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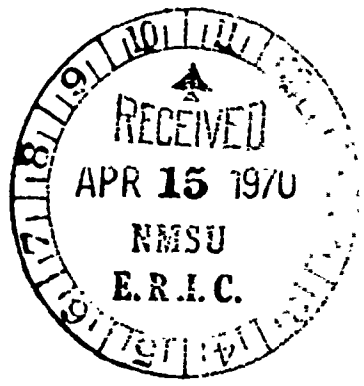
ABSTRACT

A wide spectrum of the educational problems common to migrant children are covered in this teacher handbook. Several pages are devoted to developing an appreciation for, understanding of, and empathy for, the migrants and the problems they face. The document also covers the following topics: (1) working with migrant parents, (2) working with aides, (3) the migrant and his curriculum, (4) teaching of language arts, (5) teaching social studies, (6) teaching mathematics, (7) teaching science, (8) teaching health and homemaking, (9) creativity, (10) correlation of subject matter, and (11) student evaluation. The handbook is built around the concept that proper understanding and student expectancy do influence the education of migrants. A 167-item bibliography, indexed by subject area, is included for those who wish to pursue the topic in greater depth. (DB)



HANDBOOK FOR TEACHERS OF MIGRANT CHILDREN

MICHIGAN DEPARTMENT OF EDUCATION LANSING, MICHIGAN 1970

State Board of Education

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I. THE MIGRANT CHILD AND HIS TEACHERS

Each year thousands of migrant children accompany their families in a life "on the season," moving in trucks, buses, and cars from state to state and from farm to farm, finding a home wherever their parents can make one. Although these children are United States citizens, their parents are seldom able to vote, or to avail themselves of customary social services. The average migrant worker makes $900 a year for his labor in the fields.

Often it is necessary for children to work beside their parents. The youngest children may go to the fields with their parents, or stay home with a nine-or-ten-year-old sister, whose job it is to take care of the "little ones." Although these children--particularly those of Mexican-American descent--have warm and close families, they lack security in schools where they never "belong," and in the larger society which has never accepted them.

In only a few years, increasing farm automation will make migrant workers unneeded. Lacking other skills and unable to get jobs, these families must find an unsatisfactory refuge in the urban ghetto or the rural slum. Their children need an education which will save them from a life on welfare and which will make them productive and satisfied members of our society.

Most migrant children live from day to day, never able to rely upon a home, a school, or a future with any permanence or predictability. Their lives are dictated by the seasons, the sun, and the weather. Only the repetition of the seasonal cycle has permanence for them. They do not look to nor plan for the future, because their families have never had hope for the future. Their expectations for their own lives are dim and shadowy, for they seldom see men and women moving with purpose to

higher educational and economic levels. Picking is the occupation they know, and they expect little else for themselves, since they have not seen the alternatives. In school they are often segregated and unwanted. On the road, the towns and cities do not welcome them. The schools they enter may introduce work which has little connection with what they have done in a former school, or which is irrelevant to their lives. These are the children who will be in your classrooms this summer.

The use of standardized tests which come from our own culture, and which we expect will measure school achievement, reveals that migrant children's achievement continually decreases relative to other children of their age. Apparently, although the migrant child learns something each year as he grows older, he learns less each succeeding year relative to others. This is a powerful indictment of the migrant child's teachers and his schools. Although the child initially shows himself able to learn, the school so handicaps him that he is unable to use or to demonstrate his ability. His consistently lower level of relative achievement may be the result of several factors. His learning may be retarded by teacher prejudice and misunderstanding, but lack of knowledge of how to teach this particular child, by a curriculum which does not meet his needs, by lack of continuity or by needless repetition in the curriculum forced upon him as he journeys from school to school. Learning retardation is frequently the result of the inability of the schools to give him competence in the language or dialect which he is forced to use in school. Lacking the language, he is unable to develop concepts, or to handle generalizations about relationships. He benefits even less than other children from the overwhelming amount of teacher-direction, teacher-instruction, and teacher-lecture which so frequently passes as real teaching among members of school staffs. It is obvious that if we are

going to help migrant children to achieve on a level of which they are capable, we are going to have to do a more proficient job of arranging his educational experience.

Those who have approached the teaching of migrant children with positive attitudes and dedication to making a difference in their educational progress all agree that these children possess characteristics which should make learning easy.

The migrant child is curious. He is eager to learn more about what he sees. Given an encouraging environment, he is alert, observant, and full of questions. These questions, and similar questions encouraged by teachers, are the very basis of powerful learning experiences.

The migrant child is enthusiastic. It is easy for children from the migrant cultures to become committed to activities which are paced at his level. With the exception of an initial shyness in young children, the migrant child seldom withdraws or criticizes classroom activities.

The migrant child is eager to please. Mexican-American children come from families which honor old traditions and emphasize respect for the authority of adults. In general, then, the tendency of the migrant child will be to be obedient and to value the praise and acceptance of his teacher. In fact, he may take pleasure in doing well those things which do not contribute significantly to his learning, simply because his teacher tells him to do them.

The migrant child is responsible. From his earliest years, he shares in tasks which help his family. By the age of nine or ten, it is not unusual for him to be responsible for the care of younger children while his parents work in the fields. By the age of twelve, he is often a breadwinner, contributing to his family's income by his own work in the fields. He understands what it means to "have work to do," and he is able

responsibly to complete school tasks as long as these tasks are reasonably paced at his developmental level.

The migrant child is loved. His family welcomes him with enthusiasm and warmth. His self-concept does not suffer at home. It will continue to be nourished at school if teachers help children to see themselves learning. The most "loving" act a teacher can perform toward a migrant child is to raise the level of his achievement by giving him ample opportunity to use his ability in meaningful ways

The teacher of migrant children, then, begins his task with many advantages inherent in the nature of the children he teaches. If these children fail, we are forced to conclude that the failure lies not so much with the children as with the teachers. Working with these advantages and your own common sense, there are many things which you can do for the migrant children you teach this summer.

You can make it possible for them to learn by a quick and business-like diagnosis and prescription which analyzes what children need and proceeds to teach them.

You can increase their motivation and enhance their school performance by making school a place where all children have experiences of success, because you arrange for them to be successful.

You can nourish their interest in learning by making school a relevant place where learning is related to children, to their interests, and to their questions.

You can help them to plan for the future by guiding them to make all decisions children can reasonably be expected to make, and by managing your classrooms in a democratic fashion, in which children talk things over and live with the consequences of their own actions.

You can raise their level of expectation if you show them a variety of interesting occupations, teach them what is required for these jobs,

and help them to see themselves as having higher-paid and more challenging occupations.

You can help these children to become part of the larger society by showing them what the rest of the world is like and how one lives in it.

You can give them an inkling of the possibilities for their own growth if you show them:

by your manner, that you respect them

by your expectations, that you believe in them

by your classroom plans, that they can be successful learners.

The recent work of Rosenthal and Jacobson[1] indicates with dramatic force the importance of teacher attitude and expectation to the success of children in school. These researchers pointed out to teachers a randomly-selected group of disadvantaged children. Teachers were told that a test supposedly predicting academic "blooming," or greatly improved academic performance, predicted that these particular children would demonstrate great intellectual spurts during the coming year. Although nothing special was done to or for the children, their IQ gains were significantly greater than those of the control group.[2] The authors attribute these gains to the change in teachers' expectations of what their pupils could do.

Accepting these conclusions, we must ask ourselves: how much of the migrant child's academic failure is due to teachers' low expectations for him? How much more could the migrant child achieve if his teachers believed in his ability?

Perhaps the most important thing you can do for migrant children this summer is to remind yourself that these children are as bright as any

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[1]Rosenthal, Robert, and Jacobson, Lenore, Pygmalion in the Classroom. New York: Holt, Rinehart and Winston, Inc., 1968.

[2]Some IQ gains were as great as 40 and 45 points. Mid-point gains centered around 20 points.

others, as ready to learn, as curious about their environment, and as ripe for growth. Expect them to perform well and to learn rapidly. Expect them to use their intellects with interesting and challenging tasks, because they can.

Migrant children, as all children, need good teachers. Because the migrant child comes from an environment and from past school experiences which handicap him with regard to school achievement, he needs especially good teachers in especially good schools to compensate for the scholastic disadvantages he cannot prevent.

A migrant child needs a teacher who:

--encourages, rather than discourages, by offering him an opportunity to see that he is learning every day.

--provides him with many genuine experiences of success, and helps him to cope intelligently with occasional failures.

--makes it possible for him to achieve a growing sense of self-worth because she treats him as a worthy person.

--listens to children, for they tell us how to teach them.

--helps children to make their own decisions and to grow in responsibility for their own actions.

--helps him to achieve greater competence because she teaches him effectively.

--plans with flexibility so that each child is challenged but assured of success.

--rearranges and changes plans to take advantage of immediate opportunities for learning.

--correlates all areas of curriculum so that the child acquires concepts and skills while occupying himself with what is vital to him.

--underlines the drama and excitement of learning.

--demonstrates through every contact that she cares about him and about his growth.

--Expects great things of him because he is ready to learn.

II. WORKING WITH MIGRANT PARENTS

Migrant workers have deep concerns for their children. The difficulties of their lives, the nature of their work and the effort they must put forth to gain only the barest necessities of life, may make it impossible for them to attend as much to their children as some middle-class parents do. Nor are they able to give their children the food, clothing, and kinds of material possessions which middle-class families consider essential. Yet most migrant parents give their children affection, warmth, and responsibility. They have hope for their children's futures and concern for their children's behavior. Migrant families are often close-knit, and supportive of children, giving children sureness and security at home.

While they hope for their children's future success, most migrant parents are so separated from "success" as we know it that they are in a poor position to advise their children or to help them in moving away from poverty. It is the school's obligation to show these parents the ways in which they can assist their children's school achievement and raise their children's aspirations for the future.

Most migrant workers are not aware that they can encourage their children's school achievement by being interested and concerned about it, and by talking to children about their school work. The school can send books, newspapers, and magazines home with the children, so that reading materials can become at least a temporary part of their home environment. Children can be given "home work" assignments which involve gaining information from their parents about topics being discussed in school.

For so many years the migrant worker has had so little hope for his own future that he is unable to see that there is a way out for his children. Economic necessity forces him to keep his children out of school so that they

can work and contribute to the family income. But migrant parents can be helped to see that, in the long run, education is going to provide much more for their children. This is our most realistic selling point when recruiting children for the school. As a rule, former migrants only a few years out of the migrant stream already know where the future lies for their children, and these children often talk about attending college.

Migrant workers are people with pride, sensitivity, and warmth. They provide good things for their children whenever it is within their power to do so. They deserve our respect and our tactful help, but they will not relish either dictation or condescension. At the school, migrant parents need to be accepted, welcomed, and encouraged to support their children's education. There are many ways in which teachers can help migrant parents to become a part of the school community:

1. Teachers can send home brief letters (written in both English and Spanish) inviting parents to visit the school whenever possible.

2. Parents can be greeted politely and considerately when they visit, and their visits can be made a welcome part of the school day.

3. Children and teachers can plan activities to which parents will be invited to come to the school in the evening or on a weekend. Fiestas with programs by the children, rummage sales, and ice cream socials have all been successful.

4. Teachers should visit children's homes, get acquainted with parents, and help them to work with the school in supporting children's education.

5. Brief bi-lingual newsletters, reporting what the children are doing and learning in school, help to give parents greater closeness to and appreciation of the school.

6. Parents will support the school and are more likely to send their children there and to try to find work where the schools are, if they know

that teachers seriously care about their children. If your concern for migrant children is genuine, and if you are able to show your understanding of the unique values in each child, migrant parents will recognize and appreciate what you do for their children. If you can show parents that their children are learning much each day, and that this learning will improve the quality of their existence, parents will be more likely to send their children to you.

7. The same principles which produce good relationships with parents during the regular school year are equally applicable to migrant parents: respect, friendliness, consideration, and explanation are factors which help migrant parents work with the school for the good of children.

Parents as Teacher Aides

It is hoped that many adults from the migrant stream will be hired as aides in the schools this summer. Some of them will be parents. Experience with similar programs reveals that when people of poverty populations become involved in programs for their children, several good things happen. First, adults have an opportunity to learn about educational method and about curriculum. They are also able to see themselves in decisive roles with regard to their children's education, which enhances the adults' self-concepts. Vocational aspirations of these adults are raised as they see themselves taking on new roles and gaining new skill and competence. Because of their acquaintance with the culture and past experience of the children involved, adults from the migrant stream will be able to make valuable contributions to the educational program for migrant children. They will also be able to give teachers important information regarding children's understanding and effective ways to communicate with children. Parents from the migrant stream will be one of your most valuable resources.

