CHILDREN'S CONTRIBUTIONS IN SHARING EXPERIENCES
AND THEIR POTENTIALITIES FOR THE
ELEMENTARY SCIENCE PROGRAM

DISSERTATION
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CHAPTER I

INTRODUCTION

Child's Lament in Spring

We bring her dandelions in bunches,
Polished apples from our lunches,
Bubble gum and rocks and snails,
Pussy willows, frogs in pails.

Although she cherishes what we mention
We wish she'd give them more attention.1

It has long been recognized that children are eager to talk about their possessions and their experiences; they come to school prepared to engage in conversation. Early in educational history we find that Comenius2 recognized the value of conversation; he wrote, "The greater part of our lives consists of friendly conversation, and it should therefore be easy to induce the young to acquire useful information, when they are at the same time learning to express themselves fluently and well."


Sharing periods in one form or another have existed in schools for many years; at various times they have been called "show and tell time," "discussion period," "talking time," "circle time," and "conversation period." The practice has been more prevalent with the younger children than with the older children of the elementary school; however, Zyve pointed out in 1927 that the practice was becoming more widespread:

Little by little the informal spirit of the kindergarten conversation period in which teacher and children listen to each others' experiences is creeping into other grades of the elementary school. The giving of school time for free group conversation is now a general enough practice in primary grades so that the free conversation period may be seriously considered as one of the potential means of producing facility in oral expression.3

Primarily, sharing periods have been planned for the purposes of providing experiences for children to express themselves orally and to foster social development. Each of these purposes is justifiable but one does not learn to express himself orally or develop social behavior in a vacuum. Obviously, children must talk about something; therefore the possibilities exist for "... the young to acquire useful information."4

3Claire T. Zyve, "Conversation Among Children," Teachers College Record, 29 (October, 1927), p. 46.
4Comenius, op. cit., p. 173.
It has been said that:

There is no better index of a child's interests than by what he is most anxious to talk about when he first comes to school in the morning. As an outlet for this the teacher who is wise has a sharing period at the outset of the school day and is herself a stimulating guide in the discussion.\(^5\)

Sharing time affords an opportunity for children at school to continue their out-of-school living; Dewey\(^6\) has pointed out, "From the standpoint of the child, the great waste in the school comes from his inability to utilize the experiences he gets outside the school in any complete and free way within the school itself. . . ."

In the modern elementary school it is accepted that individual differences exist among children and "... that these differences are one of the essential characteristics of the stuff with which education works."\(^7\) Furthermore, it is recognized that there are many reasons for individual differences, one of which is the experiential background of the children; in this sense Dewey\(^8\) provides direction when


he states, "Other activities are signs of a culminating power and interest; to them applies the maxim of striking while the iron is hot. As regards them, it is perhaps a matter of now or never. Selected, utilized, emphasized, they mark a turning point for good in the child's whole career; neglected, an opportunity goes, never to be recalled."

During sharing time the child brings his out-of-school life into the classroom. At the outset sharing is an individual matter; the child has had out-of-school experiences; he has made a choice; and he is willing to share with his friends. Thus, the situation develops into a social situation where democratic practices prevail and there are values to be had for all.

Burr, Harding, and Jacobs⁹ recognized that sharing periods "... can be richly informative times for the teacher as well as for the children. As children share, you will discover many things about them: their beliefs, attitudes, values; their interests; their problems, wishes, aspirations." A further statement regarding the possibilities for learning during sharing time is that of Merville:

There are real values and possibilities for learning in a good sharing time with children.

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With little encouragement from the teacher, the child will bring his treasured objects, his experiences, and his ideas to be shared with the group. An alert and resourceful teacher is able to pick these up quickly and lift the child's understanding so that he is stimulated into further thinking, discussing, and experiencing. Where this is not done the experience may never go beyond the "show and tell" level. Mere cataloging of what one said or did is obviously meaningless unless it can be related with other experiences and lifted into meaningful thinking and acting. In a good sharing period the child's interest is constantly being stimulated and his range of ideas widened. Here, too, the teacher may clarify a child's thinking when he seems confused.  

Others have recommended, "Through such informal discussion and through observation the teacher can make a careful study of each child's mental capacities, work habits, emotional stability, social adjustment, and physical well-being, and plan needed help."

STATEMENT OF THE PROBLEM

The purpose of this study was twofold: to determine certain aspects of the over-all nature of the sharing period and to determine whether children's contributions during sharing time reveal potentialities for the elementary


school science program. The investigator was interested specifically in studying the following:

I. The over-all nature of the sharing period
   A. General structure
   B. Nature of the sharing period
      1. Initiation of contributions
      2. Nature of that which the child shared
      3. Characteristics of the contributions
      4. People involved with that which the sharer shared
      5. Out-of-school experiences that provided the bases for that which the child shared

II. Potentialities for the elementary science program
   A. Science principles
   B. Science facts
   C. Science clues

IMPORTANCE OF THE STUDY

Sharing periods have evidently been accepted as good educational practice in the elementary schools; yet, the literature about the subject is scant and little research has been done in the field.

Recently, there has appeared in the literature a recognition that the sharing periods provide opportunities for the development of science concepts. Blough pointed

out that many of the things that children bring to school are of scientific nature.

Zim, in a plea for incidental science in the elementary classroom, gave considerable space to the role of science in sharing periods. He believes, "While most classroom teachers are aware of the social values of this activity, many, I am sure, do not appreciate the tremendous amount of science learning that can come from it." Burnett contributed to this idea with the following:

The naive teacher considers a dead bird brought to school in the pocket of a small boy at best in opportunistic terms. More commonly he will consider it as a rather morbid annoyance. Yet such a dead bird may have a deep emotional meaning to the child and provide a highly significant opportunity for an experience of lasting value. For living things—and even death—need to be understood and accepted emotionally.

Two very recent publications have contained pertinent statements:

With young children, especially, incidental learning situations often grow out of the receipt of birthday presents or other gifts, such as a kitten, puppy, toy, or set of tools with educational possibilities for the recipient and his classmates. Children of all ages bring to school amphibians, birds, fishes, insects, reptiles,

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14 Ibid., p. 18.

fossils, metals, rocks, ores, flowers, plants, wood products, chemical sets, mechanical and electrical devices, and many other objects. News items about the spectacular—eclipses, earthquakes, floods, hurricanes, landslides, jet planes, atomic energy—also arouse curiosity and interest.16

and

When children bring objects to class their actions are evidence of an interest which, if promising, may be used to introduce a new topic. A third grade, for example, began working with magnets shortly after Christmas when one child came in with a magnetic fishing game she had received and another brought a toy car that could be moved about by a magnet held in the child's hand.17

Although writers have given attention to sharing periods and teachers have adapted them to classroom procedures, more concrete evidence is needed to interpret and evaluate their values as educational experiences.

DEFINITION OF TERMS

The terms which had specific meanings in this study were defined as follows:

1. Sharing period: a sharing period is a time during the school day when children are permitted to present contributions of their choices; e.g., objects, experiences, and ideas.


2. Typical sharing period: a sharing period that would commonly occur in the classroom on those days when no outside interferences were present.

3. Science concept: "Concepts are syntheses or constellations of ideas or meanings."^{18}

4. Science principle: a science principle is a general statement which sums up separate scientific facts.

5. Science fact: a science fact is a statement which accurately reflects some component or event of the universe.

6. Science clue: a science clue is a word, statement, or question which provides a basis or starting point for the discovery of scientific facts or principles.

LIMITATIONS OF THE STUDY

Some limitations of this study were:

1. The data for this study were gathered during the spring of the year; it might be assumed that the contributions during other seasons of the year would differ in some respects.

2. Because the data were analyzed only in terms of one subject-matter area, the breadth of the study was limited.

3. The behavior of the teachers was not analyzed; therefore, the role of the teachers in dealing with the children's contributions was not presented. Children's responses to the teachers' questions and comments were analyzed.

4. This study was concerned with the breadth of group variance and has not included the individual differences among children.

5. Since only one recording was made in each classroom the data do not provide information concerning a day-by-day relationship between sharing periods.

PLAN OF THE STUDY

An introduction, the statement of the problem, the importance of the problem, the definition of terms, and the limitations of the study have been discussed in this chapter. Chapter II contains a review of early studies that provide background for the present study; studies that deal specifically with discussion, conversation, and sharing; and investigations in elementary science education that are related to the present study. Chapter III contains a discussion on the source of data and methodology. Chapter IV
contains an analysis and interpretation of the data pertaining to the general structure and nature of the sharing period. Chapter V contains an analysis and interpretation of the data pertaining to the potentialities for the elementary science program. Chapter VI, the final chapter, briefly summarizes the plan of the study; it contains conclusions, recommendations, and suggestions for further research.
CHAPTER II

A REVIEW OF RELATED RESEARCH

A careful review of educational literature reveals that there has been very little research done on sharing, per se. However, from the beginning of the scientific study of children and education there have been numerous studies made that are related to the present investigation. In fact, in light of the comprehensiveness of this study, it would require but little imagination to assume that a complete resume of the research done in the field of child development would be in order. The number of studies in this broad field is such that a resume of the findings would be neither practical nor within the purposes of this report.

The investigator has attempted in this chapter to report only the investigations which he deemed most applicable to the present study. In order to facilitate organization and to provide guidance to the reader, this chapter is divided into two parts. The investigations reviewed in the first part are classified under two headings: (1) early studies that provide background for the present study; (2) studies that deal specifically with discussion, conversation, and sharing. The second part of the chapter
deals only with those investigations in elementary science education that are related to the present study.

BACKGROUND STUDIES AND STUDIES INVOLVING DISCUSSION, CONVERSATION, AND SHARING

Early studies that provide background for the present study. Some of the earliest recorded studies dealt with the child's knowledge of his environment, the out-of-school experiences related to his environment, and the values of his knowledges and experiences as bases for drawing inferences that would give direction to the modification of the elementary school curriculum.

In October, 1869, the Berlin Pedagogical Verein issued a circular inviting teachers to investigate the individuality of children on entering the city schools so far as it was represented by ideas of their environment. Individuality in children, it was said, differed in Berlin not only from that of children in smaller cities or in the country, but surroundings caused marked differences in culture-capacity in different wards. Although concepts from the environment were only one important cause of diversity of individuality, this cause once determined, inferences could be drawn to other causes.¹

The investigation revealed that many children were not familiar with the commonest objects in their environment and that others evidenced knowledges superior to what had

been anticipated. Bolton\textsuperscript{2} substantiated this historical setting by saying, "This investigation has indirectly stimulated a great many others of a similar nature."

G. Stanley Hall\textsuperscript{3} described Dr. K. Lange's study of 500 children entering the city schools of Plauen and 300 entering 21 country schools in outlying districts as the immediate forerunner of his classic study, \emph{The Contents of Children's Minds on Entering School}. Lange's study compared the responses of the city children with those of country children concerning ideas about such natural phenomena as the rising and setting of the sun. The country children evidenced a considerably greater amount of knowledge than did the city children. Hall cited a utilitarian inference from Lange's findings when he stated, "The ignorance of city children shows the utility of school excursions."\textsuperscript{4}

In 1880 Hall\textsuperscript{5} began his study; his findings were first published in 1883. He used a list of questions deemed suitable for an inventory of children's conceptions


\textsuperscript{3}Hall, \textit{op. cit.}, p. 12.

\textsuperscript{4}Ibid., p. 13.

about the common things in their environment. First grade children in Boston were questioned in groups of three by four trained kindergarten teachers; approximately 200 children were involved. The analysis was primarily made in terms of percentages of objects and concepts with which the children were ignorant; Dr. Hall felt that teachers should provide children with experiences to alleviate them of their ignorance. He insisted:

A country barn, a forest with its gloom and awe, its vague fears and indefinite sounds, is a great school at this age. The making of butter, of which some teachers, after hearing so often that it grew inside eggs or on ice, or was made from buttermilk, think it worth while to make a thimbleful of it in a toy churn at school as an object-lesson; . . . more knowledge of kitchen-chemistry, of foods, their preparation and origin; wide prospects for the eyes—this is more pedagogic industrial training for young children, because more free and play-like, than sewing, or cooking, or whittling, or special trade-schools can be, as well as mere hygienic.\(^6\)

Hall, further commenting on the findings, said that:

. . . it seems not too much to infer: (1) That there is next to nothing of pedagogic value the knowledge of which it is safe to assume at the outset of school-life. Hence the need of objects and the danger of books and word cram. . . . (2) The best preparation parents can give their children for good school-training is to make them acquainted with natural objects, especially with the sights and sounds of the country, and send them to good and hygienic, as distinct from the most fashionable kindergartens. (3) Every teacher on starting with a new class or in a new locality, to make sure that his efforts along some lines are not utterly lost, should undertake to explore carefully

\(^6\)Ibid., p. 256.
section by section the children's minds with all the tact and ingenuity he can command and acquire, to determine exactly what is already shown; and every normal-school pupil should undertake work of the same kind as an essential part of his training. (4) The concepts which are most common in the children of a given locality are the earliest to be acquired, while the rarer ones are later. This order may generally be assumed in teaching as a natural one, e.g., apples first and wheat last.7

In 1883 Superintendent Greenwood, of Kansas City, used most of Hall's questions and tested 678 children of the lowest primary class in that city; the records were analyzed by Hall8 and a comparison was made to the Boston results. The percentages of ignorance found in Kansas City were slightly less than those in the Boston study.

Barnes9 cited an earlier study where Binet, using his two little daughters as subjects, concerned himself with the meanings of common words and objects: knife, water, horse, clock, doll, bread, arm-chair, hat, garden, mamma, potatoes, bottle, flower, snail, month, lamp, earthworm, shoes, finger, house, wolf, omnibus, piece of sugar, thread, table, bird, carriage, pencil, balloon, village, box, and handkerchief. From the data Binet concluded:

(1) that children are impressed very little by the visible

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7 Ibid., p. 272.
aspect of things; (2) that their greatest interest is in
the "use" of things; and (3) that their ideas possess only
slight abstract characteristics.

Barnes,10 stimulated by Binet's study and using the
same list of words, tested over 2000 children and concluded
that: (1) At the age of seven "use" is the thing of
transcendent importance in the thoughts of children. (2)
At the age of eleven "use" is still supreme, but "larger
term" and "substance" are assuming importance. "Larger
term" meant referring to its genus; such as, a clock is a
timepiece. "Substance" meant identifying what an object
was made of; such as, a clock is made of wood. (3) At
fifteen "larger term" is more important than "use"; "sub­
stance" and "structure" are getting more and more prominent.

Shaw11 repeated what Binet and Barnes had done but
he used a larger number of objects and classified his data
under different headings. Shaw's study revealed that much
of what Barnes had classified as "use" was really "action"
and that "larger term" was much less important.

The results of Hall's recommendation that students
in normal schools undertake studies of children as a part

10 Ibid., pp. 203-212.

11 Edward R. Shaw, "A Comparative Study on Children's
Interests," The Child-Study Monthly, 2 (July and August,
1895), 152-157.
of their training is possibly evidenced in Burnham's study. The students in psychology classes were to observe the conduct of children in all circumstances,—at home, at school, in the street, at work, at play, in conversation with one another and with adults,—and record what they see and hear. . . . More than 14,000 reports were made. The students reported cases of simple personification or attributing motions and actions of human beings to insects, flowers and inanimate objects; such as, bees praying, flowers drinking, dishes feeling cold and wet, etc. Cases were reported where words of unknown meaning suggested fantastic ideas; such as, cholera morbus suggested colored marbles; dapple gray, something pleasant; glory to God in the highest, glory to God in the hyacinth, etc. Cases involving mechanical invention, meaning of death, and making mental associations, etc., were also noted. In the realms of fancy 22 incidents were reported where the children thought that stars were holes in the floor of heaven, and if they watched closely enough they could see angels passing over.


13. Ibid., p. 219.
Barnes\textsuperscript{14} made another early study closely related to the present study that dealt with children's collections. He had 280 college students, after they had read the chapter in Pierre Lotis' Romance of a Child where he tells of his childhood museum, write studies of their own childhood collections. According to Barnes the first striking evidence noted was "... the great variety of things that the students loved to gather and arrange and hoard when children."\textsuperscript{15} Barnes listed the collections which stood out most vividly in the students' memories. Among them were buttons, picture cards, minerals and stones, stamps, relics, bits of silk or cloth, coins, flowers and leaves, insects, books, dolls, birds' eggs, feathers, tobacco tags, and autographs. The study also included the reasons for collecting. Barnes generalized, "The reasons given for collecting these things generally have reference to other people."\textsuperscript{16}

After Barnes had made his study on children's collections, Burk\textsuperscript{17} made a similar study using 607 boys

\textsuperscript{14}Earl Barnes, "Study in Reminiscence: IV. Children's Collections," Studies in Education, 1 (October, 1896), 144-146.

\textsuperscript{15}Ibid., p. 144.

\textsuperscript{16}Ibid., p. 146.

\textsuperscript{17}Caroline Frear Burk, "The Collecting Instinct," The Pedagogical Seminary, 7 (July, 1900), 179-207.
and 607 girls or 1214 children ranging in ages from 6 to 17 years. She found that the boys either at the present or in the past had 2374 collections with an average of 4.7 collections per boy; the girls indicated 3261 collections with an average of 5.4 collections per girl. She also found that the boys at the present were carrying on 1937 collections with an average of 3.2 collections per boy; the girls were carrying on 2115 collections with an average of 3.5 collections per girl. As an interpretation of her data, Burk stated:

That the children on the average were in process of making from three to four actual collections bespeaks a considerable amount of energy being drained off through the channels of this instinct. But the generalities of the average cover up the "spots" where the instinct breaks out with remarkable intensity. There were six boys and ten girls making nine collections each; seven boys and four girls making ten collections each; three boys and five girls making eleven collections each; one boy and two girls making twelve collections each; one boy making thirteen collections; one girl making fourteen collections; one, sixteen; one, eighteen; one, thirty-two; and one boy making fifty-five.18

With regard to the relationship between age and collecting Burk reported a rapid development from six years on, reaching greatest intensity from eight to eleven years and continuing moderately until adolescence. Ten years of age appeared to be the peak year for collecting, with the

18Ibid., p. 181.
average number of collections being 4.4 for both boys and girls.

The boys and girls evidenced equal variety in the kinds of collections: 215 and 214, respectively. A total of 294 different collections were reported for both sexes. In consideration of what children collect Burk's words are supreme:

The consciously applied genius of man could hardly concoct a more numerous and diversified set of objects,--objects ranging from the utterly absurd, the useless, the grotesque to the really valuable; ranging from the commonest, meanest things to the rarest; objects appealing to all sorts of interests and allied with a variety of motives. 19

Kline and France20 approached the problem of children's collections through the psychological concept of ownership. They attempted "... to investigate the origin and nature of instincts and motives that operate in the accumulation of property, and to describe... those psychoses arising from the consciousness of things owned; also to indicate the role played by property as a mind-developing agent." 21 The investigation revealed that the things earliest drafted as property were those that gave satisfaction to the sensory aspects of the human organism;

19 Ibid., p. 182.
21 Ibid., p. 421.
the articles collected by children depended on environment and home training; the most widespread and interesting phenomenon connected with collecting was hiding the articles; money was not collected for the purpose of purchasing power but rather as something to hoard; selfishness was the rule; children would steal, cheat or lie without scruple to acquire property; children had no idea of proprietary right; and probably the most general and most urgent motive for acquiring property was fear.

In 1896 Vostrovsky\textsuperscript{22} made a study of children's superstitions. Her investigation revealed that, within a total of 692 children evenly distributed according to sex, there existed 1641 superstitions. Girls listed a greater number of different superstitions than did the boys. Only thirteen boys and thirteen girls declared that they did not know any superstitions. The study also investigated the source of the superstitions; it was revealed that 53 per cent of the boys and 51 per cent of the girls learned their superstitions from their parents and relatives and 35 per cent of the boys and 33 per cent of the girls learned their superstitions from schoolmates and friends. Vostrovsky further concluded:

\begin{flushright}
\textsuperscript{22}Clara Vostrovsky, "A Study of Children's Superstitions," \textit{Studies in Education}, 1 (October, 1896), 123-143.
\end{flushright}
After the tenth year there is no doubt that children have passed a decided stage in progress. They no longer accept everything unquestioningly. They are more critical and demand some form of proof. But they, and indeed even the oldest pupils of our grammar grades, show lack of ability to generalize, or to reason abstractly. They remember one or more concrete cases, and judge accordingly. And yet there can be no sound hope of bringing them to see the absurdity of their views, until they not only go back to facts for proof, but are able to generalize from them.23

In her concluding paragraph Vostrovsky gave us the following pedagogical advice:

One thing more of importance to pedagogy that comes out strikingly in the study, is the seeming ignorance of our school-children concerning natural causation. This seems hardly excusable in this so-called scientific age. If there ever was need of children's realizing and understanding, as far as they can understand, that nothing in the world happens arbitrarily or through mere chance, there is certainly a need of it now. They should begin to know, even in the primary grades, that the world is governed by law. Studies showing this, which demand careful experiment on their own part, since according to our study they have greatest faith in their own experiences, would be especially valuable in helping them to see this clearly, and in relating them sanely to the universe. But teachers must be especially careful to see that pupils understand and fully grasp the large bearings of the experiments.24

Croswell,25 interested in the out-of-school experiences of children as a bases for investigating interest, had 2000 children ranging from kindergarten to high school

23Ibid., p. 142-43.
24Ibid., p. 145.
age respond to a questionnaire concerning their amusements.

Croswell concluded that, with a young child,

It is necessary that he should have a chance to try his strength, exercise his skill, and satisfy his curiosity and imagination in every way. He must have toys and objects of many different kinds which his imagination may transform in imitation of the realities about him, or upon which he can exercise his skill.26

Hall and Smith27 investigated the curiosities and interests of children. They classified children's questions under the following categories: (1) forces of nature, (2) mechanical forces, (3) origin of life, (4) theology and Bible stories, (5) death and heaven, and (6) questions which are merely inquisitive. Questions in the first group pertained to the sun, moon, stars, cloud, rain, fog, wind, thunder and lightning, fire, water, animal and plant life. Of four hundred and sixty-five questions asked by children under the age of ten, over one-half were on topics relating to nature and the working of natural forces; approximately 75 per cent of the questions were related to causation. Many of the questions revealed that children attributed sentience to wind; they thought that the thunder was caused by someone rolling barrels and that the flowers and trees had a life of their own.

26Ibid., p. 357.

27G. Stanley Hall and Theodate L. Smith, "Curiosity and Interest," The Pedagogical Seminary, 10 (September, 1903), 315-358.
Studies of sharing periods and children's conversations and discussions that are related to the present study. Studies of children's conversations and discussions were first directed toward the vocabulary development of children. Studies concerned with the free communication among children in classroom situations, such as, a sharing time, have been few. Piaget was among the first to investigate children's conversation as a method of child study. In Piaget's study the data were obtained by an observer who followed a single child at school "... taking down in minute detail and in its context everything that was said by the child." Piaget distinguished between "egocentric" and "socialized" speech. He concluded that children below seven or eight years of age were not capable of intellectualizing at conversation.

In 1927 Zyve stenographically recorded 125 fifteen-minute conversation periods of one third-grade group in order to make an analysis of children's tendencies in unhampered conversation. The children listed in advance on the blackboard the topics which they wanted to discuss.


29 Ibid., p. 5.

The teacher entered into the conversations only when necessary for the social control of the group.

Zyve reported the distribution of the subjects of conversation in percentages as follows: (1) home play 27.14, (2) animals 14.5, (3) school work 14.4, (4) auto trips 13.0, (5) special subjects 12.9, (6) group control 8.1, (7) cooperative activities 5.0, (8) minor affairs 2.1, (9) miscellaneous 1.5, and (10) English usage 1.4.

Mabie also studied children's conversations within a single class. For eight days, during a first-grade free-play period, Mabie and a competent stenographer recorded the children's conversations. The data were classified according to Piaget's categories. Mabie found that about 25 per cent of the total speech of the children was egocentric; Piaget reported 38 per cent.

Brown analyzed the stenographic recordings of 27 forty-minute periods of informal talking on the part of children. Although the study was primarily concerned with vocabulary development, some consideration was given to the subjects used by the children. The following subjects with


percentage ratings were reported: (1) personal experiences 33.9, (2) room programs 18.7, (3) study of birds 11.0, (4) book reviews 8.5, (5) experiences of others 7.6, (6) room exhibits 6.8, (7) pictures 5.9, (8) children’s illustrations 5.1, (9) pets 1.7, and (10) room party 0.8.

Dawson in 1937 studied children’s preferences for conversational topics.

Teachers were requested to record the topics discussed in children’s conversation at recess periods or in socialized situations where the teacher was to be a passive listener. Data were to be collected in grades III-VI, inclusive, over a period of six weeks. One weekly period of five to ten minutes was all that was asked. The data were collected in twenty-four schools in seven states. The following conclusions were reported:

1. In general, children tended to discuss active types of experiences, such as, sports, personal experiences, trips, pets and their tricks, and accidents much more often than they did nature, books, holidays, work, and riddles.

2. Younger children seemed to be more general in their interests than the older children.

3. Interests of children at the intermediate grades were relatively stable.

4. As children grow older they tend to talk less and less about their family and friends and talk more about school.

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34 Ibid., p. 432.
In 1942 Baker\textsuperscript{35} made the first study discovered by the writer that had many elements common to the present study; some of the categories used in classifying the present data were those used by Baker. Baker's study was concerned with children's contributions in general discussion. He defined a general discussion as:

... the term "general discussion period" signifies a portion of time in the regular school day when children may talk to their fellow pupils on any topic and in any manner desired as long as the courtesies of an audience situation are observed. In such a period the teacher serves only as an impartial presiding officer, permitting the children to carry forward the activities of the period through their own efforts.\textsuperscript{36}

Baker's data were gathered from 342 children in twelve classrooms of the second, fourth, and sixth grades within three schools in a suburban city of the New York metropolitan area; the basic part of the study, 72 general discussion period recordings, was done within one school with the data gathered from 24 general discussion period recordings from the other two schools serving primarily as a verifying technique. Baker used an abbreviated longhand


\textsuperscript{36}\textit{Ibid.}, p. 2.
as a method of recording, verbatim, the discussions.

Baker’s findings included:

1. At the second grade level 87 per cent of the contributions represented a new topic independent of other topics discussed, at the fourth grade level the percentage was 33 per cent, and at the sixth grade level 23 per cent was indicated.

2. Under "topic continued" the percentage for the second grade was 4; the percentage for the fourth and sixth grades was 43 and 44, respectively.

3. Under "new topic suggested" 8 per cent was reported for grade two, 24 per cent for grade four, and 33 per cent for grade six.

4. Animals as a topic of conversation was found at all three grade levels: 10 per cent of the total topics at the second grade level, 7 per cent at the fourth grade level, and 8 per cent at the sixth grade level.

5. At the second grade level 83 per cent of the topics was acquired by the children directly through their own actual experiences, with 52 per cent in the fourth grade, and 25 per cent in the sixth grade.

6. At the second grade level 61 per cent of the contributions dealt mainly with "personal activity" of the contributor; at the fourth grade level 41 per cent was noted, and at the sixth grade level 13 per cent. Within this category trips accounted for a percentage of 5 in the second grades, 9 in the fourth, and 3 in the sixth. Also, play and recreation accounted for 26 per cent of the personal activity for the second grades with 6 per cent for the fourth grades and 1 per cent for the sixth grades.

7. A reverse trend from that noted about personal activity was found concerning "current happenings": 16 per cent for second grade, 29 per cent for fourth grade, and 60 per cent for sixth grade. Within this category "home and family" was listed; the most frequently discussed topic was gifts.

8. Fourth grade children asked more questions than did either the second or sixth grade children; the percentages were 11, 0, and 4, respectively.
9. Evaluative remarks and explanations seldom appeared before the sixth grade and then a low percentage was noted.

10. More contributions in the miscellaneous category fell under science than under any other topic; the percentages were 0 for grade two, 6 for grade four, and 4 for grade six.

11. Very few sex differences were noted.

Hahn37 in 1948 used the sharing time in eleven first grade classrooms as a source of data for a study of the speech of first grade children. Hahn used a wire recorder to record the children's voices. In order to avoid distraction she hid the recorder in a closet or some other place of concealment and taped the microphone in a cleansing tissue box.

Hahn reported that approximately 26 per cent of the children chose to talk about objects displayed, 40 per cent chose to talk about home play, 20 per cent chose family activity, 19 per cent chose family outing, 6 per cent gave an account of a movie, and 8 per cent talked about animals; 8 per cent of the topics were classified under miscellaneous. Hahn thus agreed with Zyve and Baker in that the young children talk in the realms of personal activity.

Hughes and Cox through the use of both the wire recorder and longhand recordings studied primarily the language aspects of the sharing time; however, they also observed some of the topics or subjects which the children chose to talk about. They reported that 17.4 per cent of the responses that the children made were announcements of possessions; they mentioned all articles of clothing as well as every kind of wheel and transportation toy. Family activities were the activities that rated the most comments.

Young used tape recordings and anecdotal records of 175 fourth grade sharing periods as one basis for discovering children's science interests. In as much as Young's study is directly related to the science aspect of the present study the conclusions will be given under the third section of this chapter.


40Doris Young, "Identifying and Utilizing Children's Interests," *Educational Leadership*, 13 (December, 1955), 161-165.
Studies in elementary science education that are related to the present study. The portion of this study concerned with the potentialities for the elementary science program was explorative in nature and broad in scope; therefore, it has cut across boundary lines of classifications of investigations. It could be assumed that it was a study with many directions; such as, children's science interests, children's conceptions of physical causality, grade placement of subject matter, or incidental science programs. This investigator, rather than presenting a complete review of the research in any one phase of elementary science education, has presented some summaries and interpretations of studies representing various aspects of the research; some individual studies have been reviewed.

During the period in educational history when nature study was regarded as the proper approach to science instruction for children, several studies in science interests were conducted. Fitzpatrick, 41 somewhat skeptical of an over-emphasis being placed on children's interests as a criteria for developing courses of study and also skeptical of some of the results of the "interest" studies, reviewed

the techniques and results of some of the early "interest" studies in science.

He pointed out that some of the studies revealed greater "interest" in the biological sciences and others revealed greater "interest" in the physical sciences. He concluded,

When one examines these findings it is at once apparent that they are not unanimous in their testimony. This is particularly true with regard to the question whether pupils (any grade level) are more "interested" in the materials of biological science or in the materials of physical science.42

Fitzpatrick further reported some agreement among a number of the findings; namely, "That 'interest' varies according to age or grade level." and "That the 'interests' of the two sexes are not the same."43

Noll44 also reviewed "interest" studies, many of which were reviewed by Fitzpatrick. He summarized the results of the various studies as follows:

(1) younger elementary school children are apparently most interested in animal life and least interested in mechanical things;

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42 Ibid., p. 19.

43 Ibid., p. 19.

(2) there is reason to believe that the interest in mechanical matters increases in higher grades, especially among boys;
(3) early interests are largely superficial in the sense that they are concerned for the most part with externals such as color, shape, size, etc. Later interests reveal more discrimination;
(4) the most important outcome of these studies is perhaps the revelation that children's interests change with growth and also that they are definitely affected by the environment.45

Burnett46 reviewed more recent "interest" studies including some studies that dealt with children's reading interests. Burnett came to the following conclusion:

Other studies typically show, as do the ones mentioned, that children are like curious puppies. They have a vast urge to activity, both physical and mental. The physical activities are chiefly exploratory. Children test, interpret, compare, and relate objects and phenomena including those connected with their own bodies and personalities. They typically disclose an exuberant, all-out, unabashed attack on almost anything that is physically approachable.47

A considerable amount of research has been done regarding children's explanations of physical causality. Piaget48,49 was among the pioneers in this area of research.

47Ibid., p. 18.
With collaborators working under his supervision, Piaget recorded interviews with children under the procedure he termed as "clinical method." An analysis was made concerning the presence or absence of manifestations of realism, animism, and artificialism in the thinking of children regarding their natural environment; consideration was also given to whether syllogistic reasoning was utilized by children in considering physical causality. Piaget's main conclusions from his analyses were that children cannot successfully attack problems of causality through reasoning until they are ten to twelve years old and that animism is very evident in the reaction of children to all of the elements of their physical environment until they are seven or eight years old. Piaget's conclusions aroused a considerable number of skeptics and many studies such as Russell's^{50,51} Huang's^{52} Deutsche's^{53} Oakes',^{54} and

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^{52} I. Huang, Children's Explanations of Strange Phenomena (Smith College Studies in Psychology, No. 1. Northhampton, Massachusetts: Smith College, 1930).

^{53} Jean Deutsche, The Development of Children's Concepts of Causal Relations (Institute of Child Welfare Monograph Series, No. 13. Minneapolis: The University of
Haupt's, followed those of Piaget, many of them devised in order to make direct comparison with Piaget's studies. The reader is directed to a summary of studies related to children's conceptions of physical causality by Huang; Oakes also included a comprehensive summary and bibliography. Oakes, through personal interviews and simple demonstration-experiments, collected and analyzed the answers given by children and adults to questions regarding various natural phenomena. Among his findings were these:


54 Mervin E. Oakes, Children's Explanations of Natural Phenomena (Contributions to Education, No. 926, New York: Teachers College, Columbia University, 1947).


60 Oakes, op. cit., pp. 105-151.

61 Oakes, op. cit.
1. Each subject, regardless of age, mental ability, or grade level, gave explanations of a wide variety of types. All types of answers were given by all age groups. 

2. Piaget's seventeen types of children's thinking were not usable as categories for explanations given by subjects in this study.

3. No evidence was found to corroborate Piaget's interpretation that there is a definite stage in the child's thinking which is characteristic of a given age.

4. Although a few responses were enigmatic, the great majority were matter-of-fact, non-metaphysical; in other words, naturalistic.

5. In explaining experiments which they had seen, the children gave a higher percentage of cause-and-effect (Physical) explanations than they did in response to verbal questions.

6. It appears from the results of the study that children can learn correct explanations of many natural phenomena and most of them are eager to do so.

