DOCUMENT RESUME

ED 127 025 95 PS 008 734

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TITLE	Study of Effectiveness of Materials for Appalachian Parents.
INSTITUTION	Appalachia Educational Lab., Charleston, W. Va.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
REPORT NO	AEL-TR-48
PUB DATE	Jan 75
CONTRACT	OEC-3-7-062909-3070
NOTE	59p.; For related documents, see PS 008 661 and PS 008 731-737
EDRS PRICE	MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS	Academic Achievement; *Early Childhood Education; Field Studies; *Home Programs; Home Visits; Illustrations; *Instructional Materials; Intervention; Measurement Instruments; Measurement Techniques; *Parent Education; Parents; Program Planning; Reading Diagnosis; Reading Level; Role Playing; *Rural Family
IDENTIFIERS	Alabama; *Appalachia; *Home Oriented Preschool Education Program (HOPE); Kentucky; Marketable Preschool Education Program (MPEP); Ohio; Pennsylvania; Tennessee; Virginia; West Virginia

ABSTRACT

This study examines the effectiveness of three levels of reading materials (second, fifth and eighth grade) and two types of illustrations (decorative and instructional) on Appalachian parents' ability to complete a prescribed set of home teaching activities. The study was used in the development of parent materials for the Appalachia Educational Laboratory's Marketable Preschool Education (MPE) Program, an extension of the Home-Oriented Preschool Education Program (HOPE). The sample comprised 699 Appalachian families with preschool children. The sample was subdivided and parents in each group were presented with an activity sheet representing a particular combination of reading level and illustrative style. Parents were requested to read the sheet and to complete the activity with the home visitor, who played the role of their child. Comparisons were made to see which combination of reading level and illustrative style produced the largest number of successful completions. Results indicated that (1) even the materials at the second grade reading level, approximately one-fourth of the parents were unable to carry out activities described on the sheets; (2) instructional illustrations negatively affected the number of completions; (3) activities written at the second grade level and utilizing decorative illustrations produced the most completions; and (4) parents' ability to complete the activities was related to their educational attainment. Appendices include parent activity sheets, representing all six combinations of reading level and illustrative style. (MS)

Study of Effectiveness of Materials for Appalachian Parents

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Technical Report No. 48

Research and Evaluation Division
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January, 1975

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Introduction

This report is one of four studies outlined in the Plan for Marketable Preschool Education Program 1974 Field Studies.[1] It is intended to provide information on the effectiveness of types of parent materials to be utilized in AEL's Marketable Preschool Education Program (MPEP). Historically, the MPEP is an extension of the HOPE program, a home-oriented preschool program which utilizes a daily television lesson, visits by a paraprofessional to the home, and group sessions for preschool children.

The results of this parent materials survey are intended to answer a specific question posed by the National Institute of Education regarding the style and level of presentation which are most effective in conveying information to parents in the MPE Program. Although this survey is based on a sample of approximately seven hundred parents, it is intended that these data will be applicable to the MPEP target audience. This target audience has been defined by AEL as Appalachian families with preschool children living in areas other than cities of 50,000 or more.

Methodology

Sampling Techniques

In accordance with the requirements of the field studies plan, the original field study sample consisted of families living in the states of Alabama, Kentucky, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia. In order to locate possible sites within the area, a survey was made of existing programs utilizing regular home visits. Chief state school officers or their representatives and other knowledgeable persons

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[1]Joe E. Shively and Brainard W. Hines. Plan for Marketable Preschool Education Program 1974 Field Studies. Charleston, W. Va.: Appalachia Educational Laboratory, Inc., June, 1974.

were contacted to obtain a list of the home-based preschool programs in their areas. From these lists and from previous contacts with programs which utilize the HOPE process, a number of sites was tentatively selected for use in data collection within the seven states. The logistical constraints of time and available resources made it necessary to utilize parents whose children were already enrolled in home-oriented preschool programs or families who were being visited regularly by a paraprofessional. No other method of sample selection would have allowed both an accessible population and the necessary staff to conduct the surveys given the contractual scope of work time limits.

As will be seen, the sites varied in the nature of preschool program as well as sample characteristics including number of available families. The original sample of 951 families selected for the field studies met three general requirements which included most of the criteria listed in the field studies plan.

1. The sample adequately represented the target population as defined by AEL, i.e., families with preschool children living in areas other than cities of 50,000 or more.
2. The sample was readily accessible and did not involve major logistical problems in data collection.
3. The sample was large enough for accuracy in extrapolation, and was taken from each of the seven states in the AEL service region.

Table 1 indicates the location, size, and type of program for each of the sites which was selected for inclusion in the field surveys. In two of the sites (DILENOWISCO and Clinch-Powell), the number of families

Table 1

Description of Sites

Type of Program	State	Site	Counties	Total Available	Original Sample	Revised Sample
HOPE Model	Alabama	TARCOG	Madison, Limestone, Jackson, DeKalb, Marshall	82	82	48
Head Start	Kentucky	State Head Start	Letcher, Pike, Knott	122	122	91
HOPE Model	Ohio	Project Appalachia HOPE	Gallia	143	143	116
Head Start	Pennsylvania	Armstrong Co. Community Action Agency	Armstrong	55	36	23
Head Start	Pennsylvania	Washington-Green CAP	Washington, Greene	100	50	30
HOPE Model	Tennessee	Clinch-Powell Ed. Coop	Campbell, Claiborne, Hancock, Union	600	200	176
Special Ed.	Virginia	DILENOWISCO Ed. Coop.	Lee, Wise, Norton, Scott	250	197	108
HOPE Model	West Virginia	Pendleton Co. ECE Demonstration	Pendleton	65	65	58
Head Start	West Virginia	Raleigh Co. Schools	Raleigh	56	56	49
					951	699

available exceeded the number needed for sampling purposes. For this reason, a random selection of two hundred families was made in each of these two sites.

In order to determine the representativeness of the sample, it was necessary to determine the degree of correspondence between the sample and the MPE target audience on variables where data were already available. A preliminary comparison of data for the total adult population from the counties in which sites were located with corresponding data from the total Appalachian Region revealed that the counties in which the sites were located as a whole had a lower level of income ($5,746) than the figure for the overall region ($6,873). In addition, these counties had a slightly lower percentage of families with television sets (90%) than did the region (92%).

If the field studies sample selected was representative of the county from which it was chosen, then the sites slightly underestimated the socio-economic level of the general population of the Appalachian Region. A subsequent U. S. Census Bureau study provided data concerning the relationship between the survey sample and the specific MPEP target population. Since the survey sample distribution and the U. S. Census Bureau distribution were found to be dissimilar (using a χ^2 approach), a matrix sampling technique was used to obtain a survey sample which was representative of the regional population. Specifically, the revised sample distribution and the U. S. Census Bureau distribution were similar on the variable of educational level of mother--a variable of importance in this parent reading materials study. There were 699 families in the revised survey sample.

Data Collection Techniques

Evaluation staff at AEL trained the supervisory staff of the seven states, who in turn trained the staff who administered the survey, since it was not practical for AEL to train all of the paraprofessionals to administer the instruments used in the field surveys and the competency study.

The supervisory staff were brought to Charleston, West Virginia, during early March of 1974, and were acquainted with the purposes and structure of each study. They were trained in small groups in the administration of each instrument and were aided in the selection of parents who were to receive each of the surveys. Possible interpretations of items on the instrument were discussed, and the specific procedures for determining if parents could complete the activities were discussed. An AEL concern for invasion of the parents' privacy was also discussed with the coordinators and the home visitors were requested both orally and in writing to inform parents that they were not required to respond to any items or to the total survey if they did not wish.

