understand the curriculum changes and are ready to teach the new arithmetic and mathematics courses effectively next year.

The Federation is most appreciative of the high degree of co-operation obtained in this venture from all who were asked for assistance. The major costs were borne by the Federation and by the individual School Boards, with other financial contributions being made by the Department of Education, the University and the publishers of the two new textbooks. The total cost to the Federation alone approximates \$12,000.★

MAY - JUNE, 1962

School District No. 70 (Alberni)

The Alberni District Teachers' Association invites applications for teaching positions for the term commencing September, 1962.

Secondary:

Girls' Physical Education
8-13 two required
8-10 and other subjects
Senior English (40, 91, 100, 101)
English 30
English 10, 20 and other subjects
English 31/41
Senior Social Studies
Home Economics
1 fully qualified for senior work
1 HE 8, 10, 20 and other subjects
French 10, 20
Junior Girls' Counsellor (8-10)
choice of other subjects
Teachers of Grades 8 and 9—
general subjects

Elementary:

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Intermediate teachers
Librarians
Teachers for slow learners
Grade 7 (experienced male)

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EB 3475-5475	SB 4800-7470
EA 3875-5475	SA 5175-8175

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ROOM AND BOARD—Summer School session; women teachers preferred; \$17.50 a week. Close to U.B.C. Write Mrs. J. H. Moret, 4621 West 11th Ave., Vancouver 8.

FOR RENT—3 bedrm. modern bungalow, Arbutus Ridge. July and Aug. Completely furnished. \$125 per mo. V. K. McCuaig, 2316 W. 22nd Ave., Vancouver 8, RE 8-3987.

FOR RENT—\$90 mo. During summer School period. 3 bedrm. house; piano, TV, rumpus room. Close shopping. Burnaby, 30 min. from U.B.C. E. Nelson, 4458 Burke St., Burnaby 1.

WIDOW WILL SHARE apartment in attractive bungalow in select, quiet district. Near school, bus and town. Garage. Apply Mrs. E. F. Mitchell, No. 11-1045 Joan Cres., Victoria. Tel. EV 3-6140.

FREE ROOM AND BOARD in Dunbar area in exchange for light duties on behalf of elderly lady. July and August. Miss M. F. Ellis, 3980 W. 23rd Ave., Vancouver 8. CA 4-9374.

FOR RENT—July-Aug., central 1 bdr. apt. 15 min. U.B.C. No. 205-3780 Cambie St., Vancouver 9.

SUMMER SESSION—3 bedroom furnished house for rent. Apply Mrs. E. M. Ralston, 3037 West 28th Ave., Vancouver 8. RE 3-6328.

FOR RENT—3 b.r. fur. home, July-Aug., P. Harrison, 3976 Rumble St., S. Burnaby, HE 4-6703.

FOR EXCHANGE—3 bedroom home in Vernon for one near U.B.C. during S.S. session; for details write T.P. Moore, 2703-23rd St.

FOR RENT—Furnished 2 bedroom western home on North Shore. Available July 4-August 28. A small family who will care for garden and small dog may rent for \$175 for 8 weeks. 5725 Bluebell Dr., West Vancouver. Phone 921-7696.

GABRIOLA ISLAND—Beautiful waterfront location house (permanent)—3 bedrooms; fully equipped and furnished. Wish to exchange with a Victoria teacher for period June 29-August 17. Telephone CH 7-9356 or write Eric Chamberlain, R.R. #1, Gabriola Island, B.C.

PLEASANT FURNISHED five-room house with garden for rent July & August. Kerrisdale district. Grand piano. Would suit two people. Apply owner, 3205 W. 37th Avenue, Vancouver 13.

FOR RENT July, August, fully furn. 3 bedrm. home. Close UBC. \$150 mo. No children. Write 3825 W. 22nd Ave., Vancouver 8.

JULY-AUGUST: Deluxe bachelor ste., hideaway bed, sparsely but adequately furnished; suit two; teacher summering in Europe. 1 blk. S. Granville shopping area. Cool in summer, roof-sun deck. Miss A. Winskill, 1364 West 11th Ave., Vancouver 9.

NE. U.B.C. GATES—furn. rms., men, pvt. ent. & shower. \$7 per wk. 4644 West 14th Ave., Vancouver 8.