7. In general, understanding of essential relationships increases with age among children.

Oakes, in his summary of the literature, points to the need for further research:

... it would seem that the time has not arrived for an investigation to end all investigations of the development of children's concepts concerning the universe in which they live. Rather it is indicated that the assembling of information concerning children's explanations might well be widely extended.

62 Ibid., p. 93.
63 Ibid., p. 131.
Several studies have been directed toward the appropriateness of various types and grade placement of science subject matter for the elementary grades. The study by Webb was one of the pioneer studies in this area. He utilized a test designed to check the pupils' previous knowledges, power of direct assimilation, and power of application; the pupils' use of facts and principles concerning twenty-five science topics were investigated. Webb tested 9,819 pupils in the fifth, sixth, seventh, and eighth grades. From the results Webb was led to conclude that the planning of the elementary science program could not rely upon any appreciable previous knowledges and that fifth grade children were not able to assimilate science principles but were directly able to assimilate facts. For further references the reader is directed to other studies such as those of Hillman.

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64 Hanor A. Webb, General Science Instruction in the Grades (Contributions to Education, No. 4; Nashville: George Peabody College for Teachers, 1921).

65 James E. Hillman, Some Aspects of Science in Elementary Schools (Contributions to Education, No. 14; Nashville: George Peabody College for Teachers, 1924).
Craig,\textsuperscript{66} and Robertson.\textsuperscript{67} Noll\textsuperscript{68} has presented a thorough comparison of Craig's and Robertson's studies.

A study by Emily V. Baker,\textsuperscript{69} where children in grades three, four, five, and six were given an opportunity to write whatever questions they wanted answered, is somewhat related to the present study. The children were not restricted in their choice of topics and were permitted freedom when writing their questions so that correct writing procedures were not important. A tabulation of the results revealed a wide range of questions and topics. Many of the questions were directly related to science topics and many of the questions that were classified in categories other than science had implications for science learnings. Questions about animal life had the highest ranking; the earth, plant life, weather and climate, energy, the human body, astronomy, inventions, and personal and social adjustment also ranked high among the questions.

\textsuperscript{66}Gerald S. Craig, Certain Techniques Used in Developing a Course of Study in Science for the Horace Mann Elementary School (Contributions to Education, No. 276. New York: Teachers College, Columbia University, 1927).

\textsuperscript{67}Martin L. Robertson, A Basis for the Selection of Course Content in Elementary Science (Ph.D. Thesis. University of Michigan, 1933).

\textsuperscript{68}Noll, op. cit., pp. 78-92.

\textsuperscript{69}Emily V. Baker, Children's Questions and Their Implications for Planning the Curriculum (New York: Bureau of Publications, Teachers College, Columbia University, 1945).
During the early part of the period in history when scientific toys began appearing for children, Meister experimented with fifth and sixth grade boys to determine the value to be had from these toys. Among his conclusions were these:

1. In general the very expensive toys are not more educational or more fun-producing than are the less expensive ones.

2. The number of toys a boy possesses increases until he is eleven or twelve years of age.

3. Extra-curricular activities in science make for better control of the physical and chemical elements in our environment.

4. Extra-curricular activities in science make for almost as good a knowledge and appreciation of environmental phenomena as do curricular activities.

5. Extra-curricular activities in science make for better constructive ability; that is, ability to fashion raw material into usable things.

6. Extra-curricular activities in science encourage and stimulate activities that give the boy first-hand experiences with natural phenomena. Their activities agree closely with the useful activities of great scientists and they contain elements in common with the laboratory procedure of great scientists.71

Bergen,72 in attempting to learn of the sources of children's science information, used a combination of

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71 Ibid., pp. 812-813.

shorthand and longhand to record observations in third grade science classes; she also used personal interviews with the children. In order to gain additional data, interviews were conducted with first and fifth grade children. She found that more empirical sources were given in the interviews than were detected in the classroom observation. Bergen, as a result of her findings, recommended that:

\[\ldots\] teachers be alert to provide opportunities for children to solve problems empirically. The children seem to recognize the appropriateness of such methods but probably get too little practice in using them. It may be desirable to bring simple apparatus into the room as a means of introducing this practice.\[73\]

Hill\[74\] studied the contributions of children in classroom science discussions; she coded the remarks according to a list of science objectives. The categories included the following objectives: critical-mindedness, open-mindedness, recognition of achievements of thinking, responsibility and cooperation, initiative, application of experiences, skills, recognition and identification of natural phenomena, inquiry, speculation, cause and effect

\[73\text{Ibid.},\ p.\ 67.\]

\[74\text{Katherine E. Hill, Children's Contributions in Science Discussions (Contributions to Education, No. 931. New York: Teachers College, Columbia University, 1947).}\]
relationships, and conclusions. From her findings Hill was able to conclude the following:

It seems important to note, however, that responses which could be classified in the twelve categories representing the objectives for science in the elementary school were made in all grades. This is evidence that the objectives which have been set up by certain science educators are appropriate in that children are able to respond to these objectives.

McCollum interviewed children through the first six grades of the elementary school to secure evidences of changing maturity as related to subject matter. Both verbal and performance reactions were noted in the physical and biological sciences. Among his findings were these:

There were many evidences of wide individual differences. No responses were distributed through the grade levels from zero per cent to one hundred per cent frequency. Explanations given by sixth-graders were also given by first-graders. Even the vocabulary used in identification and explanation in many instances extended throughout the range of the grade levels. It was a changing frequency rather than a complete change in type of response that distinguished between grade levels.

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75 Ibid., pp. 11-12.
76 Ibid., p. 77.
77 Clifford G. McCollum, "The Determination of Science Maturity as a Means of Improving the Program in Elementary Science," The Science Teacher, 20 (October, 1953), 238-240.
78 Ibid., p. 240.
Young used tape recordings and anecdotal records of 175 fourth grade sharing periods to discover whether they provided for possible science learning situations. The records were kept for a period of one year; only contributions related to science were recorded. A total of 145 contributions were noted. "These contributions included objects of interest, current news, and questions and comments concerning events in the environment."\footnote{Doris Young, "Identifying and Utilizing Children's Interests," \textit{Educational Leadership}, 15 (December, 1955), 161-165.}

\footnote{Ibid., p. 164.}
CHAPTER III

SOURCE OF DATA AND METHODOLOGY

The setting of the study. The data for this study were collected in twenty-seven classrooms within ten schools; eighteen of the classrooms were located in eight schools in Columbus, Ohio; nine of the classrooms were located in two schools in Upper Arlington, Ohio, a suburb of Columbus. One recording was made in each classroom. The data were collected on and between the dates February 18, 1955, and May 27, 1955.

Table 1 shows the numbers assigned to the classrooms, the grade levels, the letters assigned to the schools, the socio-economic groups, the location of the schools, and the dates of the recordings.

The schools have been lettered A through J according to three socio-economic groups. Schools A through D represent the lower socio-economic group; schools E through H represent the middle socio-economic group; schools I and J represent the upper socio-economic group.

The classrooms have been numbered I through XXVII according to grades within the three socio-economic groups. Classrooms I through IX represent the lower socio-economic group; classrooms X through XVIII represent the middle socio-economic group.
TABLE 1

Classrooms, Grade Levels, Schools, Socio-economic Groups, Locations, and Dates of Recordings

<table>
<thead>
<tr>
<th>Classrooms</th>
<th>Grade</th>
<th>School</th>
<th>Socio-economic</th>
<th>Location</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>2</td>
<td>A</td>
<td>Lower</td>
<td>Columbus</td>
<td>Apr. 21</td>
</tr>
<tr>
<td>II</td>
<td>2</td>
<td>B</td>
<td>Lower</td>
<td>Columbus</td>
<td>Apr. 26</td>
</tr>
<tr>
<td>III</td>
<td>2</td>
<td>B</td>
<td>Lower</td>
<td>Columbus</td>
<td>May 9</td>
</tr>
<tr>
<td>IV</td>
<td>4</td>
<td>A</td>
<td>Lower</td>
<td>Columbus</td>
<td>Apr. 22</td>
</tr>
<tr>
<td>V</td>
<td>4</td>
<td>C</td>
<td>Lower</td>
<td>Columbus</td>
<td>Apr. 25</td>
</tr>
<tr>
<td>VI</td>
<td>4</td>
<td>B</td>
<td>Lower</td>
<td>Columbus</td>
<td>May 2</td>
</tr>
<tr>
<td>VII</td>
<td>6</td>
<td>B</td>
<td>Lower</td>
<td>Columbus</td>
<td>May 5</td>
</tr>
<tr>
<td>VIII</td>
<td>6</td>
<td>D</td>
<td>Lower</td>
<td>Columbus</td>
<td>May 11</td>
</tr>
<tr>
<td>IX</td>
<td>6</td>
<td>C</td>
<td>Lower</td>
<td>Columbus</td>
<td>May 13</td>
</tr>
<tr>
<td>X</td>
<td>2</td>
<td>E</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 16</td>
</tr>
<tr>
<td>XI</td>
<td>2</td>
<td>E</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 20</td>
</tr>
<tr>
<td>XII</td>
<td>2</td>
<td>E</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 20</td>
</tr>
<tr>
<td>XIII</td>
<td>4</td>
<td>E</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 17</td>
</tr>
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<td>XIV</td>
<td>4</td>
<td>E</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 18</td>
</tr>
<tr>
<td>XV</td>
<td>4</td>
<td>F</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 25</td>
</tr>
<tr>
<td>XVI</td>
<td>6</td>
<td>E</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 19</td>
</tr>
<tr>
<td>XVII</td>
<td>6</td>
<td>G</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 24</td>
</tr>
<tr>
<td>XVIII</td>
<td>6</td>
<td>H</td>
<td>Middle</td>
<td>Columbus</td>
<td>May 27</td>
</tr>
<tr>
<td>XIX</td>
<td>2</td>
<td>I</td>
<td>Upper</td>
<td>U.Arlington</td>
<td>Apr. 15</td>
</tr>
<tr>
<td>XX</td>
<td>2</td>
<td>I</td>
<td>Upper</td>
<td>U.Arlington</td>
<td>Apr. 15</td>
</tr>
<tr>
<td>XXI</td>
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<tr>
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<td>Apr. 5</td>
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<tr>
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<td>Upper</td>
<td>U.Arlington</td>
<td>Apr. 29</td>
</tr>
<tr>
<td>XXV</td>
<td>6</td>
<td>I</td>
<td>Upper</td>
<td>U.Arlington</td>
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</tr>
<tr>
<td>XXVI</td>
<td>6</td>
<td>J</td>
<td>Upper</td>
<td>U.Arlington</td>
<td>Apr. 29</td>
</tr>
<tr>
<td>XXVII</td>
<td>6</td>
<td>J</td>
<td>Upper</td>
<td>U.Arlington</td>
<td>May 3</td>
</tr>
</tbody>
</table>

A total of 832 children participated in the sharing periods recorded for this study. Table 2 shows the number of students present in each of the classrooms.
<table>
<thead>
<tr>
<th>Socio-economic Classrooms</th>
<th>Boys 2 4 6</th>
<th>Girls 2 4 6</th>
<th>Boys and Girls 2 4 6</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>16</td>
<td>14</td>
<td>17</td>
<td>31 18</td>
</tr>
<tr>
<td>II</td>
<td>14</td>
<td>15</td>
<td>14</td>
<td>29 20</td>
</tr>
<tr>
<td>III</td>
<td>17</td>
<td>14</td>
<td>14</td>
<td>31 22</td>
</tr>
<tr>
<td>IV</td>
<td>21</td>
<td>12</td>
<td>33</td>
<td>33 12</td>
</tr>
<tr>
<td>Lower</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>20</td>
<td>16</td>
<td>36</td>
<td>36 18</td>
</tr>
<tr>
<td>VI</td>
<td>15</td>
<td>18</td>
<td>33</td>
<td>33 21</td>
</tr>
<tr>
<td>VII</td>
<td>17</td>
<td>17</td>
<td>34</td>
<td>34 18</td>
</tr>
<tr>
<td>VIII</td>
<td>16</td>
<td>17</td>
<td>33</td>
<td>33 20</td>
</tr>
<tr>
<td>IX</td>
<td>12</td>
<td>10</td>
<td>22</td>
<td>22 14</td>
</tr>
<tr>
<td>X</td>
<td>14</td>
<td>12</td>
<td>26</td>
<td>26 14</td>
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<tr>
<td>XI</td>
<td>15</td>
<td>16</td>
<td>31</td>
<td>31 16</td>
</tr>
<tr>
<td>XII</td>
<td>16</td>
<td>17</td>
<td>32</td>
<td>32 16</td>
</tr>
<tr>
<td>XIX</td>
<td>17</td>
<td>14</td>
<td>31</td>
<td>31 14</td>
</tr>
<tr>
<td>XIX</td>
<td>17</td>
<td>13</td>
<td>30</td>
<td>30 13</td>
</tr>
<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XV</td>
<td>16</td>
<td>21</td>
<td>37</td>
<td>37 21</td>
</tr>
<tr>
<td>XVI</td>
<td>23</td>
<td>18</td>
<td>41</td>
<td>41 18</td>
</tr>
<tr>
<td>XVII</td>
<td>14</td>
<td>18</td>
<td>32</td>
<td>32 18</td>
</tr>
<tr>
<td>XVIII</td>
<td>15</td>
<td>15</td>
<td>30</td>
<td>30 15</td>
</tr>
<tr>
<td>Upper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XXII</td>
<td>11</td>
<td>19</td>
<td>30</td>
<td>30 19</td>
</tr>
<tr>
<td>XXIII</td>
<td>14</td>
<td>19</td>
<td>33</td>
<td>33 19</td>
</tr>
<tr>
<td>XXIV</td>
<td>16</td>
<td>14</td>
<td>30</td>
<td>30 14</td>
</tr>
<tr>
<td>XXV</td>
<td>16</td>
<td>14</td>
<td>30</td>
<td>30 14</td>
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<tr>
<td>XXVI</td>
<td>15</td>
<td>10</td>
<td>25</td>
<td>25 10</td>
</tr>
<tr>
<td>XXVII</td>
<td>16</td>
<td>11</td>
<td>27</td>
<td>27 11</td>
</tr>
<tr>
<td>TOTAL</td>
<td>128</td>
<td>152</td>
<td>280</td>
<td>280 144</td>
</tr>
</tbody>
</table>
Selecting the schools and the classrooms. The schools were selected on the basis of their socio-economic setting.

The classrooms were selected on the basis of two criteria. First, a classroom was to have a regularly scheduled sharing period as part of its activities. Second, the teacher was to be willing, without reservation, to participate in the study to the extent of allowing the investigator to make a tape recording of one sharing period.

In order to facilitate the scheduling of the recordings, an attempt was made to use as few schools as possible. With the exception of schools D, F, G, and H there were as many as two recordings made in each school; in some schools five recordings were made. Because of the fact that some schools had fewer fourth and sixth grade classrooms it was necessary to use schools D, F, G, and H for one recording only.

Establishing socio-economic groups. Two methods of determining the socio-economic groupings of the classrooms were employed. First, the investigator observed the community in which the school was located, paying particular attention to the homes in the area. Warner and Lunt\(^1\) utilized this practice in determining socio-economic status at

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Yankee City. They say, "In brief, as one descends in the class order the type of house becomes smaller and less preferable, and as one ascends the house tends to become larger and better. The upper classes get the better homes; the middle classes, the ordinary houses; and the lower classes the poor ones." They further contend, "Yankee City houses are thus symbols of status in the society. The cultural differences in the family life of the several classes are reflected in house type and symbolized by it."

Schools A, B, C, and D were located within and near the oldest section of Columbus and adjacent to the downtown area. In this area most of the homes were old, many were in need of repair and the majority were in the low-price range and the low-rent bracket. Of the four mentioned schools, school D was located in the poorest residential area; school B was located in the best residential area. These four schools were judged to be within the lower socio-economic group.

Schools E, G, and H were located within new residential areas where the majority of the homes were new, modest, and moderately priced. School F was located in an older, well-established neighborhood. The majority of the homes in this area were either moderately priced tenant
property or moderately priced private homes. These four schools were judged to be within the middle socio-economic group.

Schools I and J were located within a rather elite suburban community where the homes ranged from the substantial to the pretentious. These schools were judged to be within the upper socio-economic group.

The second method used in determining the socio-economic groupings of the classrooms was that of classifying the fathers' occupations of only those children present at the time of the recording. In the case of broken homes, the occupation of the responsible parent or guardian was used. The occupational information was taken from the children's cumulative records. In most instances this investigator compiled the information; however, in a few instances the teachers prepared the lists. In cases where the records were not clear the teachers gained the information from either the children or the parents.

The investigator adapted the Alba M. Edwards' plan for rating occupations into socio-economic groups. The Edwards' plan divides occupations into six socio-economic groups:

1. Professional Persons  
2. Proprietors, Managers, and Officials  
3. Clerks and Kindred Workers  
4. Skilled Workers and Foremen  
5. Semi-Skilled Workers  
6. Unskilled Workers

Shartle, in reference to Edwards' plan states, "In forming the social-economic groups industries were crossed and occupations requiring similar qualifications were brought together." In discussing his groupings, Edwards says, "In forming these groups, industry lines were crossed and all of the workers who were doing productive work requiring similar qualifications or who were performing services requiring similar qualifications were brought together into one large homogeneous group, without particular reference to the different occupations the workers were pursuing."

For the purposes of this study, this investigator arbitrarily designated the first two of the Edwards' groups as the upper socio-economic group, the third and fourth groups as the middle socio-economic group, and the fifth and sixth groups as the lower socio-economic group.

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6Edwards, op. cit., p. 179.
The investigator realized that it would be difficult to find classrooms where the fathers' occupations would fall one hundred per cent in any one socio-economic group; therefore, the objective became that of establishing a grouping based on the majority. A classroom was judged to be within a given socio-economic group according to the majority of the fathers' occupations. In all classrooms a majority was evidenced. Table 3 shows the majority percentages of the fathers' occupations that were used to classify the classrooms according to socio-economic groups.

METHODOLOGY

Pre-planning with administrators and teachers. Permission to use the Columbus Public Schools for this study was first granted by the Assistant Superintendent in charge of Elementary Education. The elementary principals were contacted next and with their permission and guidance the classrooms were chosen. In Upper Arlington permission was first granted by the elementary principals; upon their permission and advice the classrooms were chosen.

In almost all instances the investigator met, in a pre-recording joint session, with all the teachers within a school who participated in the study; in a few instances, especially where only one classroom per building was used, the investigator met with the teachers individually.
During this pre-recording session with the teachers, the following agreements were made:

1. The teachers were to complete, immediately following the sharing period, a short evaluative questionnaire of the sharing period. See Appendix A.
2. The study was to be concerned only with the children's behavior during a sharing period; in no way was the behavior of the teacher to be analyzed.

3. The teacher was to conduct the sharing period in so far as possible in her usual manner: the procedure, the period of the day, the length of the sharing period, the number of children who shared, and the seating arrangement of the children.

4. There was to be no special planning with the children for this sharing period. In some instances, especially in the second grades and in cases where sharing was not scheduled daily, the teacher could, if it were a customary practice, remind the children at the close of the previous school day that the next day would be sharing day.

The tabulation of the answers to question number 1 of Part II of the teachers' questionnaire revealed that all teachers honored this agreement. The question was: Had this sharing period been planned in advance with the children (planning above and beyond that which is normally done)? Table 4 summarizes the teachers' responses.

5. The children were not to know prior to the sharing period that the recording was to be made. Question number 2 of Part II of the teachers' questionnaire "Did the children know prior to this morning that this sharing period was going to be recorded?" dealt with this agreement;
TABLE 4
Structure of the Sharing Period: Had This Sharing Period Been Planned in Advance?

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>Yes</th>
<th>Total</th>
<th>No</th>
<th>Total</th>
<th>T.T.*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Middle</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Upper</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

*T.T.*—Total Teachers.

as Table 5 indicates, all teachers respected this agreement.

TABLE 5
Structure of the Sharing Period: Did the Children Know Prior to This Morning That This Sharing Period Was Going To Be Recorded?

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>Yes</th>
<th>Total</th>
<th>No</th>
<th>Total</th>
<th>T.T.*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Middle</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Upper</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>

*T.T.*—Total Teachers.
6. The investigator was to play back the recording for the teacher and the children in those instances where the teachers so desired and where it was practicable. This procedure was followed in all but the one classroom where the sharing period was scheduled during the last thirty minutes of the school day. In no case did the children know until after the recording had been completed that they would have the opportunity of hearing it.

7. The investigator was to explain to the children, at the beginning of the sharing period, his purpose in the classroom and the purpose of the tape recorder.

Minimizing the effects of the presence of the investigator and the tape recorder on the behavior of the children. One of the objectives of collecting the data for this study was to record, as nearly as possible, a typical sharing period in each classroom; a typical sharing period was defined as a sharing period that would commonly occur in the classroom on those days when no outside interferences were present. Five methods were employed as means for reaching this objective.

First, the children were not to know prior to the sharing period that the recording was to be made. It was felt that this would eliminate the possibility of the teachers and the children making special plans for the period and thus creating an unnatural situation.
Second, the teacher was to conduct the sharing period in her usual manner. See number 3 agreement with teachers on page 53 for elaboration. It was thought that the children's behavior would more probably be normal if their routine was not disturbed.

Third, the behavior of the teacher during the sharing period was not to be analyzed. It was felt that this would tend to lessen the tension on the part of the teacher.

Fourth, the investigator explained to the children, at the beginning of the sharing period, his purpose in the classroom and the purpose of the tape recorder. It was felt that this procedure would tend to release the tension on the part of the children through the acquaintance of the investigator with the children and through satisfying some of the children's curiosities.

Fifth, it seemed that the investigator's previous acquaintance with the schools, the teachers, and the children through his position as supervisor of student teachers would tend to eliminate an unnatural situation. The investigator had supervised student teachers in all the schools with the exception of schools F and J; many of the children knew him by name and spoke to him in the hallways or on the playgrounds. The investigator had previously met or worked with seventeen of the teachers; three of the remaining ten teachers had some children in their classrooms with whom the investigator had had some contact. In
seven of the classrooms the investigator had had no previous contacts with either the children or the teachers.

Evaluating the effects of the presence of the investigator and the tape recorder on the behavior of the children. To evaluate the effects of the presence of the investigator and the tape recorder on the behavior of the children three methods were used. First, the investigator believed that because of his experience as an elementary teacher and as a supervisor of elementary student teachers he would be able, through observation, to evaluate in a general way the behavior of the groups during the sharing periods. The conclusions reached were:

1. There was no apparent difference in the behavior of the second grade children. The children in all of the second grade classrooms immediately became involved in their sharing and seemed oblivious of the investigator and the tape recorder. For example, in several instances, it was necessary for the teacher to remind the children that they were standing directly in front of and against the microphone.

2. Early in the sharing period the fourth grade children seemed to be slightly reluctant to make comments or ask questions; however, in all classrooms the tension was released early and the majority of the period was typical of regular sharing periods.
3. Early in the period the sixth grade children appeared to be more reserved and reluctant to talk than either the second or fourth grade children. In almost all cases the teacher had to ask questions or make attempts at starting a conversation; the children seemed hesitant to be first; however, in all the classrooms the tension was released and all the periods ended in a typical manner.

4. In general, the behavior of the children in all the classrooms at all the grade levels was judged to be rather typical of regular sharing periods.

The second method of evaluating the behavior of the children was the teachers' evaluations; see Part I of Appendix A. The teachers were asked to answer four questions in regard to the children's behavior.

Question number 1 of Part I of the teachers' questionnaire "Did as many children as usual share?" dealt with the number of children that shared; Table 6 summarizes the teachers' responses.

Seventeen of all the teachers felt that as many children as usual shared; six of all the teachers indicated that more children than usual shared; four of all the teachers thought that fewer children shared. The sharing periods seemed to be the most typical at the second grade level where seven of the teachers thought that as many children as usual shared. There were no appreciable
differences among the socio-economic groups with the exception of the middle group where no teacher thought that fewer children shared. From the answers given to this question it can be assumed that the effects of the presence of the investigator and the tape recorder upon the number of children that shared were very slight.

Question number 2 of Part I of the teachers' questionnaire "Did as many children as usual make comments pertaining to the objects and/or experiences shared?" dealt with the number of comments made by the children other than the sharer; Table 7 summarizes the responses to this question. Eleven of all the teachers indicated that as many children as usual made comments; four of all the teachers felt that more children than usual made comments; and
twelve of all the teachers felt that fewer children than usual made comments. Since more teachers indicated that fewer children than usual made comments than did those that indicated that as many as usual made comments it can be assumed that, generally, the children were inhibited by the presence of the investigator and the tape recorder in regard to making additional comments. The second grade children seemed to be the least inhibited, especially in the lower socio-economic group where all three of the teachers felt that as many children as usual made comments; the fourth grade children in the lower and middle socio-economic groups seemed to be the most inhibited where, in
each socio-economic group, all three of the teachers indicated that fewer children than usual made comments.

Question number 3 of Part I of the teachers' questionnaire "Did as many children as usual ask questions?" dealt with the number of questions that the children asked; Table 8 summarizes the teachers' responses to this question.

TABLE 8

Teachers' Evaluations: Did as Many Children as Usual Ask Questions?

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>Yes 2 4 6 Total</th>
<th>More 2 4 6 Total</th>
<th>Fewer 2 4 6 Total</th>
<th>T.T.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>3 0 1 4</td>
<td>0 0 1 1</td>
<td>0 3 1 4</td>
<td>9</td>
</tr>
<tr>
<td>Middle</td>
<td>3 0 1 4</td>
<td>0 0 0 0</td>
<td>0 3 2 5</td>
<td>9</td>
</tr>
<tr>
<td>Upper</td>
<td>2 1 0 3</td>
<td>0 1 1 2</td>
<td>1 1 2 4</td>
<td>9</td>
</tr>
<tr>
<td>Grand Total</td>
<td>8 1 2 11</td>
<td>0 1 2 3</td>
<td>1 7 5 13</td>
<td>27</td>
</tr>
</tbody>
</table>

*T.T.—Total Teachers.

Eleven of all the teachers felt that as many children as usual asked questions; three of all the teachers felt that more children than usual asked questions; thirteen of all the teachers felt that fewer children than usual asked questions. In as much as more teachers indicated that fewer children than usual asked questions than did those that indicated that as many children as usual asked questions it can be assumed that, generally, the children were
inhibited by the presence of the investigator and the tape recorder in regard to asking questions. The second grade children seemed to be the least inhibited; eight of all the second grade teachers indicated that as many children as usual asked questions; the fourth grade children in the lower and middle socio-economic groups seemed to be the most inhibited where all three of the teachers at each of the two levels felt that fewer children than usual asked questions.

Question number 4 of Part I of the teachers' questionnaire "In what other ways did you notice any differences in behavior?" dealt with other differences in behavior that the teachers noted; Table 9 summarizes the teachers' responses to this question.

Fifteen of all the teachers noted no other differences in behavior; eleven of all the teachers thought that the group seemed slightly inhibited and one of all the teachers felt that the children were very restrained at the beginning of the sharing period. There were no appreciable differences indicated among the socio-economic groups. In general, it can be said that the effects of the presence of the investigator and the tape recorder on the behavior of the children were very slight in regard to differences in
behavior other than the effects related to the questions and comments of the children.

TABLE 9

Teachers' Evaluations: In What Other Ways Did You Notice Any Differences in Behavior?

None Explain

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>None 2 4 6 Total</th>
<th>Slightly Reserved 2 4 6 Total</th>
<th>Very Reserved at First 2 4 6 Total</th>
<th>T.T.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>2 1 2 5</td>
<td>1 2 0 3</td>
<td>0 0 1 1</td>
<td>9</td>
</tr>
<tr>
<td>Middle</td>
<td>2 1 3 6</td>
<td>1 2 0 3</td>
<td>0 0 0 0</td>
<td>9</td>
</tr>
<tr>
<td>Upper</td>
<td>1 2 1 4</td>
<td>2 1 2 5</td>
<td>0 0 0 0</td>
<td>9</td>
</tr>
<tr>
<td>Grand Total</td>
<td>5 4 6 15</td>
<td>4 5 2 11</td>
<td>0 0 1 1</td>
<td>27</td>
</tr>
</tbody>
</table>

*T.T.—Total Teachers.

The following generalizations summarize the teachers' evaluations of the effects of the presence of the investigator and the tape recorder on the behavior of the children:

1. The second grade children seemed to be the least affected; no appreciable effects were noted.

2. The fourth and sixth grade children tended to be slightly inhibited.

3. The greatest inhibiting effects were in the realms of the questions asked and comments made by the children other than the sharer.
4. No appreciable differences were noted among the socio-economic groups.

5. The effects varied from classroom to classroom; some groups appeared to be stimulated while others appeared to be slightly inhibited.

The third method employed in determining the effects of the presence of the investigator and the tape recorder on the behavior of the children was that of recording more than one sharing period in one room. Classroom number XXII was used for this purpose. Four recordings were made in classroom XXII: February 18, 1955; April 6, 1955; May 26, 1955; and May 31, 1955. The first recording was analyzed for data for the study; recordings two, three, and four were used only for the purpose of determining the effects of the presence of the investigator and the tape recorder on the behavior of the children.

The teacher felt that during the first three recordings the children, unusually stimulated, were forcing questions and comments, particularly questions; the number of children who shared was typical each time. The teacher judged the last sharing period to be a typical sharing period. Since the only noticeable differences of behavior in the children were in their questions and comments, a comparison was made of the number of questions asked and
comments made during the four sharing periods. Table 10 summarizes the findings.

TABLE 10
A Comparison of the Children's Questions and Comments During Four Sharing Periods in Room XXII

<table>
<thead>
<tr>
<th>Recordings</th>
<th>No. of Questions</th>
<th>No. of Comments</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>39</td>
<td>10</td>
<td>49</td>
</tr>
<tr>
<td>2</td>
<td>17</td>
<td>29</td>
<td>46</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>22</td>
<td>33</td>
</tr>
<tr>
<td>4</td>
<td>14</td>
<td>27</td>
<td>41</td>
</tr>
</tbody>
</table>

During the first period the children asked more than twice as many questions and made less than one-third as many comments as they did during each of the following three periods. The total number of questions asked and comments made was comparable during all four sharing periods; however, a balance between the two was indicated in the last three periods. The results of this method of evaluating the effects of the presence of the investigator and the tape recorder on the behavior of the children were:

1. The children were at first stimulated and asked more questions than usual.

2. No other differences in behavior were noted.

3. The first sharing period was not typical in that more children asked questions and fewer made comments.
4. The effects of the presence of the investigator and the tape recorder on the behavior of the children were stimulating during the first sharing period.

5. Because of the fact that this particular group tended to be stimulated and, also, that the total number of questions and comments during all the sharing periods was comparable, it appears that the difference in behavior during the first sharing period was slight.

The results of the three methods of evaluating the effects of the presence of the investigator and the tape recorder on the behavior of the children can be summarized as:

1. There was little effect on the behavior of the second grade children.

2. The fourth and sixth grade children tended to be either slightly stimulated or slightly inhibited in regard to the questions they asked and the comments they made.

3. There was little effect on the number of children that shared.

4. In general, the data for this study provided a fair sampling of children's behavior during sharing periods.

Procedure in the classroom. The investigator operated the tape recorder for all the sharing periods. In almost all cases the sharing period was during the first
period in the morning. The tape recorder and the microphone were placed in the classroom before the children entered the room. On those few occasions when sharing was done at other times during the day, the recorder was placed in the classroom either at recess or just prior to the sharing period. There was no attempt made to conceal the recorder. The microphone was placed so that the children, seated in their normal positions, would be facing it.

When the teacher and the children were ready to begin their sharing, the teacher introduced the investigator to the children and he explained his purpose and that of the recorder to the children. During the sharing periods the investigator did not enter into the conversations.

As a supplement to the recorder, the investigator made notes at those instances where it was doubtful that the voices would be recorded on the tape. Notes were also made describing the objects shared, the titles of the books and records shared, and the actions of the children, such as, the drawing of a diagram on the blackboard for explanatory purposes.

At the close of the sharing period, the investigator played the recording for the teacher and the children. At times when the recording was faint, the recorder was
stopped and the teacher and the children helped the investigator understand the voices; notes were made by either the teacher or the investigator.

Transcribing the data. The investigator used the typewriter to transcribe all of the recordings. In a few instances where the investigator was unable to understand the voices, the recording was taken back to the school and the teacher helped to interpret the recording. Also, at times, an outside person was asked to listen to the recording in order to help understand the voices. Whenever it was impossible to understand a word, a phrase, a sentence, or perhaps a paragraph it was recorded as an inaudible comment; relatively few such instances occurred.

An attempt was made to transcribe the recordings verbatim: words, phrases, sentences, paragraphs, sounds, and expressions.

Categorizing the data. The data were categorized according to the following outline (minor subtopics have not been included):

I. The over-all nature of the sharing period
   A. General structure
   B. Nature of the sharing period
      1. Initiation of contributions
      2. Nature of that which the child shared
      3. Characteristics of the contributions
      4. People involved with that which the sharer shared
5. Out-of-school experiences that provided the bases for that which the child shared

II. Potentialities for the elementary science program
   A. Science principles
   B. Science facts
   C. Science clues

The data for subhead A under I (General structure) were collected from a teachers' questionnaire and through observation by the investigator; these data were not considered as one of the major categories used in the study. The data for subhead A under I were analyzed and interpreted under STRUCTURE OF THE SHARING PERIOD in Chapter IV.

The data for the five major categories for subhead B under I (Nature of the sharing period) were derived from the transcribed recordings of the sharing periods. After the recordings were transcribed, the categories and subtopics were coded, a master tally sheet was devised, and the data were thus organized.

This investigator is indebted to Harold V. Baker\(^7\) for the general plan of categorization used for subhead B under I and more specifically for some of the categories and subtopics. An outline of the data for subhead B of I (Nature of the sharing period) with frequencies of distribution according to sex, grade levels, classrooms and socio-economic groups can be found in Part I of Appendix B.

The data were analyzed and interpreted under THE NATURE OF THE SHARING PERIOD in Chapter IV.

