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ABSTRACT

The general objective of this project is to enhance the educational and psycho-social development of seventh and eighth grade students who are experiencing learning or psycho-social deficits. This is accomplished through a meaningful tutorial relationship with a senior citizen aide. Together the adolescent student and tutor create educational devices which the adolescent in turn uses to tutor elementary school pupils. This manual presents information on the senior citizens in the project, how to recruit senior tutors, training activities used, how to admit students to the program, how to pair students and tutors, programming and program implementation and program facilities. Evaluation of program effectiveness includes cognitive objectives such as improvement in reading, math, and handwriting skills, and affective objectives such as self-concept, classroom and home behavior, and personal adjustment. Several combined approaches used to encourage a student to create materials are described, and samples of learning games produced by various students are provided. (Author/AM)

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PROJECT S.T.E.P.

by Teresa Pica

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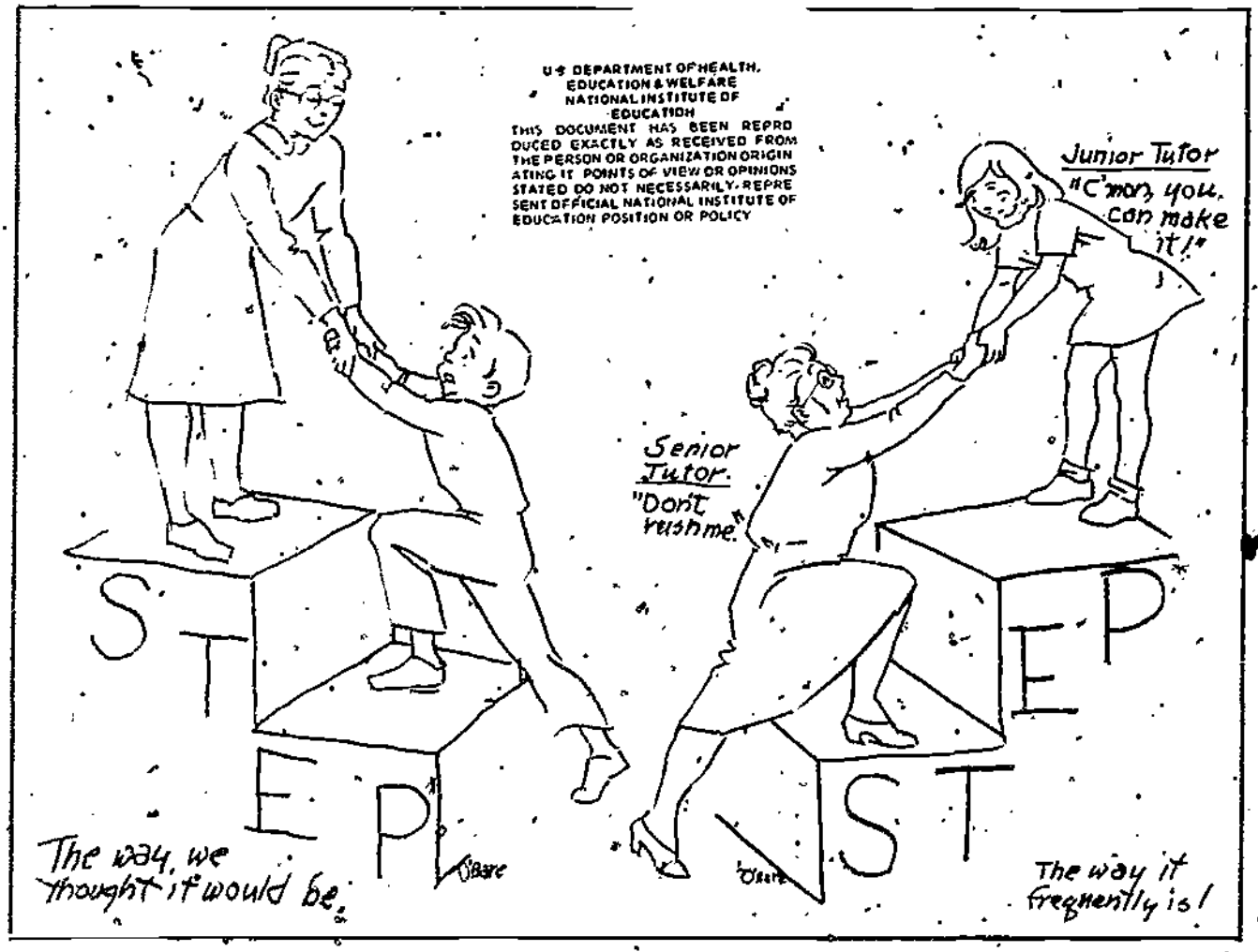

Ms Pica is the Project S.T.E.P. Program Director in Redding.

This is a "how to" manual for those who sense the creative and educational merit in bringing together learning troubled adolescents with senior citizens who have a lifetime of experiences to share. In its design and implementation, the program is a model of simplicity, with minimal requirements of both staff and facilities. In Redding, Connecticut, where the concept was first tested, Project S.T.E.P. proved to be a magical mix, resulting in change difficult to capture in statistical columns or in the written word. But the change can be seen, easily and undeniably, on the smiling and satisfied faces of the adolescents and the senior citizens alike . . . as well as on the faces of those who choose to bring them together.

UD 015 525

AUTHOR'S NOTE

The author is grateful to all those in the Redding schools who have cooperated in the work of Project S.T.E.P., and who have provided information for this manual, particularly to Lawrence R. Miller, Superintendent of Schools, Dolly Peach, David Protheroe and Donald Wendelt, guidance counselor, principal and vice-principal, respectively, of the John Read Middle School, where the project was originally implemented, to S.T.E.P. tutors Nella Ashcroft, Helen Commons, Minnie Cunningham, Frances Dormont, Philip Dormont, Charles R. Emmons, Robert H. Heatley, Christine Hurlburt, Oscar Karrel, Elizabeth McCoy, Leonore O'Hare, H. Nelson Pooler, Margaret Treadwell, Garold Van Dyke, Lucia Watt, Marie Wicklun, Peggy Zeloni, to the John Read Middle School students who participated in the project, to Drs. Ronald Raymond, Robert Matefy and Renée Frengut, psychological consultants for the project, to Carolyn G. Harriman, project secretary, and especially to Rosalie R. Saul, creator and director of Project S.T.E.P., who had the wisdom to look to the past in planning for the future.

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INTRODUCTION

A local clergyman once commented to me that, "One of the major deficits of today's youngsters is that they have virtually no contact with elderly people." He went on to reminisce about the aunts, uncles, grandparents, etc., who were very much a part of the growing up process of earlier generations. Today's children, in the main, have only the adult models offered to them by parents and the adults who serve them in formal, structured situations.

It seems remarkable that our society has not ventured to draw more deeply on the expertise and accumulated wisdom of its senior citizens. Rather, their immense potential as a natural resource has been virtually untapped.

Another restrained natural resource is the blighted talent of children afflicted with learning disabilities. Could it not be that the educational press for "individualization of instruction" gives us a partial key to the handling of so many of these disabled young people?

It seemed eminent good sense to combine these two social needs into an equation that produced the STEP program as an option serving both elements of the equation. The wisdom, warmth, and talent of the senior citizen and the deep emotional needs of the learning disabled seemed to be a sound chemical combination. It was!

Project STEP is an educational option. It is not a panacea, neither is it a public relations frill. It is one small alternative in a growing arsenal of educational approaches, and its application should depend on and be molded to local conditions and needs.

This project, just beginning to receive national attention, addresses these educational facts:

- *Carefully selected senior citizens have demonstrated the potential to make a significant impact in the educational setting. They can do so in a supplementary manner, at minimal cost, without threatening the sensitivities of certificated professionals.*
- *Learning troubled adolescents can make impressive educational and behavioral strides if, subtly but effectively, their inner-directedness and concerns with self can be shifted to deal with the problems and concerns of others.*

The program establishes a viable setting to allow senior citizens to work directly with learning troubled adolescents in the production of educational materials. Most often, these are materials requested specifically by elementary teachers to meet the special needs of a lower-level child. In dealing with the inherent difficulties in producing such materials, the adolescent — with sensitive guidance from his Senior Tutor — finds himself involved in the learning process in a new and creative way. For many children, this process has marked a dramatic change in attitude, behavior and both ability and willingness to learn in the normal classroom setting.

But no one should be misled by the apparent simplicity of the idea. Project S.T.E.P. has its own unique intricacies, and that is why this booklet will be valuable to those wishing to sample its wares. For one thing, most of the Senior Tutors have been outside the educational setting for scores of years. They bring their own sets of attitudes and prejudices to this new task. How can we best prepare them to be effective educators and counselors? How can we maximize the value of the educational materials which are produced? How can we most effectively coordinate the S.T.E.P. program with the regular classroom teacher?

These are but a few of the many questions which must be answered before a program like Project S.T.E.P. can be put together successfully. We have great pride that it has been done in Redding. We hope this comprehensive booklet will stimulate thinking about the value of this unique and interesting educational concept.

Lawrence R. Miller
Superintendent of Schools
Easton-Redding Regional
School District No. 9

S.I.E.P. adolescents often compose original stories for elementary students. But Glen is rewriting his favorite eighth grade story on a level that a third grade youngster will be able to understand.

For retired teacher Lucio Watt, educating youngsters was not a new experience, but teaching them academics through Industrial Arts activities was an unexpected challenge.

PROJECT S T E P A STEP FORWARD

Halfway through the decade of the 1970s, American society is still floundering in its attempts to shape meaningful roles for its senior citizens. The confusion, perplexity and bewilderment is no less great as educators, parents and concerned citizens struggle with the problems of troubled adolescents. Opportunities to experience success, or to simply feel good about themselves, are too often lacking both for our elder citizens and for those young people who in a variety of ways exhibit their negative attitudes about school.