After returning to their sites, the supervisors were responsible for both training and coordinating activities of the paraprofessionals. A total of fifty home visitors was trained, permitting approximately twenty families to be surveyed by each home visitor.

The surveys were conducted between March 15 and March 29, with most home visitors gathering data after regular working hours. This schedule helped to prevent any interference with normal program operation within the sites.

During the time the survey data were being collected, AEL staff visited with each site or contacted them by telephone to ascertain that schedules were being met and that proper data collection procedures were being followed. At the end of the data collection, each of the supervisory staff was "debriefed" concerning problems or unusual happenings which may have occurred during that time.

Limitation of the Study

A possible limitation of this study results from the nature of the instrument used. The survey technique used was concerned with the functional reading level of parents rather than a measured level of reading attainment. Therefore, the content validity of this instrument is of considerable importance in making extrapolations to the overall effectiveness of various reading levels of parent materials. During the development of the instrument used in this survey, which will be detailed below, several checks were built in to ensure the validity of the technique used. First, a group of consultants, knowledgeable in the area of parent materials, assisted with the basic construction and wording of the instrument. Second, a check was made on the vocabulary level of each of the three versions of the instrument (2nd, 5th, and 8th grade difficulty), and an overall vocabulary level for each passage was determined. These vocabulary levels correspond very closely with the intended reading level of the passages. It was not possible to determine the conceptual level of the passages, due to the lack of any standard reference form for determining the conceptual difficulty of written passages, although the conceptual level was apparently held constant by the experimental design of the study.

Description of Measurement Procedures

The technique which was used to determine the effectiveness of various levels of reading difficulty and styles of presentation of parent materials was based on direct observation of parent behavior. The technique used to elicit this behavior consisted of three activities to be carried out by the parent. These activities were selected from a list of activities for parents compiled during the field test of the Home-Oriented Preschool Education program. Each activity was written at the second, fifth, and eighth grade level of vocabulary and with two styles of presentation as described below.

Styles of illustration were defined by the relevance of the background illustrations on each sheet handed to the parent. Decorative illustrations (D) pertained to the general subject matter of each activity, but did not portray activities similar to those requested in the written portion of each activity. Instructional illustrations (I) gave visual clues to the nature of the activity to be carried out by the parent. Copies of the reporting schedule and each of the six sets of three activities can be found in Appendices A through G.

In one instance, the parent was asked to pretend that the home visitor was her child and to request the "child" to place a group of ten bears into two sets of five, assisting if necessary. Role playing of the child by the home visitor was also required for the second activity, and in this case, the parent was asked to tell a short story based on her childhood. The third activity involved a request for the parent to ask the home visitor, again role playing the child, to assemble pieces of a puzzle, aiding if necessary.

The parent was handed a sheet requesting her to carry out each one of these three activities. Each parent received all three activities written in one reading level and presented with one style of illustration. That is, each parent was requested to carry out three activities presented in one of six reading levels and styles of presentation. Each parent was requested to carry out the same three activities, and parents were randomly assigned within sites to each of the six combinations of reading levels and presentation styles.

In addition to asking the "child" to complete a given activity, the instructions to the parent also requested them to aid the "child" if necessary in completing those activities which the "child" was to do. The home visitor was instructed to perform those activities incorrectly the first time, thus requiring the parent's aid for successful completion. The number of questions each parent asked during the activities was also recorded on the answer sheets.

In summary, then, each parent was asked to pretend that the home visitor was her child and to carry out the written instructions handed to her on each of three sheets of paper. On handing the parent a sheet of paper, the home visitor said only "'Read this and do what it says." The parent's responses were then recorded as to first, whether she carried out the activity outlined for her on the sheet, and second, if she aided the home visitor on those activities which elicited an incorrect initial response from the home visitor. Additionally, the number of questions asked on each activity was recorded by the home visitor. Only those questions which were considered relevant to the content of each activity were recorded, while those questions about the general intent or format of the study were answered by the home visitor.

Rationale

The rationale underlying the previously described measurement procedures is that the described activities are typical of those presented to parents as a part of the MPE Program, and that the response technique is a measure of the behavior in which parents, home visitors, and children are expected to engage. The parents should not only be able to recognize the words but be able to use the activity sheets as a guide to conducting learning activities with their children.

A "blind" was provided by requiring the home visitors, or "children" to partially complete activities. It was assumed that the parent who could instruct the "child" to complete the activity possessed a more thorough knowledge of the learning activity than a parent who could not give instructions.

Data Analysis Techniques

The primary data analysis technique used for the parent materials survey was a χ^2 comparison of each possible combination of two cells with the three by two matrix of reading levels and presentation styles. That is, each of the six cells was compared with the remaining five cells by means of a χ^2 analysis of complete and incomplete responses. These χ^2 comparisons were made for total completion of the activity. This analysis was carried out for the total sample of 699 parents for each activity. Additionally, a χ^2 was performed on the total of all three activities for each cell on the total sample. Each of these χ^2 routines includes a correction factor for unequal n's across cells. The results of the χ^2 comparisons are presented in the following section.

In addition to the χ^2 analysis of primary data, the completion rate of the activities was partitioned first according to the level of educational attainment of the mothers, and second, according to the category of occupation in which the head of household was engaged. The educational and occupational data were available from a concurrent study completed by AEL.

Results

The differences in parents' ability to complete the learning activities according to the reading level and type of illustration of the materials is given in the following section. That section is followed by a discussion of the difference in educational and occupational levels of parents as they relate to the parents' ability to complete the activities.

Completion Rate of Learning Activities

The total correct and incorrect responses to the partial and full completion of each of the three activities presented to the parents are presented in Tables 2, 3, and 4. These scores are based on the performance of the total sample and are divided into each of the six cells representing a combination of reading levels and instructional styles. Additionally, similar data for the sum of all three activities within each cell are presented in Table 5. Selected results are presented in graphic form in Figure 1 for each activity, while the results for the total of all three activities are presented in Figure 2.

A series of χ^2 analyses were completed pairing each of the cells with all other possible combinations of cells as described previously. These χ^2's were carried out on a two by two matrix, where rows were various

Table 2

Partial and Complete Number and Percent Responses to "Bear" Activity (Total Sample by Cells)

		8D*	5D	2D	8I	5I	2I	Total
Partial Activity	Complete	96 69.1	89 76.7	80 70.2	73 62.9	74 67.3	70 72.2	482 69.7
	Incomplete	43 30.9	27 23.3	34 29.8	43 37.1	36 32.7	27 27.8	210 30.3
	Total n	139	116	114	116	110	97	692
Full Activity	Complete	96 69.6	88 75.9	78 68.4	74 63.8	72 65.5	69 72.6	477 69.2
	Incomplete	42 30.4	28 24.1	36 31.6	42 36.2	38 34.5	26 27.4	212 30.8
	Total n	138	116	114	116	110	95	689

*8D is the eighth grade reading level materials with decorative illustrations, etc.