The data for the three major categories under II were derived from the transcribed recordings. The investigator chose 586 statements from the transcriptions and classified them as science principles, science facts, or science clues related to the following seventeen science concepts:

1. The universe
2. The earth
3. The earth's atmosphere
4. Life
5. Conditions essential to life
6. Variety of life
7. The physical environment of life
8. Adaptations of life
9. Interdependence of life
10. Conservation
11. Health and safety
12. Chemical and physical change
13. Light
14. Energy, machines, and inventions
15. Electricity and magnetism
16. Social values of science
17. Scientific method

The investigator arbitrarily ascribed the term "concept" to the sixteen major headings listed on a chart by Craig and Others; the concept "scientific method" was added by the investigator.

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The science statements and the classifications assigned to them by the investigator were duplicated and given to four men who agreed to act as a jury and pass judgments on the statements. A definition of a science principle, fact, and clue as used in this study was also provided for the jurors. One of the jurors who now is head of the department of science in a state teachers college was at the time a professor of science education at another state teachers college; one of the jurors was an associate professor of science education in a state university; two of the jurors were members of the medical school faculty at a state university, one of them was an associate professor of anatomy and the other an assistant professor of physiology.

Since the statements were removed from context, the investigator in many instances inclosed in parentheses words or statements of clarification. The jurors were instructed:

If you agree with the investigator's classification please check the "agree" column. If you do not agree with the investigator's classification but feel that the statement should be classified otherwise, please check the one concept that is most nearly applicable to the statement. Also, check one of the following: clue, fact, principle. If in your opinion a statement is not worthy of consideration, please check the "discard" column.

In tabulating the opinions of the judges, the investigator considered three possible means of deciding
which statements to use: (1) considering the investigator as a judge (a total of 5 judges) and using any statements where there was an agreement among three (60 per cent) or more of the judges; (2) not considering the investigator as a judge (a total of four judges) and using only those statements where there was an agreement among three (75 per cent) or more of the judges; (3) not considering the investigator as a judge (a total of 4 judges) and using only those statements where there was an agreement between at least two (50 per cent) of the judges.

A tabulation of the opinions of the four judges, not including the investigator, revealed that they agreed unanimously on 300 of the statements, three (75 per cent) of the judges agreed on 204 of the statements, and two (50 per cent) of the judges agreed on 68 of the statements for a total of 572 statements. When the opinions were tabulated and the investigator included himself as a judge (a total of 5 judges) the following was revealed: five (100 per cent) of the judges agreed on 300 of the statements, four (80 per cent) agreed on 204 of the statements, and three (60 per cent) agreed on 68 of the statements for a total of 572 statements—the same total that was recorded for the four judges, not including the investigator, where 50 per cent or more agreement was considered. Since the totals for the two methods were the same, the problem then became
that of deciding whether to use the opinions of three (75 per cent) of the judges, not including the investigator, or two (50 per cent) of the judges not including the investigator. Because it was noted that one judge disagreed with 165 of the statements classified as facts while the other three judges only disagreed with a combined total of 26, the investigator decided that there must have been a misunderstanding about the definition of a fact. Therefore, it seemed feasible to categorize the statements that represented 50 per cent or more agreement by the four judges not including the investigator. In conclusion, the judges agreed unanimously on 300 of the statements categorized; on 204 of the statements three or 75 per cent of the judges agreed (on 8 statements 75 per cent of the judges agreed among themselves but not with the investigator); on 68 of the statements two or 50 per cent of the judges agreed. A total of 572 of the statements were utilized; 14 statements were discarded. A list of the statements according to grade levels; sex; socio-economic groups; science concepts, principles, facts, and clues may be found in Appendix D.

The data for the major heading II "Potentialities for the elementary science program" were analyzed and interpreted in Chapter V. An outline of the data with
frequencies of distribution according to sex, grade levels, classrooms, and socio-economic groups may be found under II of Appendix B.

Representative samplings of complete transcriptions of sharing periods may be found in Appendix E.

SUMMARY

Chapter III has dealt with the source of the data and the methodology used in this study. Data were collected in twenty-seven classrooms, eighteen in Columbus, Ohio, and nine in Upper Arlington, a suburb of Columbus. One recording was made in each classroom between the dates February 18, 1955, and May 27, 1955; 832 children participated. The investigation included twenty-seven tape recordings; three each at the second, fourth, and sixth grade levels in lower, middle, and upper socio-economic groups.

Schools were selected on the basis of socio-economic setting; selection of classrooms was based on whether the classroom held a regularly scheduled sharing period and on the willingness of the teacher to participate.

To establish the socio-economic groups two methods were employed: first, the investigator observed the homes in the community and second, the fathers' occupations were grouped.
In order to record, as nearly as possible, typical sharing periods, five methods were employed to minimize the effects of the presence of the investigator and the tape recorder on the behavior of the children. They were as follows: (1) the children were not to know prior to the sharing period that the recording was to be made; (2) the teacher was to conduct the sharing period in her usual manner; (3) the behavior of the teacher during the sharing period was not to be analyzed; (4) the investigator explained to the children, at the beginning of the sharing period, his purpose in the classroom and the purpose of the tape recorder; and (5) it seemed that the investigator's previous acquaintance with the schools, the teachers, and the children through his position as supervisor of student teachers would tend to eliminate an unnatural situation.

Three methods of evaluating the presence of the investigator and the tape recorder on the behavior of the children were employed: (1) the investigator evaluated the sharing periods on the basis of his background and experience; (2) the teachers evaluated the sharing periods; (3) four recordings were made in one classroom for comparison purposes.

The data were transcribed by the investigator. The following is an outline (minor subtopics omitted) of the presentation of the data:
I. The over-all nature of the sharing period
   A. General structure
   B. Nature of the sharing period
      1. Initiation of contributions
      2. Nature of that which the child shared
      3. Characteristics of the contributions
      4. People involved with that which the sharer shared
      5. Out-of-school experiences that provided the bases for that which the child shared

II. Potentialities for the elementary science program
   A. Science principles
   B. Science facts
   C. Science clues
CHAPTER IV

THE GENERAL STRUCTURE AND NATURE OF THE SHARING PERIOD

This chapter contains an analysis and interpretation of the structure of the sharing period as revealed through the teachers' questionnaire and through observation on the part of the investigator. The chapter also contains an analysis and interpretation of certain aspects of the nature of the sharing period as revealed through the analyzation of the data collected during the recording of the sharing periods.

STRUCTURE OF THE SHARING PERIOD

Planning policies concerning sharing periods. Question number 6 of Part II of the teachers' questionnaire "Who makes the school policies concerning sharing?" had four possible choices; namely, the principal, the teacher, the faculty, the teacher and the pupils. Table 11 summarizes the responses to this question.

The findings related to the planning policies of sharing periods were as follows:

1. The practices concerning the sharing period were based on policies established within individual
<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>Principal</th>
<th>Teacher</th>
<th>Faculty</th>
<th>Teacher and Students</th>
<th>T.T.*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 4 6</td>
<td>2 4 6</td>
<td>2 4 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>0 0 0 0</td>
<td>1 1 1 3</td>
<td>0 0 0 0</td>
<td>2 2 2 6</td>
<td>9</td>
</tr>
<tr>
<td>Middle</td>
<td>0 0 0 0</td>
<td>0 2 1 3</td>
<td>0 0 0 0</td>
<td>3 1 2 6</td>
<td>9</td>
</tr>
<tr>
<td>Upper</td>
<td>0 0 0 0</td>
<td>0 0 1 1</td>
<td>0 0 0 0</td>
<td>3 3 2 8</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>0 0 0 0</td>
<td>1 3 3 7</td>
<td>0 0 0 0</td>
<td>8 6 6 20</td>
<td>27</td>
</tr>
</tbody>
</table>

*T.T.—Total Teachers.
classrooms; no teachers indicated that the principal or the faculty formulated policies.

2. In as much as 20 of the 27 teachers indicated that the teachers and the students planned the sharing periods, it can be inferred that sharing periods were usually cooperatively planned within individual classrooms.

3. Neither the grade level nor the socio-economic setting was an important factor in determining the planning policies of sharing periods.

**Frequency of sharing periods.** Question number 3 of Part II of the teachers' questionnaire "When do you have sharing periods?" dealt with the frequency of sharing periods. Table 12 summarizes the results of this question.

The findings related to the frequency of sharing periods were these:

1. The most common practice was that of having a sharing period each day.

2. The second most common practice was that of having a sharing period two days per week.

3. At the sixth grade level sharing was more apt to take place when the occasion arose than at any of the other grade levels studied.

4. The socio-economic setting was not a factor in determining the frequency of sharing periods.

**Scheduling the sharing period within the day's activities.** Question number 4 of Part II of the teachers' questionnaire "Do you usually have the sharing period at a specific time of the day?" and "If your answer is yes, when?" provided the teachers with an opportunity to indicate
TABLE 12

Structure of the Sharing Period: When Do You Have Sharing Periods?

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>Daily</th>
<th>One day per week</th>
<th>Two days per week</th>
<th>Three days per week</th>
<th>When occasion arises</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 4 6</td>
<td>2 4 6 T*</td>
<td>2 4 6 T*</td>
<td>2 4 6 T*</td>
<td>2 4 6 T* T.T.**</td>
</tr>
<tr>
<td>Lower</td>
<td>2 1 1 4</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>1 1 0 2</td>
<td>0 1 2 3 9</td>
</tr>
<tr>
<td>Middle</td>
<td>1 2 2 5</td>
<td>0 0 0 0</td>
<td>2 0 0 2</td>
<td>0 1 0 1</td>
<td>0 0 1 1 9</td>
</tr>
<tr>
<td>Upper</td>
<td>0 1 2 3</td>
<td>0 1 0 1</td>
<td>3 1 0 4</td>
<td>0 0 0 0</td>
<td>0 0 1 1 9</td>
</tr>
<tr>
<td>Total</td>
<td>3 4 5 12</td>
<td>0 1 0 1</td>
<td>5 1 0 6</td>
<td>1 2 0 3</td>
<td>0 1 4 5 27</td>
</tr>
</tbody>
</table>

*T—Total.
**T.T.—Total Teachers.
the portion of the day devoted to sharing; Tables 13 and 14 summarize the results.

**TABLE 13**

Structure of the Sharing Period: Do You Usually Have the Sharing Period at a Specific Time of the Day?

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Lower</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9</td>
<td>8</td>
<td>25</td>
</tr>
</tbody>
</table>

*T.T.*—Total Teachers.

The findings related to scheduling time for sharing within the day's activities were:

1. Sharing time was usually scheduled for a specific time within the day's activities; 25 of the 27 teachers reported such practice.

2. The most popular part of the day for sharing time was during the first period in the morning; 22 of the 27 teachers who reported specific times of the day for sharing avowed this practice.

3. The differences noted between grade levels were not appreciable.

4. The upper socio-economic group indicated a tendency toward scheduling sharing time at various times throughout the day; however, the difference was not significant.
TABLE 14

Structure of the Sharing Period: If Answer Is Yes, (See Table 13) When?

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>1st period of the day</th>
<th>1st period after lunch</th>
<th>Combination of categories 1 &amp; 2</th>
<th>Last period of the day</th>
<th>T.T.**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2 4 6 T*</td>
<td>2 4 6 T*</td>
<td>2 4 6 T*</td>
<td>2 4 6 T*</td>
<td>T.T.**</td>
</tr>
<tr>
<td>Lower</td>
<td>3 2 3 8</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>8</td>
</tr>
<tr>
<td>Middle</td>
<td>3 3 3 9</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>9</td>
</tr>
<tr>
<td>Upper</td>
<td>1 2 2 5</td>
<td>1 0 0 1</td>
<td>0 1 0 1</td>
<td>1 0 0 1</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>7 7 8 22</td>
<td>1 0 0 1</td>
<td>0 1 0 1</td>
<td>1 0 0 1</td>
<td>25</td>
</tr>
</tbody>
</table>

*T—Total.
**T.T.--Total Teachers; the total number of teachers in this table is less than in other tables because 2 teachers did not indicate a specific time of the day for sharing time (see Table 13).
Time allotted to sharing. Question number 5 of Part II of the teachers' questionnaire "Usually, how long are your sharing periods (minutes)?" provided an opportunity to gather data concerning practices regarding the amount of time the teacher allowed per sharing period. In responding to this question a majority of the teachers (20 of the 27) stated their responses in terms of 15-20 minutes or 20-40 minutes, indicating a flexibility to meet variations from day to day. The data pertaining to this question, as shown in Table 15, were treated in the following manner: in cases where the teachers indicated a flexibility such as 20-40 minutes, the average number of minutes were computed with the assumption that the average was a fair interpretation of the usual procedure.

The data revealed the following findings regarding the amount of time allotted for sharing:

1. Nine of the 27 teachers reported that an average of 17\(\frac{1}{2}\) minutes were allotted to a sharing period.

2. Twenty of the 27 teachers reported that an average of 17\(\frac{1}{2}\) minutes or more were allotted to a sharing period.

3. No appreciable differences were noted among grade levels.

4. Among the socio-economic groups the only noticeable difference was at the lower group where 6 or 2/3 of the teachers (2 at each grade level) reported that an average of 17\(\frac{1}{2}\) minutes were allotted to a sharing period.
TABLE 15
Structure of the Sharing Period: Usually How Long Are Your Sharing Periods (Minutes)?

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>10</th>
<th>12 $\frac{1}{2}$</th>
<th>15</th>
<th>17 $\frac{1}{2}$</th>
<th>20</th>
<th>22 $\frac{1}{2}$</th>
<th>25</th>
<th>30</th>
<th>T.T.**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>1 0 0 1</td>
<td>0 0 1 1</td>
<td>0 0 0 0</td>
<td>2 2 2 6</td>
<td>0 1 0 1</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
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<td>9</td>
</tr>
<tr>
<td>Middle</td>
<td>0 0 1 1</td>
<td>0 0 0 0</td>
<td>0 0 1 1</td>
<td>0 1 0 1</td>
<td>1 0 0 1</td>
<td>1 1 1 3</td>
<td>1 1 0 2</td>
<td>0 0 0 0</td>
<td>9</td>
</tr>
<tr>
<td>Upper</td>
<td>0 1 1 2</td>
<td>0 0 0 0</td>
<td>0 0 1 1</td>
<td>0 1 1 2</td>
<td>0 1 0 1</td>
<td>1 0 0 1</td>
<td>0 0 0 0</td>
<td>2 0 0 2</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>1 1 2 4</td>
<td>0 0 1 1</td>
<td>0 0 2 2</td>
<td>2 4 3 9</td>
<td>1 2 0 3</td>
<td>2 1 1 4</td>
<td>1 1 0 2</td>
<td>2 0 0 2</td>
<td>2 7</td>
</tr>
</tbody>
</table>

*T—Total.
**T.T.—Total Teachers.
5. The time allotted for sharing time varied considerably from classroom to classroom.

Classroom procedures. During the recording of the sharing periods the investigator made notations of the classroom procedures used; these data were utilized in formulating Tables 16 and 17. Table 16 indicates the

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>Teacher 2</th>
<th>4</th>
<th>6</th>
<th>Total</th>
<th>Student 2</th>
<th>4</th>
<th>6</th>
<th>Total</th>
<th>T.C.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Middle</td>
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<td>1</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>9</td>
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<tr>
<td>Upper</td>
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<td>9</td>
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<tr>
<td>Total</td>
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<td>5</td>
<td>7</td>
<td>15</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>12</td>
<td>27</td>
</tr>
</tbody>
</table>

*T.C.*—Total Classrooms.

classrooms in which the teachers were the chairmen and those in which children were chairmen. Table 17 deals with the seating arrangements used during sharing time.

The information noted revealed the following findings:

1. The total number of classrooms where the teachers acted as chairmen of the sharing time was slightly higher than those where children acted as chairmen; however, the difference was not substantial.
### TABLE 17

Seating Arrangements During Sharing Time

<table>
<thead>
<tr>
<th>Socio-economic Group</th>
<th>Circle</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
<th>T.C.*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>Total</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>Total</td>
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<td>4</td>
<td>6</td>
<td>Total</td>
<td></td>
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<td>0</td>
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<td>3</td>
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<td>1</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>13</td>
<td>27</td>
</tr>
</tbody>
</table>

*T.C.—Total Classrooms.
2. More teachers at the sixth grade level than at any other grade level acted as chairman of the sharing time; there was a progressive tendency toward this procedure from the second to the sixth grade level.

3. At the lower socio-economic group more teachers acted as chairmen during the sharing time than did those at the middle and upper socio-economic groups.

4. In approximately 3/4 of the total number of classrooms the students remained in their usual seating arrangements; however, in approximately 2/3 of these classrooms the sharer walked to the front of the group to share.

5. The procedure of having the children form a circle for sharing time was more popular at the second grade level than at any other level; it was unanimous at the lower and upper socio-economic groups.

6. At the fourth grade level more than at any other grade level the most popular seating arrangement was that of having the children remain in their usual seating arrangement with the sharer going to the front of the group to share.

7. The procedure of having the children remain in the usual seating arrangement at all times was more frequent at the sixth grade level than at any other grade level.

8. The only appreciable difference noted among the socio-economic groups was that at the middle group only one sixth grade classroom used the procedure of having the children form a circle for sharing time.

Some variations were noted in the procedure used in selecting the children that were to share; the common procedure was to recognize those wanting to share by having them raise their hands. The variations occurred only one time and it was not deemed advisable to classify them in table form. The following variations were noted:
1. In one second grade classroom, after the children had formed a circle, the student chairman asked those desiring to share to raise their hands; he then, beginning with number 1, assigned each sharer a number and as the sharing progressed he called the next number as a method of recognizing the next sharer.

2. In one second grade classroom, after the children had formed a circle, the student chairman asked a student to share; during the rest of the sharing the sharer recognized the next sharer by choosing, from the raised hands, someone of the opposite sex.

3. In one fourth grade classroom no more than five children were permitted to share. As the children entered the classroom in the morning, those desiring to share told the teacher and she made a list of the names in the order in which they reported to her. In the event that more than five children wanted to share the list for the next day was started.

4. In one fourth grade classroom the student chairman, at the beginning of the period, took a poll of those wanting to share and then, as the sharing progressed, recognized those wanting to share by name.

5. In one fourth grade classroom the children shared according to reading groups. The student chairman announced the reading groups that were to share by stating the titles of reading textbooks; the children raised their hands for permission to share.

6. In one sixth grade classroom at the beginning of sharing time, the teacher asked those children wanting to share to raise their hands; he then called the names of those who had raised their hands and the children remembered the order in which the names were called and shared in that order.

SUMMARY

A composite picture of the structure of the sharing period revealed that sharing periods were planned according
to policies within the individual classrooms. The first period of the day was the most popular time of the day for sharing. Sharing periods on the average utilized 17½ or more minutes. From the second grade to the sixth grade there was a progressive tendency from children acting as chairman to the teachers acting as chairman of the sharing periods. In the majority of the classrooms the children were seated in the usual seating arrangements with the sharers walking to the front of the room to share; at the second grade level a preference for having the children form a circle was indicated. The common procedure for recognizing the children who wanted to share was by having them raise their hands; some individual variations were noted.

THE NATURE OF THE SHARING PERIOD

This section of the chapter deals with an analysis and interpretation of certain aspects of the sharing period. The investigator is indebted to Baker\(^1\) for some of the classifications. The five major categories considered were (1) initiation of the contributions, (2) the nature of that which the child shared, (3) characteristics of the

contributions, (4) people involved with that which the sharer shared, and (5) the out-of-school experiences that provided the bases for that which the child shared. A complete tabulation of the frequencies of distribution according to sex, grade levels, classrooms, and socio-economic groups may be found in Appendix B, Part I; percentage tables derived from the data in Appendix B may be found in Appendix C. In this section graphs have been used to portray the data presented in Appendix C. Generally the percentage differences indicated between boys and girls were slight; therefore, only the percentages for the grade levels and socio-economic groups have been shown in the graphs; instances where boy and girl differences were significant are indicated throughout the chapter.

In as much as there were multiple classifications under the major categories and the subtopics, the reader will note that the totals for the categories are not the same. Under the major categories the total frequencies of distribution were:

1. Initiation of the contributions--1597
2. The nature of that which the child shared--1654
3. Characteristics of the contributions--1651
4. People involved with that which the sharer shared--324
5. The out-of-school experiences that provided the bases for that which the child shared--432
The initiation of the contributions in the sharing periods. Six subtopics were investigated to determine the nature of the initiation of topics in the sharing periods. The six subtopics with their frequencies of distribution were:

1. New topic—Independent—the first contribution in any period and succeeding contributions judged unrelated to those preceding—contains only one major topic—257

2. New topic—Independent—the first contribution in any period and succeeding contributions judged unrelated to those preceding—contains more than one major topic; e.g., "I've got these sea shells and a doll"—55

3. New topic—Suggested—a contribution judged to be suggested by one preceding but not a continuation of that specific topic; e.g., sharer reports that his mother liked her Mother's Day gift that he made for her; then someone other than the sharer tells what she and others bought for her mother for Mother's Day—may contain additional topics—38

4. Topic continued—Further comment on topic already introduced—immediately succeeding—by someone other than the sharer; e.g., sharer says, "I got a doll...", and someone other than the sharer asks, "What kind of a doll is it?"—526

5. Topic continued—Further comment on topic already introduced—immediately succeeding—by sharer; e.g., sharer says, "I got a doll..." and then after intervening questions or comments she says, "An Indian doll."—596

6. Topic continued—Further comment on topic already introduced—subsequent to an earlier contribution after other topics have intervened—by someone other than sharer—25

Total . . . . . . . . . . . . . . . . . . . . . . . 1597
Subtopics 1, 2, and 3 which dealt with new independent topics that the children introduced were considered as indicators of informal reporting. Subtopics 4, 5, and 6 which dealt with the continuation of topics were considered as indicators of conversation.

An analysis of the data revealed the following:

1. The total number of topics initiated (1597) decreased consistently and significantly from the second grade (803) to the fourth grade (479) to sixth grade (315).

2. A striking similarity existed among all grade levels and all socio-economic groups as to the initiatory methods used.

3. The three most widely used initiatory techniques were recorded as subtopics 1, 4, and 5. At the second grade level 14 per cent of the total initiations were classified under subtopic 1, at the fourth grade level 18 per cent, and at the sixth grade level 19 per cent. The distribution for subtopic 4 was 41 per cent at the second grade level, 36 per cent at the fourth grade level, and 41 per cent at the sixth grade level. For subtopic 5 the distributions were 41 per cent at the second grade level, 40 per cent at the fourth grade level, and 25 per cent at the sixth grade level. The reader is reminded at this point that the results of subtopic 5 were not entirely the results of children's behavior in that this study was concerned with normal sharing periods and that the teachers frequently asked questions; the responses to these questions were recorded under subtopic 5.

4. In as much as only one technique, subtopic 1, classified as informal reporting had a high percentage rating and two techniques, subtopics 4 and 5, classified as conversation each had higher percentage ratings than subtopic 1 it can be concluded that conversation was the most dominant aspect of group participation within sharing periods and informal reporting was the second most dominant aspect.
5. An analysis of the findings related to sub-topics 2, 3, and 6 revealed that children made few initiations that contained more than one topic, that a preceding report rarely suggested a new topic, and that children seldom referred back to a topic once other topics had intervened.

6. Boys other than the sharer continued topics more than the girls.

Figure I is a composite presentation of the data pertaining to the subtopics. For a complete tabulation of the frequencies of distribution according to sex, grade levels, classrooms, and socio-economic groups see subhead A under I of Appendix B; see Appendix Table 1, Appendix C for percentage table.

The nature of that which the children shared. Five subtopics were investigated to determine the nature of the items which children shared during sharing periods; additional information concerning the contributions was recorded as minor topics. The following outline shows this analysis with the total frequencies of distribution.

1. Objects—gull, turtle, etc.
   a. Identification
      (1) Animal life
          (a) Bird nest—1
          (b) Garter snake—1
          (c) Kittens—1
          (d) Sea shells—2
          (e) Turtles—1
          Total .......................... 6
      (2) Books and newspapers
          (a) Coloring—1
          (b) Comic—1
          (c) Information
FIGURE 1

INITIATION OF CONTRIBUTIONS

Topic continued - after intervening topic - by someone other than sharer

Topic continued by sharer

Topic continued by someone other than sharer

New topic - independent - more than one major topic

New topic - independent - major topic

New topic - suggested

7, 8, 9 represent lower, middle, upper sixth grades
4, 5, 6 represent lower, middle, upper fourth grades
1, 2, 3 represent lower, middle, upper second grades

Percentage
1-1 Comic--1  
1-2 Encyclopedia--1  
1-3 Science--4  
1-4 Social studies--3  
(d) Notebook--2  
(e) Religion  
1-5 Bible--2  
1-6 Sunday school--1  
(f) Scrapbook--1  
(g) Stamp book--1  
(h) Story--13  
(i) Newspaper--1  
(j) Newspaper clipping--4  
Total........................36  

(3) Ceramics  
(a) Bear--1  
(b) Bird--1  
(c) Cat--1  
(d) Deer--1  
(e) Dog--2  
(f) Horse--1  
Total........................7  

(4) Coins  
(a) Counterfeit--2  
(b) Radio-active--1  
(c) South African--2  
Total........................5  

(5) Maps  
(a) Green burlap map of Philippine Islands--1  
(b) Road--1  
Total.........................2  

(6) Miscellaneous  
(a) Advertisement sign--large outdoor type--1  
(b) Antique Chinese sewing box--1  
(c) Box lined with aluminum foil--planter--1  
(d) Dentist's drill bits--1  
(e) Inside garden tools--1  
(f) Key ring with keys--1  
(g) Mattress label--1  
(h) Panamanian hat in bamboo container--1  
(i) Prism--1  
Total.........................9  

(7) New clothes  
(a) Can-can slip--1  
(b) Coat--1
(c) Dress—4
(d) Gloves—1
(e) Shirt—1
(f) Shoes—1
Total .......................... 9

(8) Personal items
(a) Billfold—Davey Crockett—1
(b) Billfold—girl's—1
(c) Bracelet—1
(d) Charm—1
(e) Earrings—1
(f) Jewelry Box—1
(g) Metal ruler—1
(h) Mirror—1
(i) Necklace—1
(j) Pencil—1
(k) Pennants—1
(l) Plastic ring—1
(m) Purse—3
(n) Wash mit—terry cloth—1
(o) Watch fob—1
Total .......................... 17

(9) Pictures
(a) Airline materials--3
(b) Baseball players
  1-7 Cards—1
  1-8 Magic—1
(c) Flowers—1
(d) Magazine and newspaper
  1-9 Animal—1
  1-10 Cartoons—Walt Disney's
    True Life Adventures—1
  1-11 Davey Crockett—1
  1-12 Nike—1
  1-13 Transportation—1
(e) Movie stars—1
(f) Wood—1
Total .......................... 13

(10) Plant life
(a) Carrot—1
(b) Dandelions—1
(c) Lilacs—2
(d) Onion—sprouting—1
(e) Poppies—1
(f) Roses—1
(g) Wild flowers—1
Total .......................... 8

(11) Post cards—1

(12) Rocks—3
(13) Toys, games, models, puzzles
   (a) Antique glass marble with lion inside—1
   (b) Doll—5
   (c) Doll clothes—1
   (d) Dominoes—1
   (e) Indian doll—1
   (f) Mechanical dog—1
   (g) Mechanical mouse—1
   (h) Model airplane—1
   (i) Model boat—2
   (j) Model car—1
   (k) Model farm—1
   (l) Monopoly game—1
   (m) Nail puzzle—1
   (n) Phonograph records—1
   (o) Plastic car and house trailer—1
   (p) Popsicle stick—1
   (q) Puppet—1
   (r) Toy watch—1
   (s) Trick bow tie—1
   (t) Viewmaster—1
   (u) Yo-yo—1
   Total ........................................... 26
   Grand total objects ..................... 142
b. Source
   (1) Borrowed—7
   (2) Cereal box—2
   (3) Church—3
   (4) Earned—1
   (5) Father’s work—samples and souvenirs—1
   (6) Found—11
   (7) Gift
      (a) Mother—5
      (b) Father—3
      (c) Mother and father—1
      (d) Sister—1
      (e) Brother—2
      (f) Aunt—3
      (g) Aunt and uncle—1
      (h) Grandmother—5
      (i) Girl friend—1
      (j) Boy friend—1
      (k) Dentist—1
      (l) Adult—unidentified—2
      (m) Mother’s trip—4
      (n) Birthday—3
98

(o) Easter—1
(p) Christmas—4
(q) Home show—1
Total . . . . . . . . . . . . . . . . . . . . 39
(r) Home—7
(s) Library—6
(t) Made—5
(u) Newspapers and magazines—6
(v) Private collections—2
(w) Purchased—8
(x) Traded—1
(y) Trip souvenir—1
(z) Unknown—22
Total sources . . . . . . . . . . . . . . . . . . 122

2. Experiences
   a. Not involving other people or communication medium—29
   b. Involving other people; no communication medium—159
   c. Involving communication medium; no people—51
   d. Involving communication medium and people—8
   e. Someone else's experience—33
   Total . . . . . . . . . . . . . . . . . . . . . . . 258

3. Readings and jokes
   a. Sunday school verse—2
   b. Jokes—1
   Total . . . . . . . . . . . . . . . . . . . . . . . 3

4. An original work
   a. Story—2
   b. Drawing—1
   c. Construction—3
   Total . . . . . . . . . . . . . . . . . . . . . . . 6

5. An idea—1245
Grand total . . . . . . . . . . . . . . . . . . . . 1654

During all of the sharing periods 142 objects were shared. Of the total number of objects shared, 83 of them were shared by the second grades, 52 of them by the fourth grades, and 7 of them by the sixth grades. The only significant difference noted within the grade levels was that the second grade of the upper socio-economic group shared
39 objects as compared to 24 and 20 shared by the middle and lower socio-economic groups, respectively.

The greatest number (36) of the objects shared under any one subtopic was under the subtopic "books and newspapers" with the second and fourth grades of the middle and upper socio-economic groups sharing 31 of the 36. There were 26 objects under the subtopic "toys, games, models, and puzzles"; the second grades shared 19 of these objects and the fourth grades shared the other 7. The subtopic classified as "personal items" ranked third with 17 objects; the second grades of lower and upper socio-economic groups shared 11 of these 17 objects. "Pictures" accounted for 13 of the objects shared; they were primarily shared by the second grades of all socio-economic groups. The remaining 50 objects were distributed among the other 9 subtopics as follows: new clothes 9, miscellaneous 9, plant life 8, ceramics 7, animal life 6, coins 5, rocks 3, maps 2, and post cards 1.

Girls shared more objects (81) than did the boys (61). Among the socio-economic groups the tendency to share objects increased progressively from the lower (35) to the middle (43) to the upper (64).

Fifteen sources were identified for the objects shared. The only significant difference noted among the sources was that of gifts which accounted for 39 of the
objects. Of the 39 gifts, 24 of them were shared by the second grades of the middle and upper socio-economic groups. The other fourteen sources had a frequency range from 1 to 11 as follows: found 11, purchased 8, borrowed 7, home 7, library 6, newspapers and magazines 6, made or constructed 5, church 3, private collections 2, cereal box 2, earned 1, father's work 1, traded 1, and trip souvenirs 1. The source of 22 of the objects was not identified.

In as much as the frequency table in Appendix B shows a total of 142 objects shared and the total in the source outline is 122, it can be noted that the difference exists because a source was recorded only one time when a child shared more than one article from the same source.

Under the subtopic "experiences" an effort was made to classify the experiences in order to gain insight into the experiences that children like to tell about. The five minor subtopics with their total frequencies of distribution were:

1. Experiences not involving other people or communication medium; e.g., "Well, I went to the zoo and I saw two giraffes, a mother and a baby, and their names were Hansel and Gretel."—29

2. Experiences involving other people; no communication medium; e.g., "Well, when we went to Florida we found this, ah, shell that had this black stuff all over it . . ."—159

3. Experiences involving communication medium; no people; e.g., "Why, ah, last night in the paper
it said that these eight children had had this polio vaccine."--31

4. Experiences involving communication medium and people; e.g., "My, my, daddy said that Davey Crockett is gonna' to start in the paper today . . ."--6

5. Someone else's experience; e.g., "Today is my mamma's birthday; she's twenty-one years old today."--33
Total ............................................. 258

The five minor subtopics under "experiences" revealed a total of 258 frequencies. The kinds of experiences that the children shared were closely related at all grade levels and within all socio-economic groups. It was interesting to note that "experiences involving other people; no communication medium" had a total frequency of distribution (159) considerably larger than the other four categories combined (99). Also of interest was the fact that "someone else's experience" (33), "experiences involving communication medium and no people" (31), and "experiences not involving other people or communication medium" (29) were of equal importance.

A significant exception occurred at the sixth grade level of the upper socio-economic group where they tended to share more "experiences involving communication medium and no people" (67 per cent) and fewer "experiences involving other people and no communication medium" (20 per cent); in the other socio-economic groups the percentages were 18
in the middle group and 13 in the lower group for "experiences involving communication medium and no people" with the middle group having 61 per cent and the lower group having 46 per cent for "experiences involving other people and no communication medium."

Figure II portrays a composite picture of the data pertaining to the experiences shared; see Appendix Table 3, Appendix C for percentages.

Readings and jokes (3) and original works (6) were of little significance in the sharing periods.

That ideas were a significant part of the sharing periods was evidenced by the high percentages indicated at all grade levels and all socio-economic groups. It must be noted here that "idea" was defined broadly and that any contribution not classified under objects, experiences, reading and jokes, or an original work was recorded as an idea. Thus, a question, or an answer to a question, or even a yes or no was recorded as an idea. This data should not be interpreted as indicating the number of ideas that were presented by original sharers.

Figure III represents a composite picture of the nature of that which children share. For a complete tabulation of the frequencies of distribution according to sex, grade levels, classrooms, and socio-economic groups
Experiences

Figure 11

- Someone else's experience
- Involving communication medium and people
- Involving communication medium, no people
- Involving other people, no communication medium
- Not involving other people or communication medium

Legend:
7.6, 9 represent lower, middle, upper sixth grades
4.5, 6 represent lower, middle, upper fourth grades
1.2, 3 represent lower, middle, upper second grades
1, 2, 3 represent lower, middle, upper second grades
4, 5, 6 represent lower, middle, upper fourth grades
7, 8, 9 represent lower, middle, upper sixth grades

FIGURE III
NATURE OF THAT WHICH THE CHILD SHARED
see subhead B part I of Appendix B; see Appendix Table 3 Appendix C for percentage table.