III. WORKING WITH ALL YOUR AIDES

Teachers and aides constitute a team which works together for the benefit of children. Although the teacher is the responsible leader, the team will not function well if he is an autocratic leader, or if he uses aides as servants. There are many things that you as a teacher can do to nourish and maintain a smoothly functioning team which has high morale and works together effectively to produce good educational experiences for children.

1. Take the time to build good relationships. Allow time for relaxed social exchanges among you and your aides. Do your planning and evaluating over a cup of coffee in a pleasant atmosphere. Aides may be somewhat in awe of the "prestigious teacher;" convince them that you are as human as they. Remember that you are working with them, not for them. If you condescend to them because they have less education or less status, you will produce resentment, alienation, and distrust. Find something unique in each aide which can be recognized and praised, and take care that team members are aware of your recognition of all of them. To the children, aides must have some authority and a respectable status in the classroom. Make sure that you communicate this to children by your obvious respect of your aides.

2. Provide important team functions for aides. Aides are not slaveys who must be confined to such functions as cleaning out cupboards or wiping up paint. Do not confine them to these jobs, but find something interesting and challenging for them to do, as well. Perhaps one of your aides sings and plays the guitar. Let her teach the children some somgs. Perhaps one has particular facility as a storyteller, or as a warm and motherly figure who can comfort unhappy children. Another may have a simple, understandable way to communicate mathematical concepts. Find

out what your aides can do, and use their talents.

3. Plan and evaluate as a team. By planning and evaluating with your aides, you will help them to see how to diagnose children's needs, how to arrange educational experiences, and how to assess the teaching performance of the classroom team. Ask for their opinions of how the day went: did Juanito grasp the idea of numerical symbols? Why do they think Maria was so quiet today? Is Raoul able to use effectively the resource books on weather which you have provided for him? In this way, aides will learn to think in educational terms. Educational purposes will become clearer to them, and they will be better able to reinforce your purposes and to carry out the plans you have made together for children.

4. Use opportunities to educate. Encourage questions from aides, so that each day in the classroom will be a learning experience for them. Explain why you use a great variety of objects and concrete experiences when children begin to learn concepts of number. Tell of the advantages when children write and then read about their own experiences. Demonstrate the learning produced by a well-conceived field trip. Help aides to understand democratic classroom management, and show them why, in the long run, this is more efficient than authoritarianism.

5. Use aides as an educational resource. Ask aides to help you learn something of the children's language. Be alert to what they know about the personal situations of your students. Listen to the interpretations your aides make of children's behavior. Encourage them to tune you in on the migrant culture. Your aides know many things which can help you to become a more effective teacher of migrant children.

6. Define and encourage professionalism. Aides have not had your exposure to the ethics of the educational profession, and have had no

opportunity to learn that certain information is not to be discussed outside of school, or that children's progress is communicated only to their parents. Make clear to your aides that information about children's performance is confidential. Allow plenty of time for discussion of feelings about children in a professional situation, so that aides will not need to "gossip" about children in the camps.

7. In case of conflict, save as many faces as you can. Although you will try to anticipate difficulties among aides and children as best you can, and eliminate them by your planning and explanation, there may be times when conflicts between aides or between an aide and a child will arise. In such cases, you will probably agree that the child should be protected first. Use your greatest tact in resolving the situation so that, although the child is protected from injustice, the aide is still able to retain self-respect. As the most responsible adult in the classroom, you can most easily afford to "take the blame." Often situations are saved because the teacher is able to say that she "forgot to explain" a procedure to an aide, or that she "should have helped more" in the prevention of the crisis. Because you are the adult with the most education and the most secure status, your face should require less saving than those of your children or your aides.

8. Watch for signs of growth among aides. When aides ask questions freely, when they volunteer suggestions concerning learning experiences, when they discuss children and their learning problems using educational concepts which you have introduced, when they work to reinforce the educational program, showing basic understanding and cooperative attitude, you will know that your efforts to build an effective educational team have succeeded.

IV. THE MIGRANT CHILD AND HIS CURRICULUM

The curriculum for migrant children must take into account their special needs and the variance in their backgrounds. Migrant children have an educational background which is different from other children and different from each other. It is important, therefore, that any group's curricular experiences be broad enough in design to allow for existing differences, yet planned carefully enough to include experiences missed in the usual school life of children on the move. Current deficiencies in migrant education suggest important areas for major emphasis.

Language. The migrant child is handicapped in all educational endeavors because he speaks a different language or dialect from that generally used in the school. Great emphasis should be placed on meaningful language development, in all phases of the curriculum. Language arts skills should be taught with every activity, and all day long. Growing language skill will give the migrant child the competence he needs to learn about the world he lives in and to meet his own needs in any setting.

Concept Development. Much emphasis needs to be placed on the development of concepts, since many of these children have at best limited experiences with the nature of their universe. Experiences in depth common to many of our children in their day-to-day living are foreign to children whose home is ever-changing. Often, migrant children do not come in real contact with the community in which they temporarily reside. Indeed, they are often unaware of the purpose of the work in which their own families are engaged. (Suggestions for developing concepts about agricultural economics will be found in the section concerning the social studies.)

Since concepts develop from the concrete to the abstract, and always begin with concrete experience, new experiences are essential to the migrant child's education. Mathematical concepts must be introduced with prolific use of concrete objects. Science principles can be discovered by the children in your classrooms if you will give them the opportunity to explore and experiment concretely. Language will be developed through much use of language about the child's own concrete experiences.

Simply giving children experience is not enough, however. In order to develop concepts, the child must be helped to make generalizations about his experience, and he must be taught the labels for the concepts which he abstracts from his experience. You can do wonders in increasing the migrant child's English vocabulary if you teach him the words which name the objects he uses and describe the ideas and principles he discovers.

Self-determination. Because of the nature of their lives, migrant children are inclined to see problems as predicaments which are solved for them by other people. The crew leader and the grower decide upon their contract. The grower controls how they will live while they are in his camp. For clothes and medical and dental services, the migrant is largely dependent upon charitable organizations. Hence, it is especially important that migrant children be encouraged to develop their facility in creative problem-solving, so that they may be able to determine their own destiny in the future. (Ways to develop creative problem-solving and self-determination are discussed under the section on creativity and the creative arts.)

Categorization. Man organizes his knowledge into "likes" and "unlikes," and puts objects or ideas which are in some way similar into general categories. Children of poverty often think in terms of specific instances, but have not been taught to make generalizations. It is important, then, to show migrant children categories of objects and ideas, and to encourage them to generalize according to their own schemes. Whatever the subject matter,

children can be encouraged to find likes and differences and to make generalizations. Development of these thinking skills makes learning easier, for it provides a verbal framework with which to grasp and to remember new knowledge.

The following pages are designed to be of help to the teachers and teacher aides who will be responsible for all curricular experiences. This is in no sense a manual to be followed slavishly; but it is hoped that some suggestion, some idea, some point of view, may be of help in stimulating the teacher to pursue further her own search for tentative solutions to the problems of children. (It is also hoped that as teachers use additional ideas and discover workable ways in any area of their school life with migrant children, they will use the blank pages at the end of each section to jot down these ideas or references which may be incorporated in their next ventures of this kind.)

V. TEACHING THE LANGUAGE ARTS

A Reminder to Teachers

One of the most important areas of concentration for migrant children is unquestionably the total gamut of communication skills. The in-take and out-put of language in both oral and written form are basic to all areas of learning. It is imperative that teachers learn how to tune in not only to the group but to each individual within the group, if children, in turn, are to be able to tune in to self and others and to life about them.

Anyone who has listened to the fluency and expressiveness of Spanish-speaking children when they talk to each other in natural situations, knows that we miss something of the quality of mind of these children when we communicate with them only in English. Those of us who can barely manage to order a dinner or find a room when we travel in foreign countries and are forced to rely on the language of that country, know how difficult it is to carry on real communication in a foreign tongue. Somehow, we do not represent ourselves in this tongue, and the subtleties of mind and complexity of ideas of which we are truly capable are never made apparent by our use of a language with which we are unfamiliar.

So it is with the Spanish-speaking child. He is asked to speak, to read, to listen, and to understand, in a foreign language. This inevitably limits his capacity to express his knowledge, his understanding, and his ability to think. Forcing him to rely upon a foreign language makes him look "dumber" than he is. This constraint is in turn reflected in lower achievement scores and in less respect from teachers. There are several steps which you can take to remedy this predicament for the Spanish-speaking child:

1. Remember what achievement scores mean. Scores on achievement tests do not necessarily reflect ability; they reflect performance. We must expect that any disadvantaged child, including the migrant child, will perform less well because of his educational handicaps. This does not mean that he lacks ability. Achievement scores can be changed. If you are doing a good job of teaching the migrant child, your success will be reflected by his rising achievement. If his achievement does not change it is your fault, not his.

2. Remember that these children are as bright as any others. There is no credible evidence that any group of people differs in range of "intelligence" from any other group. Children will perform well when you expect them to, because of your definition of them as capable people.

3. Teach them language competence. The mainstream of the American culture uses the American language. In order to make choices concerning future occupations and life styles, children must be given competence in this language. The more language skills you can impart to children, the more freedom of choice they will have. At the same time, remember that Spanish is a respectable language which these children have demonstrated their ability to learn. Spanish is not "wrong." Do not penalize children because they speak it. Instead, add to their power by teaching them all you can about their second language.

4. Improve your own skills. Since migrant children have already demonstrated their ability to learn a language, the burden of proof lies with you--their teachers. If they can learn Spanish, they can learn American--providing you can teach it skillfully. The major emphasis, then, must be on the teacher's own skills, attitudes, judgements, and range of competencies in the various areas of language learning.

An adequate language arts program encompasses many skills and is integrated into a day-long school program in which children are always talking, listening, writing, reading, and thinking. We discuss in the following pages the most important elements of an adequate program for the development of language arts skills.

The Importance of Talking

We begin to develop language skills through oral communication. Talking becomes the basis for reading and writing. It is important to the development of skill in a new language, then, that migrant children have many opportunities to talk about things in English. A classroom which relegates children to quiet will retard language development. Orderly conversation must take place much of the time. Social studies discussions, reports gathered from reading, science experiments and exploration, dramatization of events in the Mexican-American's history--all contribute to language development. Plan your children's curriculum so that opportunities for oral communication are always present. Encourage talking by twos and in small groups as children work together. Then use their statements about their work, their lives, and their discoveries as material with which to teach vocabulary, sentence structure, verb forms, or other language elements which need to be improved.

The Importance of Something to Talk About

You can diagnose language difficulties, plan presentations about language, and offer opportunities for practice, if the children in your classroom have many interesting activities to talk about. Language development should be a part of your all-day plans, and you should listen continually for language patterns which you can help to improve. Every area of the curriculum and every activity can be made a language lesson, if children have much that is exciting and compelling to talk about.

The Importance of Experience to Oral and Written Language

Some teachers waste time on what children do not know. Some speak of having children in their classrooms who have "no background." What these teachers really are saying is that the children are not prepared to meet the teachers' specifications. This is a useless waste of time and energy. The teacher needs to start immediately to listen to what the children are saying and to sense leads which can be translated into new, common, "tuned-in" experiences.

Teachers must remember that their choice of words may be as strange to children as many of the children's words will be to the teacher. A careful, caring, observant teacher can often detect the child's lack of understanding by noticing the confused, blank looks or by witnessing the seemingly irrelevant language behavior of certain children. In an attempt to gain meaning, children often relate the unknown word to the nearest known word, i.e., "unawares" becomes "underwears". It should be remembered that many expressions common to adults in our culture are indeed startling to children. The expression, "the trouble with that man is that he can't put his foot down", may provide some interesting imagery for children, but seldom allows them to unlock the true meaning of the experience.