Table 3

Number and Percent Responses to "Story" Activity (Total Sample by Cells)

		8D	5D	2D	8I	5I	2I	Total
Full Activity	Complete	92 67.2	79 68.1	99 86.8	77 66.4	70 63.6	75 78.1	492 71.4
	Incomplete	45 32.8	37 31.9	15 13.2	39 33.6	40 36.4	21 21.9	197 28.6
	Total n	137	116	114	116	110	96	689

Table 4

Partial and Complete Number and Percent Responses to "Puzzle" Activity (Total Sample by Cells)

		8D	5D	2D	8I	5I	2I	Total
Partial Activity	Complete	110 79.1	108 93.1	97 85.1	94 81.0	90 82.6	81 84.4	580 84.1
	Incomplete	29 20.9	8 6.9	17 14.9	22 19.0	19 17.4	15 15.6	110 15.9
	Total n	139	116	114	116	109	96	690
Full Activity	Complete	111 80.4	106 93.0	92 82.9	89 78.1	89 81.7	76 82.6	563 83.0
	Incomplete	27 19.6	8 7.0	19 17.1	25 21.9	20 18.3	16 17.4	115 17.0
	Total n	138	114	111	114	109	92	678

Table 5

Sum of Complete and Incomplete Responses to All Three Full Activities

Responses		8D	5D	2D	8I	5I	2I
Complete	n %	299 72.4	273 78.9	269 79.4	240 69.4	231 70.2	220 77.7
Incomplete	n %	114 27.6	73 21.1	70 20.6	106 30.6	98 29.8	63 22.3

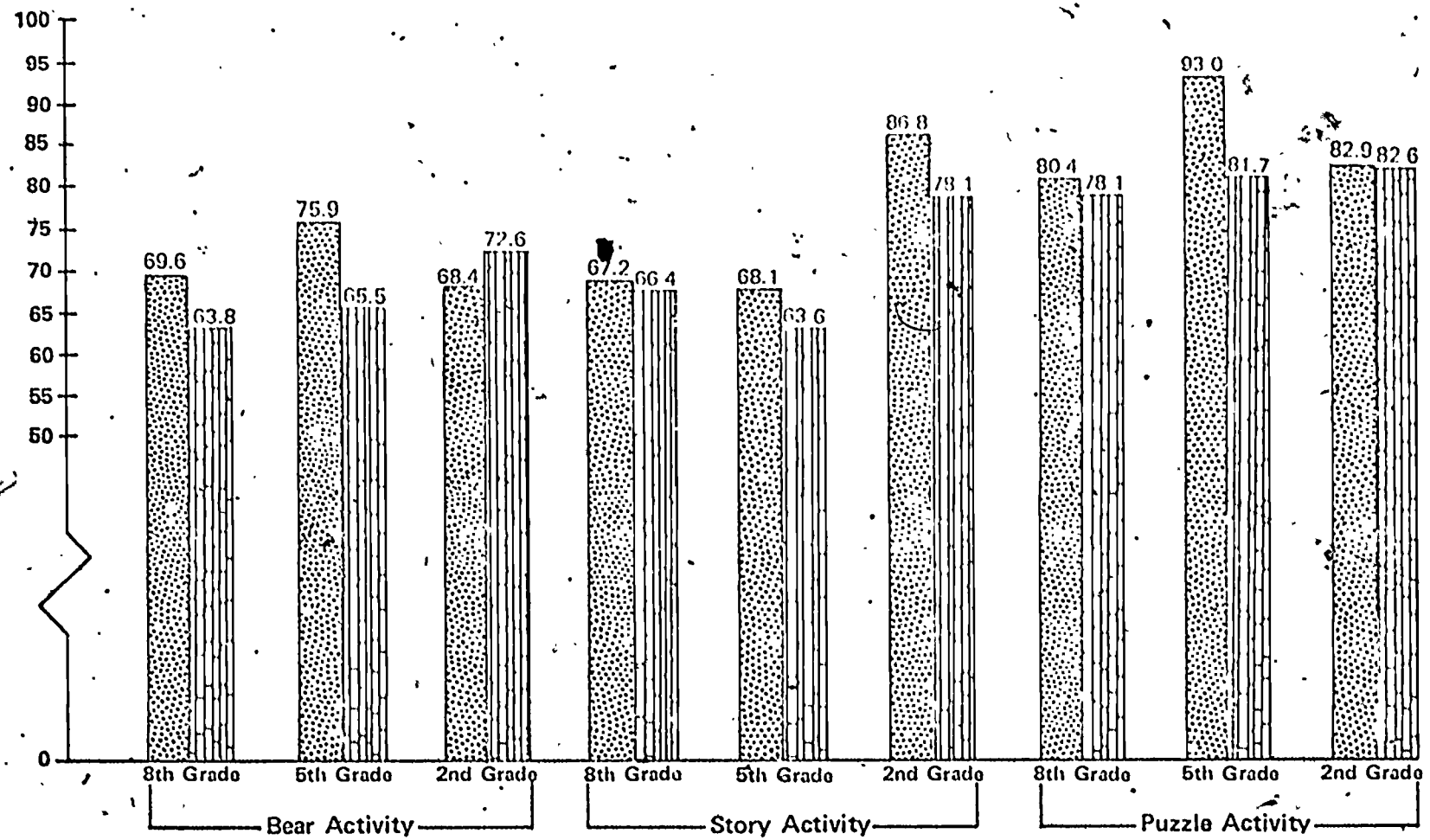

Figure 1
Percentage of Correct Responses for Bear, Story and Puzzle Activities by Reading Level and Illustrative Style

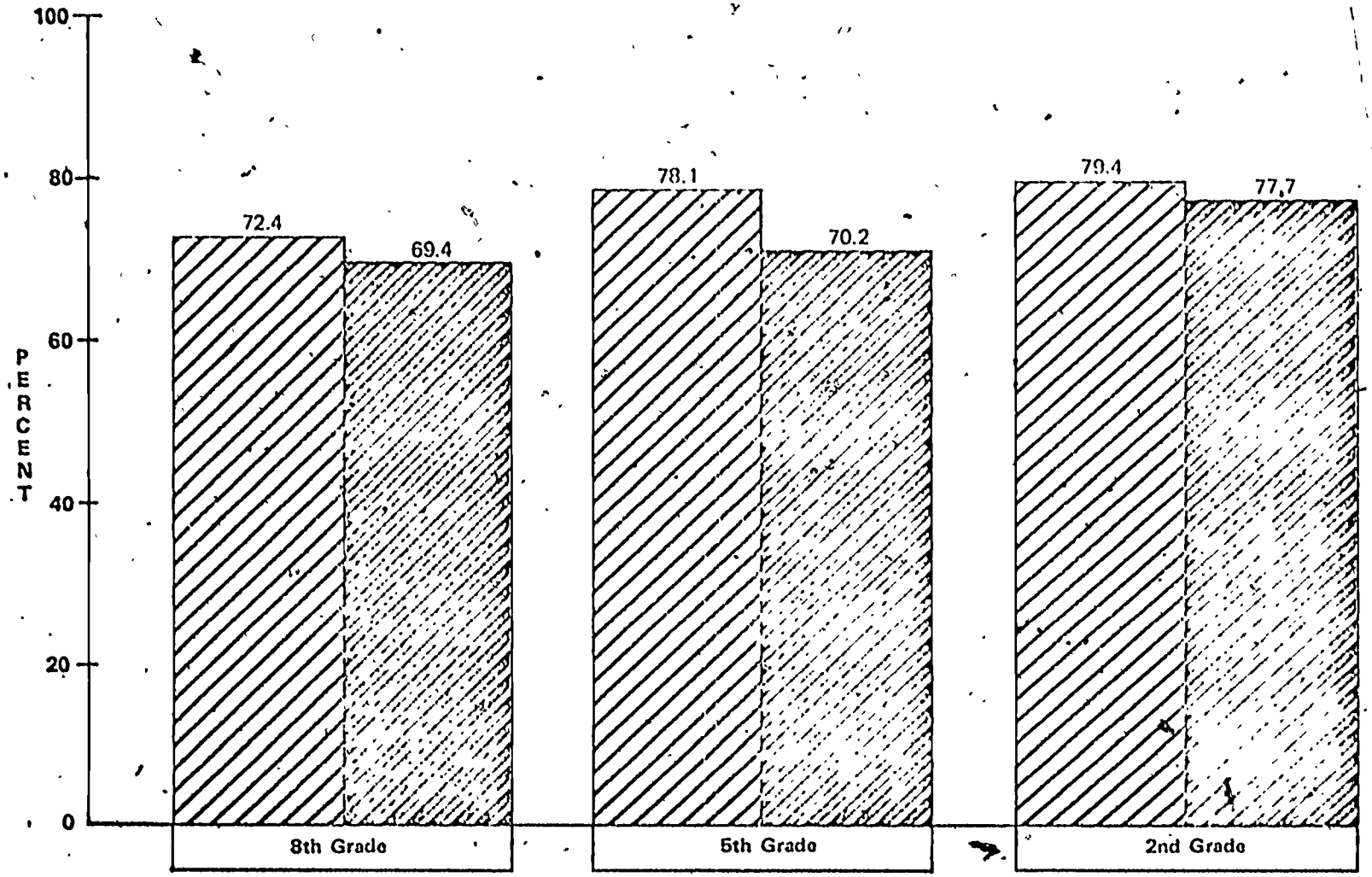

Figure 2
Percentage of Correct Responses
for Total of Three Activities
(Bear, Story and Puzzle)

combinations of reading level and instructional style and columns were completion or failure to complete given activities. A list of the significant χ^2's in these paired comparisons is given in Table 6.