It is in recognition of the needs of these too-often-overlooked people, and with faith in the services they can offer to each other and to society, that a special program has been developed in the Redding, Connecticut, public schools. Through Project S.T.E.P. (Seniors Tutor for Educational Progress), initially funded under Title III of the Federal Elementary and Secondary Education Act, senior citizens are being employed within a school setting to work with adolescents who are experiencing failure due to academic, physical, social or emotional difficulties.

Project S.T.E.P. is a viable and important alternative to direct remedial or academic programming for learning handicapped young people. Such traditional approaches, whether in the form of daily remedial sessions or self-contained classroom situations, either within the regular school or in out-placement facilities, are not only excessively costly, but too often, they prove to be ineffective in meeting the needs of special children. There is abundant proof that when youngsters must still receive special help during their adolescent years because they have difficulty in meeting the expectations of their grade level, because they cannot read, write, reason, communicate or behave appropriately — they frequently become frustrated in their attempts at learning. As they sense they are being labeled as educational failures, they begin to reject the learning experience. The frustrations of these children, their resentments and hostilities, interfere with and often totally impede their ability to learn.

As an innovative alternative to structured special educational programming, Project S.T.E.P. employs skilled, retired men and women who represent "grandparent" figures rather than teaching staff, and who stand apart from teachers in regard to skills, professional status and salary expectations. As a consequence, the opportunity is ever-present and it is continually and consistently de-

veloped to form meaningful personal relationships which bridge the generations.

The S.T.E.P. program has placed its primary exphasis not on teaching its learning handicapped students directly, but rather on creating a learning experience in which the students to a remarkable extent teach themselves. The approach is simple. adolescents, carefully identified for the program, are asked to join in an ambitious project to produce educational materials for children at the elementary level. The senior citizens, trained by specialists in the program, act as their tutors and helpmates in this endeavor.

Since its inception, S.T.E.P. has demonstrated in a compelling way that the program students, as they develop learning games, puzzles, books, tape recordings, maps and equipment which will help youngsters in the lower grades, themselves experience highly successful cognitive, affective and academic experiences, as well.

Furthermore, the program has shown that, in their work, the seniors and adolescents have reached out in a highly positive way to a vast spectrum of people, in and outside of the schools, particularly to teachers, elementary level students, parents, the local school system and ultimately, to society itself.

THE S.T.E.P. EXPERIENCE FOR STUDENTS

In producing their learning materials, the program students have readily acquired knowledge in specific subject areas such as mathematics, language arts, reading, social studies and science. Through measuring, cutting and drawing, and in estimating the use of raw materials (paper, cardboard, paste, etc.), they have also improved their perceptual skills. Language abilities have been strengthened through writing, tape recording and spelling, and through punctuating, structuring and sequencing sentences for books, and for game and equipment directions.

In building classroom furniture and equipment, the young people have learned meaningful mathematics and have received an introduction to such trades as drafting, mechanics, carpentry and woodworking. In "printing" their own books, they have acquired typing and bookbinding skills.

And there is more. Once the students have been shown how to develop and organize their ideas into valuable educational materials, they learn to plan, execute and complete a task. Many, especially those who are verbally limited, have learned that they *do* have the ability to express themselves in a uniquely personal and gratifying way . . . through their own creative talents.

For many of these disabled learners, Project S.T.E.P. was viewed as a program of last resort the final try to remedy disruptive behavior before placement in an outside facility. In many instances, S.T.E.P. has brought remarkable change as these young people interact with adults and with their peers in a totally different way. With the burden of grades and of traditional learning styles lifted from their shoulders, they have responded to this new, supportive environment in an expressive and positive manner. For some children, for the first time in their lives, they have talked freely about their feelings, their ideas, their hopes. They have begun to discover their own identities.

For many S.T.E.P. students, so great has been their growth in self-confidence and skills in this alternative learning setting that, in time, they have sought out the educational mainstream which they earlier had rejected. After several months in S.T.E.P., many youngsters began to set aside their work on materials, and instead asked their tutors for assistance in composing research papers, studying for tests and completing homework assignments. Some students, after they had been in S.T.E.P. for many months, asked to remain in the program on an elective basis only, so that they could resume a full academic schedule. Others requested that they be removed from S.T.E.P. entirely, confident that they could function well in the regular school program.

For all such students, their decisions to return to the mainstream, completely or in part have proved to be sound. Without exception, they are performing at higher levels, socially and academically, than at any other time in their young lives.

THE SENIORS IN S.T.E.P.

In many ways, the S.T.E.P. experience for the senior citizen tutors has been as meaningful as for the program students. They have formed meaningful relationships with the students, and with each other. They have made new (and sometimes their only) friends. they have discovered the joy of helping a young person, of being part of a school, of being needed and appreciated.

Previously, senior citizens' only major service to schools had been as volunteer "grannies" for children at the pre-school or elementary level. But in Project S.T.E.P., the work of seniors has been both appropriately remunerative and challenging.

Far from being representatives of "old style" teaching methods, these senior tutors, through careful training, may be rightly regarded as pioneers of exciting and innovative educational ideas. They have developed an

environment based on strong interpersonal relationships of trust, of sharing, of creating, which only they, with their wisdom, skill, patience and gift of time, are uniquely able to offer.

S.T.E.P. AND CLASSROOM TEACHERS

Classroom teachers at both middle and elementary levels have benefitted significantly from Project S.T.E.P. Middle school teachers have found they can now teach and relate to the S.T.E.P. adolescents more readily. Through their experiences in the program, S.T.E.P. students have developed the skills and attitudes they need to experience academic success. In other instances, through S.T.E.P., some students whose learning or behavior problems are severe have been removed entirely from the traditional classroom setting, where they had placed a special burden on the teacher.

Employing senior citizens rather than parents as aides to the disabled learners has been appealing to teachers, since they clearly represent no threat to the traditional teaching role, and typically are less critical both of schools and of teachers than parents in the classroom might be.

VALUABLE MATERIALS

Educational materials have been in short supply due to rising costs and diminishing funds, but through Project S.T.E.P., many unique and valuable materials have been made available to elementary teachers and their students at no charge.

When requesting materials, teachers have been encouraged to submit descriptions of the special needs of individual children in their classrooms, so that personalized materials may be developed for them. Thus through Project S.T.E.P., elementary teachers have been better able to individualize their programs, and their students have been provided with motivating games, books, tape recordings, etc., suited to their needs.

THE PROGRAM PARENTS

Parents of the program children have reported a new ease in self-expression within the home. They note further that this approach to learning for their troubled children has created a new interest in school participation. Absenteeism has been markedly reduced. Moreover, parents have been called into school less frequently for conferences regarding the academic or behavibral problems of their children.

IN THE SCHOOL SYSTEM

The Redding school system, as supporter of the program, has found in Project S.T.E.P. that it can meet the special needs of these learning handicapped children effectively and

S.T.E.P. makes classwork fun and easy. When it's time to learn multiplication tables, these youngsters match puzzle pieces for their answers.

creatively without the expense of added special education teachers. Indeed, the school system has acquired a corps of effective people at such a reasonable rate that it can afford to provide one-to-one attention for these students.

Special education personnel within the system have shown they can effectively train the senior citizens for their new roles as tutors. They continue to provide invaluable service to the program in advising, supervising and supporting the tutors in their work, and in training classroom teachers to diagnose their own children more effectively, in terms of possible referral to the program, and in requesting learning materials for children in the elementary grades.

AND IN THE COMMUNITY . . .

Through the work of Project S.T.E.P., the community and society have been offered a viable program for youngsters whose academic and behavioral difficulties had marked them as potential drop-outs or possible delinquents.

It is the hope of the Project S.T.E.P. staff that these efforts will be widely replicated. For it is through such programs that society may begin to feel more positive about the largely untapped resources of its older members, and often lost potential of many young people. Perhaps what Project S.T.E.P. can best demonstrate is that in planning for the

A successful tutor-student pair. H. Nelson Pooler suggests a plot twist to Hilda as she "prints" her story for young children.

future, we dare not overlook the past.

PERSONNEL

An effort such as S.T.E.P. is a people program. Hardware requires little more than imagination and an acquisitive nature.

Given a source of senior citizens and a group of learning handicapped adolescents, such a program can operate under the direction of one or of many professionals within the school, depending upon their abilities, specialties, and the time they have to offer to the program.

The program director should integrate and supervise all professional and paraprofessional activities related to the program through workshops, lectures, seminars and direct school contact. In this regard, it is recommended that the director fill these roles:

- Recruitment and training of the senior citizens as tutors.
- Participation in a team of school personnel which determines admission of students into the program.
- Pairing of students and tutors.
- Supervision of student-tutor work.
- Maintenance of records related to student-tutor work and progress.
- Meetings with classroom teachers to discuss their views of the students and the program, and to report on student and program progress.
- Meetings with elementary level teachers to ascertain needs of their students for learning materials.

RECOMMENDED QUALIFICATIONS FOR THE PROGRAM DIRECTOR

The program director should have a background of extensive experience in working with handicapped children, especially in the areas of language, reading and conceptualization skills. The director should be able to utilize test results to determine the needs of special children, based on their strengths and weaknesses, both for those adolescents enrolled in the program and for elementary level students for whom materials are made.

Of importance, the director should have an ability to create, or direct the creation of materials for learning which are useful in themselves, and are specific to the needs of the adolescents who make them and the elementary children who will use them.

Further, the program director should have some background in psychology, particularly with regard to testing and measurement, and have a special awareness of the needs of the elderly, as well as the young.