Since teachers will have but a limited time to work with these children it may be wise to start immediately to build some common, important, dynamic experiences rather than to spend too much time on merely discovering the background of each child. The teacher still listens and observes and notes what children say and how they say it. This helps her to determine what the children care about but at the same time she moves ahead to develop a common interest and a common commitment to some broad area of experience. A logical place to start would appear to be with ourselves and who we are, our room and how we want it to help us, our school and its surroundings,

our wider community and our relationship to it. As children and teachers talk and explore; draw maps and collect both facts and things; recognize problems and find some solutions; organize for efficient and productive work; enjoy play and dramatization; sing and dance and present their ideas in graphic form they begin to build a vocabulary that has color and meaning. Nouns, pronouns, adjectives, verbs, prepositions, interjections are there to discuss, to practice, and to use in forms acceptable to the larger culture. Rules begin to function because they are needed. The children begin to see themselves as learners, as doers, as authors. They can write interesting stories and poems which can be read and enjoyed like the books the teacher reads.

The Importance of Writing

What children know well, they can talk about. What they can talk about can be written down. What they have said, they can read. It was a wise child who said, "Writing is just talk written down." Children who write, or who dictate to you, about their own experiences, can read what they have written. Children who make their own books have a comfortable feeling about books and reading, brought about by their own authorship. Use every opportunity you can to encourage children to write. They can write experience stories which you can hang about the room for children to read when they wish. They can keep records of science experiments and their results. They can write messages to each other, a school newspaper, letters home, invitations to parties and shows, captions for displays, notices of news events, and stories from their own imagination. Use music, interesting pictures from magazines, unfinished stories, and invent your own ways to stimulate children's writing.

Evaluation is profitable when the learner participates in it. Instead of "correcting" children's writing with your red pencil, sit down

for a conference. Help the child to evaluate his own work. Pay attention to elaboration of detail, power and color of words, complexity of sentence structure, and sophistication of vocabulary before you attend to details of spelling and punctuation. When together you decide what the child is going to change in his first draft, it is time for him to rewrite, making these changes. By using this procedure, you avoid discouraging children. By accepting initial misspellings and punctuation errors, for example, you encourage the child to write more fluently because he no longer has to fear the making of minor errors. Once the language flows, it is time to correct with him those things which need improvement. The most important goal of your language program, however, should be to encourage the flow of language on paper. With this process you can help children to grow confidence and skill in their new language.

Making Reading From Talk

The teacher, recognizing that each child brings to school a language personality which is different from every other one in the classroom, determines to preserve that individual personality at the same time that certain understandings and skills are being habituated. To do this, the procedure from the first day of first grade requires the individual to express his own thoughts, ideas, aspirations, and ideals. This the child does through speaking, painting, writing, and other means. The teacher works with individual contributions to help the child move from oral and pictorial expression of his ideas to expression through writing.

As the child writes, he reads--not only what he writes but what other children write. There is no control on the vocabulary except the control which is inherent in the children themselves. The following procedure has been used successfully:

1. The teacher asks children to express their ideas--something they are thinking about, have observed, heard about, wished for, etc.--with simple crayon drawings.

2. Eight to ten children are asked to work with the teacher at a time. The teacher sits at a table where she can write and has the children stand around her in such a way that they can observe her write.

3. One by one the children tell something about their pictures. From the "talk" the teacher helps the child extract one or two important things that are written while all the children observe.

4. All the while the teacher talks informally with the children about:
   words
   names of letters
   sound values of letters and groups of letters
   beginning sounds
   ending sounds
   sounds in between
   She proves to the children that anything they say can be written down with letters in our alphabet and that a person who knows how to read can tell exactly what they said without hearing them.

5. The stories of each group are bound into books with construction paper covers. The children are treated as authors of books that other people can read and enjoy. The books can be named with the name of a child from each group.

6. The day following the making of a book, the same group that made it can be invited to look at the book. Depending on the maturity and past experience of the children involved, they can be helped to recall what was recorded and to find words that are alike, words that begin alike, words that begin like their names, etc.

7. On another day the teacher may invite a group that didn't write a book to read it with her. This is especially valuable if some children are able to recognize a few words. They begin to see that they can read what other people have written for them to read.

8. Place the books in a reading center for the children to enjoy and for them to use as references for spelling after they begin their own writing.

9. After one experience of taking dictation in small groups, begin taking dictation with easel paintings.

10. As soon as most of the children have had an opportunity to contribute to some books and have dictated at least one story with an easel painting, begin using model sentences.

11. A unit with a theme such as "At Home and School" can be introduced after a group has had experiences in "making reading from talk", has learned the routine of making individual stories with paintings, and has had a few experiences with model sentences. However, the use of model sentences might continue for several weeks and the painting and writing should continue throughout the school year.

The Importance of Linguistics

Every language has a form and a structure which follow consistent patterns. The English language, though it bedevils us with certain irregularities, is no exception. Children develop power with a language when its patterns become habitual. It is important, therefore, that you know the patterns of sounds and sentence structure which make up the English language, and the difficulties which Spanish-speaking children have in learning English because they use Spanish patterns instead. The FLICS workshop should give you an understanding of the major linguistic difficulties encountered by Spanish-speaking children. You can develop many creative ways to help your children overcome these difficulties.

Use the daily language of children to develop a meaningful linguistic curriculum. When a child substitutes a short i sound for a long e sound, use his words and others to help him learn how the sound should be made. When "sh" is substituted for "ch", find pictures of "ch" words and develop games to help children practice the correct "ch" sound. When children raise their voices instead of dropping them at the ends of sentences, make use of the tape recorder to teach them English inflections. When children neglect to reverse the order of subject and verb when asking a question (Example: "It is a bird?") develop question-and-answer games which help them to put questions correctly. The sequence of the correction of errors is not important. Nor do you need previously prepared materials which may be unrelated to your children's lives and interests in order to increase

their linguistic competence. Use your powers of listening and creating to work with the language your children are using. Constant attention to the structure of your children's spoken and written language will give them greater linguistic power.

The Importance of Reading

The first task of the teacher is to get children to want and need to read. Hopefully, the language experiences mentioned earlier will lead to a desire to read to find out, to read to enjoy, and to read to understand. This movement into reading should be easy when excitement about learning is high. Some children will have a grasp of reading, some will have had no experience with it, and some will have already swallowed the bitter pill of failure. Each will need a different approach, a different pacing, and a different kind of incentive to learn. One thing that can be counted on is that no one book and no one approach will fit all of the children in any classroom. Perhaps the most helpful attitude for the teacher is to recognize that one starts where the child is and moves forward from there.

A look at reading skills which appear to be basic to effective reading then becomes the important focus, and children are encouraged to move ahead in each skill. Some of the requirements for effective and purposeful reading are:

1. A readiness period both for the initial beginning reading experience and for reading involving specialized skills such as those needed for reading in the various content fields.

2. A knowledge of the structure and sound of words and other word recognition skills.

3. A focus on the thinking skills involved in comprehending, in interpreting, and in reading in a critical and creative fashion.

4. The ability to apply the reading-study skills needed to locate information, determine main ideas and adjust the pace of reading to the purposes involved.

No detailed listing of specific skills under the above requirements seems necessary as these are included in many of the books available for the teacher's use this summer. Many basal readers also contain such specific lists. The important thing is for teachers to be aware of the skills needed by an effective reader and to be ready to utilize the natural teachable moment for individual children and for certain groups of children.

Children need to read from a great variety of quality materials. Make liberal use of the best trade books, both fiction and non-fiction, and of the books which children themselves create. The many inexpensive paperbacks of good quality which are now available make it possible for everyone to use many books in the classroom. A variety of the best materials teaches children the value of reading: that reading can be used to find out what we want to know, to bring pleasure and amusement, to introduce real and imaginary heroes with whom children can identify, to increase understanding of the world, and to stimulate imagination and ideas. Make your reading program one which encompasses all these purposes, for in this way migrant children can become wedded to the world of books.

The teacher needs to be thoughtful about grouping children so that maximum learning can take place in a reading climate that respects each child and adds to his positive picture of himself as a learner and a reader.

Most children need to be involved in several different kinds of groups within any given day. Children need to read alone just to enjoy and savor what they read; they need to read alone with the teacher so that the teacher can concentrate on specific needs; they need to read with other children when a common project requires information or reporting, they need to read with others who need the same kind of skill help which they are ready for, they need to read with friends who enjoy the warmth of each other's company.

Above all else, the children this summer need to find pleasure, excitement, and success in the process of reading and of learning.

The Importance of Reading to Children

It must be remembered that many of the children who will attend the summer session will have had little experience with having been read to. They will not have had the pleasure of watching or listening to their parents read. Books and magazines are not things which are bought by people who have little money, who are constantly on the move, and who cannot read effectively, if at all.

It is important, then, that migrant children of all ages should be exposed to many, many stories read in an interesting manner by the teacher. Some excellent tapes and recordings of good quality are also available for use with children.

The stories, poems, articles, directions and the like should be chosen with the thought that they will "tune-in" with children's experiences and yet will allow them to move forward toward ever expanding concepts and toward new excitement. These children must sense that books and reading can provide them with new eyes and new experiences through which to view themselves and their world. Teachers should make sure that the materials read to children have a balance compatible with the interests of the children. That is to say, one cannot read everything that children might enjoy and grow on in one summer. One can choose, however, in such a way that children can flavor different styles and different subjects.

Reading to children must not be an "extra", an icing on the cake. It must be as carefully planned for as any experience in the curriculum. It should continue throughout the summer to provide "stretching experiences" for both the intellect and the emotions. Children must end the summer with a strong realization that through reading, study, and thought, they can participate in a life they have missed. They can learn to soar beyond those experiences which have been stifling their self-expression.

VI. TEACHING SOCIAL STUDIES

The Migrant Child Needs to Learn about his World

Although the migrant child travels through much of America, we cannot assume that he is well acquainted with the country in which he lives. While he lives in many states, he frequently has seen very little of them because he travels in the back of a truck, or because his family does not stop to point out to him places of historical or geographic importance. Moreover, society separates the migrant worker and his family from the mainstream of American life, and the migrant child has little opportunity to learn how other people in his country conduct their lives. It is difficult for the migrant youngster to fit into American society when he has no opportunity to learn how most Americans live.

A good social studies program should acquaint the migrant child with his country, with the economics of his parents' work, and with ways in which he can learn from his travels. It should show him the life led in other sub-cultures of his country, so that he may eventually be able to choose the kind of life he wants to live and the kind of livelihood he wishes to pursue.

Much of the middle-class child's sophistication and achievement are due to the experiences in the outside world which his parents provide for him. Travel experiences can be valuable to the migrant child, too, when his teachers show him how to learn from them. The following activities are ways for you to help the children in your school to become acquainted with their world. They are by no means all the activities which could be used. Use them as a springboard for the development of your own ideas.

A. Learning to use maps. Maps are of little use to us until we see their concrete connection with the surface of the earth. Therefore, map

reading should be taught in connection with the location to which the child finds himself.

1. Have children make a map of their schoolroom, putting in significant items such as doors, windows, and furniture. This will help them to see the relationship between maps and the real world.

2. Continue map making with school grounds and the area near the school.

3. Ask children to make maps of the route which their school bus takes from camp to school, (You will undoubtedly have to provide them with pencil and paper to do this.) putting in important landmarks.

4. Orient the children to the positions of the compass in relation to the sun, checking on the sun's location several times a day. Help them to understand the convention of putting North at the top of the map by making maps of their surroundings, using this convention.

5. Put a large map of the United States on the wall, and indicate with labels and string where each child came from and where he has traveled.

6. Ask children to discuss with their fathers the routes they took to come to Michigan. Have children put these routes on their own maps.

7. Ask children about the interesting and important things that can be seen on their travels. Help children to talk about them. Point out other things that they can be looking for when they leave the area.

8. Provide children with road maps so that they can follow their way when they travel. (Road maps may be some of the free materials you will be able to collect for your children.) Help them to mark on these maps the things they would like to see.

9. Play "treasure hunt" games in which children must read a map in order to locate a "treasure" you have prepared, a picnic site, or other place of interest.

In general, you will be giving children practical experience in the making and reading of maps, and you will be involving parents in their children's learning.

B. Learning about Agricultural Economics. Although the migrant worker contributes significantly to the economy of the country, his children are

rarely aware of what happens to the crops after they are picked. He does not know about our system of distribution and marketing. He is not aware of what happens to the cherries, the strawberries, or the "pickles" after he picks them. Here are some activities which will help the migrant youngster to recognize his family's contribution to the national economy, and to get a broader and more realistic picture of the costs and marketing of food.

1. Arrange with the manager of a near-by supermarket to have your children visit the store. Encourage children to locate and list products that they have helped to harvest, or have seen harvested. Help children to find the ways in which these products are preserved or packaged.