Several trends emerge from both Tables 2 through 6 and Figures 1 and 2. First, it is apparent that even at the second grade reading level, approximately one-fourth of all responses made by the parents were incorrect. Although difficulty in role playing by the parent may have accounted for some of these failures, on the "story" activity where no role playing was required, approximately 20% of the parents still were unable to complete the activity even at the second grade reading level. This finding argues for detailed explanations of the activities by the home visitors as the materials are presented to the parent since many of the parents will not understand the printed materials even if written at a second grade reading level. Further evidence for the possible confounding effect of role playing can be found in Table 6. In those comparisons which were statistically significant, the story activity occurred in eight comparisons, the bear activity in three comparisons, and the puzzle activity in five comparisons. Thus, the three activities were not equivalent in their ability to discriminate between reading levels or illustrative styles. This may have been caused by the difficulties experienced by parents in role playing in the bear and puzzle activities.

Table 7 summarizes the significant χ^2 comparisons for each pair of cells on a total of the three activities. From Table 7 the following relationships can be seen: Cells 2D, 2I, 5D > 5I, 8I, 8D. From the above figures, similar trends are apparent for a summation of all three activities as could be seen for each of the individual activities.. At

Table 6

Summary of Significant (.10 or Less) χ^2 Comparisons Between Parent Materials Cells

Name of Activity	Direction of Difference
Complete Puzzle	5D > 8D
Complete Puzzle	5D > 2D
Complete Puzzle	5D > 8I
Complete Puzzle	5D > 5I
Complete Puzzle	5D > 2I
Complete Story	2D > 8D
Complete Story	2D > 5D
Complete Story	2D > 8I
Complete Story	2D > 5I
Complete Story	2I > 8D
Complete Story	2I > 5D
Complete Story	2I > 8I
Complete Story	2I > 5I
Complete Bear	5D > 8I
Complete Bear	5D > 5I
Complete Bear	2I > 8I

Table 7

Significant (.10 or Less) χ^2 Comparisons Between Cells on Total of Three Activities

Direction of Differences	Description
2D > 5I	Decorative 2nd Grade better than Instructional 5th Grade
2D > 8I	Decorative 2nd Grade better than Instructional 8th Grade
2D > 8D	Decorative 2nd Grade better than Decorative 8th Grade
2I > 5I	Instructional 2nd Grade better than Instructional 5th Grade
2I > 8I	Instructional 2nd Grade better than Instructional 8th Grade
2I > 8D	Instructional 2nd Grade better than Decorative 8th Grade
5D > 5I	Decorative 5th Grade better than Instructional 5th Grade
5D > 8I	Decorative 5th Grade better than Instructional 8th Grade
5D > 8D	Decorative 5th Grade better than Decorative 8th Grade

the fifth grade reading level, the decorative illustrations produced a higher number of correct responses than did the instructional illustrations. At the eighth and second grade reading levels the differences were not statistically significant. It is possible that the instructional illustrations detracted from the parents' ability to understand the written content of each activity. This finding has further implications for future planning of parent materials. Such materials should include only decorative illustrations to add interest, and explanations of the activities should be left to the home visitor when the materials are presented to the parent. Apparently, not enough is yet understood by those producing instructional materials to support the distinction between decorative and instructional illustrations.

As was expected, parents generally performed activities more successfully when those activities were described at a lower level of reading difficulty.

Lower levels of reading difficulty consistently produced significantly higher numbers of activity completion than did higher levels both within and between illustrative styles. As was mentioned above, however, approximately one-fourth of the parents were unable to complete those activities presented at even the second grade reading level. This finding at least raises the possibility that a significant percentage of the families in AEL's target population are functionally illiterate or that the instrument was not a valid measure of reading comprehension. However, further studies should be conducted in an attempt to confirm this hypothesis.

Table 8 summarizes the significant χ^2 comparison for the different levels of reading and styles of illustrations for each activity. Also presented is the significant comparison of reading level and style of illustration for the combined activities.

Table 8

Summary of Significant χ^2 ($p < .10$) Comparisons for Levels of Reading and Type of Illustrations

Activity	Direction of Difference
Complete Story	2nd > 5th
Complete Story	2nd > 8th
Complete Puzzle	5th > 8th
Complete Puzzle	D > I
Combined Activities	2nd > 8th
Combined Activities	2nd > 5th
Combined Activities	D > I

From Table 8 it appears that the second grade level materials produced a higher number of correct responses than did either the fifth grade or eighth grade level materials for the complete story activity. For the puzzle activity, not only was the completion rate higher for the fifth grade level

materials than for the eighth grade materials, but also decorative materials produced higher completions than did the instructional materials. Overall, it appears that for the combined activities the lower the reading level the higher the correct response rate, and that decorative illustrations on materials were associated with more correct responses than were materials with instructional illustrations.

A further indication of the difficulties which parents encountered in understanding the instructions given to the [illegible] materials sheets can be found in Table 9 which indicates the number of questions asked for each one of the activities across all six cells and Table 10 which indicates the total number of questions asked for each of the six cells across all three activities.

As these tables show, parents asked a number of questions about each activity, even though these questions were not answered by the home visitor. Logically, parents asked the largest number of questions about the first activity presented and asked fewer about those activities presented thereafter. As would be expected, the distribution of questions across each of the six cells approximated the distribution of complete responses of the parents in each cell. That is, parents asked fewest questions on those activities which showed the greatest number of completions. Those activities were in cells 2D, 2I, and 5D. The relatively large number of questions which were asked also indicates the difficulty which parents found in the general role playing situation.

Completion Rates Versus Parent Characteristics

In this section, the rate at which parents completed the reading activities is compared with the educational and occupational variables.

