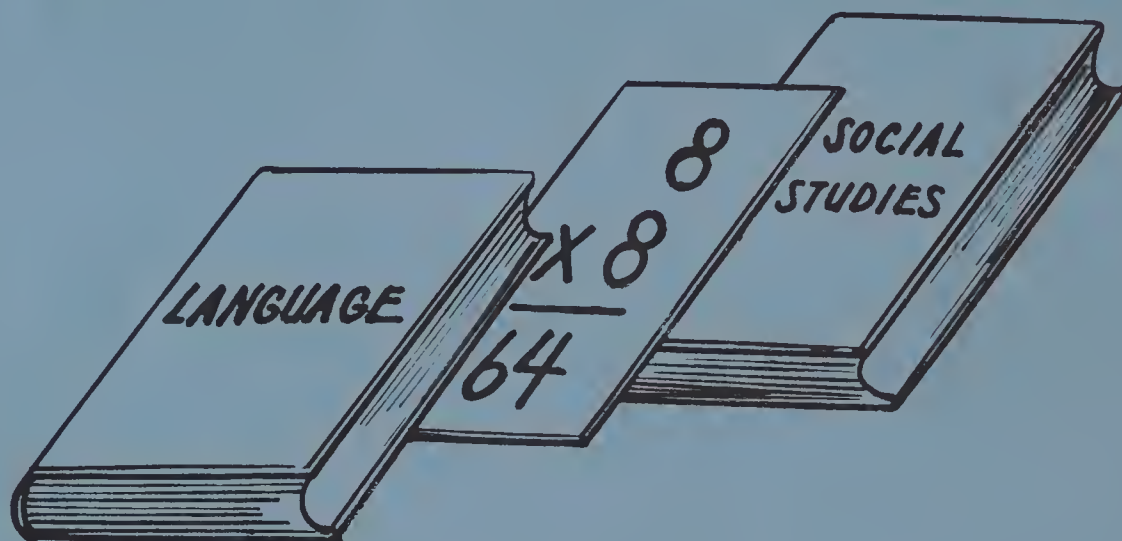






BASIC GOALS FOR ELEMENTARY CHILDREN



BUREAU OF INDIAN AFFAIRS
DEPARTMENT OF INTERIOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
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Order from
Publications Service
Haskell Institute
Lawrence, Kansas



B A S I C G O A L S
"
F O R
E L E M E N T A R Y C H I L D R E N

Levels: Seven and Eight

VOLUME III

(Tentative Draft - 1964)

Prepared by
Bureau of Indian Affairs



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F O R E W O R D

Guidance

Indian children coming to school face many adjustments. They must learn to share and own, to be aggressive and considerate, to practice democratic behavior, develop security, manifest independence and initiative, and earn group acceptance. Guidance has the function of assisting individuals to become independent, happy citizens, secure enough so that they can help themselves, and when possible others, to life, liberty and the pursuit of happiness.

Teachers have always subscribed to human growth and development. Guidance can play the central role in the growth process; it can be the cement encompassing the content of subject matter. Whereas strict formal discipline occupied the solidifying role in previous historical educational endeavors, guidance, based upon sounder psychological principles of learning, is today's answer to the child's struggle for self-acceptance, adjustment to school and adjustment to the earth as his habitat.

The classroom teacher has sound educational tools at his disposal to accomplish this objective: communication with parents, testing programs, cumulative records, counseling opportunities, desirable classroom environments, sensitivity to children's needs, studies of the home environment of pupils, sociometrics and opportunity for channeling aggressive

behavior into ambition, initiative, enterprise and self-confidence versus frustration, vandalism, fighting and teasing.

The first attempt at placing guidance in a paramount role within the academic setting capitalizes upon only three broad developmental areas. Hopefully others will emerge as intelligent teachers realize and experiment with the opportunities for new syntheses.

The three areas are:

1. The individual's recognition of time as one of his most valuable resources in his growth and development,
2. The growing consciousness of the value of human resources being invested in him, and
3. The individual's continual and humble realization of himself as the true and only source of power, fruitful accomplishments and life: his sense of self-identity within the framework of all his fellow man.

P R E F A C E

The Basic Goals for Elementary Children, from the Beginning Level through the Eighth Level, is the first draft of the revised and upgraded edition of the 1953 Minimum Essential Goals for Indian Schools. The revision appearing in this draft was prepared by a small, representative group of principals, department heads, teachers, and education specialists of the Bureau of Indian Affairs who work with primary and elementary school programs. It is now submitted for teachers and their supervisors to use and evaluate; to make further suggestions for revision of activities and techniques; to list key vocabulary at all grade levels; and to give examples of linguistic patterns that should be taught in the primary grades. Teachers and supervisors are also requested to list bibliography which they find outstanding or especially useful in developing the goals.

Carrying out the details of making and consolidating these suggestions, preparatory to submitting them for inclusion in the next draft of the revision, will be left to the local areas, or agencies. The right hand side of every page in each level of the guides is left blank for teachers to use for this purpose. Planning should be done at the local installations for handling this matter to best advantage.

How the First Draft of the Revision Was Accomplished

The workshop group met at the Phoenix Indian School for three weeks in June 1964 and began the revision of the Minimum Essential Goals of 1953. They re-studied these guides, which have been in use for the

past several years, and the evaluation was that the minimum essential goals of the 1953 guides are as basic to the education of today's children as they were to those of several years ago. They noted, however, that change and advancement of the times, and change and advancement made by the children for whom these guides are developed, both require and permit a higher level of minimum essentials than was possible ten years ago.

While the group worked on the revision, the curriculum guides of many states, counties and cities throughout the country were studied for implications, as were a great many references by noted authorities. Concepts and values secured from these sources have been used in preparing the revision.

It was determined to: attempt to retain, in this revision, all of the values and strengths of the earlier goals, while at the same time expanding and upgrading them for meeting the needs and challenging the abilities of children of the last half of the 1960's; build a foundation that will help children reach the 1970 goals that Bureau schools have set; and help elementary children make the smoothest possible transition from elementary school into the high school grades.

These purposes are emphasized in features of the revision, some having been carried over from the former guides; others are introduced in the revision. Attention is called to the following features of the revised draft of the guides:

1. Many statements of goals and activities are unchanged from those appearing in the Minimum Essential Goals; other goals from the former guides are expressed in revised statements that often combine two or more goals, and in some cases with additional values included.
2. Activities and techniques, as before, are suggestive of many more that the teacher may select to use--they are not prescriptive.
3. The guides are intended, as in the past, for both immediate use and to encourage further curriculum organization and development, based on the goals, and developed at local installations or areas.

In addition to the above features carried over from the Minimum Essential Goals, the following new features are included:

1. A central position has been established for guidance in the primary-elementary years.
2. Linguistic advances made in recent years are recognized, and examples of linguistic patterns for systematic development at primary levels are to be included in the next draft of the primary levels of the guide. This task could not be undertaken at this workshop, but should be done during the year by teachers and supervisors. In the same manner, key vocabulary that is especially important to the topic

should be listed for inclusion in all levels of the guides. These suggestions should be entered in the column provided for the purpose on the right-hand pages opposite the columns entitled "Goals" and "Suggested activities and Techniques."

3. The sequence of concepts and skills from each level to the next, and the scope of these essential learnings, both have been substantially strengthened in the present draft; yet every attempt was made to keep the goals to basic levels which, it is believed, all or at least most children can achieve well. (It should be kept in mind that most children can achieve beyond the levels indicated by the goals, and that providing opportunities for them to do so is the responsibility of every teacher and supervisor.)
4. Modern mathematics trends have been emphasized. However, the goals make provision for moving either gradually, or at once, into modern mathematics teaching and learning, depending upon each teacher's preparation to do so.
5. The science program has been accelerated and strengthened.
6. Both the music and the physical education programs have been organized more systematically and given more emphasis.

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I N T R O D U C T I O N

In order to accomplish anything, it is necessary to have a plan. Sometimes the plan is only in one's mind. Most people prefer to outline their plans on paper, and study and revise them from time to time. When many people, working together, are trying to carry out the same plan, such a written outline becomes essential or great and sometimes undesirable diversities result. What was taught in the earliest schools was very simple, and derived largely from what the teacher himself knew. Gradually there evolved some agreement as to the experiences and subject matter to which children or adults should be exposed in order to learn what it was agreed that they should know.

Courses of study grew up in different countries, and in different parts of the same country, which stressed what the people of those areas agreed was important for the schools to teach. Gradually the belief developed among the administrative officers of school systems, that more widespread uniformity in courses of study was desirable. This idea of uniformity in courses of study went far to the extreme, and the existence of individual differences among children was almost completely ignored.

Fabled Procrustes, who stretched his guests, or trimmed them to fit his bed, found his counterpart in many school systems. About forty years ago educational leaders began to point out through scientific educational research that equal achievement by all children over any wide range of subject matter was

impossible. State courses of study published in the past fifteen years reflect the results of this earlier research.

The Bureau of Indian Affairs for three decades has recognized that a uniform course of study prepared in the Central Office and issued to the field, was undesirable.* Instead every help, by means of Indian Education, summer schools, supervision, and local curriculum-making conferences, has been given to local reservations and schools, to build curricula suited to their respective needs, as determined by geographic region, natural resources, traditional background and vocational objectives of the children. Each area has been encouraged to prepare its own written outline, with the help of servicewide specialists from the Central Office. Many such outlines have been written and mimeographed. Sometimes they have found their way into use; sometimes the rapid turn-over in teaching or administrative personnel has resulted in their being laid aside, as new people and new ideas moved into an area; sometimes nothing concrete has resulted from the curriculum planning work. It is believed that the work has not been in vain, however, for it is a truism that the course of study that gets taught is the one which is in the mind and convictions of the teachers. To the extent that teachers'

*Beatty, Willard W. and associates. 1944. Education for Action. Bureau of Indian Affairs, Haskell Institute, Lawrence, Kansas. 347 pp. \$2.00.

thinking has been improved by these conferences and supervisory visits, a better coordinated teaching program has resulted.

However, it has always been clear that there is a basic core of things that needs to be learned by all children, if they are to function in modern society. This basic core consists of: the ability to speak and understand the English language; ultimately to read with facility and understanding; to communicate through written language with directness and meaning; to bring certain physical and social activities of each individual into general conformity with community standards; to understand basic numerical concepts, and acquire automatic mastery of the number combinations; to understand and practice basic health skills; and to understand and apply scientific methods of thinking. All of these goals can be stated objectively in simple terms. Each is capable of infinite elaboration through enrichment of activities and experiences.

These goals differ from the typical course of study which is often crammed with a mass of material far in excess of what can be taught within the space of time allowed. When more is demanded than can reasonably be accomplished, it is inevitable that none of it can be mastered. Pupil, teacher and supervisor have to be satisfied with partial accomplishment. It is no wonder that in many schools a passing grade is fixed at about 60% of the scattering of material upon which a pupil is tested. Different children will recall different parts of the kaleidoscopic experiences to which they have been exposed in the classroom. Inevitably, essentials are underemphasized, in the great mass of non-essentials to which passing attention is

paid. As the child proceeds through the successive years of school, he is likely to leave more and more of what is essential learning by the wayside, and not really master anything.

The goals of this pamphlet present those learnings which are believed to be basic, and which the child must successively master before he can advance into the next unit of learning with some prospect of success. If a teacher did nothing but concentrate on the objectives listed herewith, he could "cover" them, in the old sense, in much less than a year. However, most of the goals which are listed are concepts, skills or learnings which result from exposure to a series of activities and experiences. They can't be taught by rote--they are the end result of a planned and progressive series of group and individual activities.

Each goal has been expressed in measurable terms. To any ingenious teacher a variety of objective tests can be devised to measure when each child understands or can do each thing listed. Properly presented to the children, these objectives will become goals of great pride, when an individual's name appears on his private list of accomplishments. Many of these goals, as described in the manual, may be prepared and kept in little booklets in which are listed the goals.

Goals for the Beginning Year apply to non-English speaking beginners. In many parts of the country, Indian children enter school for the first time with the ability to speak and understand English with the same skill as other children. There are variations between these two extremes in other schools of the

service. While goals of the Beginning Level list the skills and abilities which must be learned while the child is acquiring English, these skills and abilities are essential to all beginning children. Children, who enter school with the ability to speak English, will nevertheless need to spend some time in acquiring other listed skills and concepts--or demonstrating that they already possess them. A skillful teacher will devise measures to test the ability of the children to do these things. As each child shows his skill, that fact can be checked off and he can be moved into a group within the room which is participating in activities leading to more advanced learning.