The characteristics of the contributions in the sharing periods. Seventeen subtopics were investigated to determine the characteristics of the contributions shared. The seventeen subtopics with their frequencies were:

1. Reporting—540
2. Showing and reporting—190
3. Attempted explanation, hypothesis, theory or supposition; e.g., "Well, ah, they, ah, they make you—it's just like burning yourself on a hot, a real hot, stove . . ."—41
4. Evaluation made by the sharer; e.g., "Oh, it's too fat."—9
5. Evaluation made by pupil other than the sharer; e.g., "Hey, that's what we saw yesterday on the movie. . . ."—75
6. Question asked by the sharer—23
7. Question asked by pupil other than the sharer—172
8. Attempted answer by the sharer to a question asked by another pupil—118
9. Attempted answer by the sharer to a question asked by the teacher—398
10. Attempted answer by some other pupil to question asked by sharer—17
11. Attempted answer by some other pupil to question asked by some other pupil—1
12. Correction-error type; e.g., "Mr. . . . , it's not quite like that; it's, ah, he said that if he got this, ah, mine he'd share it with this other guy."—23
13. Exclamation; e.g., "Gee! Tigers!"—30
14. Wisecrack; e.g., "You said it."—10
15. Humorous remark; e.g., "I never take a bath."—4
16. Wish stated by sharer—1
17. Wish stated by pupil other than the sharer—1
Total ..............................................................1651

Of the seventeen subtopics investigated only five of them provided positive data for identifying the
characteristics of contributions in sharing periods; they were "reporting," "showing and reporting," "question asked by a pupil other than the sharer," "attempted answer by the sharer to a question asked by another pupil," and "attempted answer by the sharer to a question asked by the teacher." The identified characteristics were predominant at all grade levels and in all socio-economic groups with the exceptions of "question asked by pupil other than the sharer" and "attempted answer by the sharer to a question asked by the teacher"; these exceptions will be noted later.

The findings related to the characteristics of the contributions in sharing periods revealed:

1. The one identified characteristic that was most predominant was that of "reporting" with the sixth grades disclosing 47 per cent, the second grades 30 per cent, and the fourth grades 28 per cent.

2. "Answers to teachers' questions" ranked as the second characteristic with the second grades disclosing 27 per cent, the sixth grades 25 per cent, and the fourth grades 18 per cent.

3. The third ranking characteristic was that of "showing and reporting" with the fourth grades disclosing 14 per cent, the second grades 13 per cent, and the sixth grades 3 per cent.

4. The fourth ranking characteristic, "questions asked by pupils other than the sharer," revealed 14 per cent at the fourth grade level, 11 per cent at the second grade level, and 4 per cent at the sixth grade level.

5. "An attempted answer by the sharer to a question asked by another pupil" was the fifth ranking characteristic with fourth grades disclosing 13 per cent, the second grades 6 per cent, and the sixth grades 2 per cent.
6. The low percentages for the other characteristics indicated that they were relatively unimportant in identifying positive characteristics of the contributions in sharing periods. It can be said that "attempted explanations, hypotheses, theories, and suppositions"; "evaluations made by the sharer"; "evaluations made by pupils other than the sharer"; "questions asked by the sharer"; "attempted answer by some other pupil to a question asked by sharer"; "attempted answer by some other pupil to a question asked by some other pupil"; "correction-error type"; "exclamations"; "wisecracks"; "humorous remarks"; "wishes stated by the sharer"; and "wishes stated by pupils other than the sharer" were of little significance in determining the characteristics of contributions in sharing periods.

7. The exceptions noted in characteristics "question asked by pupil other than the sharer" and "attempted answer by the sharer to a question asked by the teacher" were: the children other than the sharer in the second and fourth grades in the upper socio-economic group tended to ask more questions than did the other grades and socio-economic groups; the sharer in all the grades at the lower socio-economic group answered considerably more questions asked by the teacher than did the sharer in the other socio-economic groups.

8. Characteristics "reporting" and "showing and reporting" may be considered as indicators of informal reporting and the other characteristics as indicators of conversation. The combined percentages for characteristics that indicated informal reporting and the combined percentages for the characteristics that indicated conversation revealed that at the sixth grade level 50 per cent of the time was devoted to informal reporting and 50 per cent of the time was devoted to conversation; at the second grade level 43 per cent of the time was devoted to informal reporting and 57 per cent to conversation; and at the fourth grade level 42 per cent of the time was devoted to informal reporting and 58 per cent to conversation. This information substantiated the findings under the major category of initiations which revealed that conversation was the most dominant aspect of group participation within sharing periods and that informal reporting was the second most dominant aspect.
Figure IV presents the composite percentages for the category "characteristics." For a complete tabulation of the frequencies of distribution according to sex, grade levels, classrooms, and socio-economic groups see subhead C Part I of Appendix B; see Appendix Table 4, Appendix C for percentage table.

People involved with that which the sharer shared. Twenty subtopics were investigated to determine if people, and if so who, were important in the out-of-school experiences of the children as related to their sharing experiences. The following subtopics with their total frequencies were:

1. Family (mother, father, and siblings)--39
2. Mother--37
3. Father--34
4. Mother and father--6
5. Brother--27
6. Sister--15
7. Grandmother--13
8. Grandfather--2
9. Grandmother and grandfather--2
10. Aunt--18
11. Uncle--10
12. Aunt and uncle--6
13. Boy friend--19
14. Girl friend--14
15. Boy friends--20
16. Girl friends--5
17. Boy and girl friends--6
18. Adults other than relatives--22
19. Cousin--25
20. Unknown--4
Total............................................. 324

During the sharing periods the children referred to people 324 times. The people who were most frequently
CHARACTERISTICS OF THE CONTRIBUTIONS

FIGURE IV

REPORTING

Showing and reporting

Attemped explanation, hypothesis, theory or supposition

Evaluation made by pupil other than sharer

Correction - error type

Wisecrack

Humorous remark

Exclamation

Wish stated by sharer

Wish stated by pupil other than the sharer

Attempted answer by some other pupil to a question asked by sharer

Attempted answer by sharer to question asked by some other pupil

Attempted answer by sharer to question by teacher

Attempted answer by some other pupil to a question asked by some other pupil

Question asked by sharer

Question asked by pupil other than sharer

Question asked by pupil

Attempted answer by some other pupil to a question asked by the sharer

Correction - error type

7, 8, 9 represent lower, middle, upper sixth grades

4, 5, 6 represent lower, middle, upper fourth grades

1, 2, 3 represent lower, middle, upper second grades
referred to by the children during sharing periods were relatives. Of the people involved 234 or 72 per cent of them were relatives with friends and adults other than relatives totaling 86 or 27 per cent. In four cases the adult involved was not identified and was classified as unknown which in itself suggested strongly that children referred primarily to people whom they knew quite well.

For the most part there was a close relationship that existed between the sexes and among the various grade levels and the socio-economic groups. However, the following differences were noted:

1. Boys (22) referred to their fathers more than the girls (12), while the girls (23) referred to their mothers more than the boys (14).

2. Boys (38) referred to either a boy friend or boy friends more than the girls (1), while the girls (15) referred to either a girl friend or girl friends more than the boys (4).

3. Boys tended to talk about friends within their peer group more than girls.

4. In reference to the socio-economic groups there was a decrease in the number of people referred to during sharing periods in the following order: lower (157), middle (112), and upper (55).

5. According to grade levels there was a decrease in the number of people referred to during sharing periods in the following order: second grade (148), fourth grade (102), and sixth grade (74).

Figure V presents a composite picture of the percentages related to the people involved with that which the sharer shared. For a complete tabulation of the
1, 2, 3 represent lower, middle, upper second grades
4, 5, 6 represent lower, middle, upper fourth grades
7, 8, 9 represent lower, middle, upper sixth grades

FIGURE V
PEOPLE INVOLVED WITH THAT WHICH THE SHARER SHARED
frequencies of distribution according to sex, grade levels, classrooms, and socio-economic groups see subhead D Part I of Appendix B; see Appendix Table 5, Appendix C for percentage table.

Out-of-school experiences that provided the bases for that which the child shared. Fourteen subtopics were investigated to determine the out-of-school experiences that provided the bases for that which the children shared during sharing periods. The following is an outline, with total frequencies of distribution, for this category:

1. Activities involving animals
   a. Hunting, catching, collecting
      (1) Crawfish--1
      (2) Fish--20
      (3) Insects--2
      (4) Night crawlers--4
      (5) Sea shells--1
      (6) Snakes--1
      (7) Turtles--1
   b. Observing
      (1) Goats--1
      (2) Tame birds--1
      (3) Wild birds--11
   c. Raising and playing with pets
      (1) Chickens--1
      (2) Dogs--3
      (3) Ducks--1
      (4) Hamsters--1
      (5) Kittens--3
      (6) Rabbits--1
   d. Riding horses--2
   Total ........................................ 55

2. Activities involving plants
   a. Having a sausage from a sausage tree--1
   b. Observing flowers on hospital lawn--1
   c. Picking cultivated flowers--5
   d. Picking wild flowers--1
   Total ........................................ 8
3. Anticipated activities
   a. Movie—2
   b. Party—1
   c. Picking wild flowers—1
   d. Picnic and visit to Pioneer Village—1
   e. Polio shots—1
   f. Television appearance—2
   g. Trip to television studio—1
   h. Trip to visit relatives and friends—9
   i. Vacation—2
   Total .................................. 20

4. Art and construction activities
   a. Coloring in coloring books—1
   b. Cutting out pictures from newspapers and magazines—4
   c. Making a flower booklet—1
   d. Making a garage and burning it with kerosene—1
   e. Making a hide-out—1
   f. Making a model farm—1
   g. Making a puppet—1
   h. Tracing pictures—1
   Total ................................... 11

5. Attendance at community affairs
   a. Auto races—1
   b. Carnival—1
   c. Christmas party—1
   d. Church—2
   e. Field trial—1
   f. Movie—12
   g. Pop concert—1
   h. School carnival—1
   i. Scout meeting—3
   j. Style show—2
   k. Sunday school and Sunday school class meeting—6
   Total .................................... 31

6. Communication activities
   a. Conversation—31
   b. Listening to the crowd in the ball park—2
   c. Listening to the radio—1
   d. Reading—22
   e. Talking on the telephone—1
   f. Watching television—13
   Total .................................... 70

7. Experimenting
   a. With magnets—2
   b. With prism—1
   Total .................................... 3
8. Health and safety activities
   a. Accidents involving family car--2
   b. Being attacked--1
   c. Getting polio shot--1
   d. Getting sunburned--2
   e. Going to the dentist--1
   Total .................................. 7
9. Miscellaneous activities of the sharer
   a. Birthday--2
   b. Carrying food on bicycle--1
   c. Collecting post cards and pennants--1
   d. Entertaining visitors at home--3
   e. Getting a haircut--1
   f. Getting a new necklace--1
   g. Getting parent's permission--1
   h. Getting wet in the rain--1
   i. Giving Mother a Mother's Day gift--7
   j. Going to school--1
   k. Going to school in the rain--1
   l. Observing a supposed meteor--1
   m. Observing a whirlwind--1
   n. Observing someone's property--2
   o. Receiving a gift--27
   p. Receiving new clothes--5
   q. Riding to school with uncle and girl friend--1
   Total .................................. 57
10. Miscellaneous family activities
   a. Brother's birthday--1
   b. Fun at home--3
   c. Getting new home furnishings--1
   d. Going out for dinner--2
   e. Mother's birthday--2
   Total ................................... 9
11. Purchasing and shopping--12
12. Recreation
   a. Baseball--12
   b. Basketball--1
   c. Boat riding--2
   d. Checkers--1
   e. Dancing--1
   f. Fighting with peers--2
   g. Floating boats--1
   h. Flying model gliders and planes--2
   i. Football--1
   j. Hayride--1
   k. Marbles--1
   l. Ping pong--1
   m. Playing along the river--1
During the sharing periods 134 different out-of-school experiences were identified with a frequency of distribution tabulation of 432. The frequencies according to the fourteen subtopics in rank order were:
116

1. Trips—75
2. Communication activities—70
3. Recreation—60
4. Miscellaneous activities of the sharer—57
5. Activities involving animals—55
6. Attendance at community affairs—31
7. Anticipated activities—20
8. Working—14
9. Purchasing and shopping—12
10. Art and construction activities—11
11. Miscellaneous family activities—9
12. Activities involving plants—8
13. Health and safety activities—7
14. Experimenting—3

The rather high and consistent frequencies found under the subtopics "trips," "communication activities," "recreation," "miscellaneous activities of the sharer," and "activities involving animals" indicated the importance of these out-of-school experiences to children.

Throughout the category the following differences were noted among the sexes, grade levels, and socio-economic groups:

1. The sixth grades in the upper socio-economic group indicated a considerably higher percentage (72) of "communication activities" than did those at the middle (28) and lower (19) socio-economic groups.

2. The sixth grades at the upper socio-economic group identified themselves in only three of the fourteen subtopics; namely, "communication activities" (72 per cent), "trips" (24 per cent), and "activities involving animals" (4 per cent).

3. In the lower socio-economic group the children referred to more out-of-school experiences (201) than did the middle (127) or upper (104) socio-economic groups.
4. The combined second grades referred to more out-of-school experiences (196) than did the combined fourth (132) or sixth (104) grades.

5. The boys (36) talked more about animals than did the girls (19).

6. The girls (15) talked more about anticipated activities than boys (5). The frequencies for girls according to grade levels were: second grade (11), fourth (3), and sixth grade (1).

7. The boys (42) talked more about recreation than did the girls (18). The frequencies for boys according to grade levels were: second grade (20), fourth grade (16), and the sixth grade (6).

Figure VI is a composite presentation of the percentages related to the out-of-school experiences which provided the bases for that which the children shared. For a complete tabulation of the frequencies of distribution according to sex, grade levels, classrooms, and socio-economic groups see subhead E Part I of Appendix B; see Appendix Table 6, Appendix C for percentage table.

How the findings in this chapter compared with other research findings. In Chapter II, research on early studies that provided background for the present study and studies that dealt specifically with discussion, conversation, and sharing were reviewed. To the best of the writer's knowledge, no previous study has been made that employed the tape recorder as a medium for collecting data on sharing periods that involved three grade levels and three socio-economic groups; nor does the writer know of
another study that involved categories identical with those of the present study as techniques for analyzing the data. Baker's² study contains more similarities to the present study than does any other one. In the other studies the teachers were not actively participating in the discussions and conversations whereas in the present study the teachers participated as they normally do during sharing time.

It was difficult to equate the findings of the various studies, including the present one, because of the many variables throughout the studies; for instance, grade levels, the role of the teachers, categories and classifications, purposes of the studies, and methods of gaining data. A more specific comparison was made with Baker's³ study than with any of the other studies.

Certain topics of conversation ranked high among the investigations; namely, personal experiences, family activities, trips, animals, and objects.

The present study substantiated the findings of Hahn⁴ and Hughes and Cox⁵ regarding the importance of

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²Baker, op. cit.
³Ibid.
⁵Marie M. Hughes and Vivian K. Cox, "The Language of First Grade Children II," Elementary English, 26 (December, 1949), 468-474 and 495.
objects as conversational topics. Dawson\textsuperscript{6} found that objects "... were rarely included in the conversational topics identified..." She pointed out that the manner of classification may have caused this omission. Dawson\textsuperscript{7} also concluded that "Apparently, children tend to talk less and less about their family and friends as they go through grade school..." The present study concurred that children tend to talk less about people as they grow older.

Brown\textsuperscript{8} found that children's illustrations were significant as topics of conversation; the present study revealed that original works accounted for less than 1 percent at both the second and fourth grade levels with no instances recorded at the sixth grade level.

A comparison with Baker's\textsuperscript{9} study revealed the following similar findings:

1. There were few sex differences found.

2. There were few statements of explanations, hypotheses, theories and suppositions.

\textsuperscript{6} Mildred A. Dawson, "Children's Preferences for Conversational Topics," The Elementary School Journal, 37 (February, 1937), 437.

\textsuperscript{7} Ibid., p. 434.


\textsuperscript{9} Baker, op. cit.
3. There were few wishes stated.

4. Animals ranked high as topics of conversation.

5. Trips ranked high as topics of conversation.

6. Fourth grade children asked more questions than second and sixth grade children; the differences in the present study were not as significant as in Baker's study.

7. In Baker's study personal activities of the sharer ranked high as a medium of acquisition for the contributions; in the present study experiences ranked high.

8. Gifts were important in children's conversations.

9. Recreational activities of children were important in their conversations; the differences among the grade levels were not as significant in the present study as they were in Baker's study.

The following differences of findings between the present study and Baker's study were found:

1. The present study disagreed with Baker's findings that there was little meeting of minds at the second grade level.

2. The present study indicated a much higher percentage of topics continued than Baker's study.

3. The present study reported fewer topics suggested by previous topics than Baker's study.

Baker reported that more contributions in the miscellaneous category fell under science than any other topic; the present study has dealt more specifically with

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10 Ibid.

11 Ibid.
science than Baker's study; therefore, the data were not comparable.

The reader is reminded that the majority of the categories used in Baker's study and in the present study were not identical and that this difference could account for some of the discrepancies of the findings. Table 18 shows some of the comparisons between the present study and Baker's study.

SUMMARY

The purpose of this section of this chapter was to report the findings related to the nature of sharing periods as they existed under normal classroom situations. In order to fulfill the purpose, five major categories, each with multiple subtopics, were investigated. The five major categories were (1) initiation of the contributions, (2) the nature of that which the child shared, (3) characteristics of the contributions, (4) people involved with that which the sharer shared, and (5) the out-of-school experiences that provided the bases for that which the child shared.

During the sharing periods three initiatory techniques were widely used among the grade levels and

\textsuperscript{12}Ibid.
TABLE 18
A Comparison Between the Present Study and Baker's Study

<table>
<thead>
<tr>
<th>Topic</th>
<th>2nd grade</th>
<th>4th grade</th>
<th>6th grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baker %</td>
<td>Present %</td>
<td>Baker %</td>
</tr>
<tr>
<td>New topic— independent</td>
<td>87</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>Topic— continued</td>
<td>4</td>
<td>82</td>
<td>43</td>
</tr>
<tr>
<td>New topic— suggested</td>
<td>8</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td>Objects</td>
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<td>0</td>
</tr>
<tr>
<td>Explanations, hypotheses, theories, suppositions</td>
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<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Remarks of evaluation</td>
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<td>Wishes</td>
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<td>1</td>
</tr>
<tr>
<td>Questions</td>
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<td>12</td>
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</tr>
<tr>
<td>Animals</td>
<td>10</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Recreational activities</td>
<td>26</td>
<td>14</td>
<td>6</td>
</tr>
<tr>
<td>Trips</td>
<td>5</td>
<td>15</td>
<td>9</td>
</tr>
</tbody>
</table>

\textsuperscript{13}Ibid.
socio-economic groups; they were "new topic— independent—
1 major topic," "topic continued by someone other than the
sharer," and "topic continued by the sharer."

Conversation was the dominant aspect of sharing
periods with informal reporting the second most dominant
aspect. It was apparent that there existed a considerable
amount of group participation in sharing periods, that
children did actively involve themselves in a give-and-take
manner, and that sharing periods provided opportunities for
two-way communication; the sharer provided the starting
point. Children made few initiations that contained more
than one major topic, preceding reports rarely suggested
new topics, and children seldom referred back to a topic
once other topics had intervened.

Children primarily began their conversations with
objects and experiences during sharing time. The second
and fourth grade children, respectively, relied more upon
objects than did the sixth grade children whereas the sixth
grade children relied more upon experiences than did either
the second or fourth grade children.

The array of objects shared was such as to lead one
to conclude that children have their own values regarding
"things" and that the most liberal adult standards could
not make rhyme or reason for the choices. The second
grades of the upper socio-economic group shared more
objects than those in the middle or lower groups; however, when one considers the fact that second grade children from the upper socio-economic group shared such objects as a small sprouting onion, a carrot found on the way to school, and a large outdoor billboard from a junk pile, it cannot be inferred that the second grade children at the upper socio-economic group made selections that were wholly a result of the socio-economic factor.

The socio-economic factor was probably of importance when one considers the sources of the objects and takes into account the fact that "gifts" was the source for more objects shared than any other source and that 24 of the 39 gifts shared were shared by the second grades of the middle and upper socio-economic groups.

The gregariousness of children was evident in their tendency to talk about experiences that involved other people and the frequency with which they identified people in their conversations. Obviously children are in a dependent stage of life; yet, they undoubtedly are involved in many activities which they could label as personal experiences by using the personal pronoun "I" and relating the experiences in the first person singular. A direct inference, perhaps, cannot be made regarding the reason for this behavior; however, questions such as "How much do children value their individual experiences?"; "Have children by the
time they have reached the second, fourth, and sixth grades passed through the ego stage of development?"; and "To what extent do children in the second, fourth, and sixth grades demonstrate social behavior?" might well be raised.

Sharing time is obviously a serious undertaking for boys and girls. Reporting, showing and reporting, questions, and attempted answers to questions were the predominant characteristics of the sharing periods; wisecracks, humorous remarks, and wishes were of little significance during sharing time. The children seemed to undertake sharing as a purposeful activity, as an activity of importance, and as an activity where big ideas was their business.

As with objects, quite an array of out-of-school experiences was identified as the bases for that which the children shared. Trips, communication activities, recreation, activities involving animals, and miscellaneous activities of the sharer were identified as the activities which the children tended to talk about most. Even though the frequencies under the other classifications were not as high as the previously mentioned ones, it would be unwise to discredit their importance because an experience related by only one child may have been of prime importance to him and may have had inherent values that contributed to his
development. This study has identified many out-of-school experiences that children talk about; it has not identified the possibilities for learning and how these out-of-school experiences might be incorporated into curriculum considerations.

Second grade children apparently take their sharing experiences seriously and make sharing time a vital and important part of their school experiences. Under the five major categories there were sixty-two major subtopics. The second grades, as opposed to the fourth and sixth grades, ranked highest in frequencies of distribution under forty-three of the sixty-two major subtopics; under 3 of the remaining nineteen major subtopics they ranked as high or higher than either the fourth or sixth grades. Under the sixteen major subtopics where either or both the fourth and sixth grades ranked higher the differences were slight; the difference under four of the subtopics was 1, under four it was 2, under one it was 3, under two it was 4, under three it was 8, under one it was 16, and under one it was 18.

Similarly, the fourth grades ranked higher in frequencies of distribution than did the sixth grades under forty-four of the sixty-two major subtopics; under 1 of the remaining eighteen major subtopics they ranked as high as the sixth grade. Under the seventeen major subtopics where
the sixth grades ranked higher the differences were slight; the difference under three of the subtopics was 1, under two it was 2, under three it was 2, under one it was 4, under one it was 5, under one it was 7, under three it was 8, under one it was 14, under one it was 15, under one it was 22, and under one it was 25.

The sixth grades revealed a higher frequency of distribution than the second or fourth grades under only 8 of the sixty-two major subtopics; the distribution for 2 of the subtopics was the same as the highest recorded for either the second or fourth grades.

It seems apparent that as children advance in age and to higher grade levels they tend to express themselves less and less in general conversations such as sharing periods. It is possible that one might assume that the older children are more discrete in their remarks and therefore say less than younger children. Also, it might be assumed that the younger children are more general in their conversations and therefore tend to talk about topics that are more apt to be of interest to everyone thus eliciting greater group participation than the older children. By the same token it may be inferred that the younger children have not learned to express themselves clearly or they have not developed listening skills and a general background of information sufficient for them to
interpret and evaluate remarks without further explanation or comments; their uninhibited status in childhood thus allows them to seek further understandings about their environment.
CHAPTER V

POTENTIALITIES FOR THE ELEMENTARY SCIENCE PROGRAM

This chapter deals with an analysis and interpretation of the data pertaining to the potentialities for the elementary science program revealed during sharing periods. Primarily, three major categories were investigated to gain this information: (1) science principles, (2) science facts, and (3) science clues. A secondary consideration was given to the role of objects and out-of-school experiences. Under each of the three major categories seventeen science concepts were investigated. The investigator is indebted to Craig and Others\(^1\) for the first sixteen of the seventeen concepts used. A complete tabulation of the frequencies of distribution according to sex, grade levels, classrooms, and socio-economic groups may be found in Appendix B, Part II. A list of the statements categorized may be found in Appendix D. In this chapter tables have been used to present the data according to sex, grade levels, and socio-economic groups.

Under the major categories the total frequencies of distribution were: science principles 2, science facts 194, and science clues 376 with a grand total of 572.

**Science principles.** When the categories were first established, science principles were included in order to determine whether children reveal science principles during sharing time. The data were clearly negative with only two fourth grade boys, one in the lower socio-economic group and one in the middle socio-economic group, including science principles in their contributions. One of the statements referred to the concept "conditions essential to life" and one referred to "scientific method." In this study the conclusive evidence was that children in the second, fourth, and sixth grades do not include science principles in their contributions during sharing time. Table 19 presents the data pertaining to science principles according to sex, grade level, and socio-economic groups.

**Science facts.** The second major category, science facts, was established to determine whether children, during sharing time, include science facts in their contributions and, if so, in relation to what science concepts. The following is a list of the seventeen science concepts with the total frequencies of distribution classified under each concept:
### TABLE 19
Science Principles: Frequency Table

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<th>4</th>
<th>6</th>
<th>G.T.*</th>
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*G.T.—Grand Total*.
### TABLE 19 (Continued)

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<th>Total</th>
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1. The universe—2
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3. The earth's atmosphere—10
4. Life—15
5. Conditions essential to life—5
6. Variety of life—72
7. The physical environment of life—0
8. Adaptations of life—16
9. Interdependence of life—4
10. Conservation—0
11. Health and safety—20
12. Chemical and physical change—4
13. Light—4
14. Energy, machines, and inventions—20
15. Electricity and magnetism—0
16. Social values of science—2
17. Scientific method—2

Grand Total .................................. 194

During the sharing periods there were 72 science facts identified under the concept "variety of life"; this frequency was slightly more than three and one-half times as large as that under the next ranking concept. Two concepts "health and safety" and "energy, machines, and inventions" each having a total frequency of 20 ranked second in frequencies of distribution. The concept "the earth" with a total frequency of 18 was the third ranking concept; "adaptations of life" with a frequency of 16 was the fourth ranking concept; "life" with a frequency of 15 was the fifth ranking concept; "the earth's atmosphere" with a frequency of 10 was the sixth ranking concept; the concept "conditions essential to life" had a frequency of 5; the concepts "interdependence of life," "chemical and physical change," and "light" each had a frequency of 4; and under the concepts "the physical environment of life,"
"conservation," and "electricity and magnetism" there were no facts identified.

When the frequencies were compared concept by concept there appeared to be little difference between the boys and the girls at all grade levels and within all socio-economic groups; however, when the total frequencies were compared the factual contributions attributed to the boys were 116 to 78 for the girls, a rather significant difference.

When the frequencies were compared concept by concept, grade by grade, and socio-economic group by socio-economic group, the differences were slight. An exception occurred under the concept "energy, machines, and inventions" where the frequencies for the second grades were 15 as opposed to 3 and 2 for the fourth and sixth grades, respectively; the second grades involved were in the lower and middle socio-economic groups. When the total frequencies were compared, the second grades with 75 and the fourth grades with 73 were considerably higher than the sixth grades with 46.

Table 20 presents the data pertaining to science facts according to sex, grade levels, and socio-economic groups.

Science clues. The third major category, science clues, was established to determine whether children,
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during sharing time, include within their remarks references to scientific phenomena that point to or provide the starting point for the development of science concepts. Also, the purpose was to determine the science concepts to which the science clues were related. The following is a list of the seventeen science concepts with the total frequencies of distribution of the clues classified under each concept:

1. The universe—14
2. The earth—25
3. The earth's atmosphere—12
4. Life—19
5. Conditions essential to life—31
6. Variety of life—36
7. The physical environment of life—2
8. Adaptations of life—30
9. Interdependence of life—8
10. Conservation—1
11. Health and safety—49
12. Chemical and physical change—21
13. Light—2
14. Energy, machines, and inventions—50
15. Electricity and magnetism—3
16. Social values of science—7
17. Scientific method—16
Grand Total .................. 376

During the sharing periods 86 science clues, the largest number identified under any one concept, were identified under the concept "variety of life." The concepts "energy, machines, and inventions" with a frequency of 50 and "health and safety" with a frequency of 49 ranked second and third, respectively. The concept "conditions essential to life" with 31 frequencies was the fourth
The fifth ranking concept was "adaptations of life" with a frequency of 30; "the earth" with a frequency of 25 ranked sixth; "chemical and physical change" with a frequency of 21 ranked seventh; "life" with a frequency of 19 ranked eighth; "scientific method" with a frequency of 16 ranked ninth; "the universe" with a frequency of 14 ranked tenth; and "the earth's atmosphere" with a frequency of 12 ranked eleventh. The remaining concepts all with frequencies less than 10 were: "interdependence of life" 8, "social values of science" 7, "electricity and magnetism" 3, "the physical environment of life" 2, "light" 2, and "conservation" 1.

The difference between boys and girls, at all grade levels and within all socio-economic groups, appeared slight when a comparison was made concept by concept; however, a comparison of the total frequencies revealed that the boys (247) provided a significantly higher number of science clues than the girls (129).

When the frequencies were compared concept by concept, grade by grade, and socio-economic group by socio-economic group, the differences were insignificant, with two exceptions noted. An exception occurred under the concept "energy, machines, and inventions" where the frequencies for the second grade were 33 as opposed to 10 and 7 for the fourth and sixth grades, respectively. Another
exception occurred under the concept "the universe" where the only frequencies for the sixth grades were in the middle socio-economic group. A comparison of the total frequencies revealed that the second grades had the highest number of frequencies with 140, the sixth grades had 123, and the fourth grades had 113.

Table 21 presents the data pertaining to science clues according to sex, grade levels, and socio-economic groups.

How the findings related to science facts compared with the findings related to science clues. Among the concepts there was a close correlation between the rank order of facts and the rank order of clues; Table 22 shows this comparison by total frequencies and rank order. There were more instances under science facts than under science clues where the same frequencies were noted for more than one concept; thus, the rank order for facts was 1 through 10 and the rank order for clues was 1 through 16. In general the concepts that tended to rank high or low under facts also ranked high or low under clues.

The concept "variety of life" had the highest frequency under both science facts and science clues. The concepts "energy, machines, and inventions" and "health and
### TABLE 21

**Science Clues: Frequency Table**

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### TABLE 22

**Science Facts and Clues: Total Frequency and Rank Order Table**

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<th>Facts Rank Order</th>
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<td>12 11</td>
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<td>Life</td>
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<td>19 8</td>
<td></td>
</tr>
<tr>
<td>Conditions essential to life</td>
<td>5 7</td>
<td></td>
<td>31 4</td>
<td></td>
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<td>Variety of life</td>
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<td></td>
<td>86 1</td>
<td></td>
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<td>Physical environment of life</td>
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<td>2 15</td>
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<td>Adaptations of life</td>
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<td>30 5</td>
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<td>8 12</td>
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<td>49 3</td>
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<td>Chemical and physical change</td>
<td>4 8</td>
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<td>21 7</td>
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<td>Light</td>
<td>4 8</td>
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<td>2 15</td>
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<td>Energy, machines, and inventions</td>
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<td>50 2</td>
<td></td>
</tr>
<tr>
<td>Electricity and magnetism</td>
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<td>3 14</td>
<td></td>
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<tr>
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<td></td>
<td>16 9</td>
<td></td>
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</table>
safety each with a frequency of 20 ranked second under facts; under clues they ranked second and third with frequencies of 50 and 49, respectively.

Under the concept "energy, machines, and inventions" there was a considerably higher frequency for the second grades than for the fourth and sixth grades. This difference was most probably a result of the tendency for the younger children to share objects; many of the objects were mechanical.

The five closely related concepts "life," "conditions essential to life," "variety of life," "the physical environment of life," "adaptations of life," and "interdependence of life" had a total frequency of 112 facts and 165 clues; these totals, which constituted approximately 58 per cent of the facts and 44 per cent of the clues, were slanted toward the biological sciences. These findings were to be expected in as much as the data for this study were collected during the spring months of the year.

The concept "scientific method" ranked ninth under both facts and clues which was as high or higher than five of the concepts under facts and higher than eight concepts

2 The data for this study were collected during the time when children were first being inoculated with the Salk vaccine; this event no doubt contributed to the high frequencies under "health and safety."
under clues. Thus, children in their conversations gave some evidence that they applied higher thought processes.

The second and fourth grades had considerably higher total frequencies under facts than did the sixth grades; under clues the second grades still ranked highest but the sixth grades ranked slightly higher than the fourth grades; however, the importance of the difference between the second and sixth grades decreases when one considers the fact that the sixth grades contributed less, as reported in Chapter IV, in sharing periods than second and fourth grades.

Under both science facts and science clues boys contributed more than girls. In view of the fact that boys, particularly at the second grade level as reported in Chapter IV, continued a topic more than girls it was difficult to determine the significance of the difference. A tendency is evidently indicated that boys do refer to science phenomena more than girls but further evidence is needed before a definite conclusion can be reached.

Other factors that indicate potentialities for the elementary science program. "The nature of that which the children shared" and "out-of-school experiences that provided the bases for that which the child shared," two of the major categories reported in Chapter IV, are directly
related to the discussion in the present chapter. Many of
the items tallied under the science concepts in this chap­
ter were related to objects (one of the subtopics investi­
gated under the nature of that which the children shared)
and the out-of-school experiences that the children shared.

All of the children's contributions that contained
science principles, facts, or clues related to objects and
out-of-school experiences have been discussed earlier in
this chapter. A further analysis of the science related to
each object or each out-of-school experience will not be
made; it may be pointed out that further possibilities for
developing science concepts would probably be discovered if
such a study were undertaken.