Table 9

Distribution of Questions by Parents to Each Activity by Cell

	Bear Cell							Story Cell							Puzzle Cell						
	8D	5D	2D	8I	5I	2I	Tot	8D	5D	2D	8I	5I	2I	Tot	8D	5D	2D	8I	5I	2I	Tot
# of Questions Asked 0	38	42	37	37	33	37	224	82	58	72	68	63	72	415	86	87	73	79	70	70	465
1	41	27	34	33	35	24	194	29	35	25	28	28	16	161	28	18	27	18	23	16	130
2	21	21	22	21	21	18	124	16	17	16	13	15	7	84	17	8	12	11	14	7	69
3	26	21	11	13	14	14	99	11	3	2	4	2	2	24	6	5	2	6	2	3	24
4	9	4	4	10	3	4	34	3	5	0	2	2	1	13	1	0	0	1	0	1	3
5 or more	6	3	7	3	4	1	24	0	0	0	2	0	0	2	3	0	1	2	1	1	8
Total Asking Questions	103	76	78	80	77	61	475	59	60	43	49	47	26	284	55	31	42	38	40	28	234
Cell Size	141	118	115	117	110	98	699	141	118	115	117	110	98	699	141	118	115	117	110	98	699
Percent Asking Questions	73	64	68	68	70	62	68.0	42	51	37	42	43	27	40.6	39	26	37	32	36	29	33.5

Table 10

Distribution of Total Questions by Parents to Combined Activities by Cell

	Cell						Total
	8D	5D	2D	8I	5I	2I	(Ave)
Number of Questions Asked: 0	206	187	182	184	166	179	1104
1	98	80	86	79	86	56	485
2	54	46	50	45	50	32	277
3	43	29	15	23	18	19	147
4	13	9	4	13	5	6	50
5 or more	9	3	8	7	5	2	34
Total Number Asking Questions	217	167	163	167	164	115	993
Percent Asking Questions	51.3	47.2	47.2	47.6	49.7	39.1	47.4

Data concerning the educational level of the mothers and the occupational classification of the heads of household were available from concurrent studies and are discussed in detail in another report of this series.[2] Briefly, the mother was reported to be the head of household in 12.6% of the sample families and the correlation (r) between educational levels of mothers and heads of household was 0.52 ($n = 697$, $p < .0001$). The correlation between the occupational classification of the head of household and the educational level of the mother was 0.21 ($n = 698$, $p < .0001$). The entries for each parent in the correlational analysis were from the classifications given in the following two tables.

As can be seen in Table 11, the mothers' ability to complete the activities was most certainly related to their levels of educational attainment. The mothers with high school and college training completed almost twice as many activities as did the mothers with six years or less elementary school (80%-89% vs. 42%-44%). The results reported in Table 11 also serve as indirect validation of the measurement procedure since one would expect reading ability to be correlated with educational attainment and the percent completion of activities was definitely associated with educational attainment. The measurement procedure did not discriminate among high school graduate educational levels and beyond. Parents who were at least high school graduates completed about 80% of the activities, and parents with additional education had very similar completion rates.

As indicated in Table 12, the differences in parents' ability to complete activities were not as pronounced when analyzed according to

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[2] Joe E. Shively. A Demographic Survey of Appalachian Parents of Preschool Children. Technical Report No. 46. Charleston, W. Va.: Appalachia Educational Laboratory, Inc., January, 1975.

Table 11

Percent Completing Activities by Educational Level of Mother

Educational Level	Sample Size (n)	Activity			Average Present Completion
		Bear	Story	Puzzle	
Elementary					
1-4 years	9	33.3	44.4	55.6	44.4
5-6 years	19	36.8	36.8	52.6	42.1
7 years	22	54.5	54.5	81.8	63.6
8 years	52	53.8	55.8	76.9	62.2
High School					
1-3 years	179	67.6	67.0	81.6	72.1
4 years	313	76.4	77.6	86.6	80.2
College					
1-3 years	55	65.5	81.8	87.3	78.2
4 years	23	69.6	78.3	91.3	79.7
5+ years	3	100.0	66.7	100.0	88.9
Total	675	68.9	71.1	83.3	74.4

Table 12

Percent of Mothers Completing Activities by Occupational Classification of the Heads of Household

Occupational Classification Category	Sample Size (n)	Activity			Average Percent Completion
		Bear	Story	Puzzle	
Professional & Technical	52	71.2	80.8	88.5	80.2
Mgrs., Admins., Except Farm	38	81.6	81.6	94.7	86.0
Sales Workers	16	75.0	68.8	87.5	77.1
Clerical Workers	11	72.7	90.9	90.9	84.8
Craftsmen	157	70.7	68.2	86.0	75.0
Operative	75	70.7	80.0	78.7	76.5
Transporters & Truckers	59	59.3	62.7	84.7	68.9
Laborers, Except Farm	109	78.9	74.3	83.5	78.9
Farmers & Farm Mgrs.	27	63.0	59.3	70.4	64.2
Farm Laborers & Foremen	6	33.3	16.7	16.7	22.2
Service Workers	40	60.0	62.5	87.5	70.0
Private Household	2	0.0	100.0	100.0	66.7
Not Employed/ Unemployed	81	58.0	69.1	77.8	68.3
Total	673	68.8	71.2	83.4	74.5

occupational classifications, but the response rate was related to the amount of education generally required for the occupation. The highest rate of completion was in families in which the heads of household were managers and administrators (86.0%), clerical workers (84.8%), and professional and technical workers (80.2%). The lowest completion rates were with the 27 families in which the head of household was a farmer or farm manager (64.2%), and the six families in which the heads of household were farm laborers or foremen (22.2%). Therefore, the completion rate was related to occupational classification, but not as dramatically as was the educational attainment of the mothers.

Summary and Conclusions

In response to a request from the National Institute of Education, the research and evaluation department of AEL designed a study to determine the effectiveness of three levels of reading difficulty and two types of illustrations on parents' abilitites to carry out instructions. This study was designed both to give an estimate of the general reading level of the sample, and to provide further information for planning AEL's development of parent materials.

A sample of approximately seven hundred parents of children enrolled in home-oriented programs was identified in the Appalachian Region. This sample was partitioned into six sub-samples, each one of which received a particular combination of reading level and illustrative style. Three activities used previously in the HOPE program were used in each of the six cells, and parents were requested to read a sheet of paper containing a single activity and to complete the activity with the home visitor playing the role of the child. Comparisons were then made to see which

particular combination of reading level and illustrative style produced the largest number of successful completions of activities.

It was found that even at the second grade reading level, approximately one-fourth of the parents were unable to carry out the activities described on the sheets and that the instructional illustrations which were intended to aid the parent in carrying out the activity actually produced a reduction in number of complete responses. This decrease may have been due to the distracting nature of the illustrations which caused parents to not attend fully to the written instructions for each activity. Overall, the most successful combination of reading level and illustrative style was found for those activities written at the second grade level and utilizing decorative illustrations. Another analysis indicated that the ability of parents to complete the activities was related to educational attainment, and that over one-half of the mothers with six years of elementary school or less could not complete the activities. The ability to complete the activities was also associated with the head of household occupational classifications, but not to as great an extent as with the mothers' educational levels.

These findings have several implications for future program planning. First, it seems apparent that the materials which the home visitor delivers should be written at the simplest vocabulary level at which it is possible to convey the ideas and activities which need to be communicated to the parent. If it is at all possible, these activities should be written at the second grade level and should incorporate decorative rather than instructional illustrations. Second, since this survey indicates that almost one-fourth of the parents were unable to carry out the activities at even the second grade level, a home visitor is essential--especially with parents

with lower levels of educational attainment. The home visitor should go over each of the activities with the parent before she leaves the home and should be sure that the parent understands exactly what is required of her. Finally, this study raises the question of functional illiteracy among parents in the MPEP target population. Due to the nature of the study, it was not feasible to determine the exact number of parents who were functionally illiterate, but it is apparent that a sufficient number of parents were unable to complete the activities. These parents need additional oral instructions rather than completely depending on printed materials for communication purposes.

Finally, although comprehension appeared to be quite low, it should be recognized that the activities were no-context situations. Parents participating in the MPE Program would have been made aware of the general context each day through the television program and would have been in directed discussions with groups of parents each week in addition to the discussions with home visitors each week. These factors would undoubtedly serve to improve comprehension.

Appendix A

Reporting Form Used With All Parent Activities

Site _____ ID # _____

County _____ Cell # _____ (64)

Home Visitor _____

Parent Materials Survey Sheets

Bear Activity

Consider this activity to be complete only after the following activities have been performed. Do not aid the parent at any time.