Teachers in smaller schools are accustomed to working with children in groups, according to levels of achievement. The more capable teachers find that such groups vary in composition as different activities are taken up. One child may advance much more rapidly in English learnings than in number concepts, and is entitled to participate with the group which has reached his level of achievement in each separate subject. Graded schools simplify the number of groups which must be dealt with in any one class, but the most competent teachers find that there is no such thing as class drill or uniform class activity for all children in any field. If the varying needs of individuals are to be met, groups of varying levels will be formed and reformed daily in every classroom. Children will require varying kinds of experience for varying lengths of time, to master each of the goals listed, and they should be allowed this variety. Eventually each child should master each of

the goals--before being permitted to participate in advanced experiences of the same type.

It is an easygoing fallacy to assume that children can not learn to do all things right. With the proper incentives, and skillful teaching, every child can learn to tie his shoes. Some will learn earlier than others, but all can learn. All of the addition combinations (when that is the level of accomplishment before us), can be learned by every child, and unless we insist that it be done, the child who fails to achieve automatic mastery of these combinations will be handicapped throughout life. Every child can learn to express himself fluently in English--and should not be passed by because he is reluctant. Success in later school experience depends upon the success with which these skills are achieved in the lower grades. Deliberately the goals have been stated as less than the average teacher would expect to teach. This is because it is expected that these skills and abilities will be taught to every child. Some will learn more rapidly than others, and should be permitted to advance into more difficult experiences as rapidly as mastery of the earlier goals has been demonstrated. Rapid superficial familiarity with the skills should not be confused with mastery.

If the goals are taught to mastery or to depth of understanding at the level when they first appear, there will be little need for review of these goals in later years. If the goals here listed are superficially taught and brushed aside, later grades will be clogged with children who are not qualified to undertake the work which will be listed for those levels.

At the end of each year, a teacher should send along with the child his own list of accomplishments for the year, so that the next teacher (presuming that there may be one) will know just what skills and concepts the youngster has mastered as a basis upon which the new year's learnings may be built. We want your help and guidance in making this material just what it is called--a list of basic goals for children--around which each teacher may build as rich and complete a program of activities and supplementary learnings as are needed for his pupils. No teacher should limit his teaching to these essentials. The experiences of each child should be as broad and enriched as is profitable for the child, so long as the basic or minimum learnings, as outlined here, have been mastered.

This list of specific goals is not meant to replace the curriculum of any school. Each school should have its curriculum checked to see if the basic and essential goals have been included. Schools that are in the process of constructing a written curriculum should keep this list of basic specific goals at hand to see that they are included. Schools that

have as yet no written curriculum can be guided by these goals so that at least the basic learnings are accomplished.

This list is an advance over goals stated in some State courses of study in that the goals of this list are detailed and specific, and are closely associated with actual daily happenings in the child's life at home and at school.

This list is not sacred or final to be used forever. Teachers are expected to use it and, in using it if they find certain goals are unattainable at a particular level, or that omission of essential goals has occurred, they are urged to make such notation at the time in the outline itself. At the end of each school year suggestions for change in the material should be sent to the Chief, Branch of Education, Central Office. Future revisions will be made in light of the suggestions made by the users.

Hildegard Thompson
Chief, Branch of Education

TEACHING COURTESY

A number of the goals deal with "manners." This is a preliminary statement relating to these goals.

Most Indian children come to school with much better grounding in common courtesy, Indian style, than has usually been learned by non-Indian children of similar age. Many Indian ideas of courtesy differ considerably from those which have gained acceptance in the non-Indian community. It is important for the teacher to learn the common courtesies of the Indian community in which the school is located, so as not to make the mistake of scolding or ridiculing a child for doing what his parents have taught him is polite. Non-Indian habits of courtesy should be taught as just what they are--the national customs of showing courtesy and consideration, which it is necessary for an Indian child to know if he is going to work and live in places other than his home reservation.

Dr. Ruth Underhill's article in Education For Action summarizes the matter of manners as follows:

Etiquette

"Every people has its code of manners. Whites, who say 'How do you do,' 'Goodbye,' 'Beg your pardon,' and 'Thank you,' are shocked that some Indian languages have no words for these politenesses. Yet that does not mean that the Indians are not glad to see one another, sorry when they offend, and grateful for favors. They simply have a different method of expressing these attitudes.

Navajo, for instance, ask one another: 'Where do you come from? Where are you going?' These are questions which seem impertinent to some Whites but they are a conventional form of greeting. The question 'How old are you?' is one which is likely to follow, for the Navajo needs the information in order to call a new companion younger or older brother. But perhaps there will be no greeting of any kind. The Navajo and some other Southwest Indians, often observe silence after entering a house. They feel it indelicate to break into speech without allowing a short period for members of the group to get used to one another.

The idea behind these observances is quite as courteous as that behind the White man's formal phrases. And there are some situations where most Amerinds consider that no phrase is adequate. Why say thank you? The way to show appreciation is to do a return favor, and that quickly. The same holds for 'Beg your pardon.' The person injured will believe you are sorry when he sees you perform some real act of restitution. Indians, are as considerate in their own way as the White man. In some cases, the two correspond, and then the White may often find that the Indians are more particular than he. Let one who has been long with Indians ask himself if he ever heard one of them interrupt or contradict or shout across the table. These things, in Indian society are literally not done. As a result, an Indian sometimes appears uncommunicative. This may be because he is defending himself from impertinent

questions. Also it may be because he has been taught not to be aggressive and volunteer information. The polite person is quiet and slow of approach.

But while the White person is convincing himself that the Indian has no intention of being bad mannered, what is the Indian thinking of him? Many Indian groups have special codes whose etiquette goes absolutely counter to White usage. And in these groups the White person, while obeying his own standards, may actually be offensive.

Whites, for instance, are used to introducing people by their names and they consider failure to introduce a discourtesy. But in many Indian groups, the mention of a person's name is an offense. A man's name is his private property, and strangers have no right to know it, much less speak it. Sometimes its mention is thought to do the owner of the name a real injury by lessening his power. The census taker therefore may be offering an Indian a series of insults. So may even the kindly visitor who asks of children: 'What is your name, dear?'

There are ways around the difficulty if a White person cares to learn them. It is generally quite proper to address a person as 'My friends.' If he is a Navajo, you can be especially respectful by calling him 'My maternal grandfather' no matter what his age. And if you do want to know his name, for practical reasons, you can get to it by inquiring 'Where do you

live?' When you have that clearly, you can find the name from someone else.

People like the Mohave and many California Indians, not only object to mentioning the names of living people but feel very strongly against speaking the names of the dead. So it is unbelievably rude to ask an orphan child: 'What was your father's name?' But if one knew the conventions, he could ask a friend of the family who was 'far back on the right' meaning a paternal ancestor or 'on the left' for a maternal one.

What is a White person to do when he suspects that there may be some such conventions, of which he is ignorant and that he may be offending without knowing it? Actually, there are few better rules than the old nursery rhyme:

'Politeness is to do and say
The kindest thing in the kindest way.'

One who goes on this principle will simply act like a considerate and unselfish person and then explain: 'I do not know your rules. Please tell me if I offend for it is not intentional.' The group will know soon if he is essentially considerate and they will excuse him just as White people excuse a 'break' by someone who did not know the circumstances.

One must admit that this sort of considerate person sometimes appears to be the exception among Whites,

rather than the rule. White inconsiderateness may often arise from ignorance--not knowing that there are as many patterns of courtesy as there are races of people. In the Indian Service considerateness should be the rule, not the exception, for it is recognized that Indian customs differ from White. But the attitude of many White people appears to be: 'If the Indians have not the same manners as I, then they have no manners.' So they feel themselves at perfect liberty to walk into Indian houses uninvited, to push into the front at a ceremony and to stand there talking, though everyone else is silent. This is the sort of bad manners which can be recognized in any language and with any code. The Indian who could forgive an uninformed White man for mentioning the names of the dead, sees no reason for overlooking such forms of selfishness, which could be avoided by everyone.

All in the Indian Service can easily avoid such overt rudeness. We can look around as we would, say, in a foreign cathedral and see what the other people are doing and what seems to be proper. We need not cross the path of a procession or walk over a sandpainting. We should not bring cameras to a pueblo where a plain sign at the entrances asks that they be left outside. If we want to enter a house or a plaza which seems to be private, we should find someone in authority and ask permission. If we are given any instructions as to the direction in which to go or the place to sit, we should observe them.

We attempt, in our schools, to teach Indians the manners of the White group because they will need them in after life. But our teaching will be much more effective if the Indians know that we ourselves have the essence of good manners: consideration of others."

ART INTRODUCTION

The elementary teacher helps children become more creative individuals capable of transforming germinal ideas into richer and better ones. He hopes to increase visual awareness, to maintain and develop children's curiosity and creativity, to increase abilities to express themselves by exploring media and to integrate art throughout the school year.

There are hundreds of themes to capitalize upon: holidays, recreation, occupations, safety,

communications, seasons, industries, conversation, utilities, farm, foods, health, transportation, and community helpers.

In an era alarming because of mass-conformism, the elementary teacher can find suitable approaches to helping more creative, individualistic humans emerge through art.

PHYSICAL EDUCATION

Competitive Sports

Boys and girls in the elementary school grades are emotionally and physically immature and can be easily overstimulated.

Due to inharmonies in the growing process, great harm can be done when the needs of bodily growth and

development are overshadowed by adult enthusiasm for personal prestige or for the achievement of school glory. It is therefore suggested that highly technical and competitive games be limited to the 7th and 8th grades, and interschool competition games be eliminated from elementary school programs.

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GOALS

SUGGESTED ACTIVITIES AND TECHNIQUES

SUGGESTED LINGUISTIC
PATTERNS AND VOCABULARY

- | | |
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| 1. Develops ability to make independent decisions as to the use of time | The pupil should learn to be on time because he wants to cooperate and also because he realizes that it is a good mark in his favor. Teach that committees, like other groups, do not function best until all are present. The pupil may make a graph showing what he does and the portion of time he gives to each activity and study the time distribution to make improvements if any are needed. The class might plan and give a dramatization for an all-school assembly on how not to study and on how to study. |
| 2. Realizes that he must repay what he borrows | The pupil must realize the obligations that go with borrowing and that when he borrows he must expect to repay. He should realize fully the poor regard that society has for "moochers" and that failure to meet his obligations will bring discredit to himself. |
| 3. Extends his ability to make choices when confronted by several alternatives | Children need much practice in making choices. Whether or not it is as wise a choice as the teacher would make, is not as important as the fact that the child actually makes a choice and follows it through to its logical conclusion. Children should not be told everything they are to do from what clothes to put on when they get up in the morning to their last action before going to bed. |
- Give pupils many opportunities to make choices; such as:
- a. Choice of work to be done.
 - b. Choice of plans for a trip.
 - c. Choice of expenditure of group funds.
 - d. Choice of games to be played.

GOALS

TEACHERS' SUGGESTIONS

SUGGESTED ACTIVITIES AND TECHNIQUES

TEACHERS' COMMENTS
AND EVALUATION

SUGGESTED BIBLIOGRAPHY FOR:

TEACHERS

CHILDREN

GOALS

SUGGESTED ACTIVITIES AND TECHNIQUES

SUGGESTED LINGUISTIC
PATTERNS AND VOCABULARY

- e. Choice of right type of conduct in a given situation.
- f. Choice of type of assembly program for which they are responsible.
4. Knows operation policies and practices in depositing and spending money from student bank
- Pupils should know that one of the important principles in handling money is to have a safe place to keep the money. They should continue to make use of the school bank, if possible, and to extend their knowledge of using a bank. (Refer to goals on previous levels.)
5. Develops sensitivity to a clean and orderly work area
- Pupils need to condition themselves to working in a clean and orderly work area. The group may experiment in finding out how lighting and fresh air affect ability to work through comparing a storage room, as a work area with a regular classroom. Pupils may observe various working areas for a week and at the end of the week report their observations in class. Class groups should help to decide on the number of people who can be assigned to the various work areas and jobs.
6. Extends his respect for equipment
- Expensive pieces of equipment are to be found in most schools. What happens when a movie projector or electric polisher is out of order may be demonstrated. If abused, some pieces of equipment can never be made as useful or attractive as they were originally.
7. Assumes leadership and responsibility for campus improvement with a minimum of supervision
- The pupil has been working with this right along. Now he should be encouraged to make suggestions for group activities and to act as leader of the group in carrying them out. Different campus situations cause these activities to vary from place to place. The group will need to choose those that are suitable.