Objects in general represent phases of scientific
interest; specifically, the science represented is often
more readily identified with some objects than with others
and at times the utilitarian value of the objects commands
attention rather than the scientific phenomena that are
related to the objects. It seems apparent that it requires
little imagination and insight to perceive that science
relationships exist with the majority of the objects that
were identified in Chapter IV. For instance, live animals,
books about science, ceramic animals, coins, maps,
dentist's drill bits, new clothes, plants, rocks, and
mechanical toys are representative of the scope of the potentialities for developing science concepts.

The role of objects in the over-all nature of sharing periods was pointed out in Chapter IV; it is evident that objects also represent possibilities for the development of science concepts.

In Chapter IV there were 134 different out-of-school experiences identified, with a frequency of distribution tabulation of 432. As with objects, the majority of the out-of-school experiences that children talked about had implications for the development of science concepts. The following list is indicative of the wide range of experiences noted:

1. Hunting, catching, collecting, observing, and raising animals
2. Observing and picking flowers
3. Getting polio shots
4. Making a garage and burning it with kerosene
5. Making a model farm
6. Attending a field trial
7. Talking on the telephone
8. Experimenting with magnets
9. Experimenting with a prism
10. Going to the dentist
11. Getting sunburned
12. Observing a whirlwind
13. Observing a supposed meteor
14. Getting wet in the rain
15. Flying model boats, gliders, and planes
16. Trips to a cave, lake, zoo, museum, and through the woods
17. Cleaning fish
It is apparent that the out-of-school experiences provide children with many opportunities for exploring their environment; although all of the opportunities do not lie within the realms of science it can be said that science is definitely a representative of the possibilities.

How the findings in this chapter compared with other research findings. In Chapter II related research in elementary science education was discussed. The present study appears to be among the first to investigate the potentialities for the elementary science program in sharing periods. Young used tape recordings and anecdotal records of 175 fourth grade sharing periods as one method of identifying science interests. The records were kept for one year; 145 contributions related to science were recorded. The present study has identified 572 statements that were judged to represent either science principles, facts, or clues related to seventeen science concepts.

The present study lends support to some "interest" studies in that the data were slanted toward the biological science and that the boys referred to science phenomena more than the girls.

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3 Doris Young, "Identifying and Utilizing Children's Interests," Educational Leadership, 13 (December, 1955), 161-165.
Since 194 statements were identified as science facts the present study appears to corroborate the findings of Oakes\(^4\) and Webb\(^5\) in that children can and do learn factual explanations of natural phenomena.

Webb\(^6\) concluded that fifth grade children were not able to assimilate principles; only two science principles were identified in the present study. The present study does not agree with Webb's conclusion that the elementary science program cannot rely upon any appreciable previous knowledges on the part of the children; perhaps a definition of "appreciable previous knowledges" would erase this disagreement. Webb recognized that:

It is difficult to arbitrarily determine the amount of previous knowledge which could furnish a sufficient basis for beginning instruction in a particular science. Certainly it would seem unwise from this data to place ordinary topics of the five sciences before children of the fifth grade and expect them to really understand.\(^7\)

The present study agrees with the findings of Emily V. Baker\(^8\) in that a wide range of topics was reported and


\(^5\)Hanor A. Webb, General Science Instruction in the Grades (Contributions to Education, No. 4. Nashville: George Peabody College for Teachers, 1921).

\(^6\)Ibid.

\(^7\)Ibid., p. 66.

\(^8\)Emily V. Baker, Children's Questions and Their Implications for Planning the Curriculum (New York: Bureau of Publications, Teachers College, Columbia University, 1945).
animal life; plant life; energy, machines, and inventions; and health and safety ranked high among the contributions. Although a direct comparison cannot be made with Meister's study, this study has identified some potentialities for using toys as a medium for developing science concepts.

The results of the present study lend support to Bergen's recommendation that "... teachers be alert to provide opportunities for children to solve problems empirically." Hill reported that certain objectives for the elementary science program were appropriate at all grade levels; McCollum reported that it was a change in frequency rather than a change in response to science subject matter that distinguished between grade levels. The present study tends to support both of the above studies in


12Clifford G. McCollum, "The Determination of Science Maturity as a Means of Improving the Program in Elementary Science," The Science Teacher, 20 (October, 1953), 238-240.
that the frequencies for the science concepts investigated were distributed throughout the grade levels.

**SUMMARY**

The purpose of this chapter was to report the findings related to the potentialities for the elementary science program as revealed during sharing periods.

Three major categories were investigated; also reference was made to objects and out-of-school experiences. The three major categories were (1) science principles, (2) science facts, and (3) science clues; under each of the three major categories seventeen science concepts were investigated.

During the sharing periods only two principles were identified; it was concluded that children do not use science principles in their contributions during sharing time.

Science facts were identified at all grade levels and within all socio-economic groups. Boys revealed a significantly higher number of facts than the girls. There was practically no difference between second and fourth grades which revealed a significantly higher number of facts than the sixth grades.

Considerably more facts were identified under the concept "variety of life" than under any other one concept; two concepts "health and safety" and "energy, machines, and
inventions" with the same total frequencies ranked second. Under three concepts "the physical environment of life," conservation," and "electricity and magnetism" there were no facts identified.

Science clues were identified at all grade levels and within all socio-economic groups. Boys revealed a significantly higher number of clues than girls. In terms of total frequencies the rank order for the grades was second, sixth, and fourth, respectively.

Under the concept "variety of life" more frequencies occurred than under any one concept. The concepts "energy, machines, and inventions" and "health and safety" with a difference in frequencies of one ranked second and third, respectively.

In general, the concepts that tended to rank high or low under facts also ranked high or low under clues. Boys ranked higher in total frequencies than girls. The second grades ranked higher than the fourth and sixth grades under both facts and clues; however, the fourth and sixth grades changed in rank order with the fourth grades ranking higher in facts and the sixth grades higher in clues.

The data revealed a slight tendency toward the biological sciences; however, there was positive evidence that children refer to other areas of their environment.
No facts and very few clues were recorded under the concepts "physical environment of life," "conservation," and "electricity and magnetism"; this was a startling finding. No clear-cut explanation as to why this occurred could be given from the data; it is possible that when judging the statements they were classified under other closely related concepts, for example, "interdependence of life" rather than "conservation"; "energy, machines and inventions" rather than "electricity and magnetism." It is difficult to conceive that children cannot include references to these concepts in their conversations; this investigator suggests the need for further research in this area.

The objects that children brought to school indicated potentialities for the development of science concepts; this was particularly true in the second and fourth grades where objects were often shared. The out-of-school experiences that the children shared also revealed many possibilities for helping the children interpret and understand their environment.

All of the science data reported in this study were related to the everyday living of children; its potentialities are significant in terms of helping children develop science concepts. The data lends support for a psychological approach to the elementary science program. It can
be said that such an approach, carried to extremes and to the exclusion of other approaches, would lead to hodgepodge and chaos; it is not without merit though as one feasible method of initiating experiences dealing with science phenomena in the classroom.
CHAPTER VI

SUMMARY: CONCLUSIONS, RECOMMENDATIONS, FUTURE RESEARCH

This study has investigated twenty-seven typical sharing periods at the second, fourth, and sixth grade levels within three socio-economic groups. A total of 832 children, almost equally divided between boys and girls, participated in the study. A tape recorder was used as a medium for gathering the data; nine recordings were made at each grade level within each socio-economic group; one recording was made in each classroom.

The investigation was concerned with a breadth of variance; no effort was made to study individual children. The behavior of the teachers was not investigated.

A scheme of categories was used to classify the data. The data were categorized and classified under two major headings: the nature of the sharing period and potentialities for the elementary science program. The structure of the sharing period was investigated through the use of a teachers' questionnaire and through observations by the investigator.
Sharing periods were structured according to policies within the individual classrooms, were generally held during the first period of the day, and averaged seventeen and one-half minutes or more. The chairmen in the second grades tended to be children; whereas, the teachers tended to act as chairmen with older children. At the second grade level there was a tendency for the children to be seated in a circle; however, in the majority of classrooms the children remained in their usual seating arrangements and walked to the front of the group to share. There were variations noted in the manner of recognizing the children who wanted to share; the common practice was to recognize the children by having them raise their hands.

Three initiatory techniques—(1) new topic—inde­pendent—1 major topic, (2) topic continued by someone other than the sharer, and (3) topic continued by the sharer—were widely used by the children during sharing periods. Therefore, there was considerable give and take among the children with conversation and informal reporting, respectively, as the dominant aspects.

During the sharing periods the children relied primarily upon showing objects and relating experiences as starting points for their contributions. The second and fourth grades shared considerably more objects than the
sixth grades. Gifts was the primary source of the objects shared; however, a combined total of the other sources was considerably greater than that of gifts. The objects shared represented a wide range of choices and according to adult standards ranged from the ridiculous to the sublime. The children identified quite a wide range of out-of-school experiences; trips, communication activities, recreation, and activities involving animals ranked high.

Sharing periods were evidently important activities for the second grades; they ranked highest in frequencies in slightly more than two-thirds of the subtopics investigated under the major heading of "nature of the sharing period"; they also ranked highest in frequencies in science facts and clues investigated under the major heading "potentialities for the elementary science program." Likewise, the fourth grades ranked higher in total frequencies than the sixth grades. It seems apparent that as children advance in age and grade level they tend to express themselves less and less in general conversation situations such as sharing periods.

This study has revealed that children refer to science phenomena in their sharing periods. Even though there was a slight tendency shown for the biological sciences, there was sufficient evidence to conclude that children were general in their interests, they referred to
science phenomena in an uninhibited manner, and that they were curious, explorative, and eager to talk about their environment. It was also of importance to note that their contributions did not just represent random chatter; children made factual statements that were related to fourteen science concepts. In conclusion, the children had gained information about the world in which they live: perhaps at school; perhaps outside of school; perhaps at both places. Yet, the number of science clues that were identified indicated that children need further science information.

RECOMMENDATIONS

In consideration of the findings and conclusions in this study, recommendations may be made to teachers, administrators, and parents.

Recommendations to teachers. Sharing periods are conversation periods; therefore, the characteristics of good conversation should be developed.

The contributions that children make in sharing periods can represent a desirable kind of homework; therefore, the teacher should encourage the children to make wise choices and to evaluate their contributions.

Teachers can keep a record, perhaps with the anecdotal records or in a notebook, of the contributions that
are of particular value. These may be related to the unit of work or any other area of learning. Several such notations may represent an interest sufficiently significant to warrant further investigation by an individual child, a small group, or perhaps the entire class.

Teachers should be alert for special interests or talents of individual children; this could be a fruitful avenue for providing for individual differences. At the present time much attention is being given to the gifted child; the sharing period may not only provide an opportunity for discovering the gifted but may also be of value in understanding and interpreting his behavior.

Often the contribution a child makes in a sharing period is of such a nature that he can profitably continue his interest as an independent work activity.

Parent conferences call for tact and ingenuity on the part of the teacher. It is possible that something the child shared at school could be an appropriate approach to a successful conference.

Many of the contributions that children make in sharing periods have potentialities for the elementary science program. The teacher should be alert and utilize these potentialities when possible and practical.

The teacher who is afraid to teach science or who has not included science experiences for children in his
planning might profitably utilize the science-related contributions in sharing periods as a way of initiating science experiences into the classroom.

Teachers should remember that the sharing periods are comprehensive, that many topics will be introduced, and that the continuing values of sharing periods can only be had by the alert teacher who can evaluate sharing periods in respect to the individual child, the group, and the total curriculum. This study has provided evidence of the positive contribution of the sharing period to the development of science concepts; yet, it must be kept in mind that there are other approaches to the science program.

Recommendations to the administrator. It is recommended that administrators encourage teachers and children to engage in sharing activities; that they visit some sharing periods and evaluate them for their own information; and that they lend support and assistance to teachers who find it difficult to plan, organize, and evaluate sharing periods. Through administrative leadership, a teacher's guide could be developed for the improvement of sharing periods.

Recommendations to the parents. The activities that children engage in outside of school provide opportunities for many learnings; one specific area is the area of science. When the child goes fishing with his father, he is
not only having a good time but he is also broadening his experiences in many directions. He may possibly, for the first time, become aware of the fact that some fish have scales and some do not, or he may learn that a mile is longer than a city block when he has to walk to the nearest service station for gasoline for the stalled car.

Parents could do their children a great service by helping them understand and interpret many of the things about them. Children are constantly seeking information and they are capable of dealing with big ideas in a child-like manner. So, when the child is looking for an object to share in school or thinking about an experience to relate he is really doing his homework. If he asks for information to help him be more discriminatory or to clarify an understanding, he is seeking wise counsel—counsel that deals with the question specifically and honestly. The answers to such questions and the information gained through such aforementioned experiences provide adults with the bases for saying, "Oh! That I've always known" or "Gee! I don't know when I learned that."

FUTURE RESEARCH

The following suggestions for future research are made:
1. An investigation might be made at different seasons of the year to determine in what ways seasons influence the contributions in sharing periods, particularly in the area of science.

2. A study is needed to clarify the role of sharing periods in the total curriculum.

3. A study is needed to identify the science learnings that can be developed from the objects and out-of-school experiences that the children share in sharing periods.

4. The values for other areas of learning in sharing periods, such as, social studies, language arts, and mathematics, should be investigated.

5. An investigation should be made with parents to determine whether they play an important role in the contributions that children make in sharing periods.
APPENDIX A

Teachers' Questionnaire:
Evaluation of the Sharing Period
Teachers’ Questionnaire: Evaluation of the Sharing Period

School________________________
Teacher________________________
Grade_____ No. of students present: Boys__Girls__Total__
Date___________________________

Part I Evaluation of children’s behavior:
1. Did as many children as usual share? Yes__
   No__ More__ Fewer__

2. Did as many children as usual make comments pertaining to the objects and/or experiences shared? Yes__ No__ More__ Fewer__

3. Did as many children as usual ask questions? Yes__ No__ More__ Fewer__

4. In what other ways did you notice any differences in behavior? None__ Explain__________

Part II Structure of the sharing period:
1. Had this sharing period been planned in advance with the children—(planning above and beyond that which is normally done)? Yes__ No__

2. Did the children know prior to this morning that this sharing period was going to be recorded? Yes__ No__

3. When do you have sharing periods? Mon__ Tues__ Wed__ Thurs__ Fri__. No specified days, just when the occasion arises__

4. Do you usually have the sharing period at a specific time of the day? Yes__ No__. If answer is yes, when?__________

5. Usually, how long are your sharing periods (minutes)?________

6. Who makes the school policies concerning sharing?
   a. The principal_______
   b. The teacher__________
   c. The faculty__________
   d. The teacher and the pupils_______
APPENDIX B

An Outline of the Data, with Frequencies of Distribution, According to Sex, Grade Levels, Classrooms, and Socio-economic Groups
APPENDIX C

Percentage Tables Derived from Data in Appendix B
## Appendix Table 1

Initiation of Contributions: Percentage Table

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<th>G</th>
<th>Total</th>
<th>B</th>
<th>G</th>
<th>Total</th>
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<td><strong>Av. Total</strong></td>
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<td>3.73</td>
<td>4.33</td>
<td>3.16</td>
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Appendix Table 5
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## Appendix Table 5 (Continued)

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Appendix Table 6

Out-of-School Experiences That Provided the Bases for That Which the Child Shared: Percentage Table

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APPENDIX D

Children's Statements Classified According to Grade Levels; Sex; Socio-economic Groups; Science Concepts, Principles, Facts, and Clues
CHILDREN'S STATEMENTS

The following statements which were judged related to science concepts have been numbered (1) through (572). The letters P, F, and C refer to science principles, science facts, and science clues, respectively. The letters B and G refer to boys and girls. The numerals immediately following the letters P, F, and C refer to the science concepts as indicated:

1. The universe
2. The earth
3. The earth's atmosphere
4. Life
5. Conditions essential to life
6. Variety of life
7. The physical environment of life
8. Adaptations of life
9. Interdependence of life
10. Conservation
11. Health and safety
12. Chemical and physical change
13. Light
14. Energy, machines, and inventions
15. Electricity and magnetism
16. Social values of science
17. Scientific method

Second Grade Lower Socio-economic Group

F 3 (1) B I know why we call them April showers--because they are showers in April.

F 6 (2) G I've got these sea shells. My mother went to Florida and she got these sea shells.

C 17 (3) B Are they sea-roaring shells?

C 17 (4) B Why don't you put them (sea shells) up to your ear?

C 17 (5) B Do they (sea shells) have the sound of the sea in them?

C 17 (6) G Listen to them (sea shells).
C 7 (7) G (Answer to question regarding where the sea shells were found) Ah, in the sea. She was out by the water and got them.

C 7 (8) B (Answer to question regarding where sea shells are found) Seashore.

C 6 (9) B (Description of a field trial) Ah, you get, ah, these little hounds and they run rabbits. They run wild rabbits. Well, we--they have to call them, you know, to eat and everything. Then we go out to the, the city, ah, out in the woods and then we go, ah, and get some sticks, ah, then we, ah, run them (rabbits) through brush and everything and when they get a rabbit they say tally-ho. When they get a rabbit out of the briar patches...

C 14 (10) B (Describing a picture) A bridge and, ah, ah, some water.

C 9 (11) B One time--when she (mother) brought some Easter rabbits, ah, my dog ate one of 'em; they grew so big that the dogs were afraid of 'em.

F 6 (12) G I have some flowers (bouquet of lilacs and dandelions).

F 6 (13) G (Answer to question regarding name of flowers) Dandelions.

C 6 (14) G (Answer to question regarding name of flowers) This is violets (lilacs).

C 6 (15) B (Answer to question regarding name of flowers) Iris (lilacs).

F 6 (16) G (Answer to question regarding name of flowers) Lilacs.

C 14 (17) B I have this trick bow tie. If you push on this little lever (bulb) a worm comes out.

F 14 (18) G It's (showing a picture) a guided missile.

F 14 (19) B It's (referring to a picture) a missile.

C 14 (20) G Guided missiles (Answer to teacher's question regarding names of missiles).
14 (21) B A missile (Answer to teacher's question regarding names of missiles).

14 (22) B The Nike (Answer to teacher's question regarding names of missiles).

6 (23) B I have a bushel (bouquet) of flowers.

14 (24) B I saw on the Army show, they showed one of 'em things goin' around a track . . . then it shoted off in space, ah, which cannon can shoot it down first.

14 (25) B They said they was goin', ah, to explode the atom bomb down in Nevada some place.

3 (26) G There was a tornado Sunday some place.

3 (27) G It was (tornado) in Alaska (Alabama), I think.

11 (28) B Tomorrow we're supposed to get our polio shots.

11 (29) G It's (a picture from newspaper) about polio vaccine.

11 (30) G He (boy in the picture) has crutches.

11 (31) G He's (boy in the picture) probably got polio.

11 (32) G (Answer to teacher's question regarding why the crippled boy in the picture is taking the polio shot, too) So he won't get polio any more.

3 (33) B We got caught in the rain and we got soaked.

14 (34) B Mama put 'em (wet clothes) in the dryer.

12 (35) B I have a little ring (plastic).

6 (36) G I got to put my own fishing worms on the hook.

8 (37) B It (fishing worm) just crawls around.

6 (38) G I pick up night crawlers.

8 (39) B They're (night crawlers) fat.

8 (40) B (Answer to teacher's question regarding when to look for night crawlers) In the night.
C 8 (41) B I can't catch them (night crawlers) in the daytime.

F 13 (42) B (Answer to teacher's question as to why one takes a flashlight when looking for night crawlers) Because you can't see 'em.

F 13 (43) G My brother takes a flashlight outside at night and he picks 'em (night crawlers) up with his hands.

C 11 (44) B Daddy said when he was in the Navy a boy cooked night crawlers and ate 'em.

F 8 (45) G Me and my brother was lookin' for night crawlers. We found a big fat one and he picked it up and put it in my hand.

C 14 (46) G We got stuck in the mud when it started raining out in the country and some truck come along and he had to help us get out of there or we would have been there all day.

C 3 (47) B We went fishing . . . it was a rainy day . . . we went down a slippery hill . . . we went right in the water.

C 12 (48) B The thing (hill) was slippery . . . he put on the brakes and he slid all over the place.

C 11 (49) B Slid right into the water.

C 2 (50) B Deep, deep; it (water) was that (using arms) deep.

C 11 (51) G He fell and broke his arm; two bones kept on sticking out.

C 2 (52) G They've got a river. It's only about that (using arms) deep . . . his little boy swims in it. And once they went across in a boat . . . . It was rough.

F 6 (53) G (Identifying a picture) A baby giraffe.

F 8 (54) G (Answering a question concerning a part of the giraffe) A neck.

F 6 (55) B (Identifying a picture) A mother giraffe.
C  4 (56) G  Is it (baby giraffe) a girl or boy?
C  4 (57) B  It's a boy baby (baby giraffe).
C 11 (58) G  My aunt is in the hospital and she's got polio.
C 11 (59) G  She (aunt) has to use a crutch.
C  4 (60) G  They (aunt and uncle) got two twins.
F  4 (61) G  (Answer to question regarding set of twins)
          Two girls
F 14 (62) G  We built a fire.
F  6 (63) G  I picked three poppies.
F  6 (64) G  I saw a father red cardinal and a hummingbird.
F 17 (65) G  (Answer to teacher's question regarding how he
          knew it was a father cardinal) He was red.
F 17 (66) G  He was littler than other birds (Answer to
          teacher's question regarding identification of
          hummingbird).
C  9 (67) B  I saw a wee woodpecker making a little hole in
          a big tree.
C  6 (68) B  I got a big apple and I splattered it against
          this building. I got all full of apple juice.
C 11 (69) B  He started throwing rocks and hit my little
          cousin in the head and made a big bump.
C  6 (70) B  I caught one bass.
C 10 (71) B  He (fish) swallowed the hook and we had to
          throw him away.
C  6 (72) B  The rest was sunfish ... one sunfish I caught
          I couldn't hardly pull him in.
C  6 (73) B  I looked under that great big rose bush we have
          in our yard. ...
C 14 (74) B  I found this (toy) boat.
C  6 (75) G  This afternoon my girl friend is bringing her
          hamster.
F 6 (76) G Daddy caught a turtle.
F 4 (77) G It was a father turtle.
C 9 (78) G He caught a baby one, and mother made turtle soup for us out of that one.
F 4 (79) G I saw a father cardinal, a mother cardinal, and two baby cardinals.
F 2 (80) B We went down to the crick.
F 6 (81) B We got a whole bunch of crawdads.
C 14 (82) B This morning I got me a trailer and a car (plastic).
C 8 (83) B I caught a fish that (using arm) big.
C 11 (84) G My aunt gave us this kind of a cherry tree, but you're not supposed to eat the cherries on account of they're poison cherries.
F 6 (85) G I saw two redbirds.
F 4 (86) G (Answer to teacher's question regarding sex of redbirds) Father.
F 6 (87) B Sunday I seen a father robin.
F 4 (88) B I seen a nest with four little baby robins and some hadn't hatched yet.
F 5 (89) B Father bird come and he had a worm and he was feedin' 'em (baby birds).
F 2 (90) G We went to Old Man's Cave. . . . I went down through that dark tunnel.

Second Grade Middle Socio-economic Group

C 4 (91) G We're going to Blendon Woods.
C 2 (92) B I found a turquoise.
C 14 (93) B I had some caps, and I shot at 'em.
F 11 (94) B You crack the cap; this here smoke comes out and gets in your eyes; that's dangerous.

C 11 (95) G I hit one (cap) and sparks flew up and hit me right in the eye.

C 11 (96) G She had this great big bandage on her; she's not allowed to take it off.

C 11 (97) B I scratched my legs all up.

C 11 (98) G Bernie had his finger cut; he broke his pop bottle.

C 8 (99) B We went to the zoo . . . we seen this giraffe . . . my brother said, . . . "What's that thing got a long tail for?"

F 8 (100) B I told him, "That isn't a tail; that's a neck."

F 6 (101) B We saw a hippopotamus.

F 8 (102) B We saw this kangaroo, and the kangaroo had a baby that was in a pouch.

F 6 (103) B We came to this alligator, and then we went over to the lion's den, and the lion was eatin' on his bone.

F 8 (104) B We went over to the seal place . . . the seals was doin' some tricks.

C 11 (105) B I had a cold . . . the doctor said that I should stay in bed until Monday.

C 8 (106) B There was this great big tree, and it had lots of birds in it, and it had lots of birds' nests.

C 5 (107) B His foot went in a nest and made a hole, and there were some baby birds in it. I don't know what kind they were, and they fell down and one of them, when it fell, it knocked itself out . . . the other ones they wuz alive.

C 5 (108) B We started diggin' for worms for 'em (birds), and one of 'em was real hungry.

C 8 (109) B The mother bird, I mean three birds came, and they took the babies back up in the nest.
C14 (110) G We got another one (French fryer), and it had a plastic lid.

F 4 (111) G Our cat had some kittens, and we sold two of 'em ... she did have five but one of 'em died.

C 6 (112) G I colored this one (picture) about the little chicks.

C14 (113) B My grandmother got me this Viewmaster with the films.

C11 (114) G I was scraping up some sand when I got a splinter under my fingernail.

C14 (115) G I bought this yo-yo ... the string's inside of it.

C17 (116) G Oh, it's (primary pencil) too fat (to get the string out of the yo-yo).

C14 (117) G This (picture) is a navy plane.

C14 (118) B It (picture) looks like a motor plane 'cause it didn't show any fuel coming out.

C14 (119) G It says it's quite a large rocket, part of the guided missile program.

C12 (120) B What's that line (smoke) going out of there?

F12 (121) G It's smoke (answer to question--see #120).

C14 (122) B It (picture) was probably taken from another airplane.

F14 (123) G That's (picture) a sabre jet.

F14 (124) G That's (picture) a Navy trainer.

C14 (125) B That guided missile ain't a rocket; it's a thing that shoots down planes ... when they test it out ... the plane that controls it is down on the ground, but I don't know how they control it.

C14 (126) B I got this little plane here ... it used to have springs. I could roll the wheels and winded up the propeller.
It's a U.S. Airforce Plane.

I took it off one day to get in there and oil that.

When it had the springs on it, would the propellers go around real fast?

This is a picture of a plane that can be made into a boat.

It is a clipper ship; it's got a car on it, a train, a bus, and horses.

I think this is a hangar (control tower).

That's a terminal (control tower).

That's (picture) a control tower.

We saw that motor in our movie.

(Answer to teacher's question regarding a picture the class had seen) The weather bureau (flight training room).

This is a picture of a car.

I got a picture of the inside of an airplane.

I have this passenger plane I cut out. Here's a car I like, too.

(Answer to teacher's question concerning kind of truck picture) A gasoline truck.

This is the inside of an airplane, and this is a passenger airplane.

A yellow jacket was in front of him . . . he hit the yellow jacket and it fell on the ground.

My dog got loose . . . a big cat was chasin' him.
Second Grade Upper Socio-economic Group

C14 (144) B This is a counterfeit quarter.

C14 (145) G How do you know it's counterfeit?

C17 (146) B (Answer to question—see #145) Because it doesn't compare with another quarter and it says it's a cheat.

C 4 (147) G He wanted to know what was in the egg.

C12 (148) B This radio-active coin has a glass covering over it because it was filled with radio-active stuff.

F 3 (149) B It started sprinkling so we started home, and it started to pour when we were on the train trestle, and by the time we were all home we were all sopped.

C11 (150) B Peter had a water-proofed jacket on and I thought I had one on too, but I found out it wasn't water proofed. When I took it off I checked it and every bit of me was wet.

C 6 (151) B They had these little chickens I think they were selling.

C 5 (152) B We already have three ducks, but one of them got killed by Robinson's cat—jumped for it and killed it.

C 3 (153) G We were going to go down by the lake, but it started raining.

C 2 (154) G We went to Niagara Falls.

C 2 (155) B Did you see the Horseshoe Falls?

F 2 (156) G This (picture) is Niagara River.

F 2 (157) G We saw it (Niagara Falls) when it was dark.

C13 (158) B What makes the colored lights?

F13 (159) G They have colored spot lights.
I haven't seen them (Niagara Falls) at night; I've seen them in the afternoon.

Did you go under the Falls?

Some people can't go under (The Falls) because a rock fell off.

There has been two, big rocks fall off.

I caught a catfish, and (boy's name) taught me how to hold him. If I catch a catfish I'll probably know how to hold him—by the tail or where he doesn't have the stingers.

They (catfish) have prickers.

They (catfish) have real sharp fins.

They (fins) don't poison you.

It's (being injured by catfish fins) just like burning yourself on a real hot stove.

This canyon is so many feet deep. If everybody threw rocks down it won't be a Grand Canyon any more. (From a Donald Duck story)

There hasn't been any lions since the Civil War. (From a Donald Duck story)

Every time Donald (Duck) comes around on the donkey he always takes his camera and goes click.

We had this great big wind. It was pouring rain.

I'll wind him (mechanical dog) up and he'll run.

I had to hold my dog back because he was very eager to get this one (mechanical dog).

Once I made him (mechanical dog) go straight and follow me where I went, and I'd keep going in places where it was straight and he would follow me.

How do you get him (mechanical dog) to curve?
G A boxer (ceramic dog; answer to kind of dog).

B We kept walking in these big, dark places.

B There's this bridge we went under . . . and it was full of mud.

G Last night I cut out these pictures--some about a snake.

G This (picture) is out in the desert.

G This (picture) is in the daytime.

B Gee, tigers! (Seeing picture)

G Here (picture) is a skunk.

B There's (picture) a bat.

G That's (picture) an owl.

G I made these pictures of lambs.

G I found this little onion. It's started to have its root (sprout) down there. It's started to grow, too. When I get home, I'm going to put it in mud.

B I got these wild-flower plants down in the woods.

B This one's a jack-in-the-pulpit.

B I thought it (wild flower) was a May apple, but it's a wake robin.

G These are kittens (pictures).

B That (picture) looks like our baby kittens.

B Do you have any dog pictures?

G These (pictures) are horses.

G This (picture) is about flowers.

C 5 (197) G This (showing a homemade farm) is the chicken house.
C 5 (198) B This is a box with aluminum foil, and I'm gonna put water in this and get some wildflower plants to take home to mother.

C 6 (199) B My chameleon was lost.

C11 (200) G This is about my polio shot. Yesterday, you see, at first I was scared it was gonna hurt like penicillin shots and other shots but it didn't. You know, I turned my head and pinched my leg.

C 9 (201) G Our dog scratches on the door . . . he runs and he makes two leaps and stops in front of Mommie's bed and up in our face chewing and licking us.

C14 (202) B I saw a rabbit's foot and a screw (in a girl's desk drawer).

C 9 (203) B They try to pick him (dog) up, but he starts growling.

C 5 (204) G Our cat came home from the hospital; she wants to eat but she won't eat.

F 6 (205) B It's a raw carrot.

C 6 (206) B Does anyone have a pet rabbit?

C 4 (207) B I saw a dead person (squirrel). I don't know if it was a dead male or a dead female. Does anybody think they know what it was?

C 6 (208) B (Guesses to question--see #207) It was a rat . . . bird . . . dog . . . cat . . . rabbit . . . squirrel.

C 5 (209) B You guessed it. It was a dead squirrel, and he looked like he'd been a squirrel that was stuffed with the stuffings out of 'im.

F 4 (210) G Our cat, it's a boy cat.

F 2 (211) G We saw the waterfall.

C14 (212) G I got this pipe or somethin' and it has three little things like this, and Santa Claus is on it and you put him in, poke him in with your finger, and you blow out the other end and
either he turns a somersault or he lets go of the parachute.

C 8 (213) G Every horse there (at the riding academy) is wild.

C14 (214) B We went there (to the carnival), and I went on this funny-sight thing, and you felt like you were going to go off the roller coaster; you take real sharp curves, and I felt like I was gonna go off the roller.

C14 (215) B We went on this dodge-em; it's sorta like a car only there's only two instruments, step on the pedal and you take off, and got a steering wheel . . . and you would crash into a whole bunch of cars, electric things . . . .

Fourth Grade Lower Socio-economic Group

F 6 (216) B This snake was settin' on top of the grass, and I grabbed him, and I took him home, and I put him in the jar.

F 6 (217) B (Answer to boy's question regarding kind of snake) A garter snake.

F 8 (218) B (Answer to girl's question regarding color of the snake) Brown.

C 6 (219) B What happened to that black snake?

C 5 (220) B We got a cistern in our yard and we put him (snake) down in it.

C 5 (221) B We got four at home now and countin' this one is five snakes.

C 5 (222) G His wife got sick and had to stay in bed about four months, and then he got sick, and he died at forty-five years old.

C14 (223) B My dad fixed the spring in the bottom of it (toy jalopy), and now the axle is bent, and it just wobbles when it goes.
C 6 (224) B Daddy gave me his knife and said, "Here, you go out some, ah, weeds down to make us a place to fish."

C 8 (225) B Something hit my bobber . . . I got him in close to the bank and he jumped up out of the water and pulled my bait off and he swimmied back down the crick.

C 6 (226) B A channel cat hit it and I had an awful time gettin' it in.

C 6 (227) G I forget how many different kinds of cotton, but they were tied on to the cardboard.

Cl2 (223) B Well, this is a thing that looks like a marble.

F 4 (229) B It's (marble) got a mustard seed in the inside of it.

C 6 (230) B Davey Crockett was tryin' to kill a bear . . . he was comin' through this swamp and there wuz a alligator.

C 6 (231) G He wasn't a real dog; he was just a toy dog.

Cl2 (232) B They were supposed to put it (spaghetti) in the 'frigerator, and he forgot all about it, and it got spoiled.

Fl4 (233) B I went to West Virginia, and on the way we saw the biggest "Y" bridge.

F 2 (234) B We crossed the Ohio River.

C 6 (235) B I saw different kinds of flowers and trees that had a bunch of the leaves on.

F 4 (236) B The apple trees out in the country were start­ing to bloom.

F 6 (237) B Over by the hospital they've got big flowers.

C 5 (238) B He said you're supposed to take a pair of scissors and not cut the whole top out of the flower but cut the limb.