A. Hand the parent the sheet labeled A and say "I want you to read this and do what it says. Pretend that I am your child". Also hand the parent the bag containing ten bears.

B. The parent should say "I want you to put these bears into two groups (or sets) of five each" and should give you the ten bears. Any response indicating that the parent wants you to separate the bears into two groups of five bears is correct.

1. Did the parent give you the bears and ask you to separate them into two groups of five? Yes 1 No 2 (65)

C. When you are given the bears, place them in two groups of six and four bears and stop.

D. If the parent helps you to correct your task and has completed Step B, mark the space for completion. If she does not do all of the above tasks, mark the space for failure to complete the task. Do not aid the parent at any time.

2. Did the parent complete the bear activity (Sheet A)? Yes 1 No 2 (66)

3. How many questions did the parent ask? Questions _____ (67)

Story Activity

Consider this activity to be complete only after all of the activities have been performed. Do not aid the parent at any time.

A. Hand the parent the sheet labeled B and say "Now, I want you to read this and do what it says: Pretend that I am your child".

B. The parent should tell you a short story about her childhood. If she tells a story and if it is about her childhood, consider this activity to be complete.

4. Did the parent complete the story activity (Sheet B)? Yes 1 No 2 (68)

5. How many questions did the parent ask? Questions _____ (69)

Puzzle Activity

Consider this activity to be complete only after all the following activities have been completed. Do not aid the parent at any time.

A. Hand the parent the auto puzzle and sheet C and say "I want you to read this and do what it says."

B. The parent should hand you the puzzle and say "I want you to put this together." Any response indicating that you are to assemble the puzzle is correct.

6. Did the parent give you the puzzle and ask you to put it together? Yes 1 No 2 (70)

C. After you have the puzzle, put two pieces together and stop.

D. The parent should help you to put the puzzle together correctly. If she helps you and has completed Step B, mark the space for completion of this exercise.

7. Did the parent complete the puzzle activity (Sheet C)? Yes 1 No 2 (71)

8. How many questions did the parent ask? Questions _____ (72)

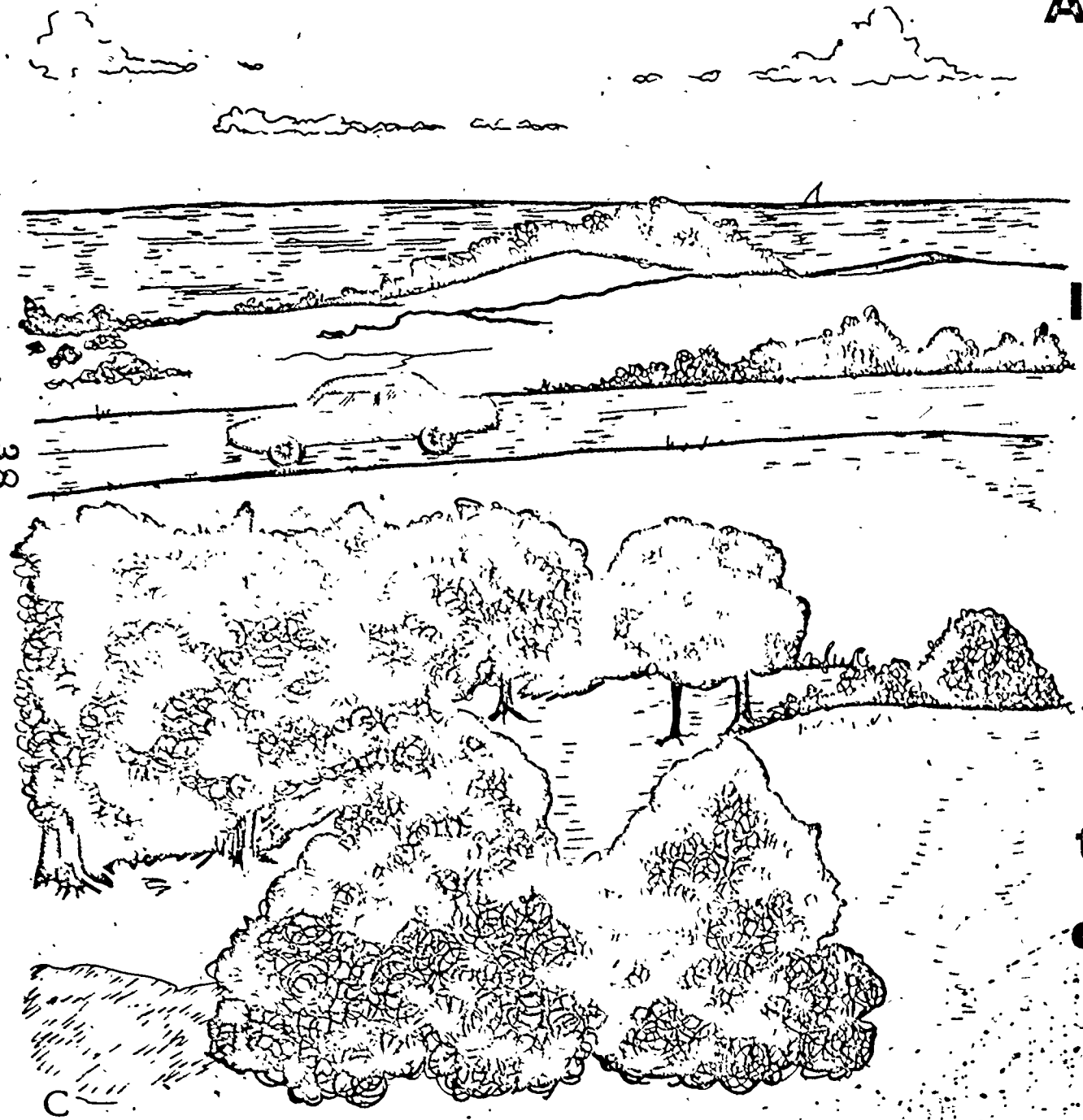
Appendix B

Eighth Grade Reading Level Decoratively Illustrated
Bear, Story, and Puzzle Parent Activities

One significant skill children must develop is the ability to separate objects into related groups, called sets in mathmatics.

Assist the child to group the enclosed bears into sets of five.

Listening to a story told by a member of his family can provide a child with a pleasurable experience. Incorporating experiences from your childhood, create a five minute story and relate it to your child.