Although more than one professional may be used to fill the varied roles of the program,

director, utilization of a single person in this position generally strengthens continuity in program development. It is important, however, for various school professionals to work individually or as a team in support of the program and the director. In particular, the school administrator, guidance personnel and school psychologist should be available to assist the program director in scheduling, testing and counseling of program students. It is recommended that the services of personnel within the school system be used exclusively in such support roles, since they are familiar to and with the students, and are aware of local problems which may bear on the program.

RECRUITING THE SENIOR TUTORS

There are varied ways of recruiting senior citizens as program tutors, and it is difficult to predict which approach may prove most effective in a given area. Senior citizens in the Redding program have responded most frequently to advertisements in the form of posters prominently displayed in post offices, beauty parlors, pharmacies and supermarkets. Radio and newspaper publicity and advertisements, as well as word-of-mouth, have also proved effective recruitment devices.

Senior citizen clubs and housing developments have generally proved to be poor recruitment centers. Seniors in such locations tend to be more interested in developing recreational rather than service activities. In general, it has been the independent senior, living alone or with spouse, relative or friend, who has responded most favorably to program recruitment publicity.

Emphasis in such publicity should be given to the need for "surrogate grandparents" rather than for "teachers" or "teachers' aides," since such terms may often cause seniors to feel unqualified for the position. Salary offered should be included in the recruitment publicity.

A typical poster in Redding reads:

RETIRED MEN AND WOMEN
[illegible] PER HOUR
HELP IN SCHOOL
[illegible] SURROGATE GRANDPARENT
[illegible] EXPERIENCE OR SPECIAL
EDUCATION NECESSARY
CALL

[illegible] OF SENIOR CITIZENS
[illegible] PROGRAM

In Redding, senior citizens responding to recruitment advertising are invited to attend a general meeting where the program is described in some detail. They are told the position requires working with seventh and eighth graders who are having difficulty in learning, and who need help on a one-to-one basis.

We tell the seniors of the program rationale: that the project involves the adolescents in making original learning materials for elementary school children, and since their own skills in such basic areas as reading, writing, spelling and mathematics are below grade level, they will themselves be involved in a worthwhile learning experience while helping younger children.

The job of the seniors, we inform them, will be to guide the adolescents in their work. Of paramount importance will be the development of personal relationships which will motivate the students to learn.

It is important that the seniors be fully informed of the training they will receive for their new, important jobs, and that they are made aware they will have the on-going support and guidance of the program director and other professionals.

THE GIFT OF TIME

The experiences gained in time, and the time to share those experiences with young people are two of the priceless gifts which the seniors can bring to the program. In Redding, Project S.T.E.P. operates five hours each school day, and the senior tutors are asked to commit themselves to the students and to the program for three days each week. While in some instances seniors may have additional time they wish to spend in the program, a minimum of three days during each school week has proved to be sufficient for thorough involvement in the project and with the students.

After the general meeting in Redding, a "sign-up" sheet is circulated, asking for the names and telephone numbers of those interested. The program director then contacts the seniors individually for follow-up personal interviews.

THE INTERVIEW WITH PROSPECTIVE TUTORS

Interviews with prospective senior tutors are in a sense a distillation of the program process: the needs of the senior citizens as well as of the program students must be judiciously weighed. The program director should approach such an interview with the following considerations in mind:

✓ It takes many different kinds of seniors to work effectively with many different kinds of children. There is not a specific type of senior who should be hired.

✓ It is important to learn of the applicant's

A lively tutor training session. Oscar Karret and H. Nelson Pooler assume the roles of "acting-out" student and tutor to stimulate staff discussion about improving behavior.

hobbies, special skills, educational background, and former occupation. The more varied these are, the more services the senior will be able to offer to the adolescents.

✓ It is worthwhile to the senior to articulate his or her reasons for wanting to become involved in the program. Such a direct question may elicit some surprising answers. However, the fact that a senior has responded to the program idea speaks well of his or her interest in young people.

✓ It is necessary to be sensitive to prejudices against such youthful predilections as long hair or dungarees. Such prejudices may prevent the senior from entering into an appropriate relationship with an adolescent.

✓ It must be reinforced that the program children are learning handicapped, and as such they may be atypical in behavior, reflecting bruised self-images or total lack of self-confidence. The program director must ask if the prospective tutor is excessively apprehensive about working with such children, or if he or she recognizes the challenge in such work. The best mix is a bit of both attitudes.

In Redding, after such an initial interview, any senior citizen who wishes to participate is accepted into the training program. Screening out of inappropriate prospective tutors is done, when necessary, during or subsequent to such training.

HOW SENIOR CITIZENS BECOME TUTORS

In Redding, the program functions best when the senior citizens are assembled and trained before the beginning of the school year. This approach, creates a feeling among students and faculty that the program is an integral part of the school schedule. In any case it is vital that all tutors attend 18 training sessions before they begin their work in the program.

The training period is for four hours a day, three days a week for a six-week period. It is often combined with, or followed by, a transition period of half-time training and half-time working with the students. It is desirable, when possible, for all seniors to attend every training session.

Once the program is in full swing, training for the senior tutors continues in the form of daily one-hour seminars. Additionally, the program director is available before and after school hours to discuss individual problems, questions and interests involving a tutor and the student.

The guideline in Redding is to accept all senior citizens into the program who apply. Since there is normal attrition in such a program, the program director enrolls several

In September, teachers assemble to hear about S.T.E.P.'s goals and objectives for the coming year.

more tutors than might actually be needed to work with the students. Salaries are paid only upon the completion of training and interaction with the students. If possible, however, reimbursement is provided for lunches and transportation during the training period.

Those conducting the training for seniors should realize that they are apt to be fearful, anxious to please, unfamiliar with contemporary schools and curricula, and often in awe of teachers. They should also forewarn the seniors that the program may not be a positive experience for all who have enrolled, and there is no embarrassment attached to simply dropping out.

Seniors who are late applicants can be introduced into the training plan at any point. Special efforts are made to increase their periods of observation of both experienced tutors and the program director working with students, followed by a period of half-time observing and half-time working. They are included in the daily one-hour training seminars from the time they enter the program, and are encouraged to come into school early and stay late so that they may have additional time with the program director. These late arrivals also partake in as many as possible of the following activities suggested for training tutors.

SUGGESTED ACTIVITIES FOR TRAINING

In Project S.T.E.P., the following activities form the basis for training senior citizens to work effectively with adolescents in the program. Most of these activities are continued for the duration of the program. They need not be presented in any specific order of sequence.

OBSERVATION OF CLASSES AT ALL GRADE LEVELS. Such observation is valuable for two reasons: first, many seniors have not been inside a school for 40 or 50 years. Secondly, the seniors must become familiar with those learning environments in which their students have had difficulty learning.

During such observation periods, the seniors are asked to keep notes of their impressions. They are asked to identify styles of teaching, learning and discipline in the classroom, and to be alert to patterns of learning and behavior of specific learning handicapped youngsters in the classroom.

LECTURES AND DISCUSSIONS. These wide-ranging and frequent discussions attempt to provide the seniors with a good deal of information on such topics as:

Methods for teaching in the academic areas.

The game-manufacturing aspects of helping students to learn.

Individualization of instruction.

Learning styles.

Psychological needs of children.

Causes of learning disabilities.

Emotional problems possible in disabled students.

Sensory-motor techniques for learning.

The role of creativity in learning and in developing a positive self-image.

The relationship between teacher and student.

The relationship between teaching and learning.

Tom just completed his weather station box and is ready to install the instruments, with help from S T E P-mate David, and Tutor Robert H Heatley

The role of the teacher (and tutor) in task-breaking for a student.

Lectures from outside sources, such as psychologists, educators and parents, are also included in some of these areas.

During discussions involving these topics, the senior citizen is not expected to learn all the concomitants of the various labels used to identify learning handicapped students (emotionally disturbed, neurologically handicapped, learning disabled, etc.). Rather, emphasis is placed on finding answers to a series of fundamental questions as they relate to individual students in the program and not as they are representative of a diagnostic description. The questions:

What do I as a tutor want to help this student to learn?

Why do I want to help this student learn this particular skill?

How am I going to help him or her learn this skill?

How does this student learn things best? What are his/her strengths and weaknesses for learning?

Have I met my goals for this student?

It is stressed repeatedly during discussion periods that the seniors' fundamental role in the program is in forming a relationship with a student based on trust, awareness of capabilities, appreciation of needs and wishes, and understanding of potential resentments or hostilities. We constantly reinforce the idea that insight into all of these areas will come through constant dialogue and listening — on a personal level.

The seniors need also to be made aware of rules and guidelines established by the school administration to govern student behavior. They become familiar with these regulations, and expect that their students will observe them to the best of their abilities. However, they learn, at the same time, that the learning handicapped adolescent, because of repeated negative experiences within the educational setting, may have considerable difficulty in observing the prescribed standards of behavior.

READING. Senior tutors are encouraged to read general materials on contemporary education, and they are provided with literature on special education and learning disabilities in particular. Discussion with the group about such articles they have read often proves to be valuable to the senior as he works to formulate a new set of ideas and ideals.

ROLE PLAYING. This device has been one of the most helpful techniques in the training program. In role playing, the tutors are paired, one as teacher, the other as student, using manipulative teaching materials such as tangrams or attribute blocks. Later, the roles are reversed. After a period of role-playing, discussion follows about:

1) Frustrations of teaching and learning.
2) Teaching styles observed.
3) Suggestions for alternative methods of teaching.
4) Strong and weak modalities which the tutors observe in themselves and in each other.
5) Ways in which tutors might relate what they have learned during this role-playing experience to a learning activity they can create for a student.