LARGE FAMILY HOME for rent for both the summer school session and the winter 1962-63 term. This house suitable for children, with three bedrooms and a den. Near Kerrisdale School. 2958 W. 42nd Ave., Vancouver 13. Phone AMherst 6-6089.

FOR RENT—Furnished house, 2 bedrooms, etc., 1 large upstairs room; July and August; on quiet street in Vernon; small private garden. Apply M. Beley, R.R. #2, Vernon.

Another Executive Member



Mr. Weicker

Douglas N. Weicker is serving his second year on the Executive, representing North Central District Council. Mr. Weicker was born in Vancouver. He attended both Victoria College and the University of B.C., graduating in 1950 with the degree of Bachelor of Arts. He took Teacher Training in 1950-51. He has since earned a B.Ed. Mr. Weicker served in the R.C.A.F. from 1943 to 1946. He began his teaching career in Kamloops in 1951 and moved to Prince George in 1953. There he has been a member of the staff of Prince George Jr.-Sr. High school, supervising principal of an elementary school, vice-principal of Duchess Park Jr. High School and is now supervising principal of that school. Mr. Weicker has, since he commenced teaching, been active in local association and District Council affairs. He was chairman of the Public Relations Committee in Kamloops, member and chairman of the Prince George salary com-

mittee, represented Prince George on the district council, and is at present chairman of the district council. He is also a member of the Federation Consultative Committee. Mr. Weicker is active in church affairs and is a member of the Kiwanis Club. His hobbies are curling, skiing, bowling and reading, although recently he has concentrated on reading. Mr. Weicker is married, the father of a son and a daughter.

James Dupray

The untimely death of James Dupray is reported with deep regret. Killed while driving to school on March 22, Jim's loss has been profoundly felt by teachers and pupils at Glenayre Elementary School in Coquitlam.

Jim came to Glenayre School last spring as a young student teacher from the College of Education, University of British Columbia. His three weeks' practice teaching so endeared him to the pupils, staff, and administration of Glenayre School that he was requested as a staff member for the following September. During his seven months in the school Jim made an invaluable contribution and his sudden loss was a severe shock.

Jim received his education at Gilmore Avenue School, Burnaby, and graduated from South Burnaby High School in June, 1959. During his school years he excelled in football—being considerably over six feet—and swimming, but, indicative of his varied interests, he found his greatest relaxation in playing chess. During his first year as a teacher his prime interest was his class of intermediate pupils.

He took particular interest in those pupils who needed something more than academic guidance and this facet of his nature may explain something of the reason why the Glenayre pupils and staff will hold a continuing affection and deep regard for the memory of Jim Dupray.—J.B.