GOALS

TEACHERS' SUGGESTIONS

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GOALS	SUGGESTED ACTIVITIES AND TECHNIQUES	SUGGESTED LINGUISTIC PATTERNS AND VOCABULARY
8. Knows the local pattern of tribal government	The pupil should know how the leader and the members of his tribal organization are elected and the responsibilities of these elected officials. He should know the names of his own representatives.	
9. Understands how the tribal government serves individuals and the tribe	The pupil should find the ways the tribal government can serve him, his family, and the entire group that it represents. This should include study of loans, land management, arts and crafts, marketing, law enforcement, and welfare. Find out how these services are paid for.	
10. Knows the pattern of organizations in local (county or city) government	In connection with this study pupils should visit the county courthouse or city hall, if possible, to get first-hand information. Visits from officials are valuable.	
11. Knows the functions of local officials and the services they render	Officials to be studied will vary with places and schools. They may be the policeman, the highway patrolman, the health officials, county-elected officials, or any others. The main idea of this goal is to develop the child's realization that these people are his friends. It is good to have these officials visit the class and talk about their work.	
12. Discovers that certain traits, qualities and skills are required of persons who are seeking public offices	Through a study of qualifications for office, lead pupils to generalize that a good citizen votes intelligently, and that the public officer is a servant and a leader.	

TEACHERS' SUGGESTIONS

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GOALS

SUGGESTED ACTIVITIES AND TECHNIQUES

SUGGESTED LINGUISTIC PATTERNS AND VOCABULARY

13. Learns about everyday living of people in the nations of the eastern hemisphere

Have pupils engage in making comparisons of homelife, foods, religious beliefs, education, recreation, and cultural background of peoples of the eastern hemisphere. They may learn how climatic conditions affect their habitat.

Lead children to understand something of the relationship of culture and religion.

A committee may list the chief natural resources that are important to us and find out in which countries they are located. Another may make a pictorial map showing the location of the major industries. Have children learn how geographical factors influence industrial development.

14. Understands some of the major aspects of present day problems of the nations of the eastern hemisphere; such as:

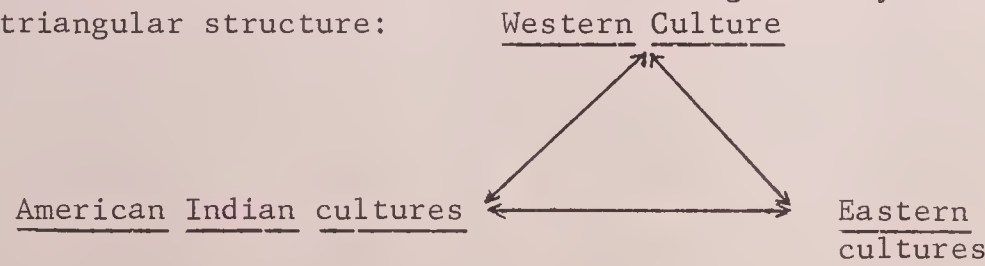
Develop a unit around the theme The Western Culture and the Eastern Hemisphere.

This unit should be developed around the fact that the emerging nations of the eastern hemisphere are blending their native culture with aspirations of democracy and industrialization. Democracy and industrialization are both products of western culture and it is the blending of the east and west which should receive the focus of attention.

a. Emerging nations in Africa

b. Improving education and living conditions in India

Contrastive studies should be made which generally form a triangular structure:



GOALS

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PATTERNS AND VOCABULARY

- | | |
|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| c. Maintaining independence in Japan, Nationalist China | Problems common to this unit may be understood by a study of the following: |
| d. Expansion in Russia due to needs for outlets on sea | <ul style="list-style-type: none"> a. What is culture? b. What is authority and how is it related to the blending of cultures? c. What is an authoritarian culture? d. Contrast democracy and authoritarianism. e. What is a primitive culture? f. Teachers should develop other questions as these represent a beginning. |

After investigating these questions and others of the teacher's own choosing, then one may begin to look at the problems the emerging nations must conquer in order to establish themselves as independent states.

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| 15. Knows about some of the efforts of the United States to establish and maintain friendly relationships with nations of the eastern hemisphere | <p>Lead pupils to understand that as distance between nations is reduced through speed in travel, their problems tend to become those of common concern, emphasizing that people of the world are alike in more respects than they are different. Students may exchange letters with pen pals in nations of the eastern hemisphere. Find examples of foreign phrases often used in English to teach children. A class map of the world may be constructed on which places studied are marked. Let pupils make a family tree and trace ancestry. Reports on famous immigrants who have had a direct influence on our culture may be given.</p> |
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Pupils may:

- a. Find out about the present immigration law.

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- b. Study the government-sponsored Exchange Program of students, teachers, doctors and scientists.
 - c. Find out about the youth programs, school-to-school program, and Friendship Box Program sponsored by the American Red Cross.
 - d. Investigate the Student Exchange Program sponsored by the Red Cross.
 - e. Do research and report on American holidays and customs which actually originated in other lands.

- 16. Knows the importance of caring properly for hair, nails, teeth, and skin and how this is related to good grooming and good health
 - Some attention should be given to the following:
 - a. What is proper care of the hair?
 - b. What are some of the diseases of the gums?
 - c. What good practices should be followed in caring for the skin?
 - d. What is acne and how is it prevented?

- 17. Understands the relationship of health to athletic and other recreational activities
 - Ask the coach, nurse, or public health consultant to talk on this subject. Use charts and articles from papers and magazines about importance of good health to success in physical development.

- 18. Knows the relationship of rest and good food in the cure of tuberculosis
 - Use visual aids; such as, filmstrips, charts, X-ray, and motion pictures.

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19. Understands the need for a yearly physical examination
- Pupils should learn that it is economically sound to have regular examinations instead of waiting until ill to consult a doctor.
20. Visits a dentist twice a year
- The teacher should stress the importance of good oral hygiene. The pupil should have acquired the habit of brushing his teeth at least once a day.
- Have the class study the structure of the tooth and how decay begins. Use charts and films.
21. Has a regular eye check
- The teacher should use Snellen or similar tests of acuity of vision. In cases where there are signs of eye strain or defects, health officials should be consulted.
22. Understands the physical changes of puberty
- The doctor or nurse should help the teacher initiate this subject, make recommendations, and provide subject matter. Visual aids approved by local authorities will prove helpful. Charts and life-size models should be used if available. Show films; such as, Life and Growth, after first obtaining approval and cooperation of parents and community leaders.
23. Knows what should go into a first aid kit
- Pupils should become acquainted with a first-aid kit. Explain how each item should be used. Ask students to examine and discuss contents. The kit should contain the following items:
- a. Band-aids
 - b. 3-inch sterile gauze squares
 - c. Assorted sterile bandage compresses
 - d. Sterile absorbent cotton

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- e. Triangular bandages
- f. 36-inch sterile squares
- g. A tube of good burn ointment
- h. Mild iodine
- i. Inelastic tourniquet
- j. Scissors and forceps
- k. 1- and 2-inch roller bandages
- l. Roll of 1 1/2 inch adhesive tape
- m. Paper cups
- n. Wire or thin board splints
- o. Sterile castor oil or mineral oil for use in the eyes
- p. Aromatic spirits of ammonia
- q. A bottle of merthiolate

The teacher should have pupils work in groups to practice simple methods of bandaging. Pupils should give demonstrations in assembly programs showing the correct procedures to use in various first aid treatments.

24. Knows what to do for minor cuts and burns

Pupils should be taught that the important thing to remember when caring for minor cuts is to avoid possible infection. A class demonstration should be given on how to wash wounds and apply antiseptics. Sterility and cleanliness should be emphasized. Pupils should be taught that puncture wounds caused by rusty nails, splinters, and other sharp objects contain germs and are particularly dangerous. They should learn the accepted first-aid treatment for burns. The pupils should also learn how to control bleeding.

25. Becomes safety conscious

Pupils may make safety surveys of their school, homes, yards, and farms; and correct those hazardous conditions

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which they are able. Teach them what steps should be taken to correct those hazards which they are unable to correct.

Pupils may participate in school and community programs; such as, clean-up campaigns and fire-prevention week.

Find ways pupils can cooperate in the school Civil Defense Program and lead them to assist in this program.

26. Knows what immunizations he gets regularly and why they are given
- Have the group visit the health authorities or hospital staff to obtain this information. Have each pupil keep his own record and take part in class discussion.

27. Understands that early stages of tuberculosis can be cured
- Continue to stress the importance of the X-ray to discover early tuberculosis (Goal 24, Level Six). Some understanding of how X-rays are made may prove helpful in creating interest in having a yearly X-ray.

The pupil should be taken into the confidence of doctor or nurse who conducts the examination. The teacher should do preliminary work on this so that both the pupil and medical staff will be prepared.

Draw pupils into discussions of check-ups on automobiles to find and eliminate defects before they become serious. Develop the thought that we should be even more concerned about the human body and have regular physical check-ups. Study the nature of tuberculosis and the fight against it, especially the part medical research has played in controlling this disease.

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28. Knows how to use a public restroom
- Arrange for pupils to visit a public restroom, see the facilities, and learn how to use them properly. Service station attendants may be helpful in assisting with this study.
- If a public restroom is not available, use local toilet facilities.
29. Knows the source of the water supply for his own and other communities, and how garbage and sewage disposal are handled
- Develop, with the class, an understanding of the term sewage. Find out the proper disposal of sewage, garbage, dishwater, and bath water. Study the proper location of a sewage disposal unit--whether outdoor toilet, septic tank, or city sewage system--in relation to the water supply. A trip to the local sewage disposal plant is desirable.
30. Understands why alcoholism is a very serious problem
- The class may:
- a. Study traffic accidents and the number involving drivers and pedestrians who had been drinking.
 - b. Find out how much money is spent in their state each year on alcoholic beverages.
 - c. Discuss reasons why there are laws to keep adolescents from drinking alcohol, and why they were passed. Find out what this law states.
 - d. List ways that money now used for alcoholic beverages could be put to better use.
 - e. List other problems created by excessive drinking; such as, traffic accidents, gets in jail, loses job, etc.

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The pupil should have some knowledge of the purpose and activities of Alcoholics Anonymous.

31. Understands why smoking may be harmful

Ask pupils to open and close their fists about 75 times a minute. Actually time them, as this will help them understand the work the heart does. Explain to them that the heart muscle contracts at about this rate throughout life.

Help them to understand that heavy smokers are often bothered with a cigarette cough as a result of irritation of membranes of the nose, throat and bronchial tubes, and that when a person inhales as he smokes very small amounts of harmful substances are taken into his body. (See chart at Goal 27, Level 6.)

Encourage each pupil to get all the facts he can about smoking, think about them, and then decide what he will do about smoking.

32. Learns to participate in a wide variety of activities with opportunity to experience success in many

Because of the variance in maturity and needs of the individuals in this age group, it is particularly important that physical education activities be selected to suit the needs of each individual. Activities should be modified to provide the best growth and development for each child at his present stage. It may mean the inclusion of less vigorous activities; such as, sitting, or quiet games, or additional rest for a child.

33. Understands the basic principles controlling body

For continuing improvement of body mechanics, muscle tone should be maintained through exercise, but exhaustion should be avoided. A systematic calisthenics

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- mechanics and maintains correct postural positions
- period of 15-30 minutes should be scheduled, to drill students in the fundamental fitness exercises.
34. Has some knowledge of weight training
- Both boys and girls need to know that weight training can develop large and small muscle groups rapidly. Deficiencies to muscle size or strength can be corrected at a faster rate through weight training. Boys can be encouraged to use bar bell equipment, and girls can use Indian clubs or other light weight equipment.
35. Participates in the following team sports: softball, touch football, basketball, soccer, volleyball, apparatus skills, track, and field
- In the upper grades children of the same grade, and even the same age, show great differences in their physical maturity. At the time when team games are being introduced, it is essential that children be classified in ability and physical groups for fairness in competition.
- A desirable method of classification for elementary boys' is the Greenway method, based on height and weight. Use $1/2$ the weight, plus height in inches, to secure the points.
- | | |
|--------------------------------|--------------------------------|
| Class A--126 points or
over | Class D--90-103 points |
| Class B--116-125 points | Class E--89 points or
under |
| Class C--104-115 points | |
36. Builds upon previous knowledge about the classification of living things
- The pupils can classify collections by sorting them into groups of similar objects. These can be discussed, bringing out the fact that scientists have based classification on different characteristics.