38

C

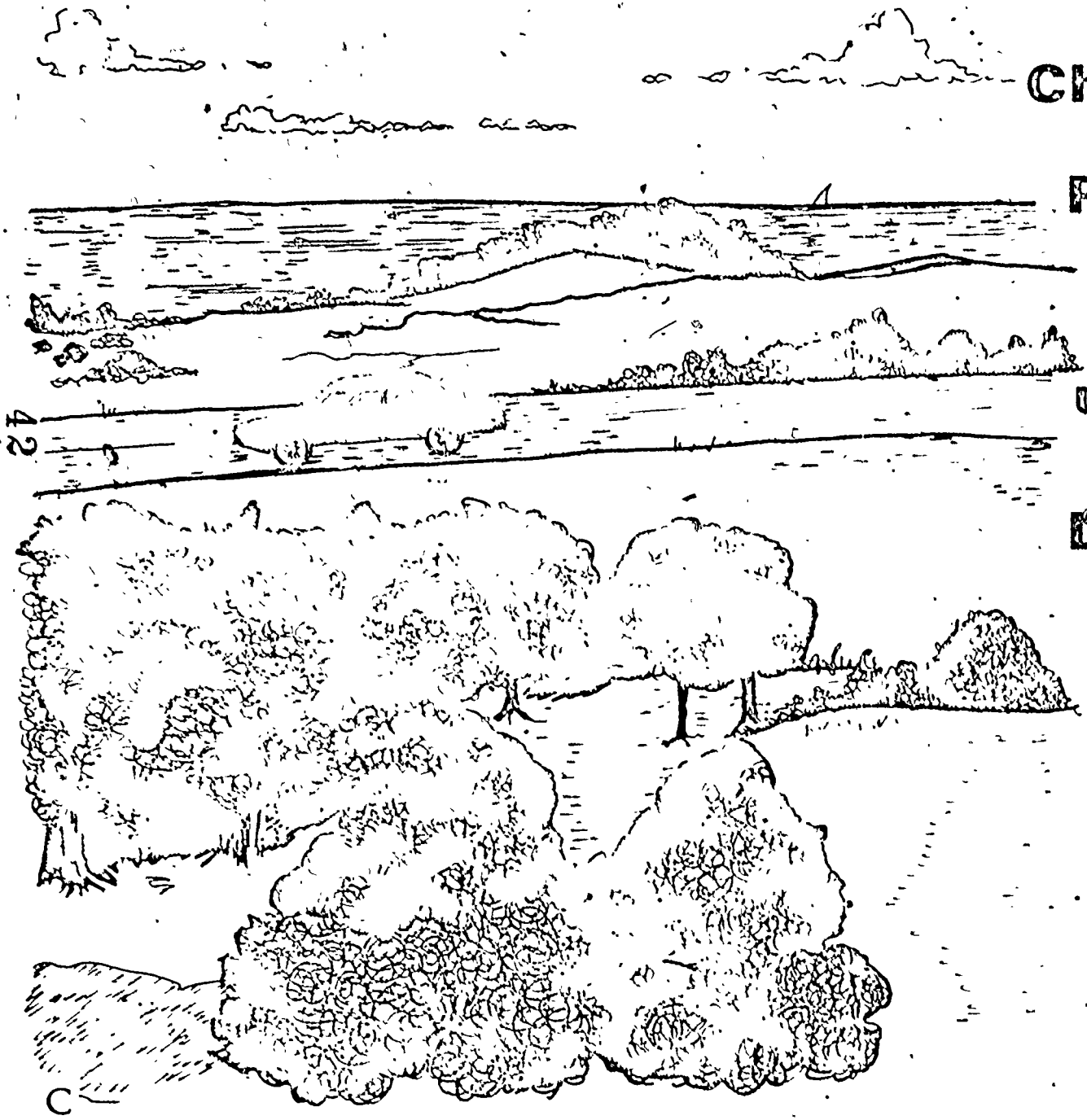
Assembling puzzles provides children with a pleasurable learning experience and helps them develop skills in using their hands. Encourage your child to assemble this puzzle, which depicts a vehicle, assisting him if he needs help.

Appendix C

Fifth Grade Reading Level Decoratively Illustrated
Bear, Story, and Puzzle Parent Activities

One important skill children must learn is to group objects. Using the bears, help your child divide them into groups of five.

Children
enjoy listening
to a storyteller who
is a family member.
Using your own
experiences as a child,
make up a five
minute story and
tell it to your child.



Children like puzzles.

Puzzles help them develop skills in using their hands.

Let your child put the automobile puzzle together. Help him if he needs it.

Appendix D

Second Grade Reading Level Decoratively Illustrated
Bear, Story, and Puzzle Parent Activities

Children must learn to put things in groups. Help your child put the bears in groups of five.

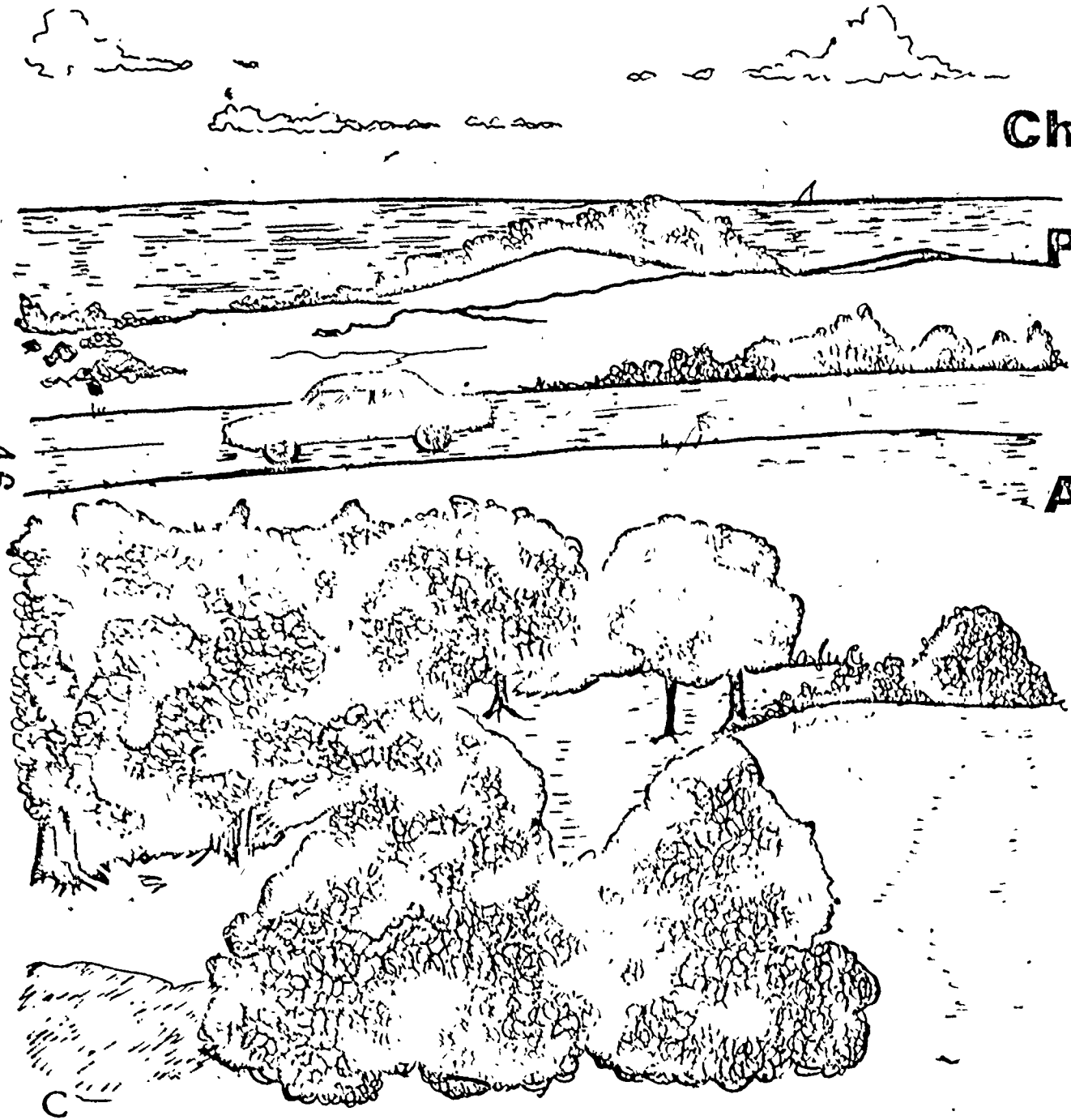
A child

likes to hear stories.

Tell your child a

short story about

when you were a child.



Children like puzzles.

Puzzles help them

use their hands.