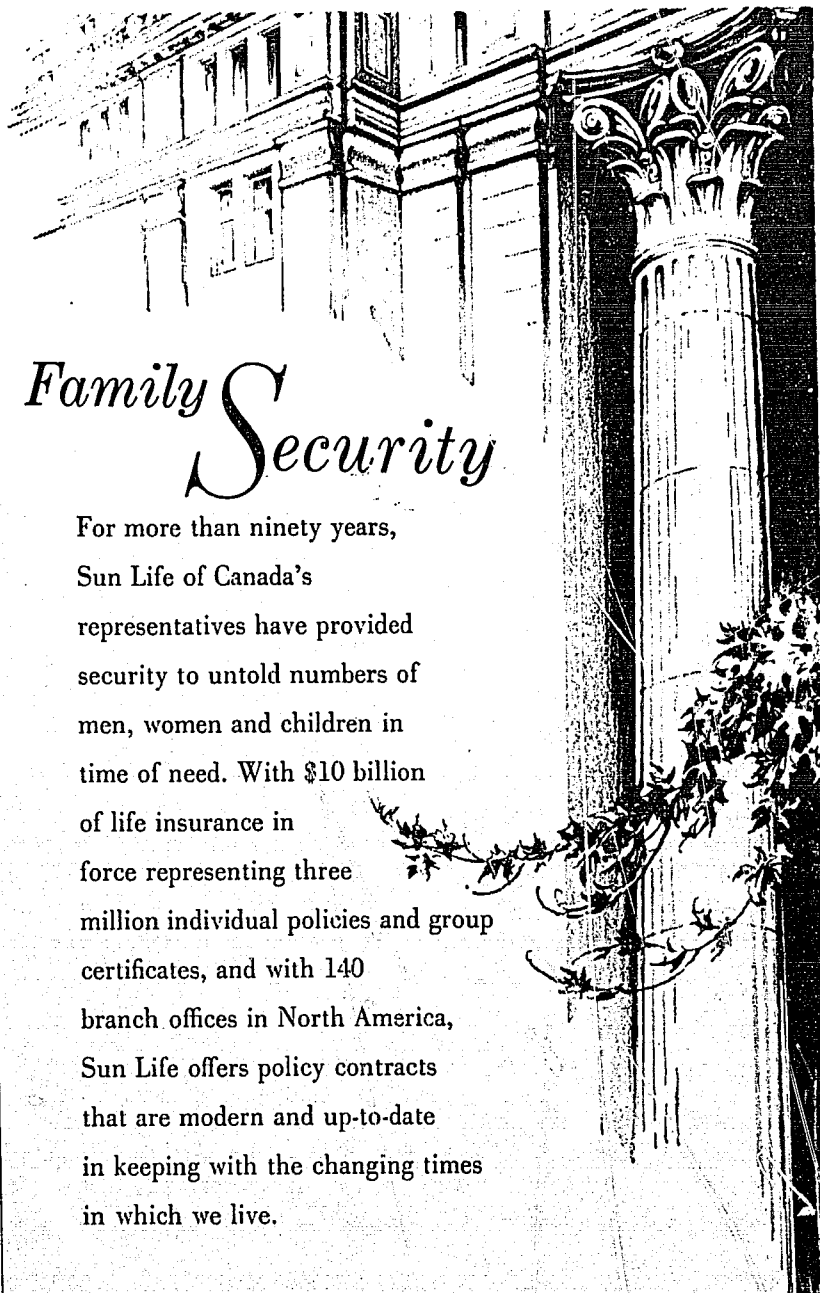
In Memoriam

Late in March William Morgan, president of the B.C. Teachers' Federation in 1936-37, passed away in Vancouver. Mr. Morgan was a native of England and taught there for several years before coming to Canada. He was a graduate of the University of Toronto, with degrees in theology and arts, and held an M.A. from the University of B.C. Mr. Morgan taught mathematics in North Vancouver, Kitsilano and Vancouver Technical high schools. He was active also as a coach of rugby and grass hockey teams and was a president of the Inter-High School Athletic Association. Mr. Morgan retired in 1954.

Walter Boldt, who teaches physics at Delbrook Senior High School, North Vancouver, will attend Stanford University this summer on a Shell Merit Fellowship. He is one of ten Canadian secondary school teachers who has won a fellowship for this year. While at Stanford, Mr. Boldt will receive training in mathematics, chemistry, physics and educational techniques, as well as first-hand knowledge of the applications of science and mathematics in industry. Lectures by top scientists and mathematicians, and weekly field trips to research laboratories and industrial plants, are included in the seminar program.

At the Annual General Meeting three teachers received from the Department of Education certificates honoring them as outstanding teachers. They were Miss Mary Buxton, of Burnaby; Mr. P. C. Gerrie, of Valemount, and Miss Jean Sutherland, of Vancouver.

MAY - JUNE, 1962



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Summer Art Course

Loon Lake, Haney, is the site for an especially interesting Summer Art (non-credit) Course for teachers sponsored by the College of Education, from August 20 to 29 inclusive. Ten thousand acres of forest, mountains, lakes and streams provide exciting subjects for painting and drawing. There will be individual instruction for both beginners and experienced artists, who are invited to try the new plastic media, polymer tempera and lucite medium and oils. Mr. J. A. S. Macdonald is the instructor.

Accommodation is in the beautiful lodge which overlooks the lake and meals are served in a communal dining hall. Room and board is priced at \$55 and tuition at \$30.

Registration should be made through the Faculty of Education, U.B.C. Materials and supplies list will be sent on request.

African Students Foundation

A campaign for \$750,000 has been started by the African Students Foundation, an independent, voluntary association, to bring sixty students from Africa to study in Canada. The money is needed urgently to finance new scholarships and to continue the education of 63 African students already studying in Canada.