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Plants and animals may be collected or observed under a microscope. Pictures, posters, charts and bulletin boards may be used to illustrate classifications:

Animals

One-celled animals--
protozoa
worms
mollusks
starfish
arthropods (Crustaceans, centipedes, spiders, insects)
fish
amphibians
birds
mammals

Plants

One-celled plants--bacteria--
yeast plants
molds
algae
mosses and liverworts
ferns
seed plants (monocotyledons and dicotyledons)

37. Knows about the balance of nature

Discuss ways that animals depend on plants and other animals for food; and how plants, in turn, use decayed animal and plant material, which has been broken down by bacteria, called humus, for food. Show that the numbers of various animals are controlled by their predators; and that erosion and floods are checked by the growth of plants. Children should have some understanding of the balance of nature and man's responsibility for maintaining this cycle. Teach that interference with this cycle causes imbalances, floods, increases in undesirable animals and plants, and the destruction of some species.

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38. Understands something about the scientific method in performing an experiment
- Have students go to the chalkboard or write on paper the steps which a scientist uses in performing an experiment.
- Demonstrate before the class an experiment showing all the steps. Have each pupil perform a simple experiment, using all the steps. Some examples of typical experiments that the students can perform are:
- a. Determining which is heavier, milk or water.
 - b. Preparing oxygen.
 - c. Determining if iron will oxidize.
 - d. Determining if there is dust in ordinary air.
 - e. Determining if dry soil contains water.
39. Has some understanding of the composition of matter
- Have pupils bring to class samples of various kinds of matter.
- Have them arrange an exhibit with pictures, diagrams, and samples showing various kinds of matter.
- Guide the class in simple experiments, showing how gases, liquids, and solids are different. Have pupils construct models and charts on the composition of matter, showing models of an atom and a molecule.
40. Knows the cause and effect of wind and water erosion
- At this level the pupil should be able to consider some of the problems and solutions which have arisen in connection with man's use of soil, water, and forests.
- Help pupils to find small areas where insidious erosion is taking place. They can experiment with different

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materials and ways of building check dams. A small area can be seeded or terraced; trees can be planted; and the effect of this on erosion observed.

Reading materials and the use of resource persons can be supplemented with field trips to areas where erosion is severe, or has been checked.

Pupils should become familiar at this point with the word erosion and its many implications.

Through using soil in a container and an electric fan and a water sprinkler, simple experiments can be set up in the classroom to show the effect of wind and water erosion.

Pupils can be made aware of the extreme losses of soil due to erosion by viewing some of the better films available.

Analyzing and evaluating such experimnts and observations should help pupils gain respect for the soil and realize that, unless care is exercised in its use, rapid deterioration takes place; and that building soil is a very slow process.

41. Learns how physical and chemical changes occur

This concept can be expanded by simple experiments; such as, cutting and stretching materials; dissolving sugar or salt in water for physical changes; and burning for chemical changes.

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Pupils should have some understanding of how scientists make use of their knowledge of physical and chemical changes.

42. Knows the importance of electricity and machinery in daily living

Teach pupils that lightning is a huge spark of electricity; that to get lightning, one must have a charge of electricity and that an easy way to get a charge of electricity is by rubbing two different materials together.

Examples: Show that shuffling across a rug, combing hair, and rubbing one's hand against cat's fur produces frictional or static electricity. Have the class or a group find out how electricity works for us. Where electric current is available in the school, pupils may visit the kitchen, shop, and other places to get this information; otherwise, reference materials will provide the source. Emphasize that electricity is a source of power, light, and heat, and that it makes possible communication by telegraph, telephone, radio, and television. Contrast the modern home with the home which is without electrical power.

Pupils should observe, discuss, and experiment with the six types of simple machines (screws, wheel-and-axle, gears, pulleys, levers, and inclined plane) in order to learn that complex machines are nothing more than combinations of simple machines; for example, in an airplane the propeller is a screw or inclined plane, the cam and drive shaft are levers, etc. The class should discuss changes brought about in our lives by complex machines; such as, the automobile and the airplane.

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Exhibit a collection of simple machines used in the home; such as, can opener, bottlecap remover, and egg beater.

43. Learns about solids, liquids, and gasses

Have groups experiment to find the various forms water will take by using a watch glass and ether to change water to a solid or by bringing water to a boiling point where it is changed to steam (kitchen tea kettle). Lead pupils to discover that temperature determines the various forms water will take.

44. Knows something of the interrelation and order of the universe

At this level children can develop the concept that accurate time is measured by the steady rotation of the earth as it revolves around the sun, and that the entire solar system is moving through space. The north star and constellations may be observed. If accessible, an observatory may be visited, or a telescope may be used. Sky maps may be made. Using magazines and newspapers, children might keep up-to-date with man's progress in exploring space.

45. Continues to improve his skills in reading for different purposes

A basic aim of reading instruction is to help pupils understand what they read and study. Increased proficiency in reading can be attained best by practice. Study skills are developed in connection with all activities of the school day. An effective program of instruction requires the cooperation of every teacher in the school. Each classroom teacher is responsible for the reading skills necessary in his particular field.

When pupils are attempting to grasp a new fact or process, help them acquire new words to express it. Have

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them pay particular attention to the definition of terms and refer to the dictionary for additional help.

Help pupils develop the habit of rereading passages for comprehension of unfamiliar terms.

Lead pupils, as rapidly as possible, to independence in their study.

46. Increases his reading rate

Pupils should be aware of their reading rate, and teachers of the various subject-matter fields should guide them in developing a rate suitable to the type of material being read and the purpose for which it is read. Emphasis should be placed upon comprehension, not speed.

Four suggestions are made to teachers who want to encourage pupils to increase their reading rate:

- a. Build a desire to read by providing materials based on the interests and abilities of the pupils.
- b. Encourage each pupil to read as much as he can.
- c. Help the pupils determine how rapidly they are able to read.
- d. Discuss the advantages of rapid reading of some materials. Interest pupils in undertaking a program to improve their reading rate.

Some devices teachers may use to increase reading rate are:

- a. Reading aloud to the pupil. (The tempo may gradually be increased.)

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- b. Reading aloud to the group; pupils follow with markers.
- c. Teaching pupils techniques of skimming and finding main points.
- d. Using timed reading drills.
- e. Helping children to overcome lip reading.
47. Extends improvement of enunciation and pronunciation in all speech activities
- Have pupils participate in informal discussion, conversation, dramatization, and choral reading. They may give book reviews or newscasts, and preside at club meetings. Using the tape recorder may also be helpful.
48. Refines listening skills
- Have pupils listen to recommended television and radio programs. Provide recordings for groups to listen to for information. Guide the class in writing down study assignments and other directions. Practice of good listening in social conversation is also helpful.
49. Understands the importance of correct usage of verbs in effective expression of thought
- One practice for students who are learning the English language is to have them use the third person singular of the verb. By using student's own oral and written work, help them learn correct usage of verb forms. Draw humorous cartoons personifying the verbs.
50. Uses nouns and pronouns correctly
- Help pupils recognize nouns and pronouns, singular and plural. If possible, compare the grammar of his own language with English grammar. Guide them in using correct number in his written and oral English.
51. Can identify the subject and predicate of a sentence
- Teach the pupil to express himself accurately and concisely. At the beginning of the year a test may be given to help the teacher and pupils determine their

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- as an aid to expressing written thoughts
- needs. Plan and work toward meeting these needs. (The technical part of language expression should be used only as it helps to clarify a point for the pupil. A simple diagram may help the pupil understand that both subject and predicate are necessary to express a complete thought.)
52. Understands the difference between sentences and phrases
- Teaching pupils how to use dictionaries and handbooks to settle their uncertainties is an important phase of learning. The habit of consulting recent and valid sources of information will help keep pupils in touch with English as a living, changing language.
- Inductive instruction in grammar will lend strength to the skill of noting true sentence meaning; phrasing in oral reading; and determining relationships of sentence parts (subjects, predicates, phrases, and clauses) may prove to be an aid in gaining this understanding. Use materials on the child's level and of his own making.
53. Shows growth in the use and understanding of words
- The teacher should be constantly alert to helping each pupil develop a vocabulary which is broad, simple, specific, accurate, and colorful. These words should come from his daily activities.
- To develop an interest in vocabulary building, a pupil may estimate his vocabulary by the following procedure:
- a. Select at random one page from each hundred pages in the dictionary; read down the list of words and count those he actually uses in speaking, in writing, or in both.

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- b. Add the numbers from the different pages; then multiply the sum by one hundred. The product will be a rough estimate of the number words in his active vocabulary.
- c. On each page selected, also count the additional words which he does not use himself, but which he understands in reading or listening. Multiply the sum of these words by one hundred and he will arrive at his passive vocabulary.
- d. Now add the words in his active vocabulary to the number in his passive vocabulary, and he will arrive at a rough estimate of his total vocabulary.

Some ways pupils may learn new words are:

- a. Listen to the radio.
- b. Read material which is expressive and attractive.
- c. See movies and television.
- d. Talk with other people.
- e. Read newspapers.
- f. Read easy, scientific material.
- g. Use the dictionary.
- h. Play word games.
- i. Learn common prefixes, suffixes, synonyms and antonyms.
- j. Identify some ways that our language changes and expands.

54. Recognizes synonyms and antonyms The more recently published reading books make provision for the study of synonyms and antonyms as important phases of reading. Pupils should understand that

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synonyms are words which express essentially the same idea but often have shades of difference in meaning. They should note that dictionaries use synonyms in defining words.

The following suggestions for preparation of exercises may be helpful:

From a reading selection, write on the chalkboard ten difficult words. In different order, write a synonym for each of these words. Let pupils match words and synonyms.

This type of matching can also be used with antonyms.

Write on the chalkboard sentences from a reading selection containing groups of words for which synonyms can be supplied. Underline the groups of words. For each underlined expression, pupils may choose an appropriate synonym, rewriting the sentences.

Example: Little by little he crept up the hill.
Gradually he crept up the hill.

Have children discover that dictionaries often give antonyms as well as synonyms in defining words.

Example: abolish - establish

55. Reads independently materials at his free reading level The pupil should be encouraged to do much independent reading at his free reading level. Such reading material should be available in each classroom. Extensive

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use should be made of the Materials Center. If the pupil learns to like to read, and seeks reading as a means of pleasure, he will greatly improve his skill in this area. See next goal for finding free reading level.

56. Reads materials at his own particular instructional level

The teacher should make every effort to ascertain that the pupil is receiving reading instruction at his instructional level. The following method may be helpful in finding the child's instructional reading level, as well as his other reading levels:

- a. Needed materials:
Readers, well graded, with interesting stories, free from specialized vocabulary.
- b. Technique
Choose several paragraphs at suitable grade levels; have a pupil read orally; ask a few fact questions to indicate comprehension; ask a thought question to disclose the pupil's ability to draw inferences.
- c. Points to notice:
 - (1) Free Reading Level
 - (a) 90% comprehension; 99 of every 100 running words correctly pronounced; natural phrasing; pupil relaxed.
 - (2) Instructional Reading Level:
 - (a) 75% comprehension; 95 of every 100 running words correctly pronounced; natural phrasing; pupil relaxed.
 - (3) Frustration Reading Level:
 - (a) 50% or less comprehension; 10 or more words mispronounced of every 100

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running words; phrasing unnatural and uncertain; pupil tense, possible finger pointing.

In working with the above, we should remember the pupil's Capacity Level. This applies when material is read to him. It is the highest level of material he can comprehend when it is read to him. A pupil's Capacity Level can be evaluated by watching for his control over language--fact relationships when material is read to him.

*The above concepts are indicated by Betts as well as other leading authorities.

57. Locates the books or information that he wants in the library

The student should know how to use the library in his school. Since the libraries of the Indian Bureau schools vary from classroom libraries to Material Centers, this goal can be attained according to the local facilities. In some schools the pattern will be very elementary; in others it may include:

- a. An elementary understanding of the Dewey Decimal System.
- b. A working knowledge of the arrangement of books on the library shelves according to the Dewey Decimal System.
- c. The use of the card catalog.
 - (1) The use of the drawer labels in the card catalog.