TESTING. Sometime during the training period, a battery of tests is administered to those senior citizens who have indicated they would like to join the program as paid members of the staff. The tests are used to determine each senior's degree of depression, self-

esteem and sense of isolation, as well as the inherent or acquired leadership modality (authoritative, democratic, laissez-faire). The results of these tests are used throughout the program to gain insight into those personal qualities in the tutors which cause them to be more effective with the students, and to constantly ease the task of placing the right senior with the right adolescent in the program. Among the tests which have been valuable are the *Whaler Self-concept Test*, *Gerontological Apperception Test*, and the *Leadership Ability Test*.

DETERMINING READINESS FOR TUTORING

When is a senior citizen ready to assume the responsibilities of the tutorial role?

By far the best yardstick of the effectiveness of the tutor training program is the subsequent success experienced by those students with whom the tutor works. If there is noticeable improvement of basic skills, achievement in academic areas, and growth in behavior and self-image, the tutor is doing an effective job.

It has been valuable, as well, to pre- and post-test the seniors in an informal manner in making a judgment about their readiness for the tutoring work.

The test is presented within the following framework. The characteristics of an effective teacher, expressed as a philosophic guideline in the program, are placed on a chart (see insert). Two observers (educators or psychologists) check the listed characteristics on a 0-to-5 scale as the tutor works with a student in a particular task, preferably manipulative in nature, such as copying of parquetry designs.

After the session with the student is completed, the program director meets with the tutor to discuss the teaching strengths and weaknesses observed during the session. In all cases, the strengths of the senior are greatly emphasized, and he or she is made to feel that the perceived weaknesses are not uncommon and are in fact shared with most members of the senior tutoring staff (in most instances this is so). As tutors thus come to recognize their own teaching styles, they are encouraged to develop a balanced approach with their students of all those characteristics of teaching effectiveness.

CHARACTERISTICS OF EFFECTIVE TEACHING

1. Observes without interrupting.
2. Intercedes before a student meets too much frustration.
3. Restates a question which a student does not understand.
4. Demonstrates to help the student.
5. Uses a non-directive approach to help a student solve a problem.
6. Accepts the onus when a student does not learn, rather than create guilt in the student.
7. Provides an atmosphere where problem-solving is within the reach of a child, such as accepting any given answer.
8. Understands the difference between an ease level, a frustration level and an instructional level.
9. Always feels there is more to learn.

HOW MUCH TRAINING IS ENOUGH?

Considering the complexities and subtleties of the tutoring role, it is impossible to give an adequate amount of training before the tutors are paired with their students.

In Redding, we have found it is best to provide a few weeks of training for the seniors, followed by a period in which the senior works directly with a student for one period a day (50 minutes) while a second senior ob-

Jill is doing so well in composing her story that Mr. Pooler can observe without interrupting.

serves the work session.

Such sessions are followed by conferences of teacher, observer and program director, relating the events of the work period to the goals of the training program. This is an especially effective training method because it allows the tutors to encounter the frustrations of teaching with resolution of these difficulties only minutes away. Furthermore, subsequent instruction for the tutors appears to be more meaningful when they discover that their pre-conceived ideas about teaching may prove to be ineffective with the disabled student.

The transition from formal training to actual work thus tends to be gradual and adjusted to the capabilities of the tutor. It is considered complete only when the program director indicates the senior is sufficiently trained to work on a regular basis with the students.

TWO PROBLEMS – AND HOW WE HANDLE THEM

As they develop some expertise, some tutors may wish to disassociate themselves from the "game" approach to learning, and may want to teach in a traditional fashion – teaching grammar through the diagramming of sentences, spelling through memorization of word lists, reading through oral recitation from a text.

Other tutors may not be able to tolerate "acting out" students. These are not atypical problems, and in Redding, we have developed approaches to deal with them which are generally effective.

First, for the tutors who are becoming traditionalists:

1) The program director may compare the progress of their students with those who are engaged in the "game" approach to learning. This may be the single most effective way to return them to the program's central learning idea.

2) The comparison idea can be strengthened further if tutors observe the program director working effectively with the students in the "game" approach. In subsequent discussion, the program director can relate in convincing detail why the learning experience was more valuable for the students than would have been the case using traditional teaching methods.

3) The program director may interview the students in the presence of the tutors (or on tape, to be played later for the tutors), asking their opinions of specific traditional approaches to learning as well as of the "game" approach. It is not suggested that this be a "gripe" session for expressing per-

"Hangman" is even better when made three-dimensional by S.T.E.P. This youngster fits a piece in the puzzle whenever she guesses a letter that does not belong in her classmates' word. To win, she must try to guess their word before finishing the puzzle.

sonal complaints about either seniors or teachers. The benefit will come to the tutors in evaluating teaching techniques, not personalities.

4) The program director should make certain that the tutors are familiar with the program's track record. In Project S.T.E.P., there is ample evidence that learning troubled students who were making relatively little gain either in regular or special education classes have demonstrated remarkable improvement after participation in the alternative teaching approaches of the S.T.E.P. program.

For those seniors having problems with "acting out" students, we have found two steps effective:

1) The tutors should be made to realize that they do not have to get along with every student in the program in order to feel that they are successful in their work. Often a tutor who has difficulty with the restless, hyperactive student is able to establish an excellent relationship with an introverted or non-achieving youngster.

2) The tutors should also come to know that once the "acting out" student becomes involved in a project which is meaningful to him or her, or has established a trusting confidence-building relationship with a tutor, behavior problems often subside. The tutors should be made aware that such change has occurred often in the S.T.E.P. program.

ADMITTING STUDENTS TO THE PROGRAM

CRITERIA FOR ADMISSION. In Redding, students considered candidates for Project S.T.E.P. are evaluated by a team composed of the school psychologist, guidance counselor, classroom teacher, special education teachers, and the project director, with regard to any or all of the following:

1) Social or emotional problems, such as extreme extroversion or introversion.

2) Perceptual handicaps, including poor visual, auditory or motor perception.

3) Physical handicaps, especially those in visual, auditory, or motor areas.

4) Under-achievement in school at least two years below grade level in any academic area (based on I.Q. potential).

5) Low intellectual functioning.

Students are accepted for the program on the basis of individual needs, the results of standardized tests, and the recommendation of each of the team members. Priority for admission is given to those students who seem least able to function in an already existing special help or classroom situation.

The scope of such a program in its early stages need not extend to those students who exhibit behavior which is physically dangerous to themselves or to others. As the seniors become more effective as tutors, however, such students may be admitted to the program. If their behavioral patterns do not begin to change within a reasonable period, however, it may be necessary to refer them to different placement.

INTRODUCING STUDENTS TO THE PROGRAM

In Redding, near the end of the senior citizen training period, a group of students, selected according to the criteria for admission, meet informally with the tutors, guidance counselor, special teachers, and program director. A circular seating arrangement is employed to allow for open discussion, and to de-emphasize the classroom environment. Seniors are asked to sit in alternating chairs before the students arrive so that when these students take their seats, each will be next to a senior citizen. The program director conducts the meeting.

The director informs the students that their school has funded a program for developing learning games and teaching aids for young children, and that older students are needed to make these materials, and also to work with the younger students in demonstrating how to use them. The students are told that they have been asked to the meeting because their teachers have indicated that they have special interest or ability in making such materials.

The role of the senior citizens as tutors is also explained: They will be available to assist the students in making these materials. They all have special skills and talents which they would like to share with the students in this new work.

Students and tutors then introduce themselves, and describe their background, interests, hobbies, etc. The adolescents are then asked if they would like to participate in the program. Those who are uncertain are told they may inform the guidance counselor or program director of their wishes within the next few days. Those students who have chosen to participate in the program should also be informed that it will begin within a few weeks.

Parents of students entering the program are contacted at this point, and are informed about the philosophy, format and goals of the program. Their permission is sought with regard to their child's participation.

PAIRING STUDENTS AND SENIOR CITIZEN TUTORS

Occasionally, random pairing of senior citizens and adolescents will prove to be successful. Normally, however, the following methods for pairing are employed by the program director:

1) Having observed and/or worked with all students accepted into the program during training, tutors are asked to list those students with whom they would like to work, students with whom they would not mind working, and students with whom they would not like to work at all. Students are asked to do the same with regard to the seniors. The program director then uses these lists for pairing, accommodating the wishes of both tutor and student whenever possible.

2) Each student is given a list of open-ended questions, which relate to those answered by the seniors during their initial interviews (e.g., with regard to their feelings about various social and moral issues, their hobbies and interests, their socio-economic backgrounds). Pairs can then be formed by grouping those students and tutors who apparently have similar interests.

3) Students who express an interest in a particular tutor because of the tutor's talent or special interests, his/her sex, or for whatever reason, are allowed to work with that tutor.

The major determining factor in pairing tutor and student is simply this: Can the tutor help the student produce materials that are meaningful for the adolescent? Changing student-tutor pairs is not uncommon. When a student goes from one tutor to another, neither the tutor nor student should feel failure. Many of these adolescents have difficulties in school which are so great that they feel completely different from one day to the next. On one day, they may need what one tutor can offer them (an activity in the Industrial Arts room); on another day, they may need a different activity with another tutor (composing a children's book on sports). Many of the students like to "try out" all of the tutors and they should be allowed to do so, especially during the early stages of the program. Further, if two students would like to 'swap' tutors permanently, or for an extended period of time, this should also be arranged by the program director.

PROGRAMMING AND PROGRAM IMPLEMENTATION

After each student's academic and emotional difficulties have been diagnosed, strengths and weaknesses determined, and cognitive and psycho-social needs indicated, an individualized program is planned by the program director, with assistance from other personnel such as the school psychologist, guidance counselor, and reading, resource and classroom teachers. The student is then guided by a senior tutor, under the supervision of the program director, to produce materials for actual (or, if necessary, hypothetical) children who have similar needs.