The 63 students are from eleven African nations and have been placed in universities across Canada. The minimum cost per student for tuition, books and living expenses is \$2,000, and this does not include transportation. The desire on the part of African students for education can be illustrated by the fact that the 63 who

came were chosen from a list of 700 applications, and this in the first year of the plan. Thousands more applied to their governments, and only the most likely applicants had their requests forwarded to Canada.

Donations may be made either to the African Students Foundation, 146 Yonge Street, Toronto, or to any branch of the Toronto-Dominion Bank.

Reduced Fares for Travel to Universities

The railway companies have announced that they are putting into effect again this year arrangements for travel between stations in Canada, under which special round-trip fares will be available to students of universities, colleges and other educational institutions, as well as to professors and teachers at such institutions, in connection with the commencement of courses next fall and their termination the following spring.

Teachers who may be eligible for these reduced rates are reminded to check with their local railway agents.

Etobicoke's Fund For Professional Development

During the past year the Etobicoke Board of Education established a Professional Fund for public school teachers. The amount of money available in any one year for this fund was set at 1% of the total salary budget for the teachers of the township, and for the calendar year 1962 amounts to \$15,258.

This plan is designed to enable teachers to engage in professional and in-service activities such as at-

tendance at educational conferences, visits to other school systems, advanced training in specialized areas through attendance at special summer courses, local in-service activities and sabbatical leaves. This fund also enables teachers to become qualified for specialized areas of work and to develop greater leadership skills.

From the Canadian Education Association
News Letter, No. 165, April, 1962

Company Broadens Scholarships

Imperial Oil will pay tuition and other compulsory higher education fees of all children and wards of its employees who get an average mark of 70 percent or over in their final high school examinations, the company has announced.

The new program will more than triple the higher education aid the company gives to children and wards of its employees, annuitants and deceased employees and could increase by about five times the number of students eligible for aid. By the time the program has been in operation four years, up to 200 students a year could be receiving assistance.

The new program replaces Imperial's undergraduate scholarship plan which this year provided scholarships to 38 children of employees. Under this scholarship plan a committee of educators selected a maximum of 12 top students each year for annual scholarships of \$700 for a maximum of four years. Scholarships were available only to students enrolling in degree-granting institutions.

Under the new program payments will be made to students for a maximum of four years so long as they successfully complete each academic year at a recognized Canadian university, institute of technology or similar institution offering post-high school level courses. To be eligible students must enroll in a course requiring full-time attendance for at least two years and leading to a recognized degree, certificate or diploma.

From the Canadian Education Association
News Letter, No. 165, April, 1962

THE B. C. TEACHER

Mechanized Teaching

Continued from page 331

and decide to act. In other words, we will reach a point in the research development of an idea where it becomes more unreasonable not to act, than to act on incomplete evidence. The exact determination of this point involves an intuitive judgment which takes into account controlled comparisons, cost, other significant trends and even the political climate.

I would like to register my intuitive judgment that we have now reached this point in so far as programmed learning is concerned and that we should move beyond our normal method of dealing with new ideas (i.e., lengthy discussion, drawing up of lists, and other exercises of a vocal, rather than of an experimental, nature) and plan some systematic program for the introduction and testing of this new technique. I would suggest further that the field of mathematics would be an excellent place to start, for we are blest here with the convergence of three new developments which ought to prove mutually stimulating. In the first place, there is at present great dissatisfaction with the high school mathematics program, and committees in several provinces are now reviewing and reconstructing these programs from the point of view of modern concepts and terminology. Coupled with this movement we are also experiencing the formation of mathematics specialist groups in several teachers organizations; presumably these are people competent to deal with the subject matter of mathematics. When we add the fact that mathematics is probably the easiest subject to program and that there are already many programs on the market which roughly approximate Canadian curricula, then we have the elements of a potential fusion which could radically change the content and

nature of mathematics instruction.

I would venture to suggest that a promising method of procedure would be for the mathematics specialist groups to obtain some of the programs now on the market, to send some of their members to undertake training in the techniques of programming, and then to modify or rewrite the programs until they are congruent with the intentions of the provincial curricula. The provincial teachers' associations could assist at this point by financing the production of programs in quantity for experimental use. The next phase would be to involve teachers on a voluntary basis in a tryout of these new programs. The peculiar advantage of the program is that it will allow teachers to set up a controlled experiment within a single classroom, and thereby avoid the administrative difficulties in trying to set up matched classes.