Cl6 (239) B She said some kids came along and picked her flowers.
B We started to start the fire up.
F It started to rain.
B The fire didn't go out though; we squashed it.
B There's a pony out there.
B My brother was gonna give it (pony) grass.
B He said that we were going to have a hurricane.
G In Virginia there was one (hurricane).
B It (hurricane) changed; it went away.
B At Buckeye Lake there's a little pond and there's turtles and snakes and everything in it.
B I slipped and fell in (pond).
B We went down to Twin Lakes.
B I got the catfish.
B I was helping 'em scale 'em (fish) . . . there was one catfish.
B It (catfish) was still alive.
B They also caught a carp.
B He couldn't hardly even get the skin off of 'em (fish) so he just took a knife and cut around its head and then took the pliers and pulled the skin off and cut the fins all off . . . cut it right down the middle and cleaned it out.
B No, because it's got a mud stream through the middle (answer to teacher's question regarding the edibility of carp).
B Some people don't go fishing right after a rain because they can't catch nothing in muddy water.
B It (catfish) has two scales (fins) and the tail . . . one on the top and two on his side.
B He (catfish) doesn't have any scales.
C 8 (260) B They (catfish) have two scales, and they've got these things here that are real sharp, and if they get you they'll form a large ball on your hand.

C 8 (261) B My dad caught one catfish. It weighed about twenty-five pounds and it had horns . . . it had horned my dad.

F 11 (262) G She (girl friend) had a headache.

P 5 (263) B He uses fish for his corn . . . he's going to plant it in there; that makes good soil.

C 5 (264) B He puts corn on his hook.

C 3 (265) B They said that the tornadoes were coming through.

C 3 (266) B She said there's some tornadoes coming up.

F 11 (267) G We went in the woods . . . he got a sticker.

C 4 (268) G That man knocked this bird nest off of his seat and killed four baby eggs, and they wuz blue ones, and all of the babies wuz blue.

F 2 (269) G We went out to Buckeye Lake.

F 14 (270) G I went out in a boat with my father.

F 11 (271) G I saw my legs all kinda blistered, and I got a sunburn.

F 6 (272) B We caught five carps.

F 4 (273) B We looked . . . we had the male and the female (fish).

F 11 (274) B I put some suntan oil on me . . . I got a suntan.

C 6 (275) G She had a dog named Zipper and he was real playful, but the other dog named Cookie he won't hardly play.

F 6 (276) G The horses wuz over in the pasture.

F 11 (277) B My grandmother is sick.
F 6 (273) G They had some real horses.

C 4 (279) G His kids had fourteen babies, and thirteen of them was billies, and one of them I don't know what it was.

F12 (280) G I got some cotton candy.

C 4 (231) B I found the mother hamster . . . she had, I think, it was around five more babies and got rid of two other babies.

C 8 (282) G We saw a great big billy goat, and his horns turned back, and his horns up here was just straight.

C 8 (283) G I rode some horses, and I kicked him, and he sorta bucked me.

Fourth Grade Middle Socio-economic Group

C 8 (284) B At Hoover Dam I seen this frog . . . he stuck his head up out of the water; my dog barked at him . . . the frog went down again; then about five minutes later he come back up again.

F16 (285) B I got a book here; it's called My Truck Book. Down here it says "The Milk" . . . the driver stands up in the milk truck and he brings milk, cream, and other things. The telephone truck . . . it carries ladders and tools to fix your telephone. The fire truck . . . the pumper carries hose through which water can be pumped down to a burning village.

C12 (286) G We had a roasted marshmallow . . . once mine fell into the fire.

C14 (287) B These are things (dentist's drills) that they put in the drill . . . after they get so dull they throw 'em away . . . they're still pretty sharp.

C 6 (288) B Me and my brother found this nest, and he said it was a woodpecker's nest; it wasn't but he climbed it and found out it was a starling's nest and he got one of the babies out.
Oil (289) B I couldn't climb the tree 'cause at the top it was real hollow . . . I thought sure it would break 'cause I could hear it crackin'.

C 5 (290) B His (baby bird) mother came and we was watchin' it feed it . . . and the father came and the mother and father played a game of fight and the mother fell down. It had on its wing blood running right down it . . . we put it in a cage and today I looked at it and it was dead.

Fl1 (291) B He had the mumps and I've had 'em on both sides.

C 5 (292) B Heck, if I didn't see that dern same robin . . . he flew over by this tree . . . I sneaked around . . . I didn't try to break a twig . . . I caught it and I took it home but I let him go.

Cl2 (293) G She started ironing it . . . half the cloth stuck on the iron.

F 5 (294) B There was this dead, red squirrel.

C 5 (295) B He (boy friend) was punching him (dead squirrel) right in the stomach, and then he found one of the BB's and there was another BB in his neck.

C 5 (296) B It (baby starling) was jest a baby one and it died and we buried it.

F 2 (297) G I went out to Indian Lake.

C 6 (298) G I saw a great big snake and it was four feet.

Cl2 (299) B We was makin' his garage . . . we stuffed sticks in it . . . we put kerosene on fire and then threw the kerosene on the garage, and then we set his little car in there and lit it and burnt it.

Cl5 (300) G I took the magnet and pulled it over the pins Mommie had . . . it picked up almost all of 'em.

C 4 (301) G (Book report) Their turkey hatched a little baby turkey . . . he run in the woods, and he run behind the bushes and in the garden.

Fl (302) B (Reading from book How Big Is Big) An elephant is the biggest animal in the zoo . . . but a tree is bigger than an elephant, but a
skyscraper is bigger than a tree . . . it would take twenty-five skyscrapers piled on one another to get to the top of a mountain . . . the sun is bigger than the earth, but a star is a hundred times bigger than the sun . . . if there are so many things bigger than you are, why do people say you are so big? You are smaller than a star . . . sun . . . moon . . . mountain . . . skyscraper . . . tree . . . elephant . . . how small is small? This puppy is small, but a mouse is smaller than a puppy, and a flea is smaller than a mouse, but to a flea a mouse is very big and a flea has to take a long walk to go from one side of a mouse to another, but a mite is smaller than a flea . . . but a protozoa is smaller than a mite . . . algae; that's what protozoa eat . . . there are things millions of times smaller than them and it's the atom . . . electrons and protons are smaller than atoms. So many things are smaller than you, so many things are bigger, but where are you? You're right in the middle.

C 11 (303) B My arm it kept itchin' and I had a bump. This morning my mother went and got this vaseline and some tape, and she taped the cotton around it, and then she put gauze all over it.

C 6 (304) B We found something; I don't know what it is but they call it a turtle bug.

F 4 (305) G I went to the zoo and I saw two giraffes, a mother and a baby.

F 2 (306) B Lake Erie (Answer to teacher's question regarding the closest and largest lake to the north of Ohio).

F 2 (307) B This (post card) is Table Rock at Kelley's Island. This is along the shore at Perry Park, Lakeside, Ohio.

F 6 (308) B This (post card) is flower gardens at State Agricultural Farm, Brewster, Ohio

F 2 (309) B This (post card) is upper gorge and falls, Old Man's Cave. This is below the falls at Old Man's Cave. This is the inner view of Rock House.
This (post card) is the famous "Y" bridge.

This (post card) is a National Monument, Put-in-Bay on Lake Erie.

This (post card) is Ohio River at Cincinnati, Ohio.

(Post card) The roller coaster.

This (post card) is Ohio Caverns.

I have two (pennants) from Indian Lake.

I got this painted turtle.

These two are painted turtles, and this is a slipper turtle.

Those are both box turtles.

They're (box turtles) both females.

(Answer to teacher's question regarding age of box turtles) You count the fifth box down on the side, and you count all those rings in there, and you get the age.

He made this dog (ceramic) out of clay.

(Answer to teacher's question regarding kind of clay used) He used that brown clay.

I have a prism . . . I could show you how it works if it had enough light. Maybe in the coat room I think it would work. Over in our house . . . there's this light right overhead, and you can stand on one side of it and turn this and focus it when the light's on, and it'll show up about that thick of colors . . . Maybe I could do it on here (tries blackboard).

First, I have to test it (prism) and see if it works.

She gave us some roses and some flags that are fifty-three years old.
G 2 (326) I have been to that Rook House. It's a great big thing inside a rock, and in some places it's got things like canyons.

G 3 (327) Sometimes it's cool and sometimes it's (Rock House) hot.

F 4 (328) (Sharer had three of Walt Disney's "True Life Adventures" Cartoons about the African oryx, the African rhinoceros, the western water ouzel, the moose, and bighorn sheep) Horned animals have weapons of varied design. The moose wields a heavy broadsword. There's that moose and he had real big antlers like and he's fighting with another one. The top one says, "The African oryx thrusts and parries with deadly rapiers." And he has real long, slender horns. And down here, "While the Rocky Mountain bighorn sheep favor the head-on, rock-and-sock technique." And here you see these two mountain goats jest hittin' each other with all their strength down there on the bottom.

"... The African rhinoceros is hungry for those tender, top leaves. He can't climb the tree ... but he can bend the tree earthward! And so ... bring his dinner down to him!"

Then this here is entitled "Bird of the Mist ... The western water izzel (ouzel) spends its life in the very heart of raging mountain torrents." And here you see him right close by the rapids. "Although a true land bird, it flies in and out of the water and walks on the stream bottom in search of food." And another part, "Home is a nest with a fine view of the falls ... from inside."

G 12 (329) Well, this (a large crystal, a glass marble with a lion inside) is a marble that (man's name) kept for sixty years.

G 12 (330) Well, when the marble was made, they probably put it (lion) with the marble mold, and then let it dry, and then put it in the fire, and that's how they got it in there.
Fourth Grade Upper Socio-economic Group

C 6 (331) G My mother and father got this little bear (ceramic polar bear head).

C17 (332) B Is that (ceramic polar bear head) real?

C12 (333) B I had a molding set where you pour some mixture down into a rubberlike thing; it makes a form, and you take it out after it dries, and then you've got to paint it; and it may be what that (ceramic polar bear head) is with some glaze on it.

C 6 (334) G Well, my daddy, his hobby is gardening and fish, and he gets these gardening books.

F 6 (335) G This (picture) is a Forty-Niner (rose).

F 6 (336) G And this (picture) is an amaryllis.

F 6 (337) G These (picture) are iris.

F 6 (338) G These (picture) are King George.

C 6 (339) G In the summer time does your father grow a lot of the flowers like that?

C 6 (340) G It (picture) looks something like pansies.

F 6 (341) G These (picture) are carnations.

F 6 (342) G This (picture) is another rose; it's called Sun Valley. This is another rose called Charlotte Armstrong.

F 6 (343) G This (picture) is the Queen Elizabeth.

F 6 (344) G These (picture) are violets.

C 6 (345) G Are those ones (picture) you showed snapdragons?

C16 (346) B Did you show any corsages in there?

C14 (347) G This is my brother's mouse (mechanical).

C 5 (348) G All of his (mechanical mouse) fur is coming off.

C17 (349) B Did he (mechanical mouse) used to be real?
Would it (mechanical mouse) run or do something?

Would he (mechanical mouse) squeak?

Can you wind it (mechanical mouse) up and let it go?

Does it (mechanical mouse) do anything at all or just sit there?

His (a sock alligator puppet) head looks sorta like a dragon's head.

This violent thunderstorm hit this tree, and it started on fire.

He snatched his hand away very fast because it burned his hand, and then sticks fell down sorta like torches.

They threw the torches right where their food was, and it started to burn; and then after they got the fire out, they found a piece of roast rabbit.

It (rabbit) was warm, and it was soft, and it smelled good. From then on, they had cooked food, and they used fire to defend themselves from wild animals.

It's (bamboo container with a Panamanian hat in it) a bamboo holder.

It's (purse) made out of pineapple bark off trees.

My mother went on the cherry blossom tour.

The band went down there to the cherry blossom festival.

I found some shells (fossils).

And here's some other fossils on these rocks.

I think that in almost every fossil rock that you can find, you will probably find either a big or a small brachiopod.
F 2 (366) B Limestone (answer to teacher's question as to kind of rock).

C 2 (367) B This is a worm-bored-hole rock.

F 9 (368) G (Reading from a bird book) "The canary was a wild bird, and then it became very tame after someone caught it and they tried to tame it. It was quite hard to tame."

F 8 (369) G (Reading from a bird book) "The chimney swifts are well named because they live in chimneys. They are swifter than any other birds. They can fly so fast that they can fly a thousand miles in a day. They can even catch insects and eat them while they're flying. Chimney swifts make their nests from twigs which they glue together and fasten to brick surfaces. They fly in the swift (I don't know that word), they migrate in big flocks. They are small birds about five and one half inches long."

F 6 (370) G This is the picture of the hummingbird and the heron. There are such things as a horned lark. Here's a picture of the pheasant, and parakeets, parrot, penguin, and pelican.

F 8 (371) G The redstart and the robin and the scarlet tanager and the sandpiper are all so brightly colored in here (book).

F 6 (372) G There are two different kinds of woodpeckers, the redheaded woodpecker that are very common and the downy woodpecker that isn't too common in this part of the world.

C 9 (373) B We've got a chimney swift in our chimney because we hear squeaking up in the chimney and our cat is always going near the fireplace and looking up.

C17 (374) G There is one way that you can find out if there is one (chimney swift); Grandma says that they make sort of a squeaky sound.

C16 (375) G It (Chinese chest . . . sewing kit with removable tray) looks like the whole thing is wood; is it?
C 6 (376) G What kind of wood is it (Chinese chest) made out of?

C 2 (377) G She sent him all of these clippings of the volcano.

C 2 (378) B That volcano there was the first time they have been able to take a picture of it just starting from a crack about three inches wide.

C 4 (379) G This is a fossil rock and it contains horn coral, brachiopods, and I think there's a half of a trilobite in there.

C 6 (380) B What are all of those animals? (China figurines)

C 6 (381) G (Answer to question—see # 380) Horse, deer, bird, cat.

F 6 (382) G This cocoon that had hatched had a whole lot of baby praying mantis; there was something like seventy of them. Now in my collection of animals I have two praying mantis.

C14 (383) G I saw the preview of this space one (movie), and the men were going real fast in the rocket ship.

F 5 (384) B I saw this robin's nest, and the mother was feeding the babies.

C 9 (385) B Well, speaking of praying mantis, last year I caught four of them in this field, and I fed 'em grasshoppers, and I put two in this one cage, and one of 'em at the other one.

C 6 (386) B Well, my snake is gettin' along fine. I caught a little bitty one out in the school field on my way home to lunch.

F 9 (387) B He should have known that praying mantis—their worst enemy is this other brother of theirs.

F 9 (388) B The praying mantis . . . it's enemy is black widows.

C15 (389) B We got the idea of making a fort. I hid in it while (boy's name) was goin' in to try and find some light system.
C 6 (390) G He's gonna have a little rabbit. It's black and white and it's ten days old.

F 8 (391) G They (birds) wuz building a nest.

F 6 (392) G The morning doves (answer to teacher's question regarding what was building a nest).

C 5 (393) B We were lookin' for these nests up in the tree . . . I think it was a plum tree, and I climbed up there . . . and there was four little robins dead there.

C11 (394) B The mother robin was squawking at us, and I jest about got my eyes pecked out.

C14 (395) B We were flying these rubber-band planes.

C 8 (396) G My grandmother sent some Mexican jumping beans.

C 4 (397) B They (jumping beans) have this little ball or something in them that makes them jump.

C 6 (398) G They (jumping beans) look like capsules.

C 6 (399) B They're (jumping beans) a little brown thing.

C 5 (400) B They ate through the little beans; see, they are worms that jump when they get hot; and they ate through the box, then into the carpet and then died. There was holes all over the place.

C 2 (401) B In our Sunday school we get these little gold pins.

C 2 (402) B Pure gold (question asked by student)?

C11 (403) B Richard had to take a bath and go to bed.

Sixth Grade Lower Socio-economic Group

F 6 (404) B I got one duck, and my brother got five chickens, and I got three chickens.

C 8 (405) B I brought a tub out . . . we put him (duck) in the water.
C12 (406) B He (duck) was as black as coal . . . when he come out he was as clean as could be.

C 8 (407) B He (duck) cleaned himself.

C 5 (408) B I seen where a cat got in a 'lectric washing machine.

C11 (409) B (From a television story) You better not drink it; it says poison water.

C 2 (410) B He found a gold mine (from a television story).

C 5 (411) B You're no good out in the desert without a horse.

F 2 (412) B (Answer to teacher's question concerning prospecting in desert today) Uranium.

C11 (413) B He got shot in the leg and it got infected.

C11 (414) B How can whiskey cure your leg if you're gonna cut it off?

C 9 (415) B My father's got some plants in the backyard, and he's got a little fence around them, and the dog next door he took off and jumped in the fence . . . he and the plants started flying.

C12 (416) B When they talk about splitting an atom, is an atom a rock, a liquid, or a gas?

C 5 (417) G A piece of tin that he was wavin' at my brother . . . he cut his leg real deep, it was bleedin' real bad . . . some meat came out of his body and my mother said that if it would have been deeper he probably would have died.

C 6 (418) G She got two little dogs . . . they wuz watch dogs.

C 5 (419) B He (dog) got hit and it split his head and he died.

F11 (420) G My little brother he's deaf.

C 4 (421) G A little baby squirrel (brother brought home from school).
C 5 (422) G We made a cage and put it (squirrel) in it.
C 5 (423) B We let him (squirrel) run around on the floor.
C 6 (424) B My uncle had a little bitty dog, puppy . . . every time he'd see a rabbit or somethin' he'd run him up a tree.
C11 (425) G We had homemade ice cream.
C11 (426) G We saw two cars having an accident.
C11 (427) B He fell down and stuck this stick in his ear.
C11 (428) B This little girl had jest fell in the water.
C11 (429) B A little piece of glass had cut a hole in his hand.
F 11 (430) G My cousin he was a blind boy.
F 6 (431) G We walked over a little dead snake and whole lots of snake holes.
F 6 (432) G I found a big frog and six little toads.
C 2 (433) G We went on a little island, somethin' like a island 'cept it was real small.
C 6 (434) G I was huntin' for a toad.
C11 (435) G I almost fell in the water.
C11 (436) G I heard that sixty-four people out of five million came down with polio.
C11 (437) G My little brother after he got his vaccine shot, he kept walking around with a stiff leg . . . he said, "My leg hurts whenever I bend it."
C11 (438) G A friend of Judy's, his head started hurtin' and it went down into his arm; now he's got polio in one leg.
C11 (439) G His little brother has got TB.
F 6 (440) B It was a rock bass.
C 8 (441) B I caught a big, long sucker, bony . . . you can’t eat it . . . you won’t get nothin’ 'cept bones. That’s all you get out of a sucker.

F 6 (442) G I caught a sunfish.

C 6 (443) B It wasn’t no frog.

C 8 (444) B I had a big boot on it (fish line), and there was a fish in it.

C 8 (445) B I drewed in one of them inner tubes (from the pond), and fifty catfish came squabblin’ out.

F 8 (446) B It was a school (fish).

C14 (447) B By the dam . . . I started pullin’ . . . something just snagged on there and started pullin’ . . . if it wasn’t for a rook I would have fallen in.

C 6 (448) B I never caught a fish before 'cept about ten bluegills.

F 6 (449) B It was a bass.

C 6 (450) B I jerked on it, and I put my foot on this icy stuff on the rocks where the water comes over it, and I went in the river.

C 6 (451) B Every time I pulled it (fish line) out I had a crawdad on it.

C 6 (452) G He caught a sunfish and a bluegill . . . some people threw over some catfish for him; there was three of them and he got stung by one of 'em.

C 6 (453) B He caught a great big catfish.

F 6 (454) G They was California poppies.

C 4 (455) B That’s the bud of it (poppy), isn’t it?

F 4 (456) B (Answer to teacher’s question concerning identification) Pollen.

C 4 (457) B (Answer to teacher’s question concerning identification of seeds) Leaves.

F 6 (458) G (Answer to teacher’s question concerning other kinds of flowers) Marigold.

F 6 (459) B I have roses and marigolds.
They're on a great big bush; they're blue and they're pink, too. I forget what they are; I'll tell you this afternoon.

We have roses and some kind of flowers that grows on a flag.

I know the leaves are called flags.

We've got tulips planted and flags that she was talkin' about . . . and some kind of white--it looks like little bells.

Lily of the valley.

They're not tulips . . . I guess you'd call them poppies.

She's got this great big, old rose bush.

Her brother's got a unicycle, one of these great big high ones; and then he's got the little one, and then he's got the little ones with the front that you lift up, that they do the tricks on.

He knocked the bird cage off and broke the bird cage, and the seed dish came out, and the bird flew out with the seed dish.

That's the pedal (explaining a unicycle in answer to teacher's request).

It's just like riding a bicycle; you've got to have good balance (to ride a unicycle).

We got out the pump and started pumping it (water out of the boat) . . . there was one glass in the boat so we started to . . . it was faster . . . bowlin' it up and throwin' it overboard.

I saw this big stalagtite that was stickin' down.
It was real cold down in there (Olentangy Caverns) and, of course, it was down in a tunnel and it was real dark . . . and we went back and got a lantern.

Stalagtites (helping sharer with name of formation coming up from the ground).

No, they're not stalagtites; they're the other kind.

Stalagmites (helping sharer with name of formation coming up from the ground).

It's gettin' kinda chilly down here, and so we got out of there, and then we went up, and boy, it was cold outside, and so I said, "Dad, I'm freezin'; let's get in the car. Turn the heater on."

There was speakers all over the house. There was this little knob that they turn on to hear a speaker, and there was three turns to it, and I turned it on the first one. It was real low. I turned on another one and it was a little higher, and then I turned it on the last one and it was real loud.

The skunk had rabies and the fox; they had bitten several dozen animals.

They tell the people on Sunbury and down to Broad to watch out . . . be aware for strange animals.

There's two kinds of rabies among the animals; there's one that's excited and it bites, and the other--it's the tamish kind and it will bite you.

I decided to make a book of flowers and I just got it started.

I got one page done with each part of the flower on it.

There was this cat, and the kids called it a tiger cat, and they said it had rabies.
Sunday my aunt's bird, well, we thought it was gonna lay an egg, but it was paralyzed; it couldn't move except his head, so we picked it up, and it just couldn't fly or anything, so we put it back in, and yesterday my aunt called and said she's died.

He's going to build a plane; it's one of these B-29; he saw it down to Civil Air Patrol; they had one with electric motors in it that you can turn a switch and the props went around real fast.

Mother suggested on our flower thing that each of us could get a box and cut the top off so that it's only about that deep and put dirt in it and each of us plant a small garden.

What was we supposed to bring in, a flower and a flower seed; I've forgot the rest.

You asked us to bring a bean seed, any kind of a flower seed, and a flower.

It's a key chain, made in Germany, and it's gold-plated.

Down in Florida there was this "sausage tree." You cut it open and cook it, and it tastes like sausage to you.

You fry it (sausage from sausage tree) and it tastes just like one (sausage). I don't know whether that's meat or not, but you just get whatever it grows on.

I had one of those sausages off the "sausage tree."

But I had one of those sausages in our basement and I threw it out; it was getting rotten.

I didn't try to eat it (sausage from sausage tree).

I was looking up citrus fruits the other night, and I wanted to know the citron; do you eat the fruit off of that?

Well, I'll try (to find out more about citron).
These great big huge meteors swarmed down, and they was forty miles around. What happened?

They had this thing sorta like a flower where they showed this sorta of a mushroom-like thing; it grows at a foot of a tree; it's twenty inches wide and ten feet long. It has a very bad odor but it is a beautiful flower. What's its name?

The big tornado that has been moving through the western part of the states has reached its three-hundredth death toll.

Is there any chance that you could find any part of this meteor that hit?

They said that when the hydrogen bomb is dropped there wouldn't be nothing left, nobody living. Do they have hydrogen bombs?

About that meteor, would pieces of it be laying around on the ground, or would the men have to dig for it?

What I mean is the pieces that break off or fall off from meteors (would the pieces be lying on the ground or do men have to dig for them).

There was a big wind came along and jest went like this (motioned spirally) way up in the air and took home plate and all the pieces of paper that was layin' down; it went way up.

Mother said it was a whirlwind.

A baby tornado (boy suggests for the big wind).

A meteor dropped there, and it's a great big place, and there's this huge big rook right there, and there's a big circle around it.

It's (meteor) a kinda bluish like.

They said they couldn't even go around there (where meteor fell) for about a half a year it was still hot; it was so hot.
C16 (511) B If these flying saucers that are supposed to have been seen, if they would attack the earth, the Russians would have to come together with us to help fight them, wouldn't they?

C 1 (512) G This lady said when a meteor came through her window and hit her and it never killed her or nothing and she has the meteor... why wouldn't it killed her?

C 1 (513) G Couldn't the force of the meteor coming down and striking the earth break off small pieces and send them around in the area?

C 1 (514) G When the largest pieces (of a meteor) go into the ground, maybe on the way down, on the sides of the earth... the little loose pieces maybe would be standing out on a little point; couldn't they break off possibly and be left on the surface of the earth?

F 1 (515) B Well, in the Smithsonian Institute there is a piece of this meteor that fell out in Arizona or some place like that. There is a piece of blue rock in the Smithsonian Institute in Washington that is supposed to be a meteor.

Sixth Grade Upper Socio-economic Group

F11 (516) B That polio Salk vaccine is okay now; and you take a shot, and then a week later you take another one; then seven months later you take another one.

F11 (517) B It (Salk vaccine) was proved eighty to ninety per cent efficient.

F11 (518) B If you're already crippled (from polio) it won't make you uncrippled... it just prevents it.

C11 (519) B One boy he had his first shot (polio); he had his tonsils taken out on the second day. He was very sick and so he died from it. None of the other ones had paralysis.
Even an aspirin would affect some people that way. Maybe one out of a half million would get hold of an aspirin and die from it; they might be allergic.

First, they gave a polio shot to monkeys. Then they tried it with children.

Dad has this chart that shows how to get polio and how to get rid of it.

I wouldn't like three shots in my arm 'cause I'd get sore in my arm.

Under eighteen you may have a bigger chance to get it (polio) on account of after eighteen you probably become immune to the virus.

The third shot of the Salk vaccine more or less acts like a booster shot.

This collection of sea shells, called butterfly shells, are not rare.

It's one of those clam shells.

This (shell) is called a mushroom.

Some of these shells you can only find in the bottom of the sea; they scrape them off of the shrimp boats.

And this is coral.

And this is a blow-up fish.

Did you find the sea horse?

You can't find sea horses anywhere.

These are called olives (shells), and these you just find everywhere on the beach.

I found them (shells) on the beach right after the tide went out. It'll come in and stay for an hour or so, and then when it goes out all of these shells are left.

Here's a baby black olive (shell).
C17 (537) B I don't exactly know what these (shells) are. I have a book at home, but ... it's not in color, and you can't tell the shells real well.

C 6 (538) B I have a great big, cone-like shell out there in the showcase and it's speckled.

F 6 (539) B Have you ever seen these regular clam shells and the clams go up and turn around in 'em? Those great big ones that are pink inside and you can hear the ocean? I have a little one like that, and it's got prongs coming out all around it.

C 5 (540) B My dad and I brought one (clam) home that was still alive, and we took a toothpick and were taking the inside out.

C 6 (541) G Can you describe what it (clam) looks like when you take it out of the shell?

C 6 (542) B It's (olam) a light tan-like animal; it's real wet and grimy, about that long, and it's a little black head, and I think it's attached to something like that 'cause we had a terrible time getting the tail out of there, there's a cattail on the end.

F 6 (543) B Here's a sand dollar.

C 6 (544) B Mother and I were finding some mother-of-pearl shells.

F 6 (545) B This is a whitish-brown olive; there is one out there that is brown with dark spots on it.

C 6 (546) B Do you call that (shell collection) a butterfly collection?

C 8 (547) B They (shells) come in beautiful colors; they come in red and orange.

F 9 (548) B They (clams) have their two hands together, and the sea gulls will come along ... and they won't crack them in half; they'll just open 'em up, and then they'll just eat the insides. Some people take them when they're closed up and they're alive ... and they boil 'em, and then they'll open up the shell and eat 'em.
C 6 (549) G We found this shell that had this black stuff all over it; it was sort of green; it was some kind of an animal that was growing on the outside of his shell.

C 6 (550) B I found this little sort of a disc (shell) and it was purple all on the outside, and it had fuzz on it.

C 6 (551) B That (referring to disc—see #550) sounds a little bit like a sand dollar; it's sorta fuzzy on the outside; it's sorta chalky.

C 6 (552) B I found this girl cleaning out some huge snail shells, and there were animals inside of them.

F 16 (553) B They took the shells, and they made jewelry out of them.

F 8 (554) B This one snail shell was cut in half, and it showed all the compartments as it goes around and around; the little snail finally gets up on a compartment. I imagine they have to be awful little to get into those 'cause they're little, tiny—they're like hallways.

C 11 (555) G Eight children had had this polio vaccine, and within a week they got polio, and they don't know whether they were just gettin' it or whether it was due to the vaccine.

F 11 (556) B It was a batch of bad vaccine, and they gave it to these seven children, and they came down with polio.

C 17 (557) B I would like to know how that sand dollar is made; I mean how does it come to be like it is?

C 6 (558) B (Answer to question—see #557) I really don't know; I haven't studied shells for very long. See, I've got this book . . . it had all of these shells in it but it wasn't colored.

C 6 (559) B This sand dollar is just like a starfish because they live down in the sea and they crawl like a starfish and I think those little hole-like things are breathing places.
C16 (560) B On this island that was destroyed by a hurricane a few hundred years ago a man found this shell and he looked inside; there was about three thousand pearls collected.

C14 (561) B She (librarian) sticks it (library card) in this little machine and stamps it.

F14 (562) B They said the (atom) bomb would be held off until Wednesday; it's the eight straight time they've held it off.

C11 (563) G The second child that was inoculated by the Salk vaccine died.

C11 (564) G He saw flames and he took his youngest brother outside before the house collapsed.

C11 (565) B This girl had 5488 hops on her pogo stick, and the city health commissioner was examining her, and she said that it was bad for her heart.

F11 (566) B The police are starting to get tough, with drunks. They are going to be jailed to prevent accidents.

F11 (567) B The medical association is having a hearing on whether they should give out any more of those vaccine shots.

C11 (568) B They've (vaccine shots) killed two kids already. After they've had the shot given, they have died.

C11 (569) G The second child that died had a slight paralysis of the left shoulder.

C11 (570) B This little girl died two days after they had the shots, and they said that they thought that it was so close after she had the shots that it wasn't the shots that did it. She must have had a case of polio before she was given the shots.

C12 (571) B On our way back we saw these great big chemical plants, and they made all kinds of stuff; and there was this truck load of sulphur right ahead of us, and it didn't exactly smell nice. They were experimenting with some atomic energy in the chemicals.

C6 (572) B Dad hooked a great big tarpon.
APPENDIX E

Representative Samplings of Complete Transcriptions of Sharing Periods
Chairman: (Boy's name)
Sharer--boy: I know why we call them April showers.
Teacher: (Question)
Sharer: Because they are showers in April.
Teacher: (Comment)
Chairman: (Girl's name)
Sharer--girl: Ah, tomorrow night I'm going to go to Pitts­burg, Pennsylvania. We're going to see our aunt.
Teacher: (Question)
Sharer: By our car.
Teacher: (Question)
Sharer: Uh-huh. Not all of us; we're going to take my aunt and uncle and two cousins with us.
Teacher: (Question)
Sharer: Uh-huh.
Teacher: (Comment)
Chairman: (Girl's name)
Sharer--girl: Today is my mamma's birthday; she's twenty­one years old today.
Teacher: (Question)
Sharer: Uh-huh.
Chairman: (Girl's name)
Teacher: (Comment)
Sharer--girl--(three sea shells and an Indian doll): I've got these sea shells and a doll. My mother went to Florida
and she got these sea shells. I'm going to give these sea shells to (teacher's name).

Teacher: (Question)

Sharer: I got a doll. My mother went to Florida and she got this doll and I got the sea shells and, ah, I'm going to give these sea shells to (teacher's name).

Teacher: (Question)

Children: No.

Teacher: (Question)

Girl: What kind of doll is it?

Sharer: An Indian doll.

Teacher: (Comment)

Sharer: Mamma told the Indian, ah, can I have one of your papooses and the Indian didn't know what she was talking about.

Teacher: (Question)

Sharer: Yow.

Teacher: (Question)

Sharer: Uh-huh, it's an Indian.

Teacher: (Question)

Children: No

Teacher: (Comment)

Chairman: (Boy's name)

Boy: It's a lady Indian.

Teacher: (Question)

Boy: A doll Indian.

Chairman: (Girl's name)

Girl: It's a baby Indian.
Sharer: Mother's got a little one.

Teacher: Ah, she said she, ah, she went up--up the Smoky Mountains.

Teacher: Huh-uh.

Teacher: Huh-uh.

Teacher: (Question)

Sharer: (Handed shells to teacher)

Teacher: (Question)

Chairman: (Boy's name)

Boy: Are they sea-roaring shells?

Teacher: (Question)

Boy: Are they sea-roaring shells?

Teacher: (Comment)

Boy: I don't know.

Teacher: (Comment)

Boy: Why don't you put them up to your ear?

Teacher: (Question)

Boy: Do they have, do they have, the, sound of the sea in them?

Teacher: (Comment)

Girl: My grandmother has one of those.

Teacher: (Question)
Sharer: Listen to them.
Teacher: (Comment)
Sharer: This one has some; it has a hole.
Teacher: (Comment)
Girl: My grandmother has one of those.
Teacher: (Comment)
Sharer: This one's got a little bit in it.
Teacher: (Comment)
Boy: A little bit.
Teacher: (Question)
Sharer: Ah, in the sea. She was out by the water and got them.
Teacher: (Question)
Boy: Seashore.
Teacher: (Comment)
Sharer: The Indian doll has got a necklace.
Teacher: (Comment)
Chairman: (Girl's name)
Sharer—girl: I got a new dress.
Teacher: (Comment)
Sharer: I have a new dress.
Teacher: (Comment)
Chairman: (Boy's name)
Sharer—boy: I got, I got a little picture, ah, in my raincoat—I'll get it.
Teacher: (Comment)
Chairman: (Boy's name)

Sharer—boy: Tomorrow is my birthday--I mean Saturday.

Teacher: (Question)

Sharer: Tomorrow is Sat--Sat--Saturday is my birthday.

Teacher: (Question)

Sharer: The twenty-third.

Chairman: (Boy's name)

Sharer—boy: I went on, I went on a field trial Sunday.