*Emmett Albert Betts, "Foundations of Reading Instruction," American Book Co., 1954, pp. 446-453.

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- (2) The use of the guide cards in the card catalog drawers.
- (3) Practice in finding books
 - (a) by title.
 - (b) by author.
 - (c) by subject
 - (d) by using cross references.

Activities:

- a. Work out a skit on the arrangement of books and the Dewey Decimal System.
- b. Have a library club.

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| 58. Does creative writing | The pupil may write personal experiences and simple poems. He may collaborate with others in writing group poems and dramatizations. He may report for the school paper. |
| 59. Shows growth in ability to follow specific directions | <p>The pupil should develop the ability to follow instructions in the performance of practical tasks; such as, following recipes, building model planes, etc.</p> <p>The teacher should continue to provide practice exercises interesting to the particular group and make frequent use of oral directions. Pupils should evaluate their success in following directions.</p> |
| 60. Collects the material necessary for study and gets to work immediately | In daily teacher-pupil planning, work out with the pupils a system of study. Check frequently to evaluate effectiveness. Encourage pupils to suggest and try out desirable changes in the study plan. |

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| 61. Gives clear and simple directions in an extemporaneous speech on how to make or do something | Situations; such as, making a bed and studying may be utilized for extemporaneous speech. Pupils should be shown how to give directions in sequential order; and to choose words that are correct for the situation. Have pupils listen to each other's directions and evaluate. Also, have the group point out needed improvements. Pupils can evaluate their own progress with tape recordings. |
| 62. Takes responsibility for speaking audibly | The pupil has had many opportunities throughout the previous school years to develop this responsibility. The teacher should provide many additional opportunities in various group situations. The pupil should seldom need to be reminded that he must speak so others can hear. |
| 63. Can make charts and labels needed in classroom work | The pupil should strive for increased proficiency in both manuscript and cursive writing. This skill can be utilized and extended by making suitable charts, posters, and labels needed in the classroom. |
| 64. Increases skill to listen for enjoyment | At this level the pupil's skill in listening for pleasure may be extended and refined through listening to good literature, poetry, and music. |
| 65. Continues to improve in spelling ability | The pupil should be gaining independence in his spelling. Develop with him an attitude of responsibility and pride in correct spelling in all phases of his written work. |
| 66. Divides fractions: | In Level Six, the child should have acquired an understanding of fractions. He should use fractions in |

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- a. Fractions by fractions. everyday situations. The teacher should provide sufficient practice to make the process automatic. (Pupils will need to understand clearly that to divide by a fraction, invert the divisor and multiply.)
- b. Whole numbers by fractions
- c. Mixed numbers by fractions
- d. Mixed numbers by mixed numbers
67. Understands the relationship of fraction numerals and decimal numerals Approach the study of decimal fractions through the medium of related common fractions. Teach that decimal fractions are common fractions whose denominators are 10, 100, 1000, or some power of 10 greater than 0.
68. Uses decimal fractions in the four processes Teach pupils to keep the decimal points in a straight column and to write tenths under tenths, hundredths under hundredths, etc., as well as to write units under units, tens under tens, etc.

In subtraction, show by example that if the number of places in the subtrahend is greater than the number of decimal places in the minuend we must begin by subtracting from an imagined zero. The blank spaces may need to be filled in with zeros until the pupil becomes more proficient and can do without such visual aids.

Example:
$$\begin{array}{r} 62.4 \\ -13.291 \\ \hline \end{array}$$
 or
$$\begin{array}{r} 62.400 \\ -13.291 \\ \hline \end{array}$$

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Show by example the analogy in adding and subtracting decimals to common fractions; for example: $1/10$ plus $3/10$ equals $4/10$; or $.1$ plus $.3$ equals $.4$; and $8/10$ minus $5/10$ equals $3/10$; or $.8$ minus $.5$ equals $.3$.

- a. Multiplication of decimal fractions. Use enough illustrative examples to show the pupil that when a decimal is multiplied by a decimal, the number of decimal places in the product is equal to the number in the multiplicand plus the number in the multiplier. Approach this through the medium of common fractions. A decimal example is stated and then solved as in common fractions. Example: $.23$ times $.7$ equals $7/10$ times $23/100$ equals $161/100$ or $.161$.
- b. Division of fractions. Use sufficient illustrative examples to show the pupils that division of decimals is similar to division of whole numbers. Make clear the fact that when we divide decimals the number of decimal places in the quotient will equal the number of places in the dividend minus the number in the divisor. If there is no decimal in the divisor, we place the decimal point in the quotient directly above the decimal point in the dividend.

69. Learns the meaning of percentage, and is introduced to the "3 cases" of percent
- Pupils should undertake to study percentage with an adequate understanding of the underlying fraction concepts. Stress the fact that percentage is merely a new word for an idea with which the pupils are already familiar. Teach the fact that percent means hundredths; thus:

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.14 equals 14 hundredths equals 14 percent equals 14%.

.85 equals 85 hundredths equals 85 percent equals 85%.

.07 equals 7 hundredths equals 7 percent equals 7%.

Inform pupils that businessmen and other people often use the term percent when referring to hundredths. When a merchant advertises a reduction of 25 percent or 25% off on ladies' coats, he means that he has reduced the price 25 hundredths, or .25 or $\frac{1}{4}$.

First lessons in percentage should be planned to show the close relationship between percentage and decimal fractions or common fractions. Percentage charts and graphs of attendance may provide purposeful activity in the use of percent.

The three types referred to in the goal are:

- a. 45% of 80 is _____.
- b. 35 is 14% of _____.
- c. 41 is _____% of 82.

In states with sales tax, give students experiences figuring taxes using tax schedules commonly used by sales personnel.

70. Learns fractional equivalents of commonly used percents

Make a wall chart showing the list of percents with their fractional equivalents. Each student may make a copy of his own for future use and study. Choose sides and have a contest to see which side has best automatic response.

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71. Learns how to compute with numerals for mixed measures
- Study tables pertaining to denominate numbers. Begin with simple changes by use of pictures or diagrams. Use actual measures, giving each child a chance to see literally, before putting a problem into figures. Work on the four fundamentals with this type of problem.
- Encourage activities that will cause the pupil to change 17" to 1' 5"; change 25 ounces to 1 pound 9 ounces; etc.
72. Gathers information on the functions and services of a commercial bank
- Visit a local bank. Invite local bankers to talk to the class.
73. Extends knowledge of money orders
- Pupils should have experiences in filling out requests for money orders. Invite the local postmaster to explain sending money by money orders. Discuss how money can be sent by telegraph.
- Make the Pupils aware that there are several sources from which money orders may be purchased. Have students compare prices to help them further develop the habit of saving.
74. Identifies common geometric--shapes--plane and solid
- Have pupils prepare a large chart, showing an example of each shape. The pupil should work with area, perimeter, and circumference.
75. Develops a concept of volume and can compute the volume of rectangular prisms
- Through manipulation of inch cubes help the pupils discover a formula for figuring the volume of rectangular prisms. Help pupils to check their calculation by counting the number of cubes in the prism.

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76. Interprets and constructs line graphs

Class attendance, average temperatures, and such data can now be expressed by employing line graphs.

Have pupils search newspapers for graphs and express the data in the various graph forms, line, pictorial or bar.

77. Extends his problem solving ability to include comparison situations as illustrated in the suggested activities column

Find the smaller number when the larger number and its excess or deficiency are known. Example: Tom has 8 blue marbles. He has 5 less red marbles than blue ones. How many red ones does he have? (Example of deficiency) $8 - x = 5$.

Find the larger number when the smaller number and its excess or deficiency are known. Example: Tom has 3 red marbles. He has 5 more blue marbles than red ones. How many blue marbles does he have? (Example of excess) $x - 5 = 3$.

Find the ratio one number is to another. (Using such terms as times as many, etc.) Example: Tom has 8 blue marbles and 3 red ones. He has what fraction as many red marbles as blue marbles? $\frac{1}{x} = \frac{3}{8}$

Find a number when the other number and the ratio of the first number to the second number are known. Example: Tom has 8 blue marbles. He has $\frac{3}{8}$ as many red ones. How many red marbles does he have? $\frac{3/8}{1} = \frac{x}{8}$

Find a number when the second number and its ratio to the first number are known. Example: Tom has 8 blue

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marbles. He has $\frac{3}{8}$ as many red marbles as blue ones.
How many red marbles does he have? $\frac{3}{8} = \frac{x}{8}$.

78. Participates in social dancing
- Boys and girls need encouragement to participate in such forms of dancing as folk, square, and modern.
79. Takes part in singing of school songs; and of songs that express appreciation of beauty of nature, dignity, and mutual regard in human relations, and of people's hopes and aspirations
- The pupil should know and try to sing school songs so that he can participate wholeheartedly in school assemblies and athletic events. Many opportunities should be developed for the class, for small groups, and for the whole school to sing together; to sing for each other; to sing for adults in the community. Each pupil should develop a repertory of songs. He should have opportunity daily to participate in singing.
80. Should have some knowledge of the composition of a band and an orchestra
- The pupil should learn by handling instruments, and/or through pictures, what is meant by percussion instruments; stringed instruments; woodwind, and brass instruments; and to recognize the instruments of each class when he sees and hears them. Recordings on disks and tapes; films featuring music; and radio and television programs can provide opportunities for listening to, identifying, and enjoying the sounds of instruments.
- Pupils should learn some of the fundamental differences in the composition of a band and an orchestra. Where possible, and when individuals are interested, pupils should have opportunity to take part in band or orchestra activities.

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81. Develops sensitivity to beauty in nature and in man-made things
- The teacher can share with the pupils, and ask the pupils to share with the teacher and classmates, the beauties of classroom surroundings; such as, the design and color found in the woods in the furniture, walls, doors, floor, and ceiling of the classroom and school buildings.
- The pupils should participate in exciting the interest and imagination, and sharing with the teacher and classmates, the beauties of design and color seen inside and outside of the school. At times when a material sharing is not possible or feasible, a verbal picture may be presented by pupils, sometimes by the teacher, for the enjoyment of the group.
- The teacher may wish to guide the content by including in the sharing (or requesting pupils to include) such things as: sunsets and sunrises, (colorful or dark); clouds (white and fluffy, or storm clouds); shapes and designs of stones, leaves, and the like; comparison of nature's designs with man-made designs used in industry (a comparison of a flying bird with an airplane), and many similar likenesses. Pupils should be made aware of the obligation of all people to preserve these beauties for their own enjoyment and that of others.
82. Appreciates the work of artists and craftsmen through first-hand experience in similar media
- Invite local and regional art authorities to talk to the class. Visit art museums when field trips are made to metropolitan areas. If bookmobiles visit the school, request inexpensive reproductions of the work of the great masters for display.

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83. Participates with other classrooms in art exhibits

The children will have reached the developmental stage of assuming great responsibility for organizing art contests.

84. Suggests creative ways of developing assembly programs in which he participates at least four times a year

At this stage pupils have had many opportunities to participate in all phases of preparing for and executing assembly programs and should during this year sharpen skills of planning, of showing a willingness to share classroom learnings, showing creativeness in ideas for presentation of classroom learnings, and showing evidence of evaluation and selectivity of materials to be used.

Pupils who, in planning for programs, make use of materials of which they have knowledge have a better opportunity to do good planning. They have better opportunity to sharpen their own skills of planning, of organizing and of communicating. They should be given the opportunity of assuming the full responsibility for the planning, the execution, and the success or failure of the program.

During the assembly program the group shares classroom learnings according to the group plan and according to a code of standards agreed upon by the group. The listeners participate according to a code of standards which is also acceptable by the group.