I think we can confidently expect that an intelligent teacher, after a year or two of this kind of experimentation, would be in a position to compare the effectiveness of the program with his own teaching. If he should find the program more efficient, then he would be forced to examine the psychological principles which underlie this superiority, and to modify his own teaching behavior accordingly or surrender part of the instructional process to the program. In this way the mathematics teacher may find his new role without the dislocation and anxiety which would be generated by high level administrative decisions regarding the part to be played by the teacher and the program. It is possible, then, that the programmed instruction movement, if properly approached, will offer the teacher a unique opportunity to find his own destiny through experiments which he himself has devised. If it achieves nothing more than this, the programmed learning movement will have been worth the effort. ★



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ALAN DAWE

ONE OF THE MOST attractive things about the teaching profession is that the sentence of each year is punctuated by such memorable occasions as the beginning, the middle and the end, to say nothing of those pre-Chant Report holidays, Christmas and Easter. I don't, however, intend to take time just now to reminisce about either the semi-colon of Christmas, or the comma of Easter. My subject is the full stop: Term End.

Few experiences in life are as satisfying as arriving safely at the end of one's first year of teaching, at which time you can give in to that incredulous light feeling that you made it, and now have it made. With the year completed, you have only to balance the register, pick up the June cheque, and head off for either Europe or U.B.C., depending on whether you are after improved certification, or an invitation to show the leaning tower of your color slides at the first fall meeting of the local P.T.A.

It is true, certainly, that getting the annual balance on the register may not be as easy as the late and redoubtable Dr. Max Cameron made it seem in Education 502. Even with Professor Cameron's example only a year behind me, I found that I had to spend every spare moment of the last week of my probationary year looking for a dislocated half day. I finally found it as a June dawn floated in over Lake Okanagan on the last morning of the school year. What had happened was that Terrence Barebodkin, one of my seventh grade scholars, had played the Friday afternoon hook in late February, and although I had noted him vertically, I had failed to discount him horizontally.

The means by which I arrived at a simulacra of a February balance is a mystery that I am not now in a position to reveal cheaply. Of course, I'm not as worried about having a perfectly symmetrical register as I was ten years ago, for I no longer believe (as I did then) that the Minister of Education spends July and August making a personal count of my year's collection of dots and crosses. I think perhaps he used to, but School Finance has been invented in the interim, and the Minister now has this higher type of arithmetical entertainment to provide him with the raw material for his midsummer night's nightmares.

Since I know almost nothing of the type of Term End problems experienced by elementary school teachers (problems compounded, I suspect, of a plethora of running shoes and gift roses), I will confine myself to commenting on problems experienced

at the high school level; not that "level" is in any way an accurate description of the topography that I will be attempting to describe. Government examinations are the most pressing Term End problem for high school teachers, particularly for those teaching terminal courses for the first time. Such teachers suffer from the carking worry that not enough of their scholars will scramble up and over the Victoria scaling to guarantee them (the teachers) a renewed contract, and the opportunity (next year) to avoid compressing the last three units into the final week. Fortunately, as the years pass, teachers of terminal courses find things less and less debilitating. Each year the government examiners seem to get more and more sense; that is, they seem to ask more and more questions on material that one has actually taught. Or vice-versa, as the case may be.

Some teachers of terminal courses eventually become so relaxed about the government exams that in July they willingly follow the words to Victoria and spend a happy ten days chuckling out loud to themselves about how ill-informed the students in other school districts seem to be keeping. I myself have enjoyed this and other aspects of marking in Victoria. I have found, though, that there is one aspect of the marking conditions that upsets me. I find that the little bell they ring to announce the morning and afternoon coffee breaks definitely has an intensifying effect on my "Pavlov's Dog Complex." I am ashamed to admit it, but more than one paper that I was poring over when the little bell rang was sent up the line coated with saliva.

Not even a brief essay on Term End can hope to be definitive unless it contains a thought or two about Summer Session at U.B.C., since nearly everyone goes to Summer Session at one time or another, and some people even look forward to it. The last time I was at Summer Session (1958), the authorities made a generous effort to cheer up those among us (I was not one of these) who had given up a jaunt to Europe in order to get a better grasp of their subject matter and/or a higher grip on the certification ladder. What the authorities did, you might recall, was deck the lawn in front of the library with a gathering of actual sculpture. By doing this, they created an atmosphere similar to either Madame Tussaud's Wax Works in London, or the Village Square in Venice. (Since I haven't been to Europe, I can't say which for sure.)