In some cases, if a student has been removed from an academic class because of failure there, he and his tutor may be given an assignment to construct a learning aid related to the curriculum studied in that classroom. In social studies, for example, this learning material might be one of the following:

1) A booklet about an aspect of history, or an historical figure which the class is studying and which interests the student. This might be done in captioned pictures or in a narrative form, and would be particularly helpful for a student who has verbal or graphic skills.

2) A map of a country or city that the class is studying, enlarged from a model, using simple graphing techniques demonstrated by a senior tutor. This might be particularly helpful for a student who has indicated interest in acquiring this skill.

3) A board game, concerning two forces at battle, moving across a board to capture one another. A variation could involve explorers and the stops they might make, and the opposition they might encounter, on their journeys. Making games such as these would be of interest to the student who shows strengths in designing, cutting, pasting, etc., or in those industrial arts activities necessary for producing movers and spinners for the games.

Once complete, these educational books, maps and games are then used directly in the adolescent's former social studies classroom, or by elementary students studying those academic subjects enhanced by these learning aids.

Production of many materials is based on the requests of elementary teachers. Such requests are converted by the program director into the form of narrative prescriptions, written in simple language, which are given to the senior tutor and adolescent student. For example, a prescription for a child in the second grade who has been reported by his teachers as having difficulty in understanding the relationship between cause and effect might read:

We have a boy in the second grade who does not understand how one thing that

S.T.E.P. students pooled their efforts to create this puzzle: One designed the pictures: another wrote a story to go with them: another cut the jig saw pattern. Once they have assembled the puzzle, these youngsters will have an illustrated story to read and enjoy.

happens could lead to another. We need to develop a card game in which he will match a card that has a sentence stating an event with a card that has a sentence stating the result of that event. For example:

CARD: "I was hungry" may be matched with

CARD. "I made myself a sandwich"

or

CARD. "I broke my shoelace," may be matched with

CARD: "My shoe fell off."

The prescription for this young boy may well be given to the adolescent S.T.E.P. student who is himself having difficulty understanding the concept of causality, constructing complete sentences, (needed for each card in the game), or sequencing related events (needed for giving game directions), but who enjoys the writing, measuring and cutting activities required for making this game.

A prescription for a child who has been reported by a teacher as having difficulty in visual sequencing might read:

We have a girl in the first grade who is having difficulty in thinking of the order in which pictures in a story should come. Let us develop a game that has four pictures which this girl must then put into the correct order for a story. These pictures might be of:

taking eggs out of the refrigerator
eating eggs
turning on the stove
breaking eggs into the pan

These pictures may be taken from a magazine or drawn and colored by hand.

This prescription may be given to the adolescent who is having difficulty with sequencing and whose strength is in graphic, rather than written expression.

In all instances, S.T.E.P. students are given an opportunity to create their own games for young children, even when no specific prescription applicable to these games has been submitted to the program. Further, upon reading a prescription, the S.T.E.P. students are given the option of creating their own materials for that child's needs, and not only the material suggested in the prescription. They are also allowed to alter the material suggested in the prescription in almost any way they deem fit. The senior tutor and program director are as liberal as possible in accepting the S.T.E.P. students' ideas for learning materials for the elementary students.

Once a S.T.E.P. adolescent has produced a learning material, he or she and a senior tutor seek out the middle school class or elementary school child for whom the material has been made, for purposes of demonstration and interaction in using it. Subsequently, student and tutor are asked to complete a simple lesson plan:

Subject (e.g., math, reading)
Purpose of Lesson (e.g., to teach_____).
Activity (one or two sentences describing what went on during the lesson)
Achievement (one or two words describing the success of the elementary student in using the learning material)
Recommendations

Completing this lesson plan gives the adolescent student opportunities for developing written expression, memory skills and powers of observation. It also provides a means of record keeping with regard to the materials the student has made and of the elementary students the program has serviced.

PROGRAM INTEGRATION WITH SCHOOL AND COMMUNITY

In Redding, meetings are conducted between the Project S.T.E.P. program director and the upper and elementary school administration, faculty and staff, the school system administration, the board of education,

Mrs. Commons and Sharon hurry to complete their "Subject Predicate Match Game" for an elementary student who needs urgent help in sentence composition.

parents and interested members of the community both before the program is under way and after it has begun. The program director requests time to speak at a board of education meeting during the spring prior to resumption of S.T.E.P. to discuss its philosophy, goals, and progress. A further report to the board is made during the school year.

The program director conducts similar introductory and follow-up meetings with school personnel. Everyone working in the school in which the adolescent-senior tutoring program occurs, including the teaching, secretarial, custodial and cafeteria staffs, is informed about the program from its onset. Every effort is made by the program director to introduce each tutor to the school faculty and staff.

Once the program is underway, the program director attends all meetings regarding each adolescent in the program. Further, the director meets with each S.T.E.P. student's classroom teachers on a regular basis. Tutors working with specific students are encouraged to attend pertinent meetings. At these meetings, the student's progress in the program is discussed and related to academic and behavioral progress observed in the classroom. The teacher of a student who has been removed from that teacher's class to attend the program is asked to delineate those study areas which the student might cover with a tutor through production of educational materials such as tapes, books, and games.

THE ACADEMICS

Often the teacher of a student who attends both S.T.E.P. and that teacher's class is primarily concerned with academic progress. The teacher may request that S.T.E.P. tutors place major emphasis on helping the student to complete homework assignments. If the program director believes such assignments are within the student's abilities and attitude toward learning, efforts are made by the student's tutor to comply with the teacher's request. For those students with more serious learning or behavioral problems, however, it is made clear to the classroom teacher that progress must first be made on the "preliminaries":

1) Learning to complete simple tasks, to follow directions and to increase attention span through the production of simple, elementary materials to which the student can relate.

2) Increasing basic skills in the areas of language (e.g., sentence and paragraph composition, vocabulary usage, and spelling), in reading (e.g., word attack skills, visual memory, comprehension); in mathematics (e.g., conceptualization and computation), all through the making of simple, manipulative materials.

3) Working on academic assignments in that subject area, but on a much simpler level.

4) Working with the tutor to overcome resentments, hostilities and difficulties in coping with learning and/or with personal and home related problems.

The program director must stress to each teacher that the goal of the S.T.E.P. program is to raise each student's potential for work within the mainstream, but that there may be many "steps" along the way.

The program director and senior tutors also become involved with elementary school teachers. Meetings are held for these teachers so that they can learn about the program, and about acquiring materials for their students.

At an initial meeting, the project director asks the teachers to think of specific children in their classrooms who are having difficulty with school work, and then to fill out a request form for appropriate learning materials for each of these children. The form used requires the first name of the elementary student, his age and grade, and the particular

Teachers meet to discuss the progress of a student who is pursuing Social Studies through S.T.E.P.

difficulty he is experiencing. The form also asks for an indication of the child's strengths and weaknesses for learning.

The forms, once completed, are given to the program director who explains they will be used to develop a prescription for remediating each child's difficulty. The program director makes sure the teachers have ample request forms so that they may order materials for additional students when needs arise during the school year.

The program director discourages teachers from requesting materials and equipment for their entire class, such as taped lists of spelling words from a grade level speller or pictures to mount on classroom walls. The director emphasizes to them that the program desires descriptions of the needs and difficulties of individual elementary children in order to individualize its work in helping each adolescent most effectively.

Once a request for materials has been filled, and the material has been in use for a period of time, the teacher is asked to provide written commentary on the degree to which the learning aid has helped the child in overcoming a specific learning difficulty.

THE PARENTS

The program director also meets with each adolescent participant's parents at the onset of the program and periodically during the school year to report academic and behavioral progress in the program and to ask about similar progress in the home. Parents may also be assembled as a group to discuss the impact the program has had upon their children and to discuss directions they would like the program to take. Senior citizens play an active role during these group discussions; furthermore, each senior is asked to attend those individual conferences involving the parents of his/her students.

Whenever possible, a monthly or bi-monthly newsletter describing the program and its work has been written by the project director or a tutor for distribution to parents, school faculty and staff, board of education members, and interested members of the community.

In Redding, as the school year draws to a close, learning materials produced by S.T.E.P. students are collected from participating elementary teachers and an open house is held to display the fruits of much labor. Elementary teachers are invited so that they may examine and order additional materials; parents, school administrators and faculty members are also asked to come and view the work of the adolescents. Board of education members, public figures and members of the community are also invited to attend.

SCHEDULING FOR TUTORS

In the Redding program, tutors work from two to five school days each week. Most tutors average three school days per week. Once the program is in full swing, the tutors' typical day includes:

Four 40-minute periods of working with the adolescents.

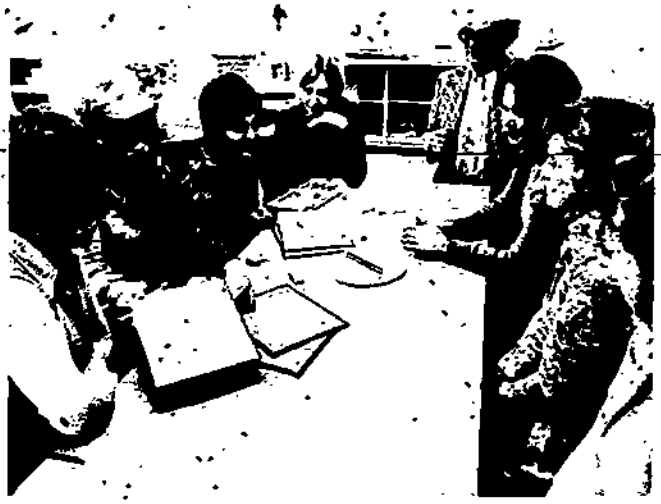
One formal training period, also of 40 minutes.