2. Perhaps school funds will permit each child to have a dime to spend at the supermarket, which will necessitate his noting of prices and budgeting of money.

3. Arrange with a local grower to have children follow his trip to a large market to witness the selling process there, so that they will know what becomes of the produce being harvested in the area.

4. Visit local canneries, wineries, and freezing plants.

5. Visit a railroad center to see how produce is transported across the country.

6. Help children to make a map showing the important growing areas of the produce with which they are acquainted, (e.g., grapefruit, cherries, tomatoes) and illustrating the produce. Personal notes can be added by the children.

7. Provide magazines in which children can find illustrations advertising the food they pick.

8. Visit local growers to see new harvesting machinery such as cherry shakers and blueberry pickers. Compare the growers' labor cost when using pickers and when using the machines. Show children illustrations of other agricultural automation.

C. Learning about City Life. The prevailing culture of the United States is now an urban culture, yet the migrant child's life is predominantly rural. He seldom has the opportunity to observe the city life to which the majority of American children are accustomed. Most migrant children have never been inside a large department store, or eaten in a restaurant, or negotiated an escalator, or viewed the city from the top

of a tall building. Yet if they are to succeed in the mainstream of American culture, they must be able to live with confidence in an urban setting.

Here are some of the activities which will help children to develop understanding and confidence with regard to city life.

1. Take a trip to a near-by city to find out what kinds of stores and other enterprises are located there.

2. Provide maps of cities visited, and help children to locate landmarks which have become familiar to them through their trip.

3. Visit near-by libraries and museums. If a teacher or the school has a library card, children can select books and participate in the process of borrowing books from the library.

4. Ask children to make a list of all the modes of transportation they can find in the city. Ride on a bus. Provide the children with the fares and let them pay their own.

5. Arrange a visit to a restaurant so that the children can not only eat there, but can talk with the owner or manager, see how and where the food is prepared, and learn something about what is involved in running a restaurant.

6. Observe a variety of occupations in the city by visiting stores, hospitals, newspaper offices, and factories. Arrange for the children to talk with employees and to discover what is required for them to get and hold their jobs.

D. Learning about the Broader World. While we wish to begin our curriculum with children's interests, it is also necessary to stimulate these interests and to take children into a broader world than that in which they now live. With a skillful introduction, you can nourish children's interests in many things which are now strange to them. The following topics might be desirable for your classroom. Children's questions and remarks, and your own good insights, will lead you to other suitable topics.

1. Children would enjoy learning the history of an area which is particularly interesting to them--the Rio Grande Valley, for instance.

2. The folk songs and dances of each culture represented in your classroom can help lead to appreciation of self and others.

3. You may have Puerto Rican children in your class. If so, a study of where they came from, what it was like there, and how they got here, will be of interest to all the children.

4. You may wish to make a detailed study of many occupations, with an eye toward raising children's vocational aspirations. (If you do, however, be realistic. There are a multitude of occupations besides milkmen, policemen, mailmen, and truck drivers. Look for the new occupations.)

5. Bring many newspapers and magazines to school, and encourage children to browse, wonder, question and report. Use children's questions as a spring board for a study of space travel, foreign countries, the U. N., conservation, marine or arctic exploration, or anything else.

The Migrant Child Needs to Learn about his Heritage

Each of us needs roots and a history of which we can be proud. Each of us needs a sense of the past of preceding generations and the people who were important then. The Mexican-American child could have a history and the means of identifying with contemporary and historical heroes, if the school curriculum would allow him this opportunity for enhancement of self-concept together with increasing knowledge. Here are some suggested questions on which to develop units of study which would meet the particular needs of Mexican-American children by means of the social studies curriculum. You will undoubtedly think of other topics which will accomplish the same objectives.

1. Discover Cezar Chavez. Who is he, and where did he come from? What are his ideas? What is he struggling for, and how? What do children think about labor unions and Chavez's efforts to organize migrant workers in California? Use pictures from contemporary periodicals, and resource people in the community who participate in or oppose the grape boycott.

2. Discover Mexican art. Display pictures of the University of Mexico. Let children try their hands at the same kinds of decorative art. Analyze the motifs decorating these buildings. Explore ancient Mexican buildings. Compare and discuss the work of Mexican artists. Could children make a mural using motifs from Mexican history?

3. Discover Mexican political ideas. The history of Mexico contains a series of democratic revolutions not unlike that of our own country. What were the ideas shaping the revolutions? How is Mexico governed now? What is the state of the Indians in Mexico at the present time?

4. Learn about Mexican heroes. You can with little effort inform yourself of the lives and ideas of such heroes as Fr. Hidalgo or Benito Juarez. Children would enjoy dramatizing the critical events in their lives, and evaluating their goals. Even a sixth-grade boy will find nothing "sissy" about playing Pancho Villa. Encourage children to write and illustrate their own books about their favorite heroes.

5. Learn about Mexican geography and economics. The varied climate and topography of Mexico offers interesting contrasts. Why are some places cooler than others? Which ones are best suited to growing things? Which parts do the children think are the most beautiful? What opportunities for earning a good living are available in Mexico? Where, and why?

6. What is "Brown Power"? Who advocates it? What should it be used for?

How to Use Field Trips

Many of the activities we have suggested involve field trips. How many field trips you take, and how far you go, will depend upon your school's finances and facilities. You should remember, however, that, despite the trouble involved in arranging for good trips, the opportunity for migrant children to see more of the world is one of the most important learning opportunities you can present, and is therefore well worth the effort.

It should be remembered, too, that a field trip may be a good or a poor learning experience, depending on how effectively teachers plan for the trip. The following guide lines will help you to make your trips successful learning experiences.

1. Make thorough and cooperative arrangements with the people whose facilities you will be visiting. Reach an understanding with them regarding the children's educational needs and the educational purposes of your trip. You will find that these people will usually be extremely helpful in putting useful resources at your disposal.

2. Plan with the physical needs of the children in mind. Will they be able to eat comfortably and on time? Will there be a need for a bathroom stop? Will some children become too tired on an all-day trip?

3. What is the most convenient and economical way to accomplish your educational purposes? Many valuable trips may be within walking distance of your school, and will cost little or nothing.

4. Prepare children for the trip by arousing their curiosity. Raise questions which can best be answered by making the trip. Field trips are not "joy rides;" do not present them as though they were entertainment. Instead, make children want to go on the trip because there are things they need to find out.

5. Prepare parents for field trips. Migrant parents tend to think of school in a stereotyped and traditional way, as a place where children sit at their desks and read, write, and do arithmetic. They are likely to be unaware of the educational purposes of your trip, and to think you are not doing your job well, unless you inform them. Do this in all ways which are possible to you--through conversations with parents at the school, during your visits to the camps, and in letters which children take home to their parents. Encourage children to tell their parents what they learned on their trip.

   Have a standard form for gaining parents' permission for their children to go on each trip.

6. Opportunities for learning are often lost unless you follow up with much related activity after your trip. Plan many ways in which children can review and build upon their experiences, using language arts, arithmetic, science, and the arts in a correlated fashion.

7. Field trips are of little proven value unless the teacher is able to evaluate the learning which arises from them. Plan ways to evaluate what your children have learned. Often your evaluation will take the form of stories, books, pictures, and dramatizations which the children make themselves. With children who are reading with competence, evaluation may also take the form of teacher-made tests. Field trips can be defended only if we have concrete evidence that children learn from them. Teachers need to plan evaluation in order to provide this evidence.

VII. TEACHING MATHEMATICS

The very nature of a summer program based upon the interests and needs of migrant children should result in mathematics experiences that are exciting, meaningful and challenging. Mathematics should be viewed as an integral and functional part of the children's daily lives at home and at school. Opportunities for providing concrete experiences that will make concepts, processes and the language of numbers clear also exist throughout the school day in all the content areas as well as in the more informal experiences of breakfast, planning the day's time schedule, and play. The special period set aside for mathematics should provide for the organized instruction and necessary drill.

These children usually bring to the classroom a background of work and travel experiences that help provide incentive and meaning for furthering learning in mathematics. They will have a number vocabulary upon which to build.

A careful consideration of the following selected guidelines should provide direction in planning meaningful experiences:

1. Utilize discovery approaches
   Although there are times when a teacher must show, demonstrate, tell and explain, the major part of the child's learning experiences should consist of opportunities to:
   - explore mathematical situations
   - make observations
   - compare
   - classify
   - discern patterns
   - discover meanings
   - indictively derive generalizations
   - deductively appiy these
   - apply generalizations to new situations

2. Develop thinking abilities
   In order to develop mathematical thinking skills, pupils should be encouraged to:

   - reason through to solutions on their own
   - explore different ways of arriving at an answer
   - estimate solutions
   - think out loud so the teacher will know steps being used and can assist where problems actually exist

3. Further the development of judgment and reasoning
   - encourage the child to explain computational procedure
   - provide time for oral practice
   - check reasoning skills before proceeding to written practice

4. Provide for active participation
   - use real situation
   - use real objects
   - use manipulative materials before a child works on paper

5. Refine skill through practice
   - use varied materials
   - use meaningful repetition
   - utilize skills learned in meaningful story problems
   - make achievement self-satisfying

6. Provide for individual differences
   - eliminate a grade level concept
   - find out what each child needs
   - provide small group experiences for common needs
   - provide individualized instruction whenever needed

Observation and testing will lead a teacher to see a great variety of needs. During a summer session a definite selection of topics providing for immediate needs should be made. The following topics could provide rich concrete experiences and the resulting necessary computational drill:

Recognizing numbers: amounts, size, shape, forms, line, balance, sets, etc.
Matching and comparing: sizes, contents, length, thickness, volume, etc.
Telling time: using the clock, reading a calendar, anticipating time needs, shadows, etc.
Quantitative measurement: amounts, distance, temperature, etc.
Money: coins, bills, values, making change, etc.

Evaluation through observation of performance and written work should provide the base for each new experiences or for further help on the process or concept taught. Emphasis should be placed upon success before any new step is taken.

VIII. TEACHING SCIENCE*

Every Child

Every child should know a hill, and the
clean joy of running down its long slope
with the wind in his hair!
He should know a tree--the comfort of its
cool lap of shade, and the supple strength
of its arms
Balancing him between earth and sky so he is
the creature of both.
He should know bits of singing water--
the strange mysteries of its depths, and
the long sweet grasses that border it.
Every child should know some scrap of
uninterrupted sky, to shout against it;
and have one star, dependable and bright,
for wishing on.

- Edna Casler -

Children of the migrant workers live in an out-of-door world. How well do they understand the physical world and man's relation to it? How well do they understand the relationship between the phenomena of the physical environment and the work of their parents? Have they had opportunities to seek, to understand, and to enjoy the beauties of nature? Have they discovered the interdependence of all living things? Have they learned to use the spoken and written language related to science? Have they become acquainted with the role of books in learning about their physical world?

A wide variety of learning opportunities or "teachable moments" exist in a summer program. All school centers are surrounded by natural laboratories. A survey of a school site will reveal most of the following:

the air and changing weather

changing lengths and directions of shadows

puddles after the rain

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*This section of the Handbook has been prepared with the valuable assistance of Dr. Beth Schultz, Department of Biology, Western Michigan University.

animals (insects, birds, small mammals, etc.)

bare areas and areas covered with plants

soil fences and vegetation along fences

litter deposited by winds and people

things in the sky (sun, clouds, airplanes, vapor trails, dust, etc.)

sounds and smells

playground equipment (pulleys-balance beam)

All of these areas are educationally useful in developing the science program if experiences are designed to help children progress toward understanding significant ideas and phenomena.

The teaching and use of the following science process skills will help in developing the desired understandings:

exploring

observing

discovering

collecting evidence

recognizing problems

planning

testing

inquiring

experimenting

summarizing

evaluating

Briefly stated, the significant ideas to stress are these: variation, interaction, change, and continuum.

These rich first-hand experiences provide a springboard for study and creative expression. As new words are introduced during the process of discovery, interest in the words themselves deepens. This growth in

vocabulary development, in turn, aids the child's speaking, listening, writing, and reading skills. Opportunities for looking longer or feeling more deeply cause children to want to write, sing, or draw.

Science experiences are also rich in providing background for understanding mathematical concepts of time, space, size, shape, measurement, etc.