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| 1. Develops time allotments needed to carry out and balance desired activities | With the hope and expectation of completing high school, the pupil needs to learn to use time wisely in balancing daily activities. Help him learn to plan home living and classroom activities to allow for satisfactory achievement and balanced participation in all of his interests and activities. |
| 2. Budgets money received from home, through class projects, 4-H activities, and similar endeavors | The pupil continues learning to budget and balance class and club accounts and to share in decisions on expenditures of funds. He reads the treasurer's report on funds spent and balances carried. He helps to plan club and class budgets for parties and other activities. He learns how to make a simple budget for his funds. Help him acquire knowledge concerning interest charges and sales tax. |
| 3. Explores and studies implications of school and training in respect to wage difference | The pupil may make a comparison of wages received in respect to work-school grants, unskilled, and skilled wages. He may make a study of occupations in the local community and school, and develop some understanding that school achievement and individual training help determine the wages a person receives. Through group discussions, reading materials, resource people, and other means, the pupil needs to be informed of his opportunities, and of his obligation to remain in school until competent to earn a living. |
| 4. Realizes that jobs well done are related to demands for individual's time and attention | The pupil needs to find ways of adjusting to his strengths and weaknesses. Through finding activities one does well, and others in which skills are needed, the pupil may learn to respond to these situations with emotional satisfaction. Help him learn to respond constructively to commendation and criticism, and in |

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situations where leadership responsibility, or other special recognition is given.

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| 5. Explores and studies under supervision his future high school program | It is important for the pupil to receive guidance in planning his transition to high school. Through the use of high school courses of study, handbooks, consultants, and other resources help pupils make plans for entering high school. |
| 6. Plans with the help of an adult and carries to conclusion, units of work or projects of work that extend over several days or weeks | At this level lead the class in extending ability to plan over a long period of time and in more complex situations. For example, in a unit on the importance of good food in respect to good health, they may keep up-to-date charts which cover extensive periods of time. |
| 7. Strengthens and maintains goals one, two, three, four, and five in Level Seven | |
| 8. Knows the pattern of the state organization of government, and its relationship to local government | The pupils should know the names of the most important state offices. Through variety of activities lead them to determine the relationship between state, local, and tribal government. |
| 9. Knows the functions of state officials | The pupils may follow the activities of state officials through newspapers and through radio broadcasts and relate these to the duties of the offices. |

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Through research, have committees report on sources of funds for state services and for national services from which they benefit. Lead them to determine their responsibilities as recipients of these services and as contributors to these services.

10. Understands his responsibilities in government affairs

The teacher should provide opportunities for pupils to participate in discussion groups; such as, panels, forums, and round tables, and should encourage pupils to take the initiative in acting as leader, chairman, or officer of such a group as a means of aiding him in understanding his responsibility to a group.

11. Understands his rights and responsibilities in selecting officials by secret ballot

The pupil may study the history of the secret ballot. He may find out what countries use it. Use the secret ballot in class voting. Lead the group to appreciate the fact that the secret ballot is an inalienable right in a democracy and places the power in the hands of the people.

12. Is familiar with the major aspects in the development of democracy in America; such as, background, expansion, and struggle for democracy

The vocabulary related to this goal should be carefully developed. The pupil will study man's first efforts toward the formation of government. He should learn that frontier life promoted the democratic way of living and realize that leaders have shown great courage in the struggle for democracy. Encourage the class to use democratic processes to solve their common problems. They should actively engage in modified forms of self-government. They should elect representatives from the class to make group decisions.

Let pupils make predictions on the topic What if there had been no constitution?

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As this goal develops, pupils should continually compare our past history with current events to realize that this is an ever-changing world. In studying the westward movement pupils will see that it continued steadily with each succeeding generation until all land from the Atlantic to the Pacific was settled.

In studying how the United States has become a great nation, pupils should understand that it has a heritage and a long history of democratic government; that it has passed through times of crises, trouble, and sorrow. They should examine the fact that the Civil War had its beginnings long before 1861, with problems; such as, slavery and states' rights.

13. Understands the basic differences between our form of government and the governments of other nations

Lead pupils in discovering the basic principles of:

- a. Democracy.
- b. Dictatorship.

Then contrast the basic principles of these two types of government to:

- a. Communism.
- b. Capitalism.
- c. Socialism.
- d. Fascism.

The pupils may make a frieze of the symbols of democracy and specify for classmates the significance of the:

- a. Great Seal.

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- b. Bald Eagle.
- c. Star-Spangled Banner.
- d. Flags.
- e. Uncle Sam.
- f. Shrine of Democracy (4 faces).
- g. Liberty Bell.
- h. Statue of Liberty.
- i. Independence Hall.
- j. Buildings and memorials in Washington, D. C.
- k. Pledge of Allegiance.
- l. Flag raising on Mt. Suribachi.

By the use of a large wall map, they may locate the capital of each country with a small flag for a little booklet in the shape of a capital building. Inside the booklet may be placed information which has been secured through research as to the type of government they maintain.

14. Understands the responsibilities of the United States as a world power in affairs; such as:
- a. Panama Canal
 - b. Pan-American Union
 - c. North Atlantic Defense Pact
 - d. United Nations
- The idea that we are living in an age in which survival is the greatest concern of all nations should be developed through a study of the United States as a world power. This study should emphasize, in ways meaningful to pupils, efforts to promote peace, security, and health throughout the world. The pupils should learn the ways in which both individuals and nations work together to preserve peace.
- Encourage wide reading of newspapers, Current Events, Junior Scholastic, magazines, and other publications. The teacher might set aside a short daily period for discussion of world events, and lead pupils to determine how these events affect them.

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15. Has some understanding of the information on his health record
- Ask a nurse or physician to go over the health record form carefully with the class. Discuss reasons for items which are included on the form.
16. Knows the relationship of rest, good food, and proper clothing to health
- Prior to this level, the pupil has practiced simple health rules. At this level, he needs to realize the importance of rest, good food, and proper clothing in keeping healthy. Use charts and other visual aids. Relate good health habits to healthy skin. Learn the facts about adolescent acne.
17. Follows instructions for the proper care of his eyes
- Discuss the necessity for periodic testing of vision.
Investigate the relationship of vision to accidents.
Discuss proper care of the eyes, prevention of eye fatigue, and use of prescribed glasses.
18. Knows the parts of the digestive system, and how they function
- Pupils should be familiar with the interdependence of the parts of the body and that good health is dependent on proper functioning of all parts of the human body. Use diagrams drawn on the chalkboard to further develop these understandings.
Use visual aids; such as, filmstrips, motion pictures, and torso models. Visit slaughter houses to see the various organs and bones of an animal's body. Use a microscope to study cellular structure and circulation of blood in the skin. (Use skin of live frog.)
This study should include factors which influence digestion, absorption and use of digested materials.

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| 19. Understands the respiratory system and how to care for it | Same as goal 18.
Also consider fresh air and sunshine. |
| 20. Realizes the value of regular dental examinations | Point out to the class what the dentist is looking for during his check-up. Discuss the purpose of dental X-rays. Ask the dentist to exhibit and explain dental X-ray. |
| 21. Understands the emotional changes brought about by physical changes at puberty | It will be desirable to keep the parents informed and obtain their consent before showing any movies on this subject, especially with mixed groups of boys and girls. Close cooperation with the doctor and the nurse is advisable. |
| 22. Knows the symptoms and has layman's knowledge of prevention and control of the most prevalent diseases | Invite the school doctor or nurse to visit the class and talk to the group. Show health films. Use reference material to find information. Make charts and posters. This study should include information on vaccines, toxoids, and gamma globulin. |
| 23. Knows the precautions necessary in preventing tuberculosis | Ask medical personnel to exhibit X-ray films and point out various stages of tuberculosis.

Discuss the dangers of contacts with tubercular cases. Demonstrate procedures in carrying out precautionary measures.

The pupil should learn the importance of building and maintaining a strong body and how he can build a strong body resistance to tubercle bacillus. |

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24. Knows how water can be contaminated and understands how it can be purified
- Pupils should know that drinking water is not chemically pure. It should, however, be:
- a. Free from harmful bacteria.
 - b. Clear and colorless.
 - c. Free from disagreeable taste and odor.
 - d. Reasonably soft.

Have members of the class observe a glass of pure water (safe for drinking) and a glass of impure water. Notice that both look the same. After bacteria have been given sufficient time to grow and multiply, examine the water from the two glasses under a microscope. If a microscope is not available, use filmstrips, slides, charts, and illustrations from various references.

The class should study and discuss the various ways by which water can be contaminated; that mud, living organisms, decaying plant and animal materials, and dissolved minerals are sources of water contamination; that some water impurities are dissolved, while others; such as, mud are suspended and visible to the naked eye; and that usually ground water is a safer source of pure drinking water than surface water.

Discuss the many ways to prevent contamination of pure water. Special attention should be given to using clean containers and individual drinking cups and to locating the well above and at least fifty feet away from contaminated areas. Water should be stored in clean, covered containers.

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Boil impure water and examine it under a microscope. Point out to the class that boiling is the simplest means of water purification. Let them find out how the school's water supply is purified. Familiarize students with the procedure for getting a water sample tested by the State Health Department. If possible, take a field trip to a town or city water purification plant.

25. Knows what to do for poisonous bites Have pupils learn the most common venomous insects and animals; such as, black widow spiders, scorpions, Gila monster, poisonous snakes, bees, mites, and ticks. Use visual aids; such as, pictures, films, and filmstrips to show these animals and their effect on our health.
26. Knows how to administer artificial respiration The pupil should learn that artificial respiration is needed at any time when there is a stoppage of normal breathing. Teach them that, through breathing, the body cells are supplied with oxygen which is essential to the continued life of all body cells. They should learn that the failure of oxygen to reach the body cells, for even short periods of time, results in irreparable damage or death. They should learn that a person who has knowledge of the best methods of applying artificial respiration can prevent death or cell damage. (All teachers should keep themselves apprised of the methods currently taught by the American Red Cross, since this is approved by the medical profession.)
27. Understands how fires can be extinguished The pupil should have experience in extinguishing small fires by using sand, water, etc., under supervision. He should understand that fires are extinguished by a lack of oxygen. He should observe the use of the common

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types of fire extinguishers, learning the type to use in different places. Put a small amount of oil in a flat pan. Pour water on this oil and note how it spreads. Discuss how various types of fires may be extinguished; that gasoline fires are not extinguished by water, but wood fires are. Ask the local fire chief to give demonstrations.

28. Understands that alcoholism is an illness

Ask pupils to discuss what they believe alcoholism to be. View films, filmstrips, and slides on the subject to establish the fact that alcoholism is an illness.

Discuss the purpose of the organization known as Alcoholics Anonymous, or A. A.

Have pupils study and discuss reasons why alcohol is used.

Learn some of the facts about alcohol; such as:

- a. Alcohol is a depressant.
- b. Alcohol dulls the senses so that one does not have good judgment and muscular control.
- c. Alcohol may become habit forming and once the habit is formed it is very hard to break.

Have pupils prepare talks on the requirements of certain jobs that involve responsibility for lives of others; such as, busdrivers, cabdrivers, airline pilots, and others. Help them develop the understanding that some traits are basic to all jobs; such as:

- a. Taking responsibility.

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- b. Learning new skills and continuing to learn while on the job.
- c. Being punctual.
- d. Cooperating both in work and spirit.
- e. Getting along well with others.

Encourage pupils to get all the facts possible about alcoholism, think about them, then decide how each individual should handle the matter of drinking intoxicants.

29. Learns the facts about cigarette smoking

Discuss reasons people sometimes have difficulty in trying to break the smoking habit.

Evaluate smoking advertisements to determine how they are based on appeal.

Select a committee to contact the local cancer society or write to the state society for information concerning smoking and lung cancer. Study the charts for facts. Again encourage the pupils to get all the facts, think, and decide for themselves what course they will follow.

30. Knows the general rules and technical skills used when playing standard national games; such as, soccer, speedball, softball, basketball, tennis, and volleyball

Have pupils study the rules for all new games or activities before undertaking to play the game out of doors. Make explanations as simple and concise as possible. Simple demonstrations are more effective than lengthy explanations.

Technical skills may be learned by demonstration and practice after school, or during physical education period.

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31. Appreciates the value of wise use of leisure time
- There are numerous active sports; such as, swimming, riding horse back, archery, bowling. Physical education can contribute to the ability of the individual to enjoy a healthy, leisure-time activity if the skills of these individual and dual sports are taught. Many of them do not lend themselves readily to classroom instruction; but others offer worthwhile material for physical education.
32. Begins to participate in interschool meets in the form of playdays
- For grades 7 and 8 there should be separate playdays for boys and girls as well as opportunities for coeducational playdays. During these occasions large numbers of pupils can have the experience of meeting with pupils from other schools and playing with them in a situation where school rivalries are forgotten and they meet as neighbors, not as opponents. Play is vigorous but the emphasis is upon social outcomes.
- Activities suggested for playdays are: volleyball, bat ball, dodge ball, softball, soccer, basketball, and horse shoes.
- In fact almost any game or activity can be adapted to a playday situation.
33. Contributes to planning and carrying out social events for boys and girls
- Class meetings or a small committee meeting affords opportunities for pupils to assume partial responsibility for planning social activities. Pupils should be led to see that lack of planning on their part can mean a poor social. The teacher should exercise patience and give the pupils time to get a feeling for this type of activity. Rather than dominate activity planning, the

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teacher should allow pupils to make mistakes. However, evaluation and additional activities should be provided to allow pupils to correct past mistakes and to become more secure with this type of responsibility.