A lunch break.

STUDENT SCHEDULING

The extent of each student's attendance in the program is determined by the program director and the team recommending placement. Some adolescents need to participate in the program during only one or two periods per day. Many need to come for three or more periods, and some need placement for every academic period, attending only their elective classes. A student's schedule *is always* based on individual needs, strengths, weaknesses and motivations for participation in the program.

Students are scheduled so that every tutor has at least one student per period. Because of student absenteeism, tutors' flexibility in



Parents learn about their children's progress by using the learning materials they have made. Here, they are getting ready to play "Parts of Speech Squares" and "Mix and Match Words."

working with more than one student at a time, and student motivation for working in pairs, a slightly greater number of students than tutors may be scheduled for each period. Because not all tutors come on a daily basis, it is highly likely and quite healthy that a student will be exposed to more than one tutor during participation in the program.

Caution is exercised in scheduling students. It is unwise to place all "acting-out" or all "introverted" students together during a single period. Nor is it wise to schedule together for the same period those students who may have a reputation for getting into trouble when they are with each other. In general, the quieter, more inhibited student will be influenced favorably by the extroverted one, and vice versa, and should be scheduled accordingly.

PROGRAM FACILITIES

In Redding, Project S.T.E.P. occupies a room large enough to accommodate tutors and students so that they can work with some degree of privacy, yet still feel that they are participants in a group effort. If possible, two rooms should be utilized for such a program, to permit separating students who need to work away from the influence of their peers.

Long tables, rather than desks, are used in the work area, with no more than two adolescent-senior pairs using a table at one time. If possible, the room should be partitioned into four to six units, using low-lying bookcases or carrels.

It is valuable to have space used exclusively by the program. Such designated space gives focus and identity to the program, and lends a sense of importance to the effort shared by tutor and student alike.

It is important that the tutors and students take full advantage of all school resources, such as the industrial arts and home economics facilities, as well as the gymnasium, both for making and displaying their materials.

EVALUATING PROGRAM EFFECTIVENESS

Evaluation of the effectiveness of the program is related directly to the program's major goals. These goals are:

1) To enhance the academic and psychosocial development of the adolescent student participants, and therefore improve their 1) reading, spelling, mathematical, language and handwriting skills; 2) subject matter grades; 3) self concept; 4) home and classroom behavior and 5) personal adjustment.

2) To train senior citizens to be tutors of adolescent learning handicapped students.

3) To provide elementary classroom teachers with learning materials constructed by the adolescents and their tutors.

Assessment of Goal 1 is made through the use of the following: The results of 1) standardized tests; parent, teacher and student questionnaires administered at the onset and end of the program each year; 2) Report card grades from initial and final marking periods each year; 3) Anecdotal commentary written or recorded by S.T.E.P. students, their tutors, teachers and parents midway through, and at the end of the program each year.

Among the specific materials which may be used in assessing the academic effects of the program are the following:

READING: 1) Wide Range Achievement Test (WRAT). 2) Gilmore Test of Oral Reading. 3) Stanford Achievement Subtests in Word and Paragraph Meaning. These tests cover word attack (decoding) skills (WRAT); oral reading accuracy (word pronunciation, word and letter sequencing, regard for punctuation) and reading comprehension (Gilmore); and comprehension of word and paragraph meaning (Stanford).

SPELLING: Wide Range Achievement Test. This test assesses spelling skills in terms of phonetic abilities and visual memory skills.

MATHEMATICS: 1) Wide Range achieve-

ment Test and 2) Stanford Achievement Subtests. These tests cover 1) ability to add, subtract, multiply and divide, using whole numbers, fractions and decimals; and 2) ability to apply computation skills and concepts to problems involving daily living activities.

WRITTEN LANGUAGE: Myklebust Pupil Rating Scale and Picture Story Test. These tests measure abilities in use of vocabulary, syntax, grammar, abstraction. They also examine abilities to understand and recall words and directions, listen attentively, retain information, relate experiences and tell stories, form ideas and use grammar.

Informal rating scales may also be used to assess the students' skills in communication with the tutors and the cogency of directions they include in their games and learning materials.

HANDWRITING: This may be assessed according to teachers' 1-5 ratings of each students "appearance and form of work" and "quality of homework."

INTELLECTUAL ABILITY: Otis-Lennon Mental Ability Test. This test samples a broad range of cognitive abilities and measures facility to reason and deals abstractly with verbal, symbolic and figurative test content.

SPECIFIC SUBJECT MATTER: Report card grades are used in examining achievement in these academic areas.

Among the specific materials which may be used in assessing the psycho-social effects of the program are the following:

SELF-CONCEPT: 1) Nowicki-Strickland Locus of Control for Children. This test measures the extent to which students feel in control of their destiny. It is assumed that the more responsible they become for their actions, the more they will be able to change work and behavior.

2) Piers-Harris Children's Self Concept Scale, entitled "The Way I Feel About Myself." This test rates self-concept by requiring yes or no answers to questions in the areas of behavior, intellectual and school status, physical appearance, anxiety, popularity and happiness and satisfaction.

CLASSROOM AND HOME BEHAVIOR: 1) Teacher and Parent Questionnaires: These may be adapted from rating scales developed by Abbot Laboratories to evaluate school and home behaviors.

Teacher Questionnaire. The first section of this questionnaire asks teachers to rate on a four-point scale (from "not at all" to "very much") the degree of problem behavior they observe in each S.T.E.P. student. The second section asks teachers to give an overall rating (ranging from "much worse" to "much better"), comparing the S.T.E.P. student with other students of the same age.

Parent Questionnaire: The first section of this test asks parents to rate on the same four-point scale as the teacher questionnaire the degree of observed problem behavior at home. A second section of the questionnaire asks parents to offer an overall rating (ranging from "much worse" to "much better") of the student as compared with other children of the same age. 2) Student Self-Ratings: These rating scales ask the students to judge their behavior on the same dimensions as teachers and parents. Using a four-point rating scale (ranging from "not at all" to "very much," Students are asked to assess the degree of problem behaviors they feel they have.

PERSONAL ADJUSTMENT: Fehrenback Sentence-Completion Form. This test is used to measure growth in well-being on a personal level. Among the areas examined are the following: 1) self image; self confidence, self-awareness 2) peer relationships 3) relationships with adults.

For these youngsters, learning is fun when they use materials created by their adolescent "teachers." Rosalie Saul, Donald Wendell (standing) and Robert Bernstein coordinate the work of S.T.E.P. adolescents with the needs of the elementary children.

Mary teaches youngsters that math can be exciting as she creates "Picture Math Problems" with guidance from Tutor Elizabeth McCoy

Assessment of Goal 2 (To train senior citizens to be tutors of learning handicapped adolescents) is made through use of the following:

1) Data regarding the educational and psycho-social gains made by those students who worked with senior citizens trained by the program.

2) The growth of each senior in teaching effectiveness, as measured by "The Characteristics of an Effective Teacher Rating Scale," given both after initial training and at the end of the school year.

3) Anecdotal commentary written or recorded by:

a) The seniors, with regard to their role in the program, their growth as individuals and their effectiveness in helping their students.

b) The S.T.E.P. students with regard to the relationships they have experienced with their tutors. This commentary is collected periodically, and at the end of the program each year.

Assessment of Goal 3 (To provide elementary classroom teachers with learning materials constructed by S.T.E.P. adolescents and their tutors) is made through use of the following:

1) Statements written by the classroom teacher requesting, and subsequently using, the learning material with a particular student, regarding the effectiveness of that material in remediating the youngster's learning difficulty.

2) Ratings provided by the elementary students using the materials, according to a five point scale, ranging from "excellent" to "poor."

HOW TO CREATE LEARNING MATERIALS

In the Redding S.T.E.P. program, material production is based on any or all of the following: requests from elementary school teachers for helping specific children; needs, aptitudes and interests of the adolescent students; creativity and skills of the student and tutor.

The students generally feel that their primary purpose is to create materials that will assist students at the elementary level, but that they may create these materials entirely to their liking.

The tutors use a variety of approaches (often in combination) in encouraging a student to create materials:

1. The tutors ask the students if they know of any subjects which give young children difficulty in school, and suggest that perhaps, together they could make up a game involving this subject. (The students will most likely name those subjects which in fact gave and still give them difficulty).
2. Tutors may share with their students the program director's written prescription for an elementary child who is having difficulty in specific learning areas (e.g., acquiring basic number facts from 1-10; applying vowel rules; identifying parts of speech). They may produce the learning material suggested by the program director to help this child, or may create a material, using their own ideas.
3. Many tutors who have special artistic or technical skills (e.g., drafting, drawing, sewing, etc.), ask their students if they would like to learn these skills in creating materials for young children.
4. The tutors frequently ask their students to utilize their own personal interests or skills (e.g., in horses, football, cars, cooking) to form the basis or theme for a learning game.
5. The tutors may utilize commercial catalogues of games and manipulative learning materials as sources for game ideas. This is especially common and necessary at the onset of their service in the program.

At all times, the program director is available to assist the senior tutors in drawing out the needs, abilities and interests of each students, and in supplying ideas for games, books and other materials.