Communication skills are improved as children plan experiences together, share data, and develop conclusions. Basic essentials of group and individual responsibility also have an opportunity to develop in this type of science program.

The selected illustrations provide several ideas to assist in planning your science curriculum.

Testing Materials with our Senses

1. Youngsters should be given the opportunity to refine their sense of touch by feeling a wide variety of substances--coarse, smooth, slippery, sticky, wet, pointed, round, soft, hard, cold, warm, etc. Vocabulary development is a natural outgrowth of this activity.

2. This can be followed by a "mystery box" game in which blindfolded children touch objects and tell how they feel. How can we use touch to help us? What parts of our bodies are the best "touch detectives?" Can children sort a large group of objects into categories, according to their texture?

3. After children have gained a high degree of mastery in describing surfaces and materials by touch, show them how fingers can be fooled. Fill three cups; one with ice water, another with water at body temperature, and the last with hot water at a temperature that won't burn the skin. Blindfold a child and without telling him about the different water temperatures, have him hold the fingers of one hand in the hot water and the fingers of the other hand in the ice water. After a few minutes, place both hands immediately and simultaneously into the water at body temperature. How does the water feel to the hands? (The hot hand will feel cool and the cold hand will feel warm in the same cup of water.) Can we trust our sense of touch when it comes to telling temperatures? What instrument does a better job of telling temperature?

4. The detection of odors helps sharpen olfactory discrimination, provides a beginning understanding of the sense of smell, and focuses attention on the particular property of matter. Children

may be blindfolded and asked to identify various substances by their odor. How does the odor get from the material to our noses? Do all substances have a detectable odor? How can we describe odors? How is the sense of smell useful to us? Names of new materials should be part of your objectives for children's vocabulary development.

5. Happy sounds. The world of sound holds many delights for the uninitiated youngster. Children should learn to listen and discriminate between sounds made by blowing, striking, and vibrating string sources. Do this by having them see, feel, and listen to a triangle, drum, piano, wind and string instruments, etc.

   Have them discriminate between high and low, and soft and loud sounds by comparing each to a standard, e.g., higher than a given note or louder than a given sound, etc. Let children participate in making the sounds. Sing songs and listen to records and piano. Fill glasses to different levels with water and strike with spoon. How many different sounds can be made?

6. Name the sound. A game of naming sounds can help with vocabulary development, broaden horizons, and stimulate the imagination. It should be used to introduce youngsters to important "foreign" sounds as the occasion warrants. For example, rural youth can be exposed to the sounds of the city, while urban children hear sounds of the country.

   Use records, tapes, and a wide variety of common sound producing devices without letting children see the source and have them guess the name of the sound. Have children "orchestrate" a series of interesting and contrastive sounds, or choose sounds to accompany a favorite piece of music.

7. Whistling Tea Kettle. Why do some tea kettles whistle? What makes it happen? These and other questions will arise if you perform the simple activity of boiling water in two different tea kettles--one of the whistling spout type and one with an open spout. Have the children watch and listen to each as water is boiled.

   What kind of sound does the whistling kettle make? Have the children imitate the sound. How do we make sounds with our lips? How do we make sounds with wind type musical instruments? Try some toy instruments and see, e.g., kazoo, wax paper covered comb.

   Cool tea kettles and let children examine them closely. What stories can they tell about the whistling kettle and the way sounds are made by wind? (Wind causes surface to vibrate, producing sound.) Read and write poems about sounds.

Studying Simple Machines

1. See-Saw Balance. Many playgrounds and classrooms are equipped with see-saws or teetertotters which youngsters use regularly. If not, make one by placing a long board (8 or 9 feet) over a low saw horse. Nail a strip of wood on the underside of the board along each side of the center balance line to keep the board from sliding off the saw horse.

   Have children balance one another and other things on the see-saw. How must objects of two different weights be placed in order to balance? (Heavy things close to the saw horse and the light object far out on the other side.)

   Let the youngsters use the board to lift things, with the pivot point (fulcrum) shifted to a position close to the load. How does this feel in comparison to lifting the load without using the board? What tools and household devices work like this board? These activities will help children to gain a rudimentary understanding of the simple machine called a lever.

2. Sliding Ramp. Many children have played on slides on playgrounds. This same toy, on a smaller scale, may be used to introduce them to the usefulness of the ramp (inclined plane) as a tool.

   Place two boards of different length on opposite sides of a box or low table to make an up and down ramp roadway. One board should be about twice as long as the other, e.g., 8' and 4' for example, but neither too short as to make the smaller ramp too steep. The boards should be wide enough to accommodate large toy dump trucks, toy carts or wagons, and baby buggies. Boards 1' wide and 1" thick will do in most instances. For safety, place a small screw-eye in the bottom of the boards at their upper ends and use this to fasten a rope from the board to the table or box. This will keep the boards from slipping off the table.

   Children can then push or pull equal loads up the inclines, feeling the greater force needed to move the load up the shorter, steeper slope. An elastic loop, secured to the front of a cart or truck, could be used as a tow rope. The differences in length of elastic stretch will help youngsters visualize as well as feel the effects of the ramps. (A ramp is a machine that helps make work easier.)

Shadow Study

Young children are fascinated by shadows. Shadow play can help them understand how shadows are produced, what makes them change in size, shape, or direction and what causes shadows to vary in blackness.

I. Determine the object to use for shadow measurements.

A. Make a shadow board by fastening a ½" or 1" piece of ¼ dowel to a board which is about 1 foot square. Cut paper to fit on the board and mark shadows on the paper. Be sure the board and paper are in exactly the same position each time you record a measurement.

B. OR--Have a supply of stakes cut. One about 2' or 3' long to be used for casting a shadow and several short ones to make the end of the shadow at time intervals.

C. OR--Locate a permanent post which casts shadows you can measure. A fence post or a utility pole may be used. Hammer stakes at ends of shadows, then record measurements.

D. OR--Use your own body to cast the shadow. Ask another student to measure your shadow.

II. Shadow changes during the day.

A. Stand with your RIGHT side toward the sun. Point to the sun with your right hand. Point to the shoulder of your shadow with your left hand. This should help you understand that the direction of the shadow shows the position of the sun in the sky and that the length of the shadow is related to the height of the sun above the horizon.

B. Measure and record the temperature (in shade) and length of the shadow of a certain object, at least three times during the day.

TIME	TEMPERATURE	LENGTH OF SHADOW	DIRECTION
9 a.m.			
noon			
3 p.m.			

Describe the relationship (if any) which you find between these two measurements (temperature and length of shadow).

Describe the relationships among the series of measurements through the day.

Describe the relationship between length of shadow and height of sun above horizon.

Describe relationship between height of sun and temperature. What generalizations can you make about angle of sun's rays and temperature?

Your generalizations will be more accurate if you keep this record for at least three consecutive days.

C. FOR A BETTER RECORD, make measurements every hour (or half hour) from sunrise to sunset.

III. What else can your shadow board tell you?

A. It locates sunrise, sunset, and height of sun in the sky. What is the direction of the shadow at sunrise? At sunset? In what direction is the earth rotating? Where is the sun when the shadow is longest? Where is the sun when the shadow is shortest? Is "sun noon" the same time as "clock noon" where you live?

Study Ecology on the School Grounds

Ecology is a study of the relationships between living things and their environment. The school ground offers a new kind of laboratory for helping children to learn more about their world while they are behaving scientifically. Here are some suggestions for using this environment profitably.

1. Study ourselves, human animals, outside the school. How does the temperature differ from that of the classroom? Where are the most comfortable places to sit? How do grass, sidewalk, driveway, and sandpile feel? Does anyone get tired of sitting on the ground? Who, and why? Children can learn that animals feel differently in different places.

2. Map and classify the school grounds. The grounds around any school will have some differences. Let children classify these different kinds of environments in ways that are meaningful to them. (Help them to notice shaded and unshaded areas, higher or lower areas, dryer or damper places.) When children understand the use of symbols on maps, they can decide upon their own symbols for each of the classifications they have made.

3. What environmental preferences have the plants and animals on the school grounds? Why does grass grow in some places and not in others? Where does the nightcrawler prefer to be? How do the ants use the environment? What does the environment provide for food for the animal life found there? Children can discover the interdependence of life forms within a particular environment.

4. What is the ideal environment for human beings? Human animals are also subject to ecological principles. Show children pictures of a variety of the earth's environments. (Try to include pictures of polluted lakes and rivers, deserts, arctic regions, etc.) Which environments do they think are most suitable for the support of human life? Why? What can humans do with their environment that other animals cannot do? Encourage children to describe an "ideal" environment for humans. What features would it contain?

5. Study plant-animal communities. Ponds, marshes, oak woods, dry, sandy areas, beaches, damps, shaded places--all have their characteristic plants and animals. Visit several types of areas near your school and help children discover differences in plant-animal communities. How do these communities differ? Why? What do they have in common? (Food relationships, for example.) Encourage the important processes of exploration, observation, and precise notation. Children could create a book synthesizing and illustrating what they have learned.

Studying Weather

Weather is an important factor in determining whether certain living things will thrive or die in a particular environment. Children can learn how to determine the amounts of light, heat, moisture, and wind which effect the little climates in various parts of your school grounds. Later, they can discover relationships between weather conditions and the plants and animals which live under those conditions. Here are some ways to accomplish such a study:

1. Map weather conditions on the school ground. Let children arrive at their own symbols for different conditions. Perhaps several children could produce a large map for the wall of the schoolroom. Record plants and animals found in each climate.

2. Keep a record of the temperature every day. Read the thermometer in shaded and sunny areas, in the air, and in the soil. If there is a stream or a pond, record its temperature. Keep a chart of the readings, and eventually add what children have discovered to the weather map.

3. After several days of temperature readings, help children to answer these questions: What relationship is there between the amount of the soil: What are the differences between sunny and cloudy days in soil and air temperature? Are the greatest differences found in the soil or in the air? What are the differences in animal activity on warmer and cooler days?

4. Record wind direction and speed. Ask children to discover which areas of the school grounds are most and least windy? Why? Indicate "shelter belts" on your weather map.

5. Show children how to use a light meter to determine the amount of light which reaches various parts of the school property. Is there a relationship between light and temperature?

6. Find out about storms. After a rainstorm or thunder shower, the scene is set for a serious study of these phenomena, which can lead, in turn, to a study of tornadoes and hurricanes.

IX. HEALTH AND HOME-MAKING

The migrant child seldom sees a doctor or a nurse Except for recent innoculation programs in some states, he receives no regular health care. Cuts, blisters, and slivers often go untended. The migrant home usually lacks antiseptics of any kind. Migrant families often do their very best to keep their children clean--which involves much hard work for the mothers --but toothbrushes are an almost unknown luxury. Good nutrition is an impossibility in many migrant families. School children receive little protein and less milk.

The most valuable health curriculum for migrant children, therefore, is one which will teach children how to care for themselves, and how to eat the most nutritive foods they can afford.

For example, children could learn the nature of infections, their results, and how to prevent them. Children could make a practice of washing their hands before meals, and brushing their teeth after meals. When cooking is a part of the curriculum, children can learn how to add protein to recipes, why some foods are better than others, how to prepare foods most healthfully, and a variety of uses for powdered milk. There are many things children can learn about homemaking and child care which relate directly to their everyday responsibilities at home. Find out what your children are expected to do at home after school, and help them to do this effectively.

Migrant families often lack the room or facilities to sit down together at a pleasant table for a family dinner. Opportunities to set and decorate the lunch table at school, and to help each other at the table, will give children a glimpse of new possibilities and new ways of living.

Since the migrant child spends much of his time out-of-doors with other children, he needs to know a variety of challenging and amusing games which do not require expensive equipment. A physical education program should increase children's repertoire of games they can play on their own, as well

as build his physical fitness.

Economy can be practiced when children know how to sew. If possible, help older girls to plan and make clothes of their own. (Your materials budget might easily include material for cotton dresses.) Emphasize the making of choices about style, color, and fit. Stick to simple styles so that children will have time to complete sewing projects and quickly gain a sense of accomplishment.

Caution!

Much that is included in a health and homemaking curriculum relates to "the way things are done" in a particular sub-culture. Members of any culture cherish the ways of their own group. Indeed, we often feel that there is something rather sacred about the way we do things, and we are likely to resent the suggestion that we change our ways. Migrant families are no exception to this rule. When we are teaching children new ways to live, we must be careful that we do not do so in a way which is critical of their families or their ways. Condescension should be eliminated from the teacher's voice and manner, and at no time should a child's parents be made to appear "wrong". We can only present the facts and the possibilities; the children must make the choice.