34. Has an understanding of methods used to improve plants and animals for man's use

Pupils should read more about the work of Luther Burbank, analyze his accomplishments and determine which ones have had the greatest influence for the good of humanity.

Help them determine from appropriate pamphlets and bulletins from the Department of Agriculture what is being done currently to improve the quality of plant and animal life. Let them find out how individual growers, farmers, nursery men, cattlemen, and others are contributing to the improvement of plants and animals.

Pupils may learn through interviews with farmers and extension agents the methods used to bring about improvements in quality of plant and animal life; and as time permits, experiment with methods learned and share the results with teachers, classmates, farmers, and extension agents.

35. Understands why we have seasonal changes

Have individuals read the weather forecasts in daily newspapers, listen to radio weather reports, and check for the degree of accuracy over a period of time with the actual weather. Use weather reports in planning for a picnic or trip. Discuss the importance of frost warnings to vegetable, fruit, and citrus growers. Study about the importance of weather reports to transportation companies, farmers, and others who are most affected by weather conditions. Visit the local weather

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bureau office to see the equipment and learn how it is used in weather forecasting.

Have the pupils make a simple planetarium. On a board which has been cut to an efficient working size (4' x 4' or larger) pupils should draw an ellipse to represent the path of the earth in a year's time. Place a small electric light at a position within the ellipse to represent the sun. Through reputable source materials the pupil should determine the position of the earth at twelve points on the ellipse, each representing a position for each month of the year. At each of the twelve points the angle of the earth's axis should also be determined. Holes should be drilled at each of the twelve points, allowing for the mounting of a small world globe to represent the earth rotating at the proper angle.

The small globe should be mounted on a steel rod. This rod should be approximately six inches longer than the diameter of the globe. Pupils should move the globe around the circle, at the same time rotating the globe, and demonstrate the changes made in the light rays striking different points on the globe.

Help pupils compare these results with changing seasons. Let them demonstrate this for visitors and for other classes at the school.

36. Knows some of the ways to prevent soil erosion

Examine different kinds of soil with a magnifying glass. Pick out pieces of rock, sand, and organic matter. The very fine material left is probably clay. Put soil in a

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jar, add water, and stir. Allow it to settle overnight. The coarsest material will settle to the bottom.

Discuss the three classes of soil; namely, clay, sand, and loam. All other soils are combinations of these three classifications. Loam is a mixture of clay, silt, sand, and decayed plants or animals.

Place a small, thin layer of loam over a fire and have the class observe how it changes in color as organic matter burns. Weigh before and after.

The greater part of soil is ground-up rock. Rocks are continually being broken up into soil by the various forces of nature. Weather and climate are the mills which have done much of this. The movement of water over rocks and the action of freezing are some ways in which soil is made. The action of the wind is another factor in soil formation. Adding plant and animal matter gives the soil body and provides it with the additional elements necessary for growth.

Have pupils observe what happens when water passes over a surface free from plant growth. Emphasize the importance of good plant growth in preventing soil erosion.

Have members of the class look up and report on various ways soil erosion can be prevented. See which ones are practiced in their community. Emphasize again that once soil is lost it is difficult to reclaim. Over-grazing should be studied and discussed thoroughly, because much of our Indian land has been lost by this practice. Find

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out from a reliable source how many sheep, cattle, or other animals can be carried on an acre of land in the pupils' home community.

The pupils should learn that all life upon the earth depends directly or indirectly on the soil. They can make charts with pictures of things coming directly or indirectly from the soil. Make use of visual aids; such as, films and filmstrips. Select something that does not come directly from the soil, like wool clothing. Point out how plants provide food for sheep raised for their wool.

37. Participates in local community conservation program

Find out from the pupils how they get their drinking water at home. Have some members of the class volunteer to tell how the school gets its water supply; or have the class investigate this.

Find out how much water is consumed by the average person, by a city, or by a community in one day. Lead the class to discover that it is not always easy for a community or city to get as much water as it needs. The pupil should learn that generally the water supply comes from two sources; surface water (rivers, lakes, and ocean) and ground water (deep wells, artesian wells, and springs).

During one of the great oil booms in the country a sudden water shortage became evident and soon a barrel of water became more valuable than a barrel of oil. Water is a solvent and cleansing agent. Water is used in different ways to run machinery. (Demonstrate the use of the water wheel as a source of power.) Water is a highway of transportation. Water is a cooling and heating

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agent. Water is the home of certain types of animal and plant life.

Read pamphlets, charts, and graphs on the subject. Attend demonstrations. Construct table models showing certain aspects of programs. Visit projects and learn about local conditions and plans for conservation. Enter poster contests. Give demonstrations.

The pupils may beautify their surroundings with plants by using native and cultivated shrubs and flowers for landscaping.

38. Understands the operation and principles of simple machines
- At this level the pupils should study and experiment with each of the six simple machines to learn how they operate to make work easier.
- a. The Wheel--Learns that wheels may be linked in trains by belts to gain advantage of direction and speed.
 - b. Pulleys--Stress the principle that pulleys multiply force--give mechanical advantage.
 - (1) Use spool pulleys or small models to form many combinations.
 - (2) Pupils should understand that the advantage of a pulley system is approximately equal to the number of strands supporting the lead.
 - c. Levers--Make clear by experimentation and observation that levers have a mechanical advantage or speed according to type. Use a yardstick for a lever and demonstrate the three kinds of levers. Make lists of each type found in everyday use;

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such as, first class lever--seesaw; second class --wheelbarrow; and third class--shovel.

- d. Inclined Plane--Experiment with the inclined plane from gentle to steep inclines to find the mechanical advantage. Discuss how this device can make our work easier. List examples of the use of this machine in industry. Pupils should find out that wedges are special inclined planes used to help push things apart. Use wedge to split wood. List and study advantages of common wedge-type machines; such as, knives, chisels, and axes.
- e. Screws-- Teach that the screw usually combines the wedge, the inclined plane, and the wheel and axle. List and study common examples of screw-type machines which make work easier (car jack). Discuss screws as fasteners in wood and metal.
- f. Gears--Find out how gears multiply force and may be used to gain speed. Examine old clock gears, auto gears, or others. See how they move each other in turn. Notice how a small gear sometimes turns a large one and this, in turn, turns still a larger one. If the small one has 12 teeth and the large one 24, a force on the small one is multiplied two times by the larger. Examine a bicycle or some other machine in which a large gear is used to turn a small one. Turn the large gear and note the speed of the large wheel attached to the small gear.

Make a chart with pictures showing man's use of air. Make small models of machines that use air pressure (windmills, airplanes).

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Prepare a list of animals that make use of air pressure to move from place to place; such as, bats, birds, and insects.

Read and see films and filmstrips for information about the use of air in air brakes, vacuum cleaners, and tires.

39. Understands something of how energy changes cause physical and chemical changes

Have some class members collect pictures showing all kinds of chemical changes. Let them do many kinds of simple experiments to show various types of chemical changes.

Examples:

- a. What happens when wood is heated?
- b. What happens when iron changes to rust?
- c. What happens when a match burns?
- d. What happens when we eat food?
- e. What happens when we breathe?
- f. What happens when sugar burns?

Dissolve baking soda in a glass of lemon juice; put some vinegar in a glass full of baking soda; or put a teaspoonful of baking soda in a half glass of vinegar to note change.

Have the pupils collect pictures or draw illustrations showing how heating and cooling changes materials; such as, water changing into steam or ice, cream changing into ice cream, glass bending, etc. Have pupils burn sugar to notice the slow browning. To prove that steam is

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really water, hold a watch glass over a beaker of boiling water. Heat and bend glass.

Place ice in water and test temperature before and after. Fill a glass or a plastic bottle with water or milk and freeze to show expansion. To determine the rate of expansion, heat a wire along its whole length and measure the wire before and after heating.

Heat a certain volume of water and show how heating increases its volume. Heat a certain volume of air and show how its volume has changed. Have pupils perform an experiment on the melting point of various materials; such as, butter, lead, and plastic. Have pupils evaporate various substances; such as, hot water, cold water, alcohol, ether, etc., to see if all liquids evaporate at the same rate. Perform an experiment to show what happens when steam is cooled.

40. Understands the electromagnet and dry and wet battery cells

Keep the concepts simple. Develop the concept that a simple magnet is a piece of iron which will attract or pick up other pieces of iron.

Secure horseshoe and bar magnets and experiment to see what materials can be magnetized.

Make a compass by magnetizing a darning needle. Lay it across a cork in a pan of water and watch it take a north-south direction. Examine and learn to use a real compass. Develop the concept that the compass is a magnet with the north and south magnetic poles and magnetic lines of force.

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Make a small electromagnet by wrapping several feet of insulated wire around an iron bolt or large nail and fastening the two ends of the wire to a dry cell. Use the magnet to move a pile of iron filings or tacks. Bring out the fact that electromagnets are made stronger by using more coils and by sending stronger currents through the wire.

Take a dry cell apart to see and study the chemicals, the carbon rod, and the zinc caps which generate the electricity. Show how the wires must be connected to the two posts on the cell before electricity is generated.

Examine a section of a wet storage battery to learn the parts and how they store electricity.

41. Understands explanations of natural phenomena according to:
- a. Science
 - b. Superstition
 - c. Mythology
- Demonstrate the difference between these points of view by analyzing the following:
- a. The creation--In this case mythological and scientific explanations may be given. Draw from Indian mythology of other and local tribes as well as Greek and Norse mythological explanations. Explain the importance of Greek and Norse mythology to American life and show the similarities to American Indian myths. Then, contrast the mythological explanation to the theory of evaluation. (The teacher is cautioned against teaching the rightness of any of these, as to do so violates freedom of thought.) Give the individual pupil an opportunity to begin to make up his own mind.

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b. Contrast in the same manner as the foregoing the following natural phenomena:

- (1) Fire
- (2) Storms
- (3) Thunder and lightning
- (4) Sunsets

42. Learns something about how man uses air and space

List as many ways as possible in which man utilizes air pressure. Consider: machine power, windmills, sailboats, vacuum cleaners, plumbing, and steam power. Make and test models of windmills, sailboats, and gliders. Study and discuss air compressors and air pressure in tires. Discuss why a balloon floats and an airplane flies.

Pupils can perform simple experiments with balloons and other objects to help them understand Newton's Law of Motion and jet propulsion. Simple research and experiments can be done to help pupils understand the working of rocket engines, escape velocity, the orbiting of satellites, and centrifugal force.

43. Understands a few sources of energy emanating from the physical universe

Through elementary research, observations, simple experiments, field trips, and the use of resource persons, pupils should develop the concept that a change or movement of any kind involves energy. They should discover that there are many forms of energy; such as, chemical energy, electrical energy, mechanical energy, sound, light, and heat and that when we use a fuel properly, energy is released. Develop the concepts that everything is made of small moving particles called atoms, and that electrical energy is a movement of electrons

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which are the outer parts of atoms. Let pupils discover that energy is stored in coal and petroleum. (This is sometimes called stored sunlight.)

A group might show how man has learned to use the energy from moving water and wind, and bring out that man used the sun's energy long before he knew much about it.

Pupils should understand that the atom is a vast storehouse of energy and that uranium is one fuel which is used to release this atomic energy to run machinery.

44. Has a general understanding and curiosity about man's quest for knowledge of the universe

Pupils should realize that man's quest for knowledge of the universe has extended from ancient times to the present.

The pupils can do research to find out which planets are visible to the naked eye at the time, their location in the sky, and the times they rise and set. Solar and lunar eclipses and phases of the moon can be depicted. The solar system, constellations, comets, corona, and sky charts can be portrayed and displayed.

Pupils should visit an observatory or planetarium, if one is accessible. If a telescope is available, help them use it.

Pupils may prepare displays or bulletin boards, showing the tools of the astronomer.