Teacher: (Question)

Sharer: Ah, you get, ah, these little hounds and they run rabbits. They, they run, ah, ah, wild rabbits.

Teacher: (Comment)

Sharer: Well--

Teacher: (Comment)

Sharer: Well, we--they have to call them, you know, to eat and everything. Then we go out to the, the city, ah, out in the woods and then we go, ah, and get some sticks, ah, then we, ah, run them through brush and everything and when they get a rabbit they say tally-ho. And then, then, the rabbits--then, whoever turned the rabbits in, the dogs get--they get some money.

Teacher: (Question)

Sharer: Well, we go to the clubhouse and then we eat and then we go out to the woods and then they get sticks and they, ah, tap at brush and run through the brush and then when they get, a, a rabbit out of the briar patches or anything they say tally-ho and then the fellows go and run after the rabbit whoever's the dogs turn in.

Teacher: (Question)

Girl: I've been on one with my grandpa.
Sharer: The one that we went to was an old log cabin; that's what the clubhouse was. Daddy said, "I wouldn't want to live in one."

Chairman: (Boy's name)

Sharer—boy—(small picture painted on wood—resembled a city in Austria): I've got a picture. It's a little village of, ah, California, a little village of California.

Teacher: (Comment)

Sharer: And here's a little house down here. There's three buildings.

Teacher: (Question)

Sharer: A bridge and, ah, ah, some water.

Teacher: (Comment)

Chairman: (Boy's name)

Sharer—boy: One time I—when she brought some Easter rabbits, ah, Easter rabbits, ah, my dog ate one of 'em and she—my mother gave 'em away and they grew so big that the dogs were afraid of 'em.

Teacher: (Question)

Sharer: The rabbits. My dog ate one of them.

Chairman: (Girl's name)

Sharer—girl—(small bouquet of lilacs and dandelions): I have some flowers, I have some, I have some flowers for (teacher's name). These are, ah--

Teacher: (Question)

Sharer: Dandelions.

Teacher: (Comment)

Sharer: My mother, ah--

Teacher: (Question)

Sharer: This is violets.
Teacher: (Question)
Children: No.
Chairman: (Boy's name)
Boy: Iris.
Teacher: (Question)
Children: Yes.
Teacher: (Question)
Some children: I don't.
Teacher: (Question)
Sharer: Lilacs.
Teacher: (Comment)
Chairman: (Boy's name)
Sharer--boy--(wearing a trick bow tie): I have this trick bow tie. If you push on this little lever (meant bulb) here a worm comes out.
Children: Laugh
Teacher: (Question)
Sharer: I bought it in the store.
Boy: How much did it cost?
Sharer: Twenty-nine.
Girl: I don't trust it.
Girl: I don't either.
Teacher: (Question)
Girl: It scares people.
Teacher: (Question)
Girl: He might squirt it out and scare somebody.
Fourth Grade Lower Socio-economic Group

Teacher: (Question)
Children: No response.
Teacher: (Comment)
Teacher: (Question)
Children: (Several raised their hands) I did.
Teacher: (Question)
Teacher: (Question)
Sharer—girl—(Sunday school book with verse in it--this child had a physical defect and her words were indistinguishable). The Lord is with you, ah, if you are with Him. If you seek Him you will find Him.
Teacher: (Comment)
Sharer—boy: (Teacher's name), ah, I went to West Virginia and on the way we saw the biggest "Y" bridge and--
Teacher: (Question)
Sharer: In Zanesville. Then we went on, we crossed the Ohio River on the bridge, and then we went into West Virginia, and we saw one of the largest steel mills in the world.
Teacher: (Question)
Sharer: Uh-huh. I saw all, all different kinds of flowers and, ah, trees that had, had a bunch of the leaves on. And, ah, the apple trees out in the country, they were starting to bloom.
Sharer—boy: Over by the hospital they got big, ah, flowers and that man, he was over there, they pick 'em; he said, he said, they didn't let those nurses pick 'em 'cause they don't know the right to pick 'em--he said you're suppose, supposed to take, ah, pair of scissors and cut--not cut the whole top out of the flower but cut, cut the limb.
Teacher: (Comment)
Sharer--boy: Oh, ah, I, ah, I went out to my cousins'.

Teacher: (Question)

Sharer: Ah, out in the country. And when we came back me and, ah--Dennis and I, we went to, ah, well, to sell soap. We, ah, we went past a lady's house and she was standing out on the porch and she said, "Nnnnt! Nnnnt! Nnnnt!" And, I, we asked her what was the matter and she said some, some kids, ah, came along and picked her flowers.

Teacher: (Question)

Sharer--boy: Well, yesterday we were going down to, ah, ah, weiner roast down to our house in the country, that we're buildin' and ah, and ah, and we started to start the fire up and it started to rain and we had to go inside the house then--the fire didn't go out though--we squashed it and then, ah, we went out with friends of ours and he went out and started the fire real good again and we roasted the weiners and we went to the home of these friends of ours and the rain came do--and the rain came down.

Teacher: (Question)

Sharer: Uh-huh. We've got the, we've got the roof on and, ah, the sides.

Teacher: (Question)

Sharer: Uh-huh.

Teacher: (Comment)

Boy: (Teacher's name?)

Teacher: (Comment)

Sharer: And there's something else out there. There's a pony out there, it's a, it's a it's a friendly pony for children--it likes children. And my, and my brother was gonna give it grass but then he said for me to.

Teacher: (Question)

Sharer--boy: (Teacher's name), on television last night he said that we were going to have a harrica--hurricane.

Girl: Uh-huh.
Teacher:  (Question)

Girl:  In Virginia there was one.

Teacher:  (Comment)

Boy:  It changed. It went away.

Teacher:  (Question)

Sharer—girl:  Ah, well, Sunday, I think it was Sunday I, that, ah--I forgot what day it was on--I saw Disneyland. They showed how they, ah, they invented Donald Duck.

Teacher and children: That was Saturday.

Boy:  I saw it before--they had it on once before.

Children: In the evening--preview--

Boy:  I, ah, one of us kids could make one.

Sharer—girl: Well, Friday we went, ah, night Daddy he went and bought a car and, ah, it was only $50, and, ah, he went down in Kentucky and got back Sunday morning about, ah, about 4 o'clock I think it was and, ah, when my, when Daddy--Saturday, Friday night we got, we got there about 6:30 and, ah, let's see at 10 o'clock we, we, ah, went down to his mother's to stay, just me and my brother--my brother and I, and, ah, we watched television on, a what's his name's now--

Boy: Jackie Gleason

Sharer--I can't remember, but, there's the biggest man in the whole wide world; he was 8 feet--

Children: Ah! ah! ah!

Sharer: --tall and the littlest man he was 5 feet and he talked so funny and he said he couldn't set in this chair so he had to set on a step ladder.

Boy: He talked like a real kid.

Teacher:  (Comment)

Sharer--boy: Ah, year before, ah, year before last year I went out to Buckeye Lake, ah, I stayed at my grandmother's house and, ah, I used to know some little kids over there
and they moved away, and jest before they moved we, we used to go down to the, ah, at a little pond and there's turtles and snakes and everything in it, and ah, I went down there and I slipped and fell in. And I, and I didn't know how to swim so I jest started—I jest held out my hands and started to go like any other, ah, boys, that didn't know how to swim—I jest—threw my hands out in the water.

Boy: You've told us that before.

Sharer: What?

Boy: That story you just told.

Teacher: (Comment)

Boy: What river was it?

Teacher: (Comment)

Sharer—boy: My sister, she said that she'd like—her and her husband say that they'd like to live on that river down there, you know, where all the boats go by—

Teacher: (Comment)

Sharer: No, I think it's by Franklin Park—well, anyway, one of them; it's a big river—they said they'd like to live by it—the only reason they don't want to live by it is 'cause the kids could get out some way.

Teacher: (Comment)

Sharer—boy: Well, ah, long time, I forget when it was—it was when my dad and my mom and some others—some other family went with us—we went down to Twin Lakes, and we went down there. We went fishin' and he told me not to brace your, the fly rod and I got a bite from a fish and my cork went under. I, I, pull—I got the catfish O.K. but the fly rod fell over and hit my dad on the head. My mom, my mom gave me heck.

Teacher: (Comment)

Sharer—boy: (Teacher's name), ah, down in West Vir—I mean, in, where I live there's a river and—across the way and they've got a fence along there, ah, so they won't fall in—and kids are always fishing down there, and, ah, when I was in West Virginia, ah, my uncle (name) and, ah, ah, I've
got another uncle—I forget his name—and they caught some fish and, ah, I was helping 'em scale 'em and there was one catfish it was about that big and it was still alive and, ah, you should have and, ah, he couldn't even hardly even get the skin off of 'em so he--just the--took a knife and cut--get the scraper and scraped the skin and, ah, cut its head off--head off and, ah took--cut around it's head and then took the pliers and pulled the skin off then he cuts his fins all off and, ah, and then, he, he was a--cut it right down the middle and cleaned it out and put it in a bucket, he also, he and my oth-other uncle they also caught a carp that big.

Teacher: (Question)
Children: No.
Teacher: (Question)
Boy: Because it's got, it's got a mud stream through the middle.

Teacher: (Question)
Children: Sewer--muddy water.
Teacher: (Comment)
Children: (Teacher's name, teacher's name)
Boy: Some people don't go fishing right after a rain because they can't catch nothing in muddy water.

Teacher: (Question)
Sharer: It has two, it has two scales (meant fins) and the tail.
Teacher: (Question)
Sharer: Yow.
Teacher: (Comment)
Sharer: One on the top and two, two on his side--
Teacher: (Comment)
Sharer: He doesn't have any scales.
Teacher:  (Question)

Children:  No.

Sharer:  They have two scales and they've got these things here that if--they--if--if--see are real sharp--and if they get you they'll form a large ball on your hand.

Teacher:  (Comment)

Boy:  (Teacher's name), my dad caught one catfish about that long and that big around and it weighed about twenty-five pounds and it had horns on it about that big and it horned my dad right here (pointed to palm of his hand).

Sharer:  When I caught that--

Teacher:  (Comment)

Sharer--girl:  Friday, I went to, Friday, I went to church and ah, he said something about fighting and, ah, (girl's name), (girl's name) and me we had a fight and then, ah, that same night right after church why I went and made up with her and we've played with each other ever since that.

Teacher:  (Comment)

Sharer:  She didn't feel good today--she did--she wanted to come to school but, but she didn't feel very good. She had a headache.

Teacher:  (Comment)

Sharer--boy:  In West Virginia, ah, my uncle, he uses fish for his corn, and, ah, he's going to plant it in there; that makes good soil.

Teacher:  (Question)

Children:  Indians, Indians.

Boy:  Well, my dad when he fishes, he puts corn on his hook. He says he can catch stuff, ah, thata way--he got one I know thata way.

Inaudible comments.

Sharer--boy:  Sunday, when we, we, we, we, Sunday when we were going to a barbecue they said that the tornadoes were
coming through; well, we, barbecued inside and we had, we cooked the hamburgers down in the broiler.

Teacher: (Comment)

Boy: (Teacher's name), my sister told Mom, she said oh, oh, there's some tornadoes coming up; if there's any tornadoes hit our house, if we're over in your bed you'll know—you'll know a tornado came through.

Teacher: (Comment)

Boy: Yow, I saw her in Sunday school.

Teacher: (Comment)

Sharer—girl: Sat—Sat—ah, Saturday morning we went, ah, down in the country and, ah, we stayed, ah, stayed over night and, ah, I, ah, my, ah, broth—ah, my sister and her kid and her husband went and, nen, ah, my three sisters not countin' me and my mommy and daddy went and, ah, we, we went in the woods the day after and, when we went up in there, well ah, little, ah, (boy's name), he's almost the littlest—not the littlest—ah, my sister and her kid and her husband went and, nen, ah, my three sisters not countin' me and my mommy and daddy went and, ah, we, we went in the woods the day after and, when we went up in there, well ah, little, ah, (boy's name), he's almost the littlest—not the littlest—but he got a sticker and he said the sticker was sticking him when it was sticking me instead—he had on overalls.

Sixth Grade Lower Socio-economic Group

Teacher: (Question)

Sharer—boy: Well, at home about ah, Easter time I got, ah, one duck and my brother got five chickens and I got three chickens and, ah, my dad built a fence for them; but now that we have the duck and I might ask Mom if we could bring the duck up and put him in the bathtub, if she says—

Teacher: (Question)

Sharer: Yep. No, one of them got stepped on.

Teacher: (Comment)

Sharer: Yow, and, ah, I brought a tub up. Mom said I could bring a tub up; I brought a tub out in the backyard and, ah, Mom said the duck don't know what to do, and I said, well, I'll put him in the water, and we put him in
the water and, ah, he was as black as coal and nen we for-got about it and when he come him out he was as clean as could be.

Teacher: (Question)

Sharer: Cleaned himself.

Teacher: (Comment)

Sharer—boy: (Teacher's name), I seen where a cat got in a electric washing machine. He, he come out clean, too.

Teacher: (Comment)

Sharer—girl: Last night on Disneyland, they had--

Teacher: (Comment)

Sharer: Yes, at 6:30. But, ah, last night they showed one of these progress reports of the Disneyland Park that is coming in California--they showed all kinds of things about it--

Teacher: (Question)

Sharer: Uh-huh.

Teacher: (Question)

Sharer: This is the same one. "Nature's Half Acres" is on.

Teacher: (Comment)

Sharer—boy: Ah, it was Sunday night, ah, and, ah, it's covered, no it's, er, it's Borax Show, this 20 mule team Borax, on that, well, this here guy he had a broken back and he was jest about ready to die and this here other man met him and nen he said, ah, ah, before you die you ought to come out to, to the desert with me, ah, take baths and he said o.k. And, ah, he, ah, got well and he went back to the city and started up insurance and this here other guy he stayed out there. He started looking for a gold mine and he come through town with all the money he had and he bought a--he wanted to go see his friend--and he bought a railroad, or, yow, a railroad and, ah, and, ah, or a rail-road train and he ran the train all by hisself or he shoveled the coal by hisself and, ah, and--when the car--the train--he had it goin' a hundent and sixty miles or something like that all the way to the, Chicago and, ah, he
told the insurance man all about his, ah, investment and he said—he asked him if he would come out to the desert with him. He said no he wanted to stay out—stay in the city when he said he didn't like the city so went—he started goin' right back to the desert and these here two crooks wuz a folerin' him and, ah, he—he had gone to lose 'em where there was water and these guys were real thirsty, these crooks and he put up a sign that said, ah, poison water and they started—they was goin' to drink it and he jumped out and said you'd better not drink it, it says poison water and he says, ah, you jest put that sign up there and ah, and he says o.k., then let your horse drink the water and if your horse dies you'll die too 'cause you're no good out in the desert without a horse and so, ah, they, they went on.

Teacher: (Comment)

Boy: He didn't find a gold mine; they were interested in finding out whether he found a gold mine or not, you see, they, ah, showed a monument to him.

Teacher: (Comment)

Girl: Inaudible comment.

Teacher: (Comment)

Girl: It was jest a legend.

Teacher: (Question)

Girl: Well, ah, it was jest a story of, ah, man out West and they told it on, ah, "Death Valley Days" and it wasn't really a—it wasn't real.

Teacher: (Comment)

Girl: Uh-huh.

Teacher: (Comment)

Boy: Ah, on a program that comes on close to two, there, ah, "Death Valley Scotty," nobody knows whether there was a couple of gold mines like that—nobody's ever found them.

Teacher: (Comment)

Boy: (Teacher's name), ah, he, he went in this house—
Boy: He went into this house and he bought a big steak and he gave it to his dog, his dog had, ah, ah, money—ah, money for, you know, tied around—money all put together and, he, ah, he come around and served himself jelly.

Boy: (Teacher's name), ah, it, ah, showed, ah, Scotty, he had a mansion that he built out there and he, ah, learned to place, ah, I mean, (inaudible), with the tiles on the railroad track.

Boy: Ah, in the beginning of the story it said that it was true but played by, ah, different people.

Girl: (Teacher's name), it's not quite like that, it's ah, he said that if he got this, ah, mine he'd share it with this other guy.

Boy: This, this guy, this other guy was in Chicago, said he wondered why the gold, why they couldn't sh-sh-share it with each, with each other.

Boy: It's ah, I think it is, ah, true what you say it is the same one because on "Death Valley" it said that the story was true.

Boy: Is there very many people that live in "Death Valley?"

Boy: Uranium.

Boy: Ah, (teacher's name), ah, when my aunt and uncle went to Texas, I think it was two years ago, well, they took a
trip I think it was to Arizona to a prospector's mine and, ah, they wuz looking around there and, they couldn't get down in the gold—shut down or something like that.

Teacher: (Comment)

Sharer--girl: Can I change the subject?

Teacher: (Comment)

Sharer: My mother signed that there permission slip, she said, ah, I might not, ah, get to go.

Teacher: (Comment)

Sharer--boy: Ah, well, two weeks they had a real good movie; I think it's the best one they ever had, Peg Leg Smith and he got, ah, shot in the leg and it got infected and he--

Teacher: (Comment)

Boy: He was trying to protect that, ah, money bag, ah, that had money in it and ah, and, ah, he got shot.

Teacher: (Comment)

Boy: On Peg Leg Smith--how, how can, ah, whiskey cure your leg if you're gonna' cut it off?

Teacher: (Question)

Boy: He cut his leg and then poured some whiskey on it and then cut it the rest of the way off.

Teacher: (Comment)

Boy: Yow! But he poured it on his leg, too.

Teacher: (Comment)

Boy: Well, when we, you was talking about farms, my father's got a--some plants in the backyard and he's got a little fence around them and the dog next door he took off and jumped in the fence and, eh, he and the plants started flying. Boy! my dad jest came a runnin' out that house!
Sharer--boy: When they talk about splitting an atom, is a--an atom a rock, a liquid, or a gas?

Teacher: (Comment)

Teacher: (Comment)

Second Grade Middle Socio-economic Group

Teacher: (Comment)

Chairman: (Girl's name) row. (Girl's name)

Sharer--girl: This morning when I got up, ah, well, Mommie was fixin' break, breakfast and (boy's name) snook under the bed and soared me half to death.

Chairman: (Girl's name)

Sharer--girl: Well, the, ah, last, ah, Wednesday we were at Bluebirds and we didn't have anything to make so we played games.

Teacher: (Question)

Sharer: I told them.

Teacher: (Comment)

Sharer: I'm going to dance on television next--this coming Sunday.

Teacher: (Question)

Sharer: I don't know.

Teacher: (Comment)

Chairman: Anyone else in (girl's name) row? (Boy's name) row? (Boy's name.)

Sharer--boy: Last night when we were playin' outside I came home from the paper route and we decided to make my little kitten a house so we turned the, the wagon like, so,
it was facin' like 'is and I put (boy's name) thing, ah, he has a bow and arrow set, only it has rubber tips on the end and I put, laid it up against the wagon and put some rags over it and put a door on the other end and put a door on this end so he could get in and out.

Chairman: (Boy's name)

Sharer--boy: Yesterday when I was home, my daddy he got a new car. It's sorta creamish. And tonight he's going to take me up to the airpark, airport.

Chairman: (Girl's name)

Sharer--girl--(doll and a book *Snow White and the Seven Dwarfs*): We went, oh, I forget what, what town we went to and, and my aunt she gave me this doll and Mommie had to go away somewhere and then she got me this *Snow White* book.

Chairman: (Boy's name)

Sharer--boy: Well, ah, I think it was, ah, Tuesday, my aunt she came, came to our house and, and she brought her little, ah, baby with her and she, ah, everything you say she tells, tells it back to, to you.

Chairman: Anybody else in (boys's name) row? (Girl's name) row? (Girl's name)

Sharer--girl: Well, ah, last night, well, at seven, six o'clock well, ah, we took our, ah, French fryer back 'cause it wouldn't work, the second one, and, ah, we got another one and it had a plastic lid and then we went down to our grandma's and we, ah, stayed there for awhile and I had a whole bag of candy.

Chairman: (Girl's name)

Sharer--girl--(two kittens in a big box--started to turn the box so that the children could see in it):

Teacher: (Comment)

Sharer: (Picked up the two kittens--one brown, one gray)

Children: Ah-h-h-h-h.

Boy: That one looks like my kitten.

Children: Ah-h-h-h-h.
Sharer: I, ah, I think it was jest about, ah, the Sunday before Easter (cat's name) had some kittens and we sold two of 'em.

Teacher: (Question)

Sharer: Four; she did have five but one of them died.

Teacher: (Question)

Sharer: We're, we're gonna sell this one (gray) and we're gonna keep this one (brown).

Teacher: (Comment)

Chairman: Anyone else in (girl's name) row? (Girl's name.)

Sharer--girl: Well, ah, three days ago, a little while ago, I mean, ah, me and my mother and father, well, we took, ah, my brother and me and him on down to the swimming pool and we saw the, saw what the swimming pool was going to look like when they open it.

Teacher: (Comment)

Chairman: Anyone else in (girl's name) row? (Boy's name) row? (Boy's name.)

Sharer--boy: Well, ah, last night, when, ah, me and (boy's name) was ridin' and (boy's name) he was throwin' stones and, ah, I broke a piece of, ah, concrete about that long and the piece hit his bike and he started throwin' at me and my mother said that because, and that I had to ride all by myself and when I get down to (boy's name) I started wrasslin' with him.

Chairman: (Girl's name)

Sharer--girl--(two pictures from coloring book--elephant on a ball and two chickens): Last night ah, we went to bed real early and Mommie said I could stay up and, ah, in my, in my bedroom and do anything I wanted to, I got a, a case started for this picture and I finished it and it says Polly takes a tumble and I colored this, this one about the little chicks.

Chairman: (Girl's name)
Sharer—girl: Today is my grandma's birthday and, ah, she doesn't, she doesn't know about it so, ah, so, ah, Grandpa took all the calendars down; he said it was Saturday today and, ah, we're gonna have a surprise party and all of that and then, of course, my cousins, ah, they're going to join together and get, ah, presents and things and we're gonna get ice cream and split up the money.

Chairman: (Girl's name)

Sharer—girl: Well, ah, the, tonight, this afternoon my cousin, she's not going to school—she lives in Michigan, because—ah, she's going to come down to Columbus and, ah, she's gonna, she might stay over, over, over at my house tonight or tomorrow night.

Chairman: Anyone else in (boy's name) row? (Boy's name.)

Sharer—boy—(viewmaster with five reels of film): Well, a long, long time ago, well, ah, my grandmother got me this viewmaster with, with the films and, and, if it's all right with (teacher's name), well, ah, I can either pass it around right now, er, ah, lay it back there on the shelf and let you, ah, look at it when, ah, you're done with your book—-with your work.

Teacher: (Comment)

Chairman: (Girl's name)

Sharer—girl: Yesterday I was playin' in the sandbox with my baby sister and I was scraping up some sand when I got, I got a splinter under my fingernail and my dad had to cut my finger nail off to get the splinter out.

Chairman: Anyone else in (boy's name) row?

Chairman had something to share—girl—(box of dominoes in a paper sack and a yo-yo): Well, ah, for my birthday, it was a long, long time ago, I got these, ah, ----ah, these dominoes and last night I got them out from the jar and they spilled on the floor; and Daddy was layin' in on Mommie's bed and he got up and said what happened; and I said, well, I dropped somethin' but it wasn't anything of yours; and I picked them up because he was out of the room then. He went, then he went in on the couch and laid down and I, and I got them because, I got them and I put them under my pillow because I didn't want Mommie to know that I had them. And, ah, last Saturday, I don't know if it was
last Saturday or the Saturday bef. before but I went down to the store and bought this yo-yo. (String was wrapped so tightly she couldn't get the loose end.)

Teacher: (Question)
Sharer: The string's inside of it.
Teacher: (Question)
Sharer: Yes.
Girl: (Gave sharer a primary pencil)
Teacher: (Comment)
Sharer: Oh, it's too fat.
Children: Laughter.
Boy: Here (girl's name). (Gave sharer some scissors)
Sharer: (Took the scissors and got the string out.)
Teacher: (Comment)
Sharer: And, I can, I, I, ah, well, the day I got it I learned to do it right away. (Demonstrated how to use it.)
Teacher: (Comment)

Fourth Grade Middle Socio-economic Group

Sharer--boy--(a collection of sixty-two post cards about Ohio; a collection of eleven pennants about Ohio; a book, Ohio's Wildlife Resources): Well, these are pennants that I've collected and these are post cards that I got from all over Ohio.
Teacher: (Comment)
Sharer: This is Daniel Emmett's Memorial.
Teacher: (Comment)
Sharer: Well, these post cards are very easy things and they aren't very expensive things to collect. This is Daniel Emmett's Memorial and this is Mac-a-Cheek's Castle.

Teacher: (Question)

Sharer: He was a composer for a few songs.

Teacher: (Question)

Sharer: Old Dan Tucker.

Girl: Dixie.

Teacher: (Comment)

Sharer: Here is a very old post card (leather) that my grandmother got; it's about fifty years old. This is the walk along Blue coal.

Teacher: (Question)

Children: (A few of them raised their hands.)

Teacher: (Comment)

Sharer: This the aerial view of downtown Cleveland.

Teacher: (Comment)

Sharer: Then this is the Knox County Court House, McCormick.

Teacher: (Question)

Sharer: Yes, real old. This is the bird's-eye view of Ohio River.

Teacher: (Comment)

Sharer: Then this is the auditorium, Lakeside, Ohio.

Teacher: (Question)

Children: (Three raised their hands.)

Teacher: (Question)

Boy: Lake Erie.

Teacher: (Comment)
Sharer: This is the famous Indian Inscription Rock at Kelly's Island, Ohio.

Teacher: (Question)

Boy: No, but my boy friend, he goes there about every summer with his dad and they fish and they go fishing and everything. Miss (teacher's name) about, ah, it was sometime this week, it was, Monday and they were showing, ah, at their house about, ah, Ohio and, ah, they went around to all the islands and places where, ah, of Ohio and they named it Flight, Ohio--the name of it was--They were at Kelley's Island and lots of others.

Sharer: This is Table Rock at Kelley's Island. This is along the shore at Perry Park, Lakeside, Ohio.

Teacher: (Question)

Sharer: No, but some of my friends have and they sent me post cards.

Teacher: (Comment)

Sharer: I think this is very beautiful; it's Perry's Memorial by night, Put-in-bay, Ohio

Children: Oh-h-h-h.

Boy: Oh, yow! that's pretty.

Teacher: (Comment)

Sharer: And then this is flower gardens at State Agricultural Farm, Brewster, Ohio. This is upper gorge and falls, Old Man's Cave, Logan, Ohio.

Boy: Oh! I've been there!

Teacher: (Question)

Children: (Most of them raised their hands.)

Teacher: (Question)

Children: Yes.

Teacher: (Question)
Boy: Oh, about two years ago with my dad; we, we're shootin' pictures, taking pictures and had a picnic.

Teacher: (Comment)

Sharer: This is a National Monument, Put-in-bay on Lake Erie. This is a bird's-eye view of Put-in-bay.

Teacher: (Comment)

Sharer: This is President Harding Memorial. Do you know where it is located? (Girl's name)

Girl: In Marion, I think.

Sharer: Yes.

Teacher: (Comment)

Sharer: This is the inside of President Harding's Memorial. This is Mound City State Park, Chillicothe, Ohio.

Teacher: (Question)

Children: (Many raised their hands.)

Teacher: (Comment)

Sharer: This is the Old Man at Old Man's Cave. This is below the falls at Old Man's Cave. This is the inner view of Rock House.

Teacher: (Question)

Sharer: This is the famous "Y" bridge. Do you know where it's located at?

Boy: Zanesville.

Sharer: Right. This is Ohio River at Cincinnati, Ohio. This is my favorite. This is a picture of Cinerama, part of the movie--the roller coaster.

Children: Ah's and oh's!

Sharer: A good picture; I've seen it two times.

Teacher: (Comment)
Boy: I've never been on a roller coaster and I'm just not interested.

Children: I've been on a roller coaster; I've seen it; etc.

Teacher: (Comment)

Sharer: These are pennants that I got in Ohio. This is Chillicothe, Ohio. This is (school's name).

Teacher: (Comment)

Children: (Clap their hands.)

Sharer: This is Ohio Caverns. I have two from Indian Lake, one red and one blue. This is the first state house at Chillicothe. This is Fort Ancient, Ohio. This is Cincinnati, Ohio. This is Put-in-bay and this is the Cub Scouts.

Children: (Clap their hands.)

Teacher: (Comment)

Children: (Laughter)

Teacher: (Question)

Sharer--boy--(a large box containing two box turtles: two painted turtles and one small, tiny turtle):

Boy: Did you find them?

Teacher: (Question)

Boy: Here's Teeney (meaning the small turtle).

Sharer: Well, this one I named him Mudface. I caught him down in the hollow. And that one's mine and I named him Shrimpless.

Teacher: (Question)

Sharer: Shrimpless.

Teacher: (Question)

Sharer: I don't know--jest called him that.
Teacher: (Comment)

Sharer: And, ah, I had this one and I got this, ah, painted turtle—

Teacher: (Question)

Children: No.

Teacher: (Comment)

Sharer: These two are painted turtles and this is a slipper
turtle.

Teacher: (Comment)

Sharer: Yow!

Teacher: (Question)

Sharer: Yow. I named him.

Teacher: (Question)

Sharer: That's Shrimpless.

Teacher: (Question)

Sharer: It's a box turtle; those are both box turtles.

Teacher: (Comment)

Sharer: They're both females.

Teacher: (Question)

Sharer: Yes, you can tell by those rings, these things
right here; you count the fifth box down on the side and
you count all those rings in there and you get the age.

Teacher: (Question)

Children: No.

Teacher: (Comment)

Sharer: That's only on the box turtles; some other kinds
of turtles you tell them a different ways.

Teacher: (Comment)
Children: (Inaudible comments)

Teacher: (Question)

Sharer--boy--(ceramic dog): Well, ah, this is what my brother made. He made this clay dog, this dog out of clay.

Teacher: (Question)

Sharer: He used that brown clay, I think.

Teacher: (Question)

Sharer: No, he, all he does is just shape it out with his hands.

Teacher: (Comment)

Teacher: (Question)

Sharer--boy--(prism): I have a prism. Many people, ah, will not know what this is at first glance.

Teacher: (Comment)

Sharer: But after they look at it a little while they might know. It's kinda chipped on the edges here but, ah, anyway it's real neat; ah, I could show you how it works if it had enough light. Maybe in the coat room I think it would work. Over in our house, ah, in the dining room, there's this light right overhead and it, ah, and it's right overhead in the middle of the table and you can stand on, ah, one side of it and sit on a chair and turn this and focus it when the light's on and it'll, ah, show up about that thick of colors.

Teacher: (Comment)

Sharer: And it's real neat and, ah, and, ah, jest before that, there's about that thick of colors. I could do it if I had enough light, but I don't think it could do; maybe I could do it on here (tries the blackboard).

Teacher: (Question)

Sharer: Well, if you could let me I could, ah, go in the coat room and if, if it works I could come--I'd tell the class to come in here one by one.

Teacher: (Question)
Sharer: First, I have to test it and see, ah, if it works.

Teacher: (Question)

Sharer--boy: I went to the museum to, ah, get, get, some things for our scrapbook and it was in a, last night.

Teacher: (Comment)

Sharer: No--no, it was night before last, rather and, ah, I was down there and Mom was reading some things and I walked into this room and there was this, there was this old car, real old car, and then on the sides of it as you walked into it, there was pictures of Mound Builders and then the Indians and pictures of, of the old pioneers and some of their dresses.

Teacher: (Comment)

Girl: Oh, I've been there.

Teacher: (Question)

Sharer--girl: Mrs. (name), she lives beside us and she gave us some roses that she's had for fifty-three years. And, ah, some, ah, flags, that, are fifty-three years old, too.

Teacher: (Comment)

Sharer: She brought 'em along from the home that she used to live in and she's had them fifty-three years.

Teacher: (Comment)

Girl: I have been to that, ah, rock, ah, I----forget----

Teacher: (Comment)

Girl: Rock House and it has a, it's jest, oh, it's jest a great big thing inside of a rock and it shows it, it, and some places it's got things like canyons and things.

Teacher: (Question)

Girl: Uh-huh, sometimes it's cool and sometimes it's hot but when we were there it was real nice and cool.

Teacher: (Comment)
Sharer—boy—(three "Walt Disney's True Life Adventures" cartoons from the newspaper: The African Oryx; The African Rhinoceros; The Western Water Ouzel; The Moose; and Bighorn Sheep): Well, last night I cut out these "Walt Disney's True Life Adventures."

Teacher: (Comment)

Sharer: This first one is entitled (he reads) "En Garde! In the world of horn anim, horned animals it's 'Have at you' with weapons of varied design. The MOOSE wields (meant wields) a heavy broadsword--sword." There's that moose and he had real big antlers like and he's fighting with another one. The top one here, it says, "The African ORYX thrusts and parries with deadly rapiers." And he has real long, slender horns. And down here, "While the Rocky Mountain BIGHORN SHEEP favor the head-on, rock-and-sock technique." And here you see these two mountain goats jest hittin' each other with all their strength, down there on the bottom. And the other is entitled "NOT SO DUMB. The African RHINOCEROS is hungry for those tender top leaves. He can't climb the tree...but he can bend the tree earthward!"

Teacher: (Question)

Children: (Some said, yow!)

Sharer: "And so...bring his dinner down to him!" And here, there's the tree leaves up there and he wants to get 'em and he's bending the tree down here and here he has it.

Teacher: (Question)

Sharer: Then this here is entitled "BIRD OF THE MIST...The Western WATER OZZEL (OUZEL) (or Dipper) spends its life in the very heart of raging mountain torrents (meant torrents)." And here you see him right close by the rapids.

Teacher: (Question)

Sharer: Ouzel.

Teacher: (Comment)

Sharer: "Although a true land bird, it flies in and out of the water and walks on the stream bottom in search of food." Here he's walking on the very bottom of the stream huntin' for food.
Sharer: I thought that was very interesting. And another part, "Home is a nest with a fine view of the falls... from inside." And here the nest is very close to the falls.