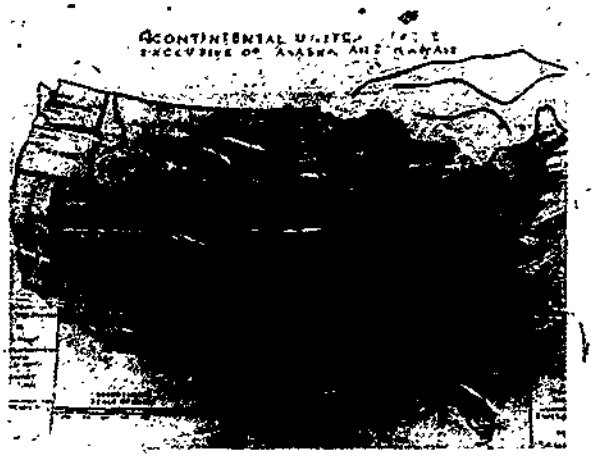
The supplies used in the production of learning materials are quite simple and inexpensive, and are generally found within the supply, art and industrial arts rooms of a school. The items employed most frequently in producing the materials of the Redding program, shown on the following pages are: poster board, construction paper, scissors, pencils, paint, magic markers, rulers, paste, plywood, pictures from magazines, catalogues and workbooks.

Many of the learning materials, particularly the games, are produced from the combined efforts of several students. Depending on needs and abilities, one student may create the idea or theme for a game. One, for example, may design or illustrate it, another write directions, and still another may make the movers, spinner or dice.

SAMPLES OF LEARNING GAMES

LEARNING GAME "Math Checkers"
SUBJECT: Mathematics
PURPOSE: To provide practice in addition and multiplication skills.
MATERIALS: Checkerboard, each square having a number in two of its opposite corners.
Checker movers for two players.
DIRECTIONS. Each player performs mathematical calculation (either addition or multiplication as decided by players at the start of game), using number in corner of the square from which he or she moves and number in corner of square to which he or she moves; e.g., a player wishing to move from square 6 to square 2 must either add 6 + 2 or multiply 6 x 2.
Each player moves diagonally across board (except when landing in specially divided square from which he/she may move vertically or horizontally).
Single checker movers move in one direction only (toward opponent), "Kinged" checker movers move in either direction.
The player who succeeds in "capturing" all of his/her opponent's checker movers wins the game.
BY: S.N., John Read Middle School, Redding, Connecticut, Peggy Zeloni, S.T.E.P. tutor.

LEARNING GAME. "Finish the Problem"
SUBJECT: Mathematics
PURPOSE: To develop skills in logic and problem solving, in sentence composition and in sentence sequencing.
MATERIALS Twenty index cards with opening statements to mathematics application problems, e.g., 'Mary had 14 pencils. She gave 4 to her brother . . . . . or 'Johnny rides his bike 6 miles in 1 day . . . . . ' or 'Sharon needs 2 cups of flour to bake 1 cake. She used 12 cups of flour in her baking today . . . .'
To provide interest, illustrations are used whenever possible, e.g., 14 pencils, then 4 pencils are illustrated in problem (1); a boy riding his bike is shown in problem (2); 4 cups, then 12 cups of flour and a cake are drawn in problem (3).
At the bottom of each card is written: 'Method' (used to solve this problem) with a space for the answer.
DIRECTIONS: Two to five players may play this game. Each player chooses a card, reads the opening statement(s) then writes an appropriate question (thus creating a mathematical problem). The player then writes the method to be used in solving this problem in the space at the bottom of the card.
Each player receives a point for writing an appropriate question and a point for writing the correct method of solution.
The first player to attain six points wins the game.
BY: M.P., John Read Middle School, Redding, Connecticut, Minnie Cunningham, S.T.E.P. tutor.



LEARNING GAME: "Let's Travel"
SUBJECT: Geography, Mathematics
PURPOSE: To develop awareness of the names of the states and major cities in the United States.
To develop awareness of the distance between major cities in the United States.
To provide experience in visual perception through the estimation of distances on a map.
MATERIALS: Large map of the United States, with major cities indicated.

Plastic cord cut to the lengths of various distances between cities.
'Trip' cards stipulating departure and destination cities, and actual distance in miles between them.

DIRECTIONS: Two to four players may participate. Players take turns in choosing a 'trip' card, then reading the names of departure and destination cities, and number of miles between them.
Each player locates these cities on the map and visually estimates the distance between them.
Player then chooses three strips of cord estimated to represent the distance between the cities.
If one of these strips spans the distance correctly, the player receives one point.
The player with the most points at the end of the game is the winner.

BY: C.C., John Read Middle School, Redding, Connecticut, Marie Wicklun, S.T.E.P. tutor.

(NOTE: This game may be adapted for the use with maps from other countries or cities, especially the town or city in which the student lives.)

LEARNING GAME: "Yesterday . . . Today . . . Tomorrow Game"
SUBJECT: Time conceptualization
PURPOSE: To teach the concepts of past, present and future. To develop reading skills.
MATERIALS: Set of 24 cardboard strips, each bearing a sentence such as 'I went to the store.' 'I am watching television.' 'I will visit my friend.'
Set of 40 small 'time' cards, each bearing the word 'yesterday,' 'today,' or 'tomorrow.'

DIRECTIONS: (Game may be played individually or with 2-4 players).
Individually: Student places sentence strips before him/her, reads each sentence, then places appropriate 'time' card on top of each sentence strip.
Group: Players are dealt equal number of sentence strips. 'Time' cards are placed in pile before them.
Each player takes a turn in selecting a 'time' card from pile.
Player tries to correlate 'time' card with a sentence. If other players agree that the correlation is appropriate the player receives one point.
The first player to correlate all of his/her sentence strips with appropriate 'time' cards wins the game.
If, after all the 'time' cards have been used, no player has been able to correlate all sentence strips with the 'time' cards, the player with the most points wins the game.

BY: D.G., John Read Middle School, Redding, Connecticut, Marie Wicklun, S.T.E.P. tutor.

LEARNING GAME: "Redding Squares"
SUBJECT: Spelling
PURPOSE: To offer acquaintance with word endings, and experience in word formation and rhyming.
MATERIALS: Game board with series of connected squares on which word endings and directions for their usage are indicated.
4 wooden movers
Spinner
Answer card

DIRECTIONS: Two to four players may participate.
Player spins and moves the number of squares indicated.
Having landed on appropriate square, player must form the number of words indicated for the ending on the square, e.g., "Say three words that end with -ate."
If the answer is correct, according to answer card (or dictionary), player then remains on square.
If answer is incorrect, player must move back one space.
The first player to reach the "FINISH" square wins the game.

BY: K.M., John Read Middle School, Redding, Connecticut, Robert H. Heatley, S.T.E.P. tutor.

(NOTE: Other 'Redding Squares' games may be used for teaching: 1) initial blends of words (e.g., player required to say 2 words that begin with /fl/); 2) vowels (e.g., player required to say 3 words that have a short /a/ sound in them); 3) syllables (player required to say 3 words that have 4 syllables in each of them).

LEARNING GAME: "Snoopy Vowel Game"
SUBJECT: Decoding and Phonics
PURPOSE: To offer experience in vowel sound discrimination and vowel usage.
MATERIALS: Game board of Snoopy pictures;

each displaying one vowel on Snoopy's nose and one vowel on a book he carries. (These vowels are marked short or long). A gold paper fastener is inserted next to each vowel.
Snoopy "Bones" with string attached. Each bone bears a word with a single vowel.

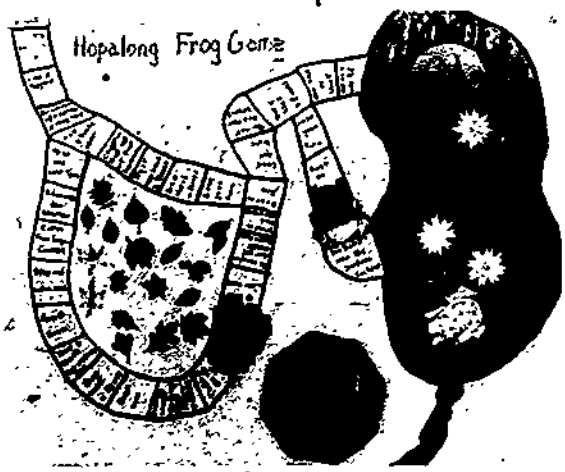
DIRECTIONS. Two to four players may participate.
Player draws a "bone" and says word on "bone".
Player then matches vowel he/she sees and hears in this word with vowel on Snoopy board.
When player finds a vowel match, he/she must hang the "bone" by its string to the paper fastener next to the vowel on the Snoopy board, e.g., if a player draws a "bone" with the word hill, "bone" must be placed on the Snoopy with the i.
The first player to hang ten "bones" wins the game.

BY. L.S. and P.L., John Read Middle School, Peggy Zeloni, S.T.E.P. tutor.

(NOTE. The format of this game may be employed in teaching diphthongs (with Snoopy holding diphthong letters and bones having words with diphthongs in them) or syllables (Snoopy holding numbers such as 1, 2, 3, 4 and 'bones' with words of one multiple syllables in them.)

LEARNING GAME. "Grammar Bingo"
SUBJECT: Grammar
PURPOSE. To teach the names of the parts of speech.
To develop the ability to associate words with the names of the appropriate parts of speech.
MATERIALS. 'Bingo' grids with words representing different parts of speech in each column.
Small 'caller' cards indicating the column letter and name of the part of speech to be called (e.g., 'B – conjunction,' 'I – noun,' 'O – adjective')
Small 'marker' cards (may be color coded, with a different color representing each part of speech) to be placed over word on grid if part of speech represented by that word is called.
DIRECTIONS. Two to four players may participate in this game.
Game is played like 'Bingo.'
One player is chosen to be the 'caller.' 'Caller' selects a 'Caller' card and reads column letter and part of speech (e.g., 'B – noun').
If a player has a word representing the part of speech called in the appropriate column, (e.g., if 'house' or 'book' in column 'B' when 'B – noun' is called), he/she places a marker there.
The game continues in this manner until a player fills a column either horizontally, vertically or diagonally.
Once a player has filled a column, the caller checks the player's words in that column to see if he/she has identified the parts of speech appropriately. This can be done by asking the player to name each part of speech representing the words in the column or by checking each word to see if it is covered with the appropriate colored marker.