When you build a health curriculum, you will find, again, many opportunities to use arithmetic, science, and the language arts. You can reinforce learning in each area by correlating it with health and homemaking studies.

X. CREATIVITY AND THE CREATIVE ARTS

Why Emphasize Creativity?

Human beings owe their difference from all other animals to the fact that humans can imagine, invent, and create. Humans can put together old ideas to make more satisfactory new ideas. If we wish to educate human beings, as opposed to training animals, we must educate for the development of the uniquely human capacity: the ability to use invention, to communicate with others and to improve the quality of human existence.

Using the human creative faculty produces social as well as personal excellence. Each step which mankind has taken for the betterment of his own existence has been accomplished by someone with a new idea, someone who was fearless of social disapprobation, someone who believed in his own perceptions and his own organization of them--a creative person.

Generally, psychologists assume that the ability to create lies within the possibilities of every human nervous system. Migrant children, too, are capable of functioning in creative and inventive ways, provided they are encouraged and stimulated to do so. Surely no social group can benefit more from the nourishment of this capacity; migrants are much in need of creative leadership for the solution of their pressing problems.

Many important benefits accrue to children with a curriculum which emphasizes the creative arts. Briefly, these benefits are as follows:

1. Success experiences. The innovative solution, the solution which calls for creative problem-solving, is in all cases a unique solution. For open-ended problems, there is no one "right answer," and every child's answer can be accepted. The creative curriculum, then, offers opportunity to be successful, which is sorely needed by migrant children whose school situations frequently expose them only to failure.

2. Understanding and acceptance of self. School seldom teaches the

disadvantaged child to accept himself in the school situation. A curriculum which nourishes and rewards creativity, however, gives the child an opportunity to become acquainted with his own thoughts and ideas and to grow in power to express himself. This curriculum also allows his teacher to accept him, and he is thereby helped to become a more worthy person in his own eyes.

3. Understanding and acceptance of others. Because the creative curriculum allows for a diversity of solutions and expression, and because each is recognized, the child comes to recognize the contributions of others and to understand the thoughts of others. Here the child can witness his teacher recognizing the behavior of all children in the classroom, rather than that of just the few who read or do arithmetic exceptionally well. The teacher of a creative curriculum presents a model of acceptance from which children can learn.

4. Gaining skill in self-determination. The curriculum which rewards the creative process gives the child responsibility for thinking for himself, and autonomy in reaching conclusions. Such qualities are essential to the development of responsible democratic citizens, and are particularly valuable to migrant children whose helpless social and economic condition has heretofore prevented them from making choices concerning their own destinies.

5. Living a richer life. Art requires objective and careful perception of the world around us. Music and dance require a sensitive ear. Drama compels one to become sensitive to the needs and emotions of others. Thus, children who have a curriculum rich in the creative arts live richer lives through the development of sensitivity, perception, and a sense of the appropriate, the beautiful, and the excellent.

6. Gaining rewards. The curriculum in the creative arts allows children to develop new skills and to handle effectively new materials and

media. The child who can witness his own growing skill is a child who becomes increasingly satisfied with his efforts. Such a curriculum also permits the constructive use of feeling and emotion and honors the child's responsible expression. Thus, the child is rewarded for becoming increasingly his own unique and integral self.

Respecting Process and Product

Creativity is a process which requires time to fool around, to try out, to experiment, to dream, and to allow ideas to "incubate." The school must provide opportunity for this process, and the teacher must become a helper rather than an outside evaluator. Some recognition must be given to every child who undertakes to try the process, regardless of the initial quality of his products.

The migrant child comes from a family where authority and tradition are very important. While this gives him stability at home, it does not encourage the development of questioning, doubt and departure from old ways which are necessary to the creative process. Many of your children may at first be reluctant to try for new answers, but will instead be more comfortable when you tell them exactly what to do on all occasions. Resist the temptation to be the sole authority, remembering that encouragement of the creative process will in the long run do much for the migrant child's existence.

Once the process is under way and the child has learned to be secure while expressing himself or trying new ways, we can turn our attention to the quality of his product. Not all products are as good as all others. The child can improve his performance by evaluating his own products, with your help. It is not necessary to compare the work of one child to another, or the work of children to the model provided by the teacher. Self-evaluation leads to self-knowledge, self-control, and learning.

Ask your children to tell you what they like best and least about their work, or which of their own work they prefer above the rest. This will focus children's attention on quality and help them to set higher standards of performance without discouraging them or producing failure experiences.

The Teacher as Nourisher of Creativity

In order for the migrant child's school life to be conducted in an atmosphere rich in art in all its forms, and in order for the creative process to be stimulated and rewarded in migrant children, a certain kind of teacher is required. The migrant child needs a teacher who:

--is sufficiently open to new ideas that she can try new things.

--is sufficiently sure of herself that children's differences do not threaten her.

--is sufficiently healthy to permit children's questions and disagreement.

--tries out the arts for herself.

--learns to accept children's first efforts.

--continually arranges the curriculum to provide for the creative process in children.

--develops the habit of asking open-ended questions and accepting a variety of answers.

--makes all the arts a part of daily living.

--genuinely shares children's appreciations.

--emphasizes the quality of human existence over non-essential details.

The suggested curricular content and experiences in the language arts, social studies, mathematics, and science afford innumerable opportunities for using the creating process to develop real and lasting meaning. The classroom and the lunch room also provide situations in which the arts can be used to provide learnings needed by these children.

An examination of some of the possibilities suggest the following:

Situation	Possible Experience
Classroom	1. Floral and wild grass arrangements 2. Posters and bulletin boards about special events 3. Bulletin boards about themselves 4. Illustrative daily weather and activities calendars 5. Recorded music before school 6. Singing at the beginning and ending of the school day 7. Colorful labels, etc.
Lunchroom	1. Decorated place mats and napkins for special occations 2. Table decorations 3. Posters illustrating health habits 4. Posters illustrating menus with vocabulary 5. Background music
Language Arts	1. Stick, paper bag, or hand puppets for story telling 2. Dramatizing stories 3. Illustrating stories and poems 4. Making and illustrating booklets of experience stories, poems, and riddles 5. Making illustrative booklets of favorite poems 6. Making roller movies or accordian booklets for illustrating the sequence of a story 7. Dressing doll characters
Social Studies	1. Illustrative maps of area being studied 2. Relief maps 3. Diorama scenes 4. Exhibits and collections 5. Scale models 6. Charts illustrating comparisons 7. Related folk songs and dances 8. Dramatics interpreting a culture and its ideas 9. Designs for holiday decorations 10. Dramatization of important events in the lives of men in the history of people.
Science	1. Discovery of scientific principles through controlled experiment, observation and evaluation 2. Design of experiments to answer children's questions 3. Dramatization of the struggles of scientists in their societies 4. Imagination and elaboration of future scientific developments

(Science, cont.)	5. Development of imaginative improvements in common household objects
Mathematics	1. Discovering ways to multiply or to divide. 2. Thinking through ways to explain the meaning in fractions to others in the classroom. 3. Figuring out the solutions to practical classroom problems such as, how much material and how much paint will we need? How much will it cost? How far will we have to ride? How much will we have to charge to meet expenses?

As experiences in the creative arts are planned and developed these questions need to be raised and asnwered:

1. Are we helping these children to look and see with all their senses the world in which they live?

2. Are we helping them to become more aware of the art forms that exist in their immediate and extended surroundings?

3. Are we providing the types of real experiences that nurture creativity?

4. Do we consider that the growing process in the creative arts is more important than the end product?

5. Are the children growing in confidence and satisfaction in expressing themselves through the creative arts?

6. Are we helping them to learn about the possibilities and limitations of materials and methods in conveying ideas?

7. Are we extending their experiences into the world of the great artists, craftsmen, and musicians?

8. Are they growing in their ability to communicate ideas?

9. Are we growing in our ability to understand the uniqueness of every child?

10. Are we enjoying the challenge of providing experiences that help children understand what they are learning?

A Check List for More Effective Problem-Solving and Decision-Making

This check list seeks, through the asking of questions, to ascertain that the problem has been carefully thought through and the most satisfactory alternative arrived at.

1. What is the problem?
   Why is it a problem?
   When did it become one?

2. What are the facts?
   Are these the real facts? All the facts?
   How much additional information will be needed?

3. Who should be involved in the decision? Why?
   What is their interest or contribution?

4. What are the organizational objectives to be served?
   How well have these been served?
   What are time factors?

5. What are the alternative courses of action?
   Are they real? Can they be undertaken?
   What will they cost?

6. Which will best serve the organization's objective?
   Long range? Short range?
   What are the advantages and disadvantages of each?
   "Who will be mad? How mad?"
   "Who will be glad? How glad?"

7. Which course of action is best?
   Which alternative should be selected?
   Is there adequate consensus?
   If not, are there other assurances it can be carried out?

8. Are procedures to make it work provided for?
   Do the people who will be involved understand their assignments?
   Is there adequate support for it?

9. What are the arrangements for modification or appeal?
   Are they agreed upon?

10. What are the arrangements for testing and evaluating results?
    Are they agreed upon?

11. Are those making the decision really prepared to live with the results?

XI. THE CORRELATION OF SUBJECT MATTER

One thing is sure about learning: irrelevant bits and pieces do not stay with us long. We remember things which are put into a context which means something in our lives. We remember things which are organized together in ways that have meaning to us. We remember things which we need to use repeatedly in our own existence.

Children learn the life they live--not what is artificially imposed upon them. Children learn what is relevant to them--not that which lacks connection with their lives. Children learn when their interest and curiosity are aroused.

You will accomplish more with migrant children in less time if you carefully organize your plans so that drill and practice stem directly from the excitement of the curriculum and the demonstrated needs of the children. Both science and social studies will require constant use of all the language arts and other creative arts. Investigations into the social studies and scientific experiments both provide the basis for new reading and spelling vocabulary. Why confine your "word lists" to words which have no immediate and concrete meaning? Expand children's language power by correlating language study with the drama you introduce into school life. Use words from all areas of the curriculum to promote linguistic analysis and to stretch vocabulary further. If children are studying clouds, they can learn "loud" and "proud" as well as "cloud." There should be ample opportunity for practice, but practice should always be related to what has meaning for children.

The need for mathematics becomes clear when children are cooking, ~~building, shopping, measuring, or traveling.~~ Use these experiences to show children the concepts they need. Next, offer other concrete experiences illustrating these concepts. Then, introduce practice on needed

skills. Continually provide concrete materials to accompany this practice.

For example, we recently watched a 13-year-old Mexican-American girl laboring over the multiplication of fractions. Many of these fractions (5/16, 8/9, for example) are almost never used in real-life situations. The child we observed was "guessing" her answers in illogical ways, because this area of mathematics had been taught as a skill only, and in an automatic fashion which presented only the process of arranging numbers, and not the meaning of fractions. How much better if she had had to increase recipes in order to bake cookies or make"sloppy Joe's" for her class! In this way, meaning would have been put into the curriculum, and the child would have recognized a need for her practice. Each cooking experience would require more practice, and could be followed by practice with actual recipes. Large families also require the increasing of recipes. This child could have filled a recipe box full of index cards containing economical recipes which she could have used with her family.

Learning more about the world in which we live enables children to develop personal interests in the use of language and arithmetic. Capitalize on children's experiences and interests to develop their skills. Such correlation of subject matter creates for each migrant child a richer and more productive environment for learning.

XII. EVALUATION

No teacher can continue to plan and teach day after day without knowing whether what he does works. No program deserves public support unless it can be shown that the program is effectively reaching the goals it is supposed to attain. For these reasons, evaluation is an essential part of every program for migrant children and of every teacher's day.

Evaluation is the process we use to find out how well we are doing what we set out to do. Note that it is not a means of deciding whether children have succeeded or failed; it is a way of measuring the effectiveness of curriculum and instruction.

Evaluation always measures behavior in some objective fashion. Teacher's subjective opinions do not count as evaluation. If you say, "Gee, the children have higher self-concepts now," or, "The children just loved this activity," no one is going to consider your statements as adequate evaluation, and you should not expect it. There are, however, ways for every teacher to measure accomplishment with children. These ways are relatively simple and need not cause anxiety in children. You can produce a reasonable process of evaluation by following these steps.