45. Improves skill in interpreting maps,

This goal is an extension of the related goal in Level Five. Maps, tables, charts and cartoons of a more

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| <p>tables, charts, and cartoons</p> | <p>complex nature than those used previously should be studied.</p> |
| <p>46. Reads material on his level and makes a clear, intelligent summary, both oral and written</p> | <p>In Level Six, the child has participated in making summaries with his group. At this level, he should use that skill to make his own summary of the material he reads. This may also be done orally for additional speech practice.</p> |
| <p>47. Reads independently materials at his free reading level</p> | <p>The pupil should be encouraged to do much independent reading at his free reading level. Much reading material should be available to him in his classroom. Extensive use should be made of the Materials Center. If the pupil learns to like to read, and seeks it as a means of pleasure, he will improve his skill in this area. (See Goal 56 in Level Seven for a method of finding the free reading level.)</p> |
| <p>48. Reads materials at his own particular instructional level</p> | <p>Refer to this goal at Level Seven for identifying the various reading levels of the pupil.</p> |
| <p>49. Shows some independence in locating, using, and studying information</p> | <p>As local facilities permit, skill in using the library should be extended. The pupil should gain independence in his ability to locate needed information. He should be given assignments which require him to locate information independently, but should have assistance from the teacher and librarian in correcting faults and improving skills.</p> |
| <p>50. Listens and categorizes ideas</p> | <p>The pupil should demonstrate growing skill in listening. He should learn to utilize the differential between</p> |

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thought and speaking speed to classify ideas to which he is listening. He should be taught to listen for implications as well as for direct statements.

51. Listens to summarize significant findings

Pupils should have experiences in listening to separate the relevant from the irrelevant and to summarize the relevant points. They should have opportunities for frequent practice and should be evaluated by classmates and teacher.

52. Increases his skill in outlining; knows how to use one-word, phrase, and sentence outlines

The pupil should acquire proficiency in outlining by using this skill in preparing reports, recording minutes of a meeting, taking notes on an assembly talk, radio speech, newspaper article, or book.

Have the group discuss outlines made. Ask them to suggest ways of improving the outlines.

The teacher may make skeleton outlines of main points and have the pupils fill in the supporting details.

53. Uses bibliographies and footnotes

As pupils gain facility in performing research, introduce them to footnotes and bibliographies. Guide them in learning to use footnotes. Help them, through reference to bibliographies, to select additional material for study of a certain topic.

54. Shows growth in ability to write paragraphs

This is an extension of the related goal in Level Six. The pupil's growth should be demonstrated by his ability to develop paragraphs from outlines. Provide pupils with continued practice in developing paragraphs from outlines in accordance with demonstrated ability.

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55. Extends his interest in creative writing
(See the related goal in Level Seven.) Pupils may contribute editorials and articles for the school paper. They may write brief stories of imaginary characters with settings in American history; exchange letters with eighth graders in other schools; or design greeting cards and write original greetings. Some might write original endings to incomplete stories read by the teacher or other pupils.
56. Has developed a feeling of responsibility for his own improvement in writing in all subject areas
Direct pupils to assume responsibility for refining the organization of their ideas and converting them into acceptable written form. If many occasions are provided for pupils to exercise and improve these skills, they should gain independence in selection of terms and modifiers which will reflect precision and add interest to their compositions.
57. Shows growth in word usage
As the pupil meets new words in his reading (study material or leisure-time) he should attempt to add to his vocabulary words which will be helpful to him in the activities he is pursuing.
58. Participates in the operation of his own school library
The goals for the use of the library are triple: skill, liking, choice. These goals can be achieved through actual participation in the operation of the library. On this level the pupils should be given opportunities to work in the library. Some of the activities may be:
- a. Ventilating the library.
 - b. Keeping plants and bulletin boards.
 - c. Making decorations.
 - d. Repairing books.

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- e. Making booklets for the vertical file.
- f. Keeping the library clean
- g. Returning books on time and paying for lost or damaged books.
- h. Making posters advertising books.

59. When speaking, makes a conscious effort to be easily understood by all listeners
- Pupils may rate each other on audibility and, led by the teacher, offer constructive suggestions to each other. They may make recordings and attempt to listen critically to such recordings of their own speech or of that of other pupils. Dictating a short passage to a group might be helpful practice. The teacher should encourage the pupil to hold his body erect, to open his mouth, and to breathe deeply as he speaks before a group.
60. Uses a variety of connective words to express his thoughts
- Discuss when to use and (similar ideas) and when to use but (contrasting ideas) in writing compound sentences.
- Discuss how the meanings of sentences are changed by using a variety of introductory words: when, then, after, before, etc.
- Use pictured forms to illustrate the importance of the connective words.
61. Contributes information directly related to the topic under discussion by the group
- This goal is an extension of related goals in Levels Five and Six. The pupil has already been taught to organize the material he contributes. He should have frequent practice in evaluating his material on the basis of its value to the group, and contribute only that which will be of help.

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62. Recognizes homonyms The pupil might be able to find jokes on his level which depend on homonyms for humor. The class might make a scrapbook of such jokes or of simple crossword puzzles containing homonyms. Have a group contest or construct a chart listing homonyms encountered.
63. Writes possessive plurals and possessive singulars correctly Afford pupils with many opportunities to use possessives in meaningful situations. Use their written work as a source of material for lessons on developing an understanding of the correct use of possessives. Provide pattern practice for those having difficulty in usage.
64. Recognizes declarative, imperative, and interrogative sentences Lead pupils to realize that they have been using these kinds of sentences ever since they began speaking in sentences. Develop an understanding of the various types. Provide much meaningful practice in writing the different kinds of sentences. Let pupils analyze their written work to determine the kinds of sentences they have used.
65. Uses modifiers to express different shades of meaning:
- a. Adjectives
 - b. Adverbs
- The children should call adjectives by name and understand that they add to the meaning of nouns. Use phrases; such as, to a white house and to a brown house to show how adjectives change the meaning. Similar use should be made of numerals, demonstratives, indefinites, articles; but the children should not be required to call the kinds of adjectives by name. The examples used should include the range of samples the child will use at the present maturity level.
66. Has attained a functional level Guide pupils in demonstrating an attitude of responsibility for correct spelling in all phases of written

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of self reliance
in spelling

work. Independent use of the dictionary should be stressed.

67. Extends his understanding of the 3 cases of per cent

Pupils should solve practical problems in each of the three types of percentage problems.

- a. What is 5% of \$200?
- b. \$15 is what percent of \$300?
- c. \$12 is 6% of what amount?

The pupils may do some of the following activities to develop skill in solving percentage problems:

- a. Figure the percentage of words spelled correctly, problems solved correctly, and ball games won.
- b. Arrange a budget on a percentage basis.

68. Solves problems involving simple interest

Let pupils compute simple interest paid by local bank on various amounts of money in savings accounts. Compute interest collected by the bank on loans. Use table to compute interest.

69. Names some advantages and disadvantages of installment buying

Provide problems to show how much more it costs to purchase merchandise on the installment plan. Stress the point of not having too many payment obligations at one time.

70. Computes charges incurred by ordering merchandise

Invite the local postmaster to talk to the class. Point out the additional cost incurred by ordering merchandise by C. O. D.

Compute shipping charges when ordering from a catalog.

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71. Begins to evaluate advertising in view of his own needs
- Have pupils collect advertisements of things that appeal to them. Discuss each contribution separately, stressing the obligation incurred by answering an advertisement. Consider the need and usefulness of each article they seem particularly interested in. Stress the term, making ends meet showing them they must make a sacrifice somewhere else in order to meet the obligation of paying for the article.
72. Knows the purpose of taxation; studies state and local tax plans
- Pupils should learn that taxes are for the public benefit, are necessary, and are obligations of every citizen. Bring tax bills to school for discussion. Have committees visit local tax collecting offices for information. Figure simple individual income tax returns.
73. Extends his knowledge to include circle graphs and statistical tables
- Points to be considered include:
- a. Bar and line.
 - b. Pictorial.
 - c. Circular.
- Collect graphs for study and discussion from magazines, daily papers, and books.
- Have pupils construct and explain graphs showing class or school attendance records, savings records and projects to raise funds.
- Give pupils opportunities to transpose material between graphs and statistical tables.
74. Computes surface area of various prisms
- Each pupil should be able to recognize the figures and know the formula for finding areas of the surfaces.

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75. Uses compass and straight edge to duplicate angles
- Develop definitions (pupil-made preferred) for circumference, diameter, radius, arc, and bisect.
- Have pupils draw circles to develop the ability to manipulate compasses. Bisect angles and duplicate angles using compasses and protractors.
- Give pupils opportunities to make practical use of bisecting lines and angles--lay out ball fields, construct party favors, draw maps, etc.
76. Understands the use of the protractor
- Make use of the same type of activities using the protractor rather than compass. Practical use of the protractor should develop a lucid understanding of its use on the part of the pupil.
77. Extends his problem solving ability
- Basically the efforts of the pupil at this level in problem solving are to enhance his ability to:
- a. Identify the number question which must be answered to solve the problem.
 - b. Analyze the facts and select the proper arithmetic process to use.
 - c. Estimate answers.
 - d. Supply missing facts or eliminate superfluous information.
 - e. Develop logical analysis.
 - f. Generalize problem situations into formulae.
 - g. Use different instructional settings at a more advanced level than that used initially.
 - h. Learn to state arithmetic procedures without sacrificing mathematical correctness.

<p><u>GOALS</u></p>	<p><u>TEACHERS' SUGGESTIONS</u></p> <p><u>SUGGESTED ACTIVITIES AND TECHNIQUES</u></p>	<p><u>TEACHERS' COMMENTS</u> <u>AND EVALUATION</u></p>
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<p><u>SUGGESTED BIBLIOGRAPHY FOR:</u></p>	
<p><u>TEACHERS</u></p>	<p><u>CHILDREN</u></p>

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78. Takes part in choral singing or plays a simple instrument
- Make singing a creative, intellectual and emotional outlet for pupils. Provide a variety of experiences with singing to develop and broaden pupils' tastes.
- Each pupil should have the privilege of some musical experience that will give him a wider knowledge of notes and harmony. He could play some of the more simple instruments; such as, flutophones, harmonicas, and guitars.
79. Is encouraged and given opportunities to share the music and dances of his own culture
- Pupils may perform tribal dances in school programs or community programs.
80. Develops an interest in and appreciation for good music
- Discuss various kinds of instrumental and vocal music with pupils. Encourage them to listen to music on radio, television, and records. Provide occasions for them to attend concerts and musical programs when opportunities arise. Help them evaluate the music heard. Acquaint the class with the life and works of famous composers; such as, Bach, Beethoven, Brahms, Tschaikowsky, Humperdinck, Schubert, Handel, Mozart, McDowell, Chopin, Johann Strauss, and John Philip Sousa.
81. Experiments freely to express his own ideas in creating visual or auditory materials
- The teacher should encourage the pupils to plan and display bulletin boards and exhibits of classroom learnings. Tapes and other recordings may be made to explain the contents of exhibits.
82. Expands his appreciation of the
- Invite local and regional art authorities to talk to the class. Visit art museums when field trips are made to

<p><u>GOALS</u></p>	<p><u>TEACHERS' SUGGESTIONS</u></p> <p><u>SUGGESTED ACTIVITIES AND TECHNIQUES</u></p>	<p><u>TEACHERS' COMMENTS</u> <u>AND EVALUATION</u></p>
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SUGGESTED ACTIVITIES AND TECHNIQUES

SUGGESTED LINGUISTIC
PATTERNS AND VOCABULARY

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| <p>work of artists and craftsmen through first-hand experience in similar media</p> | <p>metropolitan areas. If bookmobiles visit school, request inexpensive reproductions of the works of the great masters for display. Have local artisans demonstrate their craft and skills.</p> |
| <p>83. Helps organize school art contests and exhibits his own work</p> | <p>Serves on committees to interest other pupils in contributing handicrafts for art exhibits. Has experience in assisting with displays of exhibits growing out of work of many classes as well as arts and crafts.</p> <p>Pupils should be acquainted with the features of art work necessary to enter it in traveling exhibits, museums; and encouraged to meet these requirements.</p> |
| <p>84. Contributes to assembly programs (at least four times a year) through use of his artistic abilities and skills</p> | <p>See Goal 85, Level Seven for suggestions.</p> |

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