Sharer--girl--(a large crystal glass marble with a lion inside): Well, this is a marble that (man's name) kept for sixty years and, ah, he let me bring it to school this morning and he let me bring it to school today.

Teacher: (Question)

Sharer: It's sixty years old.

Teacher: (Question)

Sharer: There's a lion inside of it.

Teacher: (Question)

Boy: Well, when the marble was made they probably, ah, put it in the, ah, put it in the mold with the, ah, with the marble mold and then let it dry and then put in the fire and that's how they got it in there.

Sixth Grade Middle Socio-economic Group

Teacher: (Question)

Sharer--girl: Well, there was this friend of ours, he said that down in Florida there was this, ah, "sausage tree." And they had to guard it, ah, real close, that you'd, ah, get one of these and cut it open and cook it and it's jest taste like sausage to you. They--it cost a lot of dollars--a lot of money if, ah, you know, you took one.

Teacher: (Question)

Sharer: It's the only one in the United States, he said; they couldn't find any more like that.
Sharer: Well, you fry it and it tastes like one; I don't know whether that's meat or not, but you jest get whatever it grows on there, you know, and cut it open and fry it and it tastes like sausage. It's the only one they have.

Teacher: (Comment)

Children: (Laughter)

Teacher: (Question)

Sharer: Huh-uh.

Teacher: (Comment)

Sharer: Uh-huh.

Teacher: (Comment)

Sharer--boy: Well, (teacher's name), ah, my mother, she had, ah, ah, copy of the Hilltop Record yesterday and, ah, our pictures were in it and they were all blurred and everything and (boy's name), (boy's name), you couldn't even see his face—it was just a big white round piece of paper.

Children: (Laughter)

Teacher: (Comment)

Boy: I had one of those sausages off the sausage tree; my grandmother got it in Florida.

Teacher: (Question)

Boy: Uh-huh.

Girl (first sharer): There was only one.

Boy: Yow, But I had one in our basement and I threw it out; it was getting rotten.

Girl (first sharer): He said there was only one tree in the whole United States.

Teacher: (Question)

Boy: No, I didn't try to eat it.

Children: (Laughter)
Sharer—boy: Ah, my dad went to Las Vegas last Sunday and last night he came back and he brought some silver dollars and a whole bunch of post cards with pictures on them. He stayed at, he stayed at the El Rancho Vegas hotel and brought home a ten-gallon hat and a whole bunch of things for my little brothers and we had lots of fun last night—we gave a party. And when he was come, coming, ah, from Las Vegas he was delayed in Chicago and left his camera there—in the airport.

Sharer: Ah, he, ah, he won this Motorola contest—

Girl: Go ahead.

Sharer: And, he got a free all-expenses paid trip to Las Vegas going from Chicago to Las Vegas.

Sharer--girl: I had a cousin, that went to Florida yesterday and she going to stay for two or three weeks.

Sharer--girl: (Teacher's name), I was looking up citrus fruits the other night and I wanted to know the citron—do you eat the food off of that?

Sharer: Well, I'll try.

Sharer: All right.

Sharer--boy: (Teacher's name), in the Columbus Dispatch, you know, the series that Walt Disney puts out about those, ah, oh, animals and things like that. Well, it said that in 1903 in Siberia these, ah, or no, in India, these great big huge meteors swarm—came down and, ah, they was forty miles around. What happened? It said forty miles around, that's what it said.
Teacher: (Comment)
Sharer: It might have been.
Teacher: (Question)
Sharer: No, they don't, they don't know.
Teacher: (Question)
Sharer: Well, I think they were jest thick right almost together right in this area.
Teacher: (Question)
Boy: (Teacher's name), it said it wiped out forty miles around.
Teacher: (Comment)
Sharer--boy: Well, ah, on this, ah, thing they have in the paper, this Disney Land thing, ah, a couple of weeks ago they had this thing sorta like a flower where they showed this sorta of a mushroom like thing; it grows at a foot of a tree, it's twenty inches wide and ten feet long. And, ah, it said that it has a very bad odor but it is a beautiful flower. Well, what's its name?
Children: (Laughter)
Sharer: They didn't give the name of it.
Teacher: (Comment)
Sharer--girl: Well, the big tornado that has been, ah, moving through the western part of, of the states has reached its three hundreth death toll. And some 700 are injured and it says at the last part of one of these storms over the western part why they--there was this airliner, a plane overhead and it grabbed hold of this plane and it crashed to the ground and killed all ninety men.
Teacher: (Comment)
Sharer--girl: (Teacher's name), in our pictures in the paper and those, ah, pictures we're going to get--when you first look at 'em (boy's name) looks like the teacher.
Boy: Yow!
Teacher: (Comment)

Children: (Laughter)

Teacher: (Comment)

Sharer—boy: Ah, -----(forgot what he wanted to say)

Teacher: (Comment)

Boy: (Teacher's name), is there any chance that you could, ah, find any parts of this meteor that hit. In the, ah--

Teacher: (Comment)

Sharer—boy: (Teacher's name), well, ah, Tuesday night in the Dispatch, ah, there was this, this man, he was a four-star general, General Kaye, and he, he said that, ah, well, I don't know who found out but somebody said that they was gonna, the Russians was gonna attack the U.S. and, ah, he said, he said we wasn't prepared. Do you think that will be true?

Teacher: (Comment)

Sharer: Well, they said that they--that when the hydrogen bomb is dropped they--that there wouldn't be nothing, nothing left, nobody living. Do they have hydrogen bombs?

Teacher: (Comment)

Boy: Ah, about that meteor--would, ah, pieces of it be laying around on the ground or would the men have to dig for it? Would they have to dig down for that, too?

Teacher: (Comment)

Boy: What I mean is the, the pieces that break off or fall off from meteors. They're in different places.

Teacher: (Comment)

Boy: Yow.

Teacher: (Comment)

Sharer—boy: Ah, when we were out playin' baseball about a week ago we were ah, gettin' ready to bat, (boy's name)
was, and there was a big wind came along and jest went like this (motioned spirally) way up in the air and took home, home plate and all the, the pieces of paper that was layin' down; it went way up.

Teacher: (Question)

Children: (Laughter)

Sharer: I told it to Mother and she said it was a whirlwind. It jest took everything up--it went way up.

Boy: A baby tornado.

Teacher: (Comment)

Sharer--boy: (Teacher's name), ah, over at my boy friend's there's this, ah, like, ah, I think he said that a meteor dropped there and it's a great big place and, ah, you can--there's this huge big rock right there and 'en, ah, there's a big circle around it, where this--the--a person drowned there.

Teacher: (Question)

Sharer: Yes, and it's, it's a kinda bluish like.

Teacher: (Comment)

Sharer: They said they couldn't even go around there for about a half a year, it was still hot--it was so hot.

Children: Ah-h-h-h.

Girl: You're being tooken.

Teacher: (Comment)

Sharer--boy: (Teacher's name), if these flying saucers that are supposed to have been seen, well, if they would attack the earth, the Russians would have to come together with us to help fight them, wouldn't they? Get ready to come together?

Teacher: (Comment)

Sharer: Yow, but they couldn't hit 'em--we couldn't hit 'em--them up there.
Teacher: (Comment)

Sharer—girl: Well, (teacher's name), I saw in the paper a long time ago—we was talkin' about meteors—there was this lady and, ah, she said when ah, meteor came through her window and hit her and it never killed her or nothing and she has the meteor, I mean it was, well, why wouldn't, ah, ah, it killed her, why wouldn't it—

Teacher: (Comment)

Boy: Floor.

Teacher: (Comment)

Sharer: Couldn't the force of the meteor coming down and striking the earth break off small pieces and send them around in the area?

Teacher: (Question)

Sharer: Well, when it, when it goes—when the largest pieces go into the ground the—maybe on the way down, on the sides of the earth, it would, ah, the little loose pieces maybe would be standing out on a little point or something, couldn't they break off possibly and be left on the surface of the earth?

Teacher: (Comment)

Boy: Well, (teacher's name), when (girl's name) was talk­ing about this, ah, how (boy's name) looked, well (boy's name) looked like a girl. Gollee!

Children: (Laughter)

Teacher: (Comment)

Boy: Well, ah, in the Smithsonian Institute there is a piece of this ah, meteor that fell out in Arizona or some place like that; there is a piece of it in, ah, this rock that (boy's name) was talking about over in his friend's yard—well there is a piece of blue rock in the Smithsonian Institute in Washington that, ah, is supposed to be a meteor.

Teacher: (Comment)
Boy: Maybe that's what it is.
Teacher: (Question)
Boy: Yes.
Teacher: (Question)
Boy: Right now.
Teacher: (Comment)

Second Grade Upper Socio-economic Group

Chairman: One.
Sharer—girl: Well, ah, ah, I, ah, I think it's, ah, June the fourth we're going on, ah, we're going on a vacation and I, and I, if I remember correctly my mommie said that I'm going to miss the last week of school--we're going to Lake Hope.

Chairman: Two.
Sharer—girl—(new dress): Yesterday, Mommie went down to Lane Shopping Center and got me this new dress; and oh, she got me some short, some new shorts and a top.

Chairman: Three.
Sharer—boy: Ah, well, yesterday and the day before, my mother wrote, ah—yesterday morning we were all mad because everybody was coming in when I was working at school and, and, ah, ah, I gave my mother my polio slip and she wrote down yes and me and (boy's name) both broke, almost broke in the, broke in the floor when we did, when she did it.
Boy: When she did what?
Sharer: Wrote yes, we could get a polio shot.

Chairman: Four.
Sharer—girl—(pictures from Life Magazine): Well, ah, last night I cut these pictures out of a magazine. Some
about a snake (inaudible comments). This is out in the
deser, desert. And here, ah, this, this is in the daytime.

Boy: Gee! Tigers!

Sharer: And here is a skunk standing on his head.

Boy: There's a bat!

Sharer: And here's here's some more of the daytime.

Boy: Is this a bat? Is there a bat?

Sharer: That's an owl.

Chairman: Five.

Sharer--girl--(three pictures that she had made of lambs):
Well, ah, yes, yesterday, ah, I made these pictures of
lambs.

Girl: Did she make them?

Girl: She said she made them--she traced around them.

Boy: She did not trace those.

Girl: Did you trace those?

Sharer: I drew around them but I did all the rest.

Girl: Why did you draw so many pictures of them?

Sharer: This one I think is the best.

Boy: Which one, what is, what does it say?

Sharer: The lost lamb.

Chairman: You were five (pointing to sharer), right? Six.

Sharer--girl--(book): Well, ah, this, ah, oh, this morning
(teacher's name) told me that ah, I ah, at library (librarian's name) asked (teacher's name) if I can, ah, read, ah,
this book that I had. taken out of the library to you, ah,
that I liked and I think maybe you'd like.

Boy: What is it, Ramar of the Jungle?
Teacher: (Question)
Sharer: (Shook head, yes)
Chairman: Ah, seven.
Sharer—boy—volume of Compton's Encyclopedia opened to article White Tail Deer): Well, ah, my mother found, ah this story in the encyclopedia; it's called "White Tail."
Boy: Oh, yow.
Boy: Are you—can you read it?
Sharer: Maybe (teacher's name) will read it.
Boy: (Boy's name)
Sharer: Huh?
Boy: You can find anything in encyclopedia.
Boy: Oh yeah, let's see you find Robin Hood.
Boy: Find Robin Hood! (amusingly)
Chairman: Eight.
Sharer—girl—bracelet panorama of Washington, D.C.): Well, I got this at the, ah, Union, at Lane Shopping Center.
Boy: What is it?
Boy: What is the pictures?
Boy: Where did you get it?
Sharer: What?
Boy: How much did it cost?
Sharer: I don't know.
Boy: Well, then how did you get it up at Lane Shopping Center?
Boy: She's a rich one!
Sharer: My mommie got it.
Chairman: Nine.
Sharer—girl—(small onion—starting to sprout): Well, ah, well, ah, I found, I got this, this, this little onion; it's started to have its root down there; it's started to grow, too. When I get home I'm going to put it in mud.

Chairman: Ten.

Sharer—girl: Well, ah, ah, Mommie said maybe—ah, ah, Daddy says he's going to try his very best to get, ah, home in the afternoon as early as he can and, ah, he, Mommie said she'd go down to Lane Shopping Center and get me some things. Ah, one's some, something for my hair; I don't know what you call it but, ah, that's all I'm going to get.

Chairman: Eleven. Twelve.

Sharer—girl: Well, ah, while up to (girl's name), ah—every, every Faster program to me and Mommie and Daddy are taking us to—at the circus and, ah---

Boy: My Gosh! She's told that once—she said that once.

Sharer: Keep quiet! Daddy, Daddy, ah, he started—keeps telling me he's lost the tickets and he always has a smile on his face when he says it so I keep telling him back, you've got the tickets.

Boy: Hope he does lose them!

Teacher: (Comment)

Chairman: Is there anybody else who would like to share?

Fourth Grade Upper Socio-economic Group

Sharer—boy—(comic book): Well, ah, but I've, I've got this comic book—it's not exactly a comic book—but it's about, ah, the ancient cavemen and I've picked out a part that I'd like to read. It's, ah, it's ah, about fire and how the cavemen discovered fire. Ah, ah, this violent thunderstorm, it, ah, it hit this tree and it, ah, this, the tree started on fire; after the storm the, ah, it was still burning and they, ah, they were astonished to see
that, ah, see such a, a remarkable thing. They had never seen fire before and ah, ah, they touched it and, ah, he snatched his hand away very fast because it, ah, it burned his hand and then, ah, ah, sticks fell down sorta like torches. And, ah, they threw these torches away and they weren't very careful where they threw it and they threw it right where their, ah, their leaves or their food, their food was and, ah, it started to burn and 'nen, ah, after they got the fire out they, ah they found a piece of roast rabbit--they didn't know that it was roasted rabbit--but, ah, it was warm, and it was soft, and it smelled good, very good. And they, ah, they, ah, had a big argument about who was going to eat it and finally the one that, ah, finally one of them got it and, well, from then on they, they, ah, had cooked food and they, they, used fire to defend themselves, ah, from wild animals. And, ah, well, that's about it.

Chairman: Any questions or comments?

Boy: Where did you get that, ah, comic book?

Sharer: Why, ah, my mother gave me a subscription in the mail, ah, for Christmas, and, ah, this is my fourth one.

Chairman: Who would like to share?

Sharer--girl--(a large green burlap map of the Philippine Islands; a Panamanian hat in a bamboo container about twelve inches long and three inches in diameter; a purse): Well, this is a map of the Philippine Islands. And here's a, a, hat. It's a bamboo holder, and it's a Panama, a, hat. And this is a purse and it's made out of pineapple bark off trees.

Chairman: Any questions or comments?

Girl: Where did you get it (girl's name)?

Sharer: It's my mother's.

Girl: Where did she get it?

Sharer: Well, we have some Philippine friends.

Teacher: (Question)

Chairman: Who would like to share?
Sharer—girl—(A metallic jewelry box--on the top was a miniature of the Capitol and its surroundings): My mother went on the, the, ah, cherry blossom tour and she brought me back this, ah, this little, ah, well, it's a little box that you put your jewelry in and this is the state capitol (pointing to the U.S. Capitol). And up in this dome here, ah, ah, an artist painted a picture of Pocahontas and Captain John Smith when they, ah, were going to chop off the head of Pocahontas (inaudible comment) and here's the Lincoln Memorial on this side and here is the Union Station where the train came in and here's Washington's Mem, Monu, Mansion and here's the White House.

Chairman: Any questions or comments?

Teacher: (Question)

Boy: White House.

Boy: State Capitol.

Boy: The United States Capitol.

Teacher: (Comment)

Chairman: Any more questions or comments?

Boy: Well, my brother, you know he's in the Arlington band, and they, the band went down there to the cherry blossom festival down in Washington and he saw the White House and, ah, and Union Station.

Chairman: Who would like to share?

Sharer--boy--(four rather large rocks): Well, ah, (boy's name) and I went down to Miller's Park and, ah, I found some, some shells (fossils). I'll pass, I'll pass them around.

Teacher: (Comment)

Sharer: Well, first I found this and my brother, he was kidding me, and he said, You'd better put this in a glass and take it to the museum, they're real rare and I didn't believe him, of course. And here's, here's some other fossils on these rocks. I'll, I'll put 'em over on the shelf so you can look at them.

Chairman: Any questions or comments?
Teacher:  (Question)

Sharer:  Huh-uh.

Chairman:  Any more questions or comments?

Boy:  I think I can recognize one; I think that in almost every fossil rock that you can find, you will probably find either a big or a small brachiopod.

Teacher:  (Question)

Boy:  Limestone.

Teacher:  (Comment)

Chairman:  Who would like to share?

Sharer--boy--(two rocks):  Well, this is a worm-bored-hole rock.

Chairman:  Any questions or comments?

Boy:  Ah, I don't think--well, I know where you can get a bunch of those down in Arkansa.

Chairman:  Who would like to share?

Sharer--girl--(Bird Book--Blue Angel Picture Dictionary):  Yesterday when we had our, we had our radio program and they talked about things that'd fly, they talked about some birds that'd fly.  And my grandmother, my grandmother, brought me a book of birds, so I have found some that they talked about and I would like to share them.  This is a picture (page in the book) that has quite brightly colored, ah, birds on it.  I brought the canary--it says that, "The canary was a wild bird and then it, then it became very tame after, after someone tried, after someone caught it and they tried to tame it.  It was quite hard to tame."  They told about the chimney swift.  The chimney swift only lives in a chimney.

Girl:  It does?

Sharer:  It says in the little paragraph, it says, "The chimney swifts are well named because they live in chimneys.  They are swifter than any other birds.  They can fly so fast that they can fly, they can fly a thousand miles in a day.  They can even catch insects and eat them while they're
flying. Chimney swifts make their nests from twigs which they glue together and fasten to brick surfaces. They fly in the swift (I don't know this word) they migrate in big flocks. They are small birds about five and one-half inches long." This is a picture—we've studied about the humming bird and the heron—this is the picture of the humming bird and the heron. Many people seem to know about it, I didn't, but there are such things as a horned lark. Here's a picture of the pheasant, and parakeets, parrot, penguin, and pelican. I picked this page because I thought it was so pretty, there's a, they're so brightly colored—the redstart and the robin and the scarlet tanager and the sandpiper—they're all so brightly colored in here. This is a picture of—there are two different kinds of woodpeckers—there's the redheaded woodpecker that are very common and then the woodpecker, the downy woodpecker that isn't too common in this part of the world.

Chairman: Any questions or comments?

Boy: Ah, do you know where you got that?

Sharer: Yow, my grandmother brought it to me, she brought it. She got it in Buffalo.

Chairman: Any more questions or comments?

Boy: Well, I don't know but I think we've got a chimney swift in our chimney because it jest, it, we hear squeaking up in the chimney and Johnny, our cat, is always going near the fireplace and looking up the chimney.

Sharer: Well, there is one way that you can find out if there is one, ah, it doesn't tell in here but Grandma says that they make sort of a squeaky sound.

Boy: Un-huh. It's probably that then.

Chairman: Who would like to share?

Sharer—girl—(Chinese chest: a sewing kit with removable tray): Well, when my great-great grandmother was a little girl she had a friend that was in China and he brought her over this, ah, sewing kit. And inside it has all hand-carved little places where they keep their things—it's got this hand-carved spool and a pin cushion and little places to put needles and everything. And then below this (lifting up the tray) are where she kept, my great-great grandmother, kept her treasures, she has lots of little things
in there. My great-great grandmother's daughter wrote all about her, all about her life when she got this present; here's a letter (small card). A purse (old, cloth with metal trimmings).

Chairman: Any questions or comments?

Boy: (Girl's name), ah, how much would that cost you if you bought it in the stores today?

Sharer: Oh, I don't know; it ought to be in a museum now.

Girl: Is the top of it a mirror?

Sharer: No.

Girl: Ah, well, the way I look inside of it--it looks like, ah, the whole thing is wood, wood. Is it?

Sharer: Yow.

Girl: Is that hand-painted on the outside?

Sharer: Uh-huh.

Girl: Ah, what kind of wood is it made out of?

Sharer: I don't know.

Boy: How many centuries ago was your great-great grandmother living?

Sharer: About one, about one and one-half.

Teacher: (Question)

Sharer: No, but it tells on the bottom but I didn't get down in there to find out.

Teacher: (Comment)

Sharer: I can find out.

Chairman: Who would like to share?

Sharer--girl--(newspaper clippings in a folder): My brother has a pen-pal in Hawaii and, ah, she wrote to him not long ago, ah, she sent him all of these clippings of the, ah, volcano. There are lots of them and I'm going to
put, ah, most of them over on the window so that everybody can see them later.

Chairman: Are there any questions or comments?

Teacher: (Question)

Sharer: No. I didn't even know it until I got home.

Teacher: (Question)

Boy: Well, ah, one of those volcanoes, I think it, it's that volcano there was the, the, only the first time they have been able to take—they, they took a picture of it just starting from a crack about, oh, three inches wide.

Chairman: Who would like to share?

Sharer—girl—(rock): Well, this is a fossil rock and it contains, ah, horn coral, brachiopods. And, (teacher's name) and I think there's a half of a trilobite in there.

Boy: Half of a trilobite!

Chairman: Any questions or comments?

Girl: Ah, where did you find that?

Sharer: Well, I found it out on a rock pile beside my house.

Teacher: (Comment)

Sharer: Yow; I live in Dublin.

Chairman: Who would like to share?

Sharer—girl—(four China figurines: horse, deer, bird, cat): Well, I got this (bird) in North Dakota. I got this horse for my birthday. (Showed other figurines)

Chairman: Any questions or comments?

Girl: Where did you say you got that?

Sharer: I got this (horse) for my birthday.

Boy: (Girl's name), what are all of those animals?

Sharer: Horse, deer, bird, cat.
Chairman: Anybody else like to share?

Teacher: (Comment)

Boy: Where did you get that horse?

Sharer: I got it for my birthday.

Girl: (Girl’s name), do you have a collection of China things?

Sharer: Uh-huh.

Chairman: Who else would like to share? Any more questions or comments?

Sixth Grade Upper Socio-economic Group

Teacher: (Comment)

Sharer—boy—(two boxes of sea shells: one small, flat box covered with cellophane had small shells mounted inside it for display purposes; the other one was a large box with loose shells inside it): Well, ah, these, this collection of shells here, called butterfly shells, and they're not, I mean they are not rare or anything but there are three different kinds and there are big ones and little ones and medium size ones and then there are these. And, ah, I collected those, those—there was a lady down there who was collecting them to put on flower pots and everything.

Teacher: (Comment)

Sharer: And, ah, now this one—that looks like a picture in a magazine if you look at it closely. It just looks like a picture out of a magazine but that’s a real, real McCoy. It’s a, it’s one of those clam shells. Now, this is called a mushroom and it’s a, it’s jest regular shell, and stuff—(pointing to the box) got a whole bunch of junk in here. And I bought this because some of these shells you can only find in the bottom of the sea; they scrape them off of the shrimp, the shrimp boats when they’re looking for shrimp and all of that. And this is, ah, coral. They, they makes good paper weights—my dad has got a big, big coral that big—he has it on his desk. And, this is a blow-up fish I got like that lady brought that other time.
I got little things all over—(searching in the box). And, here's a sea horse—I'll pass that around—it's so darn little. (Boy's name)

Boy: Did you find the sea horse?

Sharer: I didn't find the sea horse; that I had to, ah, buy. You, you can't find sea horses anywhere, period.

Girl: Well, how did they get 'em?

Sharer: Well, they had to scrape them off the bottom of the sea, as I said; the shrimp boats bring 'em in—when they scrape off the bottom for shrimp. And here are two more clam shells. Now there are some of these out, out there in the showcase—these are called olives and these you just find everywhere, I mean, you just find them everywhere on the beach. (Boy's name)

Boy: Ah, where did you get all of those shells?

Sharer: Well, I found them on the beach—the tide would go out—it was right after the tide about seven o'clock in the morning, jest after the tide went out—it'll come in and stay for about an hour or so and then when it goes out and makes the beach bigger then all of these shells are left on—my dad and I went out there and for about two or three hours just looking for shells and we came home with so many shells we had, almost had, the back seat filled with 'em—I've still got more at home—I couldn't bring 'em all this morning. And here's a baby black olive—and the one out in the showcase is polished; you—and I didn't buy that either, you find them all polished. Now these are different; they're not polished. Here's another clam shell and here's another one. And this, I don't exactly know what these are—I have a book at home but it doesn't—it's not in color and you can't tell the shell, the shells real well. I have a real tiny little one like that, too. And here's another clam shell. Now here is a real tiny baby olive that is already polished—real little tiny one. I'll pass that around. Now I have a great big cone-like shell out there in the showcase and it's speckled and of course I bought that—you can't find anything like that very—there's a place down in Florida called, ah, something like Black Valley or Midnight Pass, that's what it's called, Midnight Pass; and you go down there and you find all kinds of odd shells, this lady has—I have some at home that—have you ever seen these regular shells, that are, ah, clam shells and the clams go up and turn around in 'em? Those
great big ones that are pink inside and you can hear the ocean? Well, I have a little one like that and it's got prongs coming out like—all around it, and, that's—now here's a little tiny one. Now, you can get big ones, little one; my dad and I brought one home that was still alive and we took a toothpick and were taking the inside out, and were taking 'em out and taking 'em out. I'll pass that on because that's so little no one can see it. And more clam shells. (Girl's name)

Girl: Can you describe what, ah, it looks like when you take it out of the, ah, shell; you said you were taking them out of the shell.

Sharer: Well, it's sorta of, ah, I can't exactly, ah, describe it; it's light tan-like animal; and it's jest, ah, it's, ah, real wet and grimy, about that long and it's a little black head, and, ah, that's about what it looks like—I mean, and it's, ah, I think it's attached to the thing something like that cause we had a terrible time getting the tail out of there—there's a cattail on the end. Now here's a silver dollar, sand dollar, rather that's half broken. That's great! Well, that's the way I found that. And Mother and I were finding some mother-of-pearl shells down there; she's going to make a necklace out of 'em; they're, ah, beautiful shells and we went down to this place and they had great big huge ones about, ah, that big and they cost, so, ah; one there it was given to them from Japan and it cost—it wasn't even for sale but there was one great big one there cost something like ten dollars and some cents—it was mother-of-pearl—I have one of them at home but I didn't bring it today. See, I got, ah, several boxes downstairs in the basement and I jest didn't have time 'cause it was ten minutes till the bell ring when I came. Here's some more olives. This is a bigger one. This is a white, ah, whitish brown olive. Now there's one out there, the polished one, that is brown with dark brown spots on it. And that's all.

Teacher: (Comment)

Boy: Do you call that a butterfly collection, ah?

Sharer: Yes, they're called butterfly collections, ah, they, ah, they jest come in beautiful colors; they come in red and orange and people like to buy, ah, they find (inaudible comment) out the tide—and their—when they have their two hands together and the sea gulls will come along and they'll crack them open and they won't crack 'em in half,
they'll jest open 'em up and then they'll just eat the
insides and then, and we found a live one but the people
all, ah, some people that come along they take 'em when
they're already closed up and they're alive they take 'em
and put, they take 'em home and they boil 'em and then
they'll open up the shell and eat 'em. They're supposed to
be real good but I don't know.

Girl: Oh, I've seen those before.

Sharer: (Girl's name)

Girl: Well, when we went to Florida we found this, ah,
shell that had this black stuff all over it. It was sorta
of green, it was some kind of an animal that was growing on
the outside of his shell.

Sharer: I don't know anything about that. (Boy's name)

Boy: Well, I, when I was in Florida I found this little,
sorta of a disc and it was purple all on the outside and it
had fuzz on it.

Sharer: A disc?

Boy: And fuzz, sorta.

Sharer: And purple?

Boy: Yes, it was sorta purplish.

Sharer: Well, that sound, a little bit like a sand dollar;
it's sorta fuzzy on the outside--it's sorta chalky--I don't
know whether--what happened to it, but, ah--

Teacher: (Comment)

Sharer: (Boy's name)

Boy: Well, ah, when I was in New England, I found this, ah
girl cleaning out some huge snail shells and, and a, there
were animals inside of them.

Sharer: Well, that, that, ah, they do, too. Tomorrow, if
I bring any, I have this--ah, we went to this place where I
bought most of my shells they were making; they took the
shells and they made jewelry out of them, and this one
snail shell was cut in half and it showed all the compart-
ments as it goes around and round, the little snail, and
finally gets up on, on a compartment. I imagine they have
to be awful little to get into those things 'cause they're
little tiny— they're like hallways, jest go round and round
and finally get into this little room— real little, tiny.
I'll bring it up tomorrow.

Teacher: (Comment:

Sharer—girl: Well, ah, I read last night in the paper,
but you know that Sheppard guy? Well, he's going to get a
new trial because they've found a new clue, ah, of who
might murdered her— there's, ah, blood where she was
murdered.

Boy: The murder was a left-handed person; there's blood on
the--

Sharer: Yow, uh-huh.

Teacher: (Comment)

Sharer—girl: Why, ah, last night in the paper it said
that these eight children had had this polio vaccine. And,
ah, within a week they got polio and they don't know whether
they were jest gettin' it or whether it was due to the
vaccine.

Boy: I know, I can answer that.

Teacher: (Comment)

Boy: It was a batch of bad, ah, vaccine. They said that
the, it was a batch that, ah, there was something wrong
with it or spoiled, or something like that and it was very--
it was bad vaccine and they gave it to these seven children
and they came down with polio.

Teacher: (Question)

Boy: Yes.

Teacher: (Comment)

Girl: Well, that's, that's what my father, he's ah, said.
Ah, a, they weren't sure now, right now-- they couldn't tell
for a little while yet.

Teacher: (Comment)
Sharer—girl: Well, there was another thing in the paper last night, I don't, I don't know what it meant, but there was these two children, they were over in France or Paris or something like that and they, and they were looking for their grandmother who was from Columbus and it, and they were lost but they got lost and they were looking for her. But it turned out that Grandmother was in Columbus. I don't get it.

Teacher: (Comment)

Boy: Well, ah, it was Vienna, Austria.

Sharer: Yow.

Teacher: (Question)

Boy: No, not much—but I know that, ah, that, that, the United States, French, and British, and Russian police are looking for them.

Sharer: Un-huh.

Teacher: (Question)

Girl: Yow. I read it. Ah, they, they went out, they were, they wanted to find their grandmother and, ah, they were looking every place for her and there, and, ah, the boy that left them, a little boy, said that he was gonna go away and his mother didn't believe him and ten minutes later they looked and they weren't there and so everybody was out hunting for them and they were hunting for their grandmother and, ah, she happened to have come to, ah, Columbus here and they were looking for her, and, ah, in Australia.

Teacher: (Question)

Boy: How did they get to Australia?

Girl: I mean Austria.

Teacher: (Comment)

Girl: Will we get to hear our voices on that when he gets finished recording it?

Teacher: (Comment)
Boy: Well, I would like to know, how, ah—(boy's name) shells—how that sand dollar is made, I mean how does it come to be like it is?

Sharer: Well, ah, I don't really know, of course, because I haven't studied shells for very long; see, I've got this book—and it had the san—it had all of these shells in it but it wasn't colored—I mean the shells weren't colored and it's very hard to find out what shell is what and what's the name of it if they're not colored and only in black and white.

Teacher: (Comment)

Boy: Well, ah, the sand dollar is jest like a starfish because they, ah, they live, they live down in the sea and they crawl like a starfish and, and I think those little hole-like things are breathing places because I have one at home—it's bigger than that one.

Teacher: (Comment)

Sharer—boy: Well, ah, Saturday Ohio State's baseball team played Wisconsin's baseball team at Northwestern University I think it was and they—an' Ohio State beat Wisconsin eight—nine to eight.

Teacher: (Comment)

Sharer—boy: Well, I read, ah, this in the Radio-Reel News that, ah, some doctor, a history men, ah—in Venezuela went out to this island that was destroyed by a hurricane a few hundred years ago—found this shell and he looked inside there was about 3,000 pearls collected—he could get about 300,000 dollars.

Teacher: (Comment)

Sharer—boy: Well, ah, this is a kinda of a funny story of this man, this janitor in, ah, let's see now what country was it—I can't exactly remember—it was a janitor in England I believe it was—janitor in England and he went to this train station and there was a box for him or package or something and there was supposed to be a hundred beads or something in it—something like that and he took it home and put it on the shelf for a couple of years. And then one day he opened it up and here he found all of these
diamonds and, ah, rubies and everything in it that had been smuggled over. He had, he had, and he wound up with them in that case—that package, package that'd been sent to him.

Teacher: (Comment)

Boy: Well, on the subject of finding treasures, I believe, I think it was in Columbus a couple of years ago, this, ah, guy, he was remodeling this old house somewhere around in the center of Columbus and this stamp, ah, he, this stamp fell out on the floor and it turned out worth—it was worth something like 300 dollars.

Teacher: (Comment)
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AUTOBIOGRAPHY

I, Irvin Lee Ramsey, was born in Stephensport, Kentucky, September 8, 1918. I received my elementary school education in Perry County, Indiana; I graduated from the Cannelton High School, Cannelton, Indiana, on May 27, 1935.

I completed a two-year elementary education program at Indiana State Teachers College, Terre Haute, Indiana, in June, 1937. I taught one year in a rural elementary school in my home community; for four years I taught the fourth grade in the elementary school at Cannelton, Indiana.

From July, 1942, to January, 1946, I served in the United States Army; the majority of the time I was a non-commissioned officer in the army program for illiterates.

I was granted a Bachelor of Science degree from Indiana State Teachers College, Terre Haute, Indiana, in 1946. During the following two years I was a supervisor and demonstration teacher of the fifth and sixth grades in the Laboratory School at Indiana State Teachers College; at the same time I was working toward a Master of Science degree which I received in June, 1948.
From September, 1948, to June, 1951, I was a supervisor and demonstration teacher of the fourth and sixth grades at the Campus School, Iowa State Teachers College, Cedar Falls, Iowa.

In June, 1951, I enrolled in the graduate program at The Ohio State University; I supervised elementary student teachers as an instructor in elementary education at the University from September, 1952, until June, 1955.

I am currently an assistant professor of elementary education, a position that I have held since 1955, at the University of Virginia, Charlottesville, Virginia.