1. Diagnose children's needs. Read with individual children and determine where they are. What word analysis skills do they already possess? What are they ready to do now? Talk with children and listen to their speech patterns. What pronunciation, what parts of speech, what sentence structure needs improvement? Ask questions and use diagnostic tests to determine children's understanding. Where children are now is the taking-off point for the teaching-learning process.

2. Set specific behavioral goals in terms of children's needs. Delineate each behavior that you wish children to be able to perform when you have taught them. For example:

a. When presented with words ending in e, children will be able to drop the e when adding -ing.

b. Maria should be able to give the initial consonant sounds contained in the story she is reading. Confronted with new words beginning with the same consonants, she should be able to tell "how the word starts."

c. In our next conversation about himself, Oscar should be able to make five positive statements about his accomplishments of the last three days.

d. Juanito's poking of the children sitting next to him should decrease to nothing.

e. Following this unit, all children should be able to explain in their own words that rain falls on the western mountains because as air rises it cools, is able to contain less moisture, water condenses, rain falls.

f. Given a box of miscellaneous household items, Randy should be able to sort them into groups by some reasonable principle (e.g., color, material, shape) which he is able to describe in his own words.

g. Benito's next story should contain at least five more colorful adjectives, for the same amount of written material, than did his last story.

Setting specific goals in terms of behavior, after you have diagnosed what children need to learn, will help you to check on the effectiveness of your methods and procedures.

3. Decide how you will measure the behavior which you hope children will attain. Sometimes teachers are tempted to say, "What I teach can't be measured." This is an evasion of responsibility. Change in children's behavior can always be observed in some concrete way. This does not always mean that you will use an objective paper-and-pencil test. You may be counting occurrences of carefully-described behavior. You may tape record an interview. You may use anecdotal records. You may count certain kinds of words used in creative writing, or the correctly-spelled words on a child's spelling list.

4. Measure behavior before you begin. If you think Juanito is poking too much, find out how many times he pokes during one morning, or several

mornings. This will give you a record of "base-line behavior" from which to work. You cannot prove how far you have gone unless you can show where you started. Use the same type of measurement, with the same kinds of conditions and restrictions, that you will use during your evaluation. Compare tape-recorded statements with tape-recorded statements, timed observations with timed observations, written paragraphs with written paragraphs, etc.

5. Measure behavior at regular intervals. Use evaluation techniques regularly and examine results diagnostically, so that you have a graphic picture of each child's progress, and a basis for planning what to do next.

6. Give children a share in the development of goals. When you know where you're going, it's a lot easier to get there. More learning occurs, moreover, when the learner helps to define what his goals ought to be. Be sure that children understand where it is you are trying to take them. Present these goals as achievements which you know they can attain. Encourage children to define what they would like to learn, and the skills they would like to develop. Help them to talk about their own goals in order to give them habits of self-determination and greater responsibility for their own learning.

7. Make evaluation a cooperative process. Use consultants available to you, and exchange ideas with other teachers. Above all, confer with children as to how they think they are realizing the goals which you have established together. This helps children to be more thoughtful about their learning, and continually focuses attention on the objectives of classroom activities.

8. Keep a record of your "treatment". Meaning will be added to your evaluation report when you describe what you did to achieve desired ends. Keep a record of your plans and their implementation. When you achieve good results (and we believe you will!) you will then have a way to share

your successes with others. Your own records can contribute to your profession.

9. Use evaluation as a basis for planning. The process we are describing here is circular and never-ending. We use evaluation to discover where children are. This evaluation forms a basis for plans and implementation, which requires subsequent evaluation, which leads to further plans. Make evaluation part of the continual teaching-learning process.

..... AND A FINAL WORD

Much federal money has gone into education for disadvantaged children. The Department of Education of the State of Michigan has for the past three years placed special emphasis on the improved education of migrant children who come to our state in such large numbers during the summer. To date, relatively little has been accomplished by all these programs, in terms of dramatically improving disadvantaged children's achievement. Apparently, we have been doing more of the "same old thing," when trying new approaches is necessary.

We believe, however, that migrant children <u>can</u> learn, with the help of truly effective teaching. In this Handbook we have tried to outline for you some of the special needs and learning problems of Spanish-speaking migrant children. We have suggested ideas for curriculum, methodology, and evaluation which are supported by research. In-service workshops will add to your expertise. It is up to you to take it from here.

Teachers who are sincere in their attempts to teach migrant children, teachers who believe in these children's real ability and who respect these children as capable and worthy human beings, should be able to use their own creative ideas, their insightful planning, and their careful evaluation to make a significant difference in the lives of migrant children. Experience with the migrant child has shown that he is a delightful and responsive child with much desire to learn. With these children as your students, and with your own determination to help them attain success, you should have a most interesting and rewarding summer. Good Luck!

A SELECTED BIBLIOGRAPHY

The following readings will help to give you additional understanding of the migrant child, his life, his teacher and his educational problems.

Asbell, Bernard, The New Improved American. (paper) New York: Delta, 1963.

Bagdikian, Ben H., In the Midst of Plenty. (paper) New York: Signet, 1964.

Bloom, Benjamin S., et al, Compensatory Education for Cultural Deprivation. New York: Holt, Rinehart and Winston, Inc., 1965.

Crow, Lester D., et al, Educating the Culturally Disadvantaged Child. New York: David McKay Co., Inc., 1966.

Davis, Allison, Social Class Influences Upon Learning. Cambridge: Harvard University Press, 1948.

Deutsch, Martin, "Minority Group and Class Status as Related to Social and Personality Factors in Scholastic Achievement." Monograph of the Society for Applied Anthropology, 1960, No. 2, pp. 1-32.

_____, "Social and Psychological Perspectives on the Development of the Disadvantaged Learner." Journal of Negro Education, 33 (Summer, 1964), 264-74.

Fantini, Mario D., and Weinstein, Gerald, The Disadvantaged; Challenge to Education. New York: Harper and Row, 1968.

Fishman, Joshua, et al, "Guidelines for Testing Minority Group Children." Journal of Social Issues,20 (April, 1964), 127-45.
(This supplement is available separately upon request to the Society for the Psychological Study of Social Issues, P.O. Box 1248, Ann Arbor, Michigan.)

Frost, Joe L., and Hawkes, G.R., The Disadvantaged Child. New York: Houghton Mifflin Co., 1966.

Harrington, Michael, The Other America. (paper) Baltimore: Penguine Books, 1963.

Holt, John, How Children Fail. New York: Pitman Publishing Co., 1966.

Kvaraceus, William C., et al, Poverty, Education, and Race Relations. (paper) Boston: Allyn and Bacon, 1967.

May, Edgar, The Wasted Americans. (paper) New York: Signet, 1964.

Miller, Herman P., Poverty, American Style. Belmont, Calif: Wadsworth, 1966.

Moore, Truman E., The Slaves We Rent. New York: Random House, 1965.

Reul, Myrtle, Where Hannibal Led Us. New York: Vantage Press, 1966.

Rosenthal, Robert, and Jacobson, Lenore, Pygmalion in the Classroom. New York: Holt, Rinehart and Winston, Inc., 1968.

Sexton, Patricia, Education and income. New York: Viking Press, 1961.

Shotwell, Louisa R., The Harvesters. Garden City: Doubleday & Co., 1961.

Sutton, Elizabeth, Knowing and Teaching the Migrant Child. Washington: NEA, 1960.

Teaching the Disadvantaged Young Child. National Association for the Education of Young Childre.

These readings are particularly recommended for the spendid help they will give you in preparing an excellent language arts curriculum. Many examples come from classroom teachers who tell about their procedures and their results.

Aaron, Ira E., ed., Informal Reading Inventories. IRA, 1965.

Applegate, Mauree, Easy in English. Evanston: Harper and Row, 1963.

Arnstein, Flora J., Adventure into Poetry. Stanford University Press, 1951.

_____, Poetry in the Elementary Classroom. New York: Appleton-Century-Crofts, Inc., 1962.

Brogan, Peggy, and Fox, Lorene K., Helping Children Read. New York: Holt, Rinehard and Winston, 1961.

Burrows, Alvina Treut, They All Want to Write. Third edition, paper. New York: Holt, Rinehart and Winston, 1964.

Coh n, Werner, "On the Language of Lower Class Children." School Review, 69 (Winter, 1967), 435-40.

Cole, Natalie, The Arts in the Classroom. New York: John Day Co., 1940.

Dale, Edgar,"Vocabulary Development of the Underprivileged Child." Elementary English, 42 (1965), 778-86.

Darrow, Helen Fisher, and Howes, Virgin M., Approaches to Individualized Reading, New York: Appleton-Century-Crofts, Inc., 1960. (paper)

Department of Elementary School Principals, Sailing Into Reading. 1956.

Fagan, Edward R., English and the Disadvantaged. Scranton, Pa.: International Textbyok Co., 1967.

Featherstone, Joseph, "Schools for Children." The New Republic, 157 (August 19, 1967), 17-21.

Frost, Joe L., ed., Issues and Innovations in the Teaching of Reading. (paper) Part VIII: "Reading for the Disadvantaged." Glenview, Illinois: Scott, Foresman and Co., 1967.

Games Make Spelling Fun. Palo Alto: Fearon Publishers, Inc.

Glaus, Marlene, From Thoughts to Words. Champaign, Illinois: NCTE. 1965.

Haberman, Martin, "Materials the Disadvantaged Need--and Don't Need." Educational Leadership, 24 (April, 1967), 611-17.

Herrick, Virgil E., and Nerbovig, Marcella, Using Experience Charts With Children. Columbus, Ohio: Charles E. Merrill Books, Inc., 1964.

Holt, John, How Children Learn. New York: Pitman Publishing Co., 1958.

Hymes, James L., Before the Child Reads. Evanston: Row Peterson & Co., 1958

Jennings, Frank G., This is Reading. New York: Bureau of Publications, Teachers College, 1965.

Keats, Ezra Jack, "The Right to be Real." Saturday Review. 46 (November 9, 1963), 46.

Klineberg, Otto, "Life is Fun in a Smiling, Fair-Skinned World." Saturday Review, 46 (February 16, 1963), 75ff.

Kohl, Herbert, 36 Children. New York: New American Library, 1967.

Larrick, Nancy, "The All-White World of Children's Books." Saturday Review, 48 (September 11, 1965), 63.

Lee, Dorris M., and Allen, Robert V., Learning to Read through Experience. (paper) Second edition. New York: Appleton-Century-Crofts, 1963.

MacKintosh, Helen K., Children and Oral Language. ACEI, 1964.

McKee, Paul, Reading. Boston: Houghton-Mifflin Co., 1966.

Ort, Lorrene Love, "Basal Readers: A Case History and Prognosis." The Reading Teacher. 17 (1963-64), 435-40.

Petty, Walter T., and Bowen, Mary E., Slithery Snakes and Other Aids to Children's Writing. (paper) New York: Meredith Publishing Co., 1967.

Possein, Wilma M., They All Need to Talk. New York: Appleton-Century-Crofts, 1969.

Russell, David H., et al, Listening Aids Through the Grades. New York: Bureau of Publications, Teachers College.

_____, Reading Aids Through the Grades. New York: Bureau of Publications, Teachers College.

Schatz, Esther E., et al, Exploring Independent Reading in the Primary Grades. Columbus, Ohio: The Ohio State University, 1960.

Smith, James E., Creative Teaching of the Language Arts in the Elementary School. Boston: Allyn and Bacon, 1967.

_____, Creative Teaching of Reading and Literature in the Elementary School. (paper) Boston: Allyn and Bacon, 1967.

Stuart, Allaire, "Creative Writing: Japanese Haiku." Elementary English, 49 (1963), 35-6, 67.

Torrance, E. Paul, "Creative Thinking through the Language Arts." Educational Leadership, 18 (1960), 13-18.

Veatch, Jeannette, Individualizing Your Reading Program. New York: G.P. Putnam's Sons, 1959.

These Readings will give you useful ideas regarding the teaching of the social studies.

Association of Teachers of Social Studies of the City of New York, Handbook for Social Studies Teaching, third edition. New York: Holt, Rinehart and Winston, Inc., 1967.

Brown, J. Douglas, "The Development of Creative Teacher-Scholars." In Creativity and Learning, edited by Jerome Kagan. Boston: Beacon Press, 1967.

Brown, Richard H., "History and the New Social Studies." Saturday Review, 49 (October 15, 1966), 80 ff.