Mr. Dawe teaches at Abbotsford Sr. High School.

THE B. C. TEACHER

I do know, however, that the effect created was peculiarly conducive to study, probably because it gave the pre-Library lawn such a cemeterial look that most people preferred to stay inside the library and work, even on days especially suited to forging ahead with one's outside reading. I have been told that something equally motivational has been laid on for the coming summer. It may be something as simple as rain, so pack your bathing suit.

The one sad thing about Term End is that even it eventually ends. July and August somehow drift away, and suddenly it is the start of another school year. But as I observed in my exordium, one of the most attractive things about the teaching profession is that the sentence of each year is punctuated by those memorable occasions, the beginning, the middle and

THE END.

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for The B.C. Teacher

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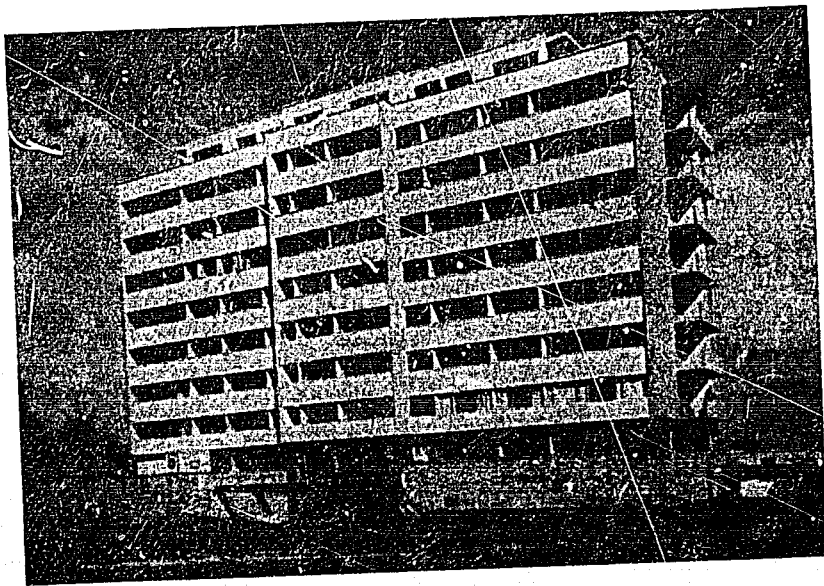
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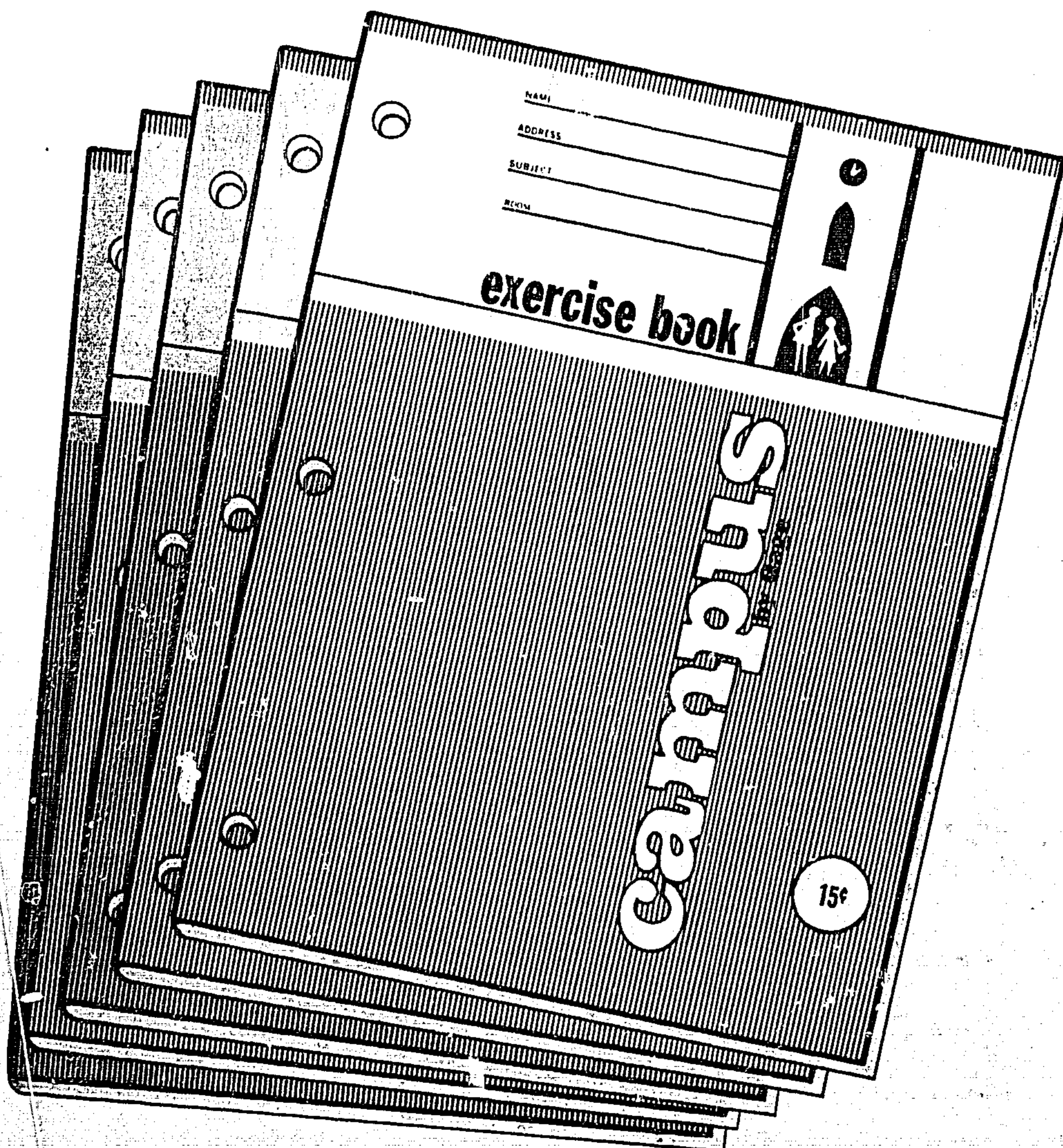
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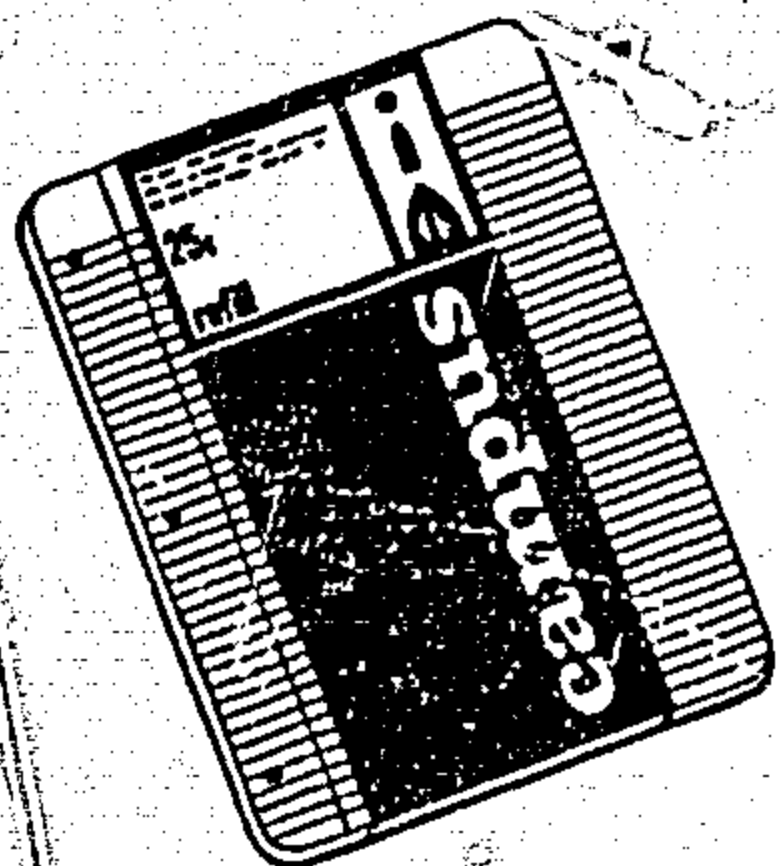
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