BY: M.A., John Read Middle School, Redding, Connecticut, Helen Commons, S.T.E.P. tutor.

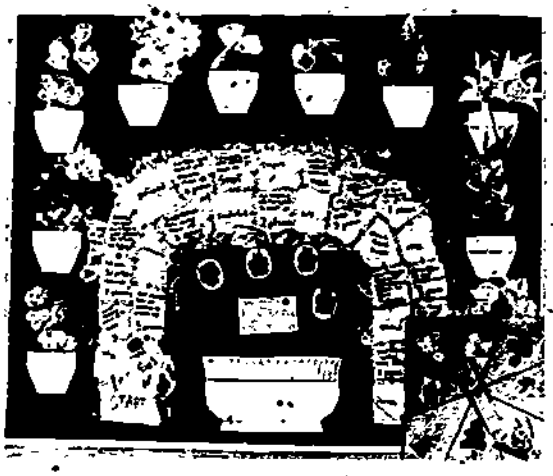


LEARNING GAME: "Hopalong Frog Game"
SUBJECT: Science
PURPOSE. To increase information in the subject of science.
To teach the living habits of the frog.
MATERIALS. Game board with path on which is written directions for movement. These directions are based on the living habits of the frog. (e.g., Caught in mud; lose turn. Hibernate for winter; lose turn)
Frog movers
Spinner
DIRECTIONS: Two to three players may participate in this game. Player spins and moves along frog path according to number spun. Player follows directions according to space on path he/she has landed. The first player to reach the lily pond wins.

BY. J.H., John Read Middle School, Redding, Connecticut, Frances Dormont, S.T.E.P. tutor.

(NOTE. The format of this game may be adapted to teach the living habits of any other animal. A path may be followed by horses going from barn to pastore or birds flying North to South. Directions based on the living patterns of these animals may be written on the path spaces. Horse or bird shaped movers may be used.)

SUBJECT: Science
PURPOSE: To teach the names of flowers.



To develop association skills (associating the name of a flower with its physical appearance.)

To provide experience in arranging parts into a whole.

(The many flowers form a single bouquet.)

MATERIALS: Game board with pictures of flowers placed in slots along perimeter. The name of the flower is indicated on the back of each picture. In the center of the board is a block arrangement of a garden path which provides the field for movement in the game. This path surrounds a slotted area in which players mount and arrange flower pictures as they select and name them in the course of the game.

Lady Bug Movers

DIRECTIONS. Two or three players may participate.

Player spins and moves along garden path according to number spun.

Player follows direction on block on which he has landed.

If direction requires pointing to a flower pictured along board, the player does so (and verifies answer by checking name on back of picture). If correct, player remains on the block and places the flower in a slot at the center of the path. If incorrect, player returns to previous block.

If direction requires a further board move, the player performs this action, (e.g., "You overwatered your flowers; go back 4 spaces."

As players successfully identify flowers and place them in slots at the center of the board, they create a lovely bouquet.

The first player to reach the end of the garden path wins the game.

BY: J.H., Grade 8, John Read Middle School, Redding, Connecticut, Frances Dormont, S.T.E.P. tutor.

(NOTE. The format of this game may be adapted to teach the names and physical appearance of members of any classification system such as animals, plants, objects. For example, to teach the names and physical appearance of furniture, pictures of these items may be placed along the perimeter of the playing board, to be moved by game players into a picture of a room in the center of the board. To teach the names and physical appearance of birds, pictures of birds may be placed in nests along the perimeter of the board to be moved by players into a tree in the center of the board.)

LEARNING GAME "Beat the Band"

SUBJECT: Music

PURPOSE. To teach the names of musical instruments.

To develop association between the name of an instrument and its physical appearance.

To demonstrate the arrangement of instruments within an orchestral scheme.

MATERIALS: Game board with pictures of musical instruments mounted on small manilla envelopes along perimeter. Inside each pocket is a card bearing the name of the instrument. In the center of the board is a block arrangement of an orchestra which provides the field for movement in the game.

Task cards with directions for further moves and/or identification of instruments.

Spinner

Six wooden movers

DIRECTIONS: Two to six players may participate in this game.

Player spins and moves along orchestra blocks according to number spun.

Player then follows direction on block on which he/she lands:

If direction on block requires selection of a task card, player picks up card and follows its direction, e.g., Point to the clarinet. (Player verifies on answer by checking name on card inside pocket). If correct, player takes another turn; if incorrect, player remains stationary.

If direction on block calls for a further move, player performs this action, e.g., "Kettle drum plays good solo: Move to saxophone." or "Second-trumpet loses mouthpiece: Lose 2 turns."

The first player to reach the block marked "Conductor", "Beats the Band", and wins the game.

BY: J.C. and L.S., John Read Middle School, Redding, Connecticut, Elizabeth McCoy, S.T.E.P. tutor.

LEARNING GAME "Sorting Box"

SUBJECT: May be used for any subject

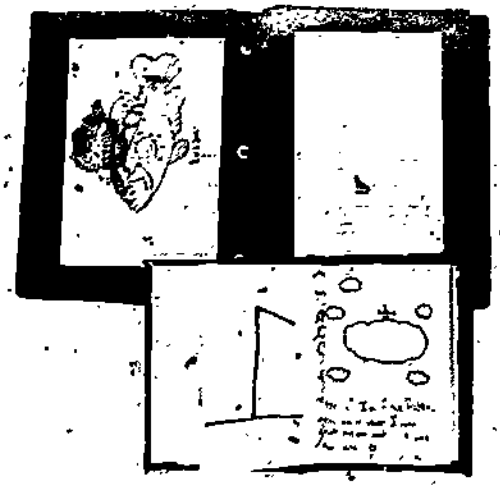
PURPOSE. To develop skills in classification, and in the particular subject for which it is programmed (spelling, reading, etc.)

MATERIALS. Box with lid (shoe box, or wooden box). On the lid are 4 slots, each

measuring 4 inches in length.
The interior of the box is partitioned into 4 equidistant sections.
The midpoint of each section corresponds to the slot in the lid of the box.
A strip of cardboard stipulating 4 items to be classified is placed in a groove along lid of box, each item corresponding to a slot on lid of box.
3 x 3 inch cards to be filed in slots in box, according to categories listed on cardboard strip.

DIRECTIONS: Sample programs for classification:
Strip: Stipulates furniture, toys, animals, food.
Cards: Contain pictures of items in these categories which child must file in appropriate slot.
Strip: Stipulates short vowels /a/, /e/, /i/, /o/ or /u/ or long vowels /a/, /e/, /i/, /o/ or /u/.
Cards: Contain words containing one of these vowels. Child must file each word card in appropriate slot.
Strip: Stipulates the numbers /2/, /3/, /4/, /5/
Cards: (for number of syllables) contain words with any number of syllables.
Child must file in appropriate slot.

BY: C.F. and J.R., John Read Middle School, Redding, Connecticut, Robert H. Heatley, S.T.E.P. tutor.



BOOK: "Life of Pollution"
SUBJECT: Science
PURPOSE: To acquaint readers with information as to the causes and prevention of air and water pollution.
To encourage readers to actively engage in pollution prevention.
DESCRIPTION: This book offers a pictorial and written description of the pollution problem. Through eyewitness accounts of "Peter Patter" (an animated raindrop who is no longer clean), the author presents the background of the pollution problem, its current status and its effect on everyone in the world.
The book is both a documentary of the pollution problem and a plea for action on the part of industry and the American people.
BY: R.F., John Read Middle School, Redding, Connecticut, Marie Wicklun, S.T.E.P. tutor.

BOOK: "Fishing at Gilbert and Bennett Pond"
SUBJECT: Science and Reading
PURPOSE: To provide information on the appearance and nature of specific fish.
To portray fishing as a pleasant and rewarding leisure activity.
DESCRIPTION: The author tells about fish through careful descriptions based on first-hand experience and through his own colorful and precise illustrations. He expresses much enthusiasm for fishing and writes in a style that enables him to share his feelings with his readers and encourage them to engage in this activity.
BY: R.P., John Read Middle School, Redding, Connecticut, Elizabeth McCoy, S.T.E.P. tutor.

MAP: "Map of the Town of Redding, Connecticut"
SUBJECT: Geography and Social Studies
PURPOSE: To provide information on the roads, waterways, parks and important landmarks of Redding.
DESCRIPTION: This map has been enlarged to approximately five times its original size, through simple graphing and drawing techniques. It is easy to read, and is used in locating geographical information concerning the Town of Redding.
BY: S.D., John Read Middle School, Redding, Connecticut.
R.P., John Read Middle School, Redding, Connecticut, Philip Dormont, S.T.E.P. tutor.

EQUIPMENT: "Hurdles"
SUBJECT: Physical Education
PURPOSE: To assist in track and field exercises in physical education classes.
MATERIALS: 2" and 6" lumber for bases
1½" dowels
Canvas attached by velcro strips which break away when jumper misses jump.
DESCRIPTION: These hurdles have been designed from actual photographs. They were planned, modified then drawn to scale before they were actually constructed.
Their construction has allowed for a considerable savings over prices indicated in gym equipment catalogues.
BY: D.L., R.H., B.M., C.M., John Read Middle School, Redding, Connecticut, Charles Emmons, S.T.E.P. tutor.