Ask your child to

put the car

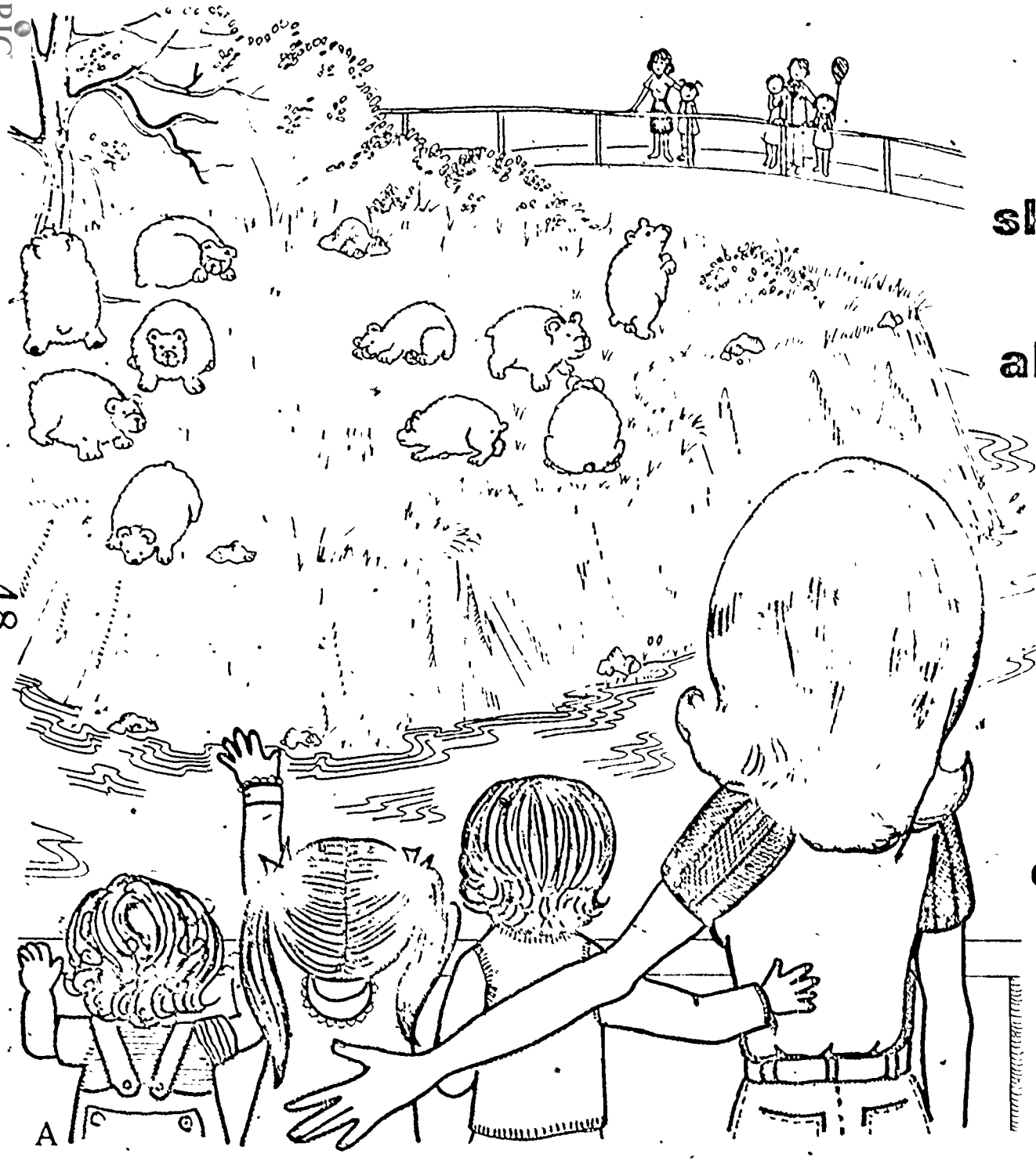
puzzle together.

Help him if he

needs it.

Appendix E

Eighth Grade Reading Level Instructionally Illustrated
Bear, Story, and Puzzle Parent Activities

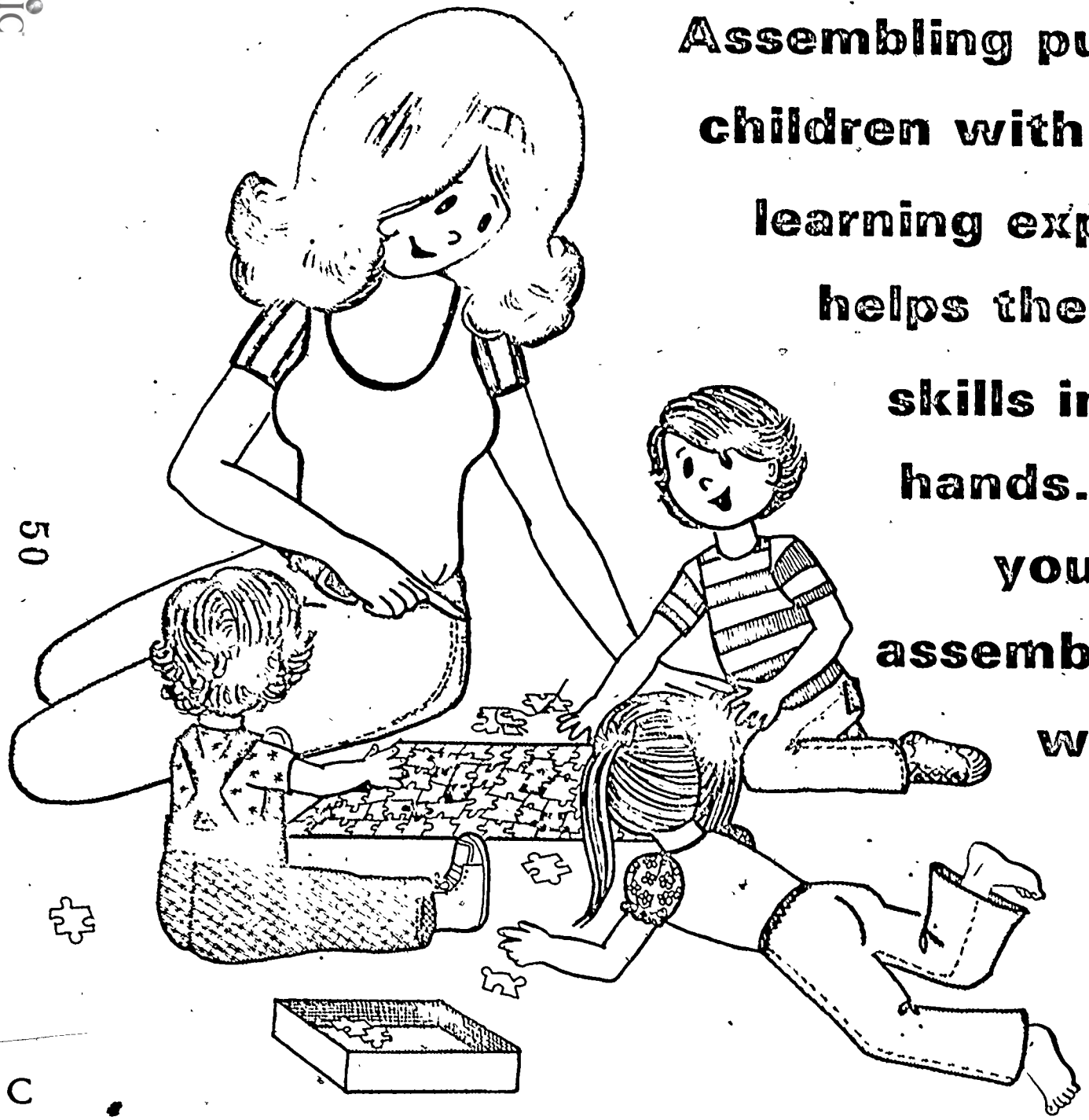


48

A

One significant skill children must develop is the ability to separate objects into related groups, called sets in mathmatics. Assist the child to group the enclosed plastic bears into sets of five.