Bruner, Jerome S., "Man: A Course of Study." Chapter 4 of Toward a Theory of Instruction. Cambridge: Belknap Press, 1966, pp 73-101.

Greenstein, Fred I., Children and Politics. New Haven: Yale University Press, 1965.

Hanvey, Robert G., "Social Myth vs. Social Science." Saturday Review, 50 (November 18, 1967), 80 ff.

Jarolimek, John, and Walsh, Huber M., Readings for Social Studies in Elementary Education. New York: The Macmillan Co., 1965.

Massialas, Byron G., and Zevin, Jack, Creative Encounters in the Classroom. New York: John Wiley and Sons, Inc., 1967.

Riessman, Frank, Helping the Disadvantaged Pupil to Learn More Easily. Englewood Cliffs: Prentice-Hall, Inc., 1966.

Smith, James A., Creative Teaching of the Social Studies in the Elementary School. Boston: Allyn and Bacon, Inc., 1967.

Storen, Helen F., The Disadvantaged Early Adolescent: More Effective Teaching. New York: McGraw-Hill Book Co., 1968.

These readings will be particularly useful in helping you to encourage children to explore mathematics, and in suggesting ways of teaching through concrete and meaningful experience.

Arithmetic Learning Activities. Palo Alto: Fearon Publishing Corp.

Blaney, Rosemarie B., Teaching New Mathematics in the Elementary Schools. Englewood Cliffs: Teachers Practical Press, Inc., 1964.

Bruner, Jerome S., The Process of Education. Cambridge: Harvard University Press, 1960.

_____, Toward a Theory of Instruction. Cambridge: Balknap Press, 1966.

Flavell, John H., The Developmental Psychology of Jean Piaget. Princeton: Van Nostrand Co., Inc., 1963.

Harding, Lowry W., and Lamb, Pose, Children Consider Mathematics. Columbus, Ohio: The Association for the Study of Educology, The Ohio State University, 1962.

Holt, John, How Children Fail. New York: Pitman Publishing Co., 1966.

How to Meet Individual Differences in Teaching Arithmetic. Palo Alto: Fearon Publishing Corp.

Kontos, Peter G., and Murphy, James J., eds., Teaching Urban Youth: A Source Book for Urban Education. New York: John Wiley and Sons, Inc., 1967. See especially: Part Three, "The Math-Science Program," pp. 125-88.

Making and Using Charts. Palo Alto: Fearon Publishing Corp.

New Directions in Mathematics, Association for Childhood Education International.

Nuffield Mathematics Project, I Do and I Understand. New York: John Wiley and Sons, Inc., 1967.

_____, Pictorial Representation. New York: John Wiley and Sons, Inc., 1967.

Shulman, Lee S., and Keislar, Evan R., eds., Learning by Discovery: A Critical Appraisal. Chicago: Rand McNally and Co., 1966. See especially: "Intellective Processes in Children," pp. 319-32; and Jean Piaget, "How Children Form Mathematical Concepts." pp. 333-37.

Westcott, Alvin M., and Smith, James A., Creative Teaching of Mathematics in the Elementary School. Boston: Allyn and Bacon, 1968.

The following readings will help you to construct an exciting and meaningful Science curriculum.

Bingham, Alena, Improving Children's Facility in Problem Solving. New York: Bureau of Publications, Teachers College, 1958.

Craig, Gerald S., Science in Childhood Education. New York: Bureau of Publications, Teachers College, 1944.

Kontos, Peter G., and Murphy, James J., eds., Teaching Urban Youth: A Source Book for Urban Education. New York: John Wiley and Sons, Inc., 1967. Part Three: "The Math-Science Program," pp. 125-87.

Munch, Theodore, How to Individualize Science Instruction in the Elementary School. National Science Teachers Association.

Nature and Science. Garden City: Natural History Press.

Navarra, John, The Development of Scientific Concepts in the Young Child. New York: Bureau of Publications, Teachers College, 1959.

Pacilio, James V., How to Construct and Use Elementary Science Teaching Aids. Minneapolis: J.X. Denison and Co., Inc., 1966.

Piltz, Albert, Extending Children's Early Science Interests. Chicago: F.E. Compton Co., 1958.

Piltz, Albert, and Sund, Robert, Creative Teaching of Science in the Elementary School. Boston: Allyn and Bacon, 1968.

Salem, Donald, Science Experiences for Elementary School Teachers. Englewood Cliffs: TEachers Practical Press, Inc., 1961

Schmidt, Victor E., and Rockcastle, Verne N., Teaching Science with Everyday Things. New York: McGraw Hill, Inc., 1968.

Science for Eights to Twelves. Association for Childhood Education International.

Sheckles, Mary, Building Children's Science Concepts. New York: Bureau of Publications, Teachers College, 1958.

Unesco, Source Book for Science Teaching. Revised and enlarged edition, 1962.

Young Children and Science, Association for Childhood Education International.

These readings will add to your understanding of the creative process and provide many ways to develop creativity in children.

ON THE NATURE OF CREATIVITY:

Anderson, Harold H., ed., Creativity and Its Cultivation. New York: Harper and Bros., 1959.

Bronowski, J., "The Creative Process." Scientific American, 109 (September 1958), 59-63.

Eiseley, Loren, The Mind as Nature. New York: The Macmillan Co., 1950.

Ghiselin, Brewster, ed., The Creative Process. New York: Mentor Books, 1952.

Guilford, J.P., "Creativity." American Psychologist, 5 (1950, 444-54.

Kneller, George F., The Art and Science of Creativity. New York: Holt, Rinehart, and Winston, Inc., 1965.

Koestler, Arthur, The Act of Creation. New York: The Macmillan Co., 1964.

MacKinnon, Donald W., "What Makes a Person Creative?" Saturday Review, 45 (February 10, 1962), 15-17, 69.

ON CREATIVITY AND THE SCHOOLS

Childhood Education, 39 (April, 1963), entire issue.

Cole, Natalie, The Arts in the Classroom. New York: John Day Co., 1940.

Kagan, Jerome, ed., Creativity and Learning. Boston: Beacon Press, 1967.

Leonard, George B., Education and Ecstasy. New York: Delacorte Press, 1968.

Lloyd, J., "Developing Creativity in the Culturally Deprived." The Instructor, 75 (February, 1966), 27 ff.

Massialas, Byron G., and Zevin, Jack, Creative Encounters in the Classroom. New York: John Wiley and Sons, Inc., 1967.

Mueller, Richard J., "Can the Public Schools Foster Creativity?" Saturday Review, 57 (December 19, 1964), 48-9, 64.

Scofield, Robert W., "A Creative Climate." Educational Leadership, 18 (1960), 5-6, 49.

Smith, James A., Setting Conditions for Creative Teaching in the Elementary School. Boston: Allyn and Bacon, 1966.

Stein, Morris I., "Creativity and Culture." Journal of Psychology, 36 (1953), 311-22.

Topper, H., "Special Assignment: Creative Arts in the Disadvantaged Elementary School" School Arts, 66 (February, 1967), 508.

Torrance, E. Paul, Education and the Creative Potential. University of Minnesota Press, 1963.

_____, "Identifying the Creatively Gifted among Economically and Culturally Disadvantaged Children." Gifted Child Quarterly, 8 91964).

_____, Rewarding Creative Behavior. Englewood Cliffs: Prentice-Hall, 1965.

Wallach, Michael A., and Kogan, Nathan, Modes of Thinking in Young Children. New York: Holt, Rinehart, and Winston, 1965.

Zirbes, Laura, Spurs to Creative Teaching. New York: G.P.Putnam's Sons, 1959.

ON THE GRAPHIC AND PLASTIC ARTS

Bits and Pieces: Imaginative Uses for Children's Learning. Association for Childhood Education International.

Burkhardt, Robert C., Spontaneous and Deliberate Ways of Learning. Scranton: International Textbook Co., 1962.

Children Can Make It: Experiences in the World of Materials. Association for Childhood Education International.

Cole, Natalie, The Arts in the Classroom. New York: John Day Co., 1940.

Kaufman, Irving, Art and Education in Contemporary Culture. New York: The Macmillan Co., 1966.

Lowenfeld, Viktor, and Brittain, W. Lambert, Creative and Mental Growth. Fourth edition. New York: The Macmillan Co., 1964.

Merritt, Helen, Guiding Free Expression in Children's Art. New York: Holt Rinehart, and Winston, 1964.

Schinneller, James A., Art: Search and Self-Discovery. Scranton: International Textbook Co., 1961.

Smith, James A., Creative Teaching of the Creative Arts in the Elementary Classroom. Boston: Allyn and Bacon, 1967.

Wachowiak, Frank, and Ramsay, Theodore, Emphasis, Art: A Qualitative Program for the Elementary School. Scranton: International Textbook Co., 1965.

Weiss, Margaret R., "Learning through the Lens." Saturday Review, 50 (June 17, 1967), 55 ff.

Wright, G. Scott, Jr., "The Ignorant Silence." Saturday Review, 44 (March 18, 1961), 52-3.

ON DANCE

Andrews, Gladys, Creative Rhythmic Movement for Children. Englewood Cliffs: Prentice-Hall, Inc., 1954.

Eastman, Marcia, Creative Dance for Children. Tucson: Mettler Studios, 1954.

Hawkins, Alma M., Creating Through Dance. Englewood Cliffs: Prentice-Hall, Inc., 1964.

H'Doubler, Margaret, Dance, A Creative Experience. University of Wisconsin Press, 1959.

Stuart, Frances R., and Ludlam, John S., Rhythmic Activities. Minneapolis: Burgess Publishing Co., 1963.

ON DRAMA

Burger, Isabel B., Creative Play Acting: Learning Through Drama. New York: The Ronald Press Co., 1950.

Carlton, L., and Moore, R.H., "Effects of Self-Directed Dramatics on Reading Achievement and Self-Concept of Culturally Disadvantaged Children." Reading Teacher, 20 (November, 1966), 125-30.

Shaftel, F.R., and Shaftel, F., "Role-playing as a Learning Method for Disadvantaged Children." School and Society, 94 (December 24, 1966), 494-8.

Siks, Geraldine, Creative Dramatics, and Art for Children. New York: Harper and Bros., 1958.

Slade, Peter, Child Drama. London: University of London Press, Ltd., 1954.

Spolin, Viola, Improvisation for the Theatre. Evanston: Northwestern University Press, 1963.

Ward, Winifred, Playmaking with Children. New York: Appleton-Century-Crofts, Inc., 1957.

ON MUSIC

Bergethon, Bjornar, and Boardman, Eunice, Musical Growth in the Elementary School. New York: Holt, Rinehart and Winston, Inc., 1963.

Ellison, Alfred, Music with Children. New York: McGraw-Hill Book Co., 1959.

Krone, Beatraice Perham, and Miller, Kurt R., Help Yourselves to Music. San Francisco: Howard Chandler, 1959.

Landeck, Beatrice, Children and Music. New York: William Sloan Assoc., 1952.

Making and Playing Classroom Instruments. Palo Alto: Fearon Publishing Corp.

McMillan L. Eileen, Guiding Children's Growth Through Music. Boston: Ginn and Co., 1959.

Rosenberg, Martha, It's Fun to Teach Creative Music. New York: The Play Schools Association, 1963.

Sheehy, Emma Dickson, Children Discover Music and Dance. New York: Henry Holt and Co., Inc., 1959.

ON CREATIVE WRITING

Applegate, Mauree, Helping Children Write--A Thinking Together About Children's Creative Writing. Evanston: Row, Peterson and Co., 1954.

Arnstein, Flora J., Adventure into Poetry. Stanford University Press, 1951.

Burrows, Alvina Treut, et al, They All Want to Write. Revised edition. New York: Prentice-Hall, Inc., 1962.

_____, "Children's Writing and Children's Growth." Elementary English, 28 (1951), 205-7.

Kohl, Herbert, 36 Children. New York: New American Library, 1967.

Mearns, Hughes, Creative Power: The Education of Youth in the Creative Arts. New York: Dover Publications, Inc., 1958.

Petty, Walter T., and Bowen, Mary E., Slithery Snakes and Other Aids to Children's Writing. New York: Appleton-Century-Crofts, 1967.

Scofield, Elizabeth, "Haiku, A New Poetry Experience for Children." Elementary English, 38 (1961), 24-6.

Torrance, E. Paul, "Creative Thinking through the Language Arts." Educational Leadership, 18 (1960), 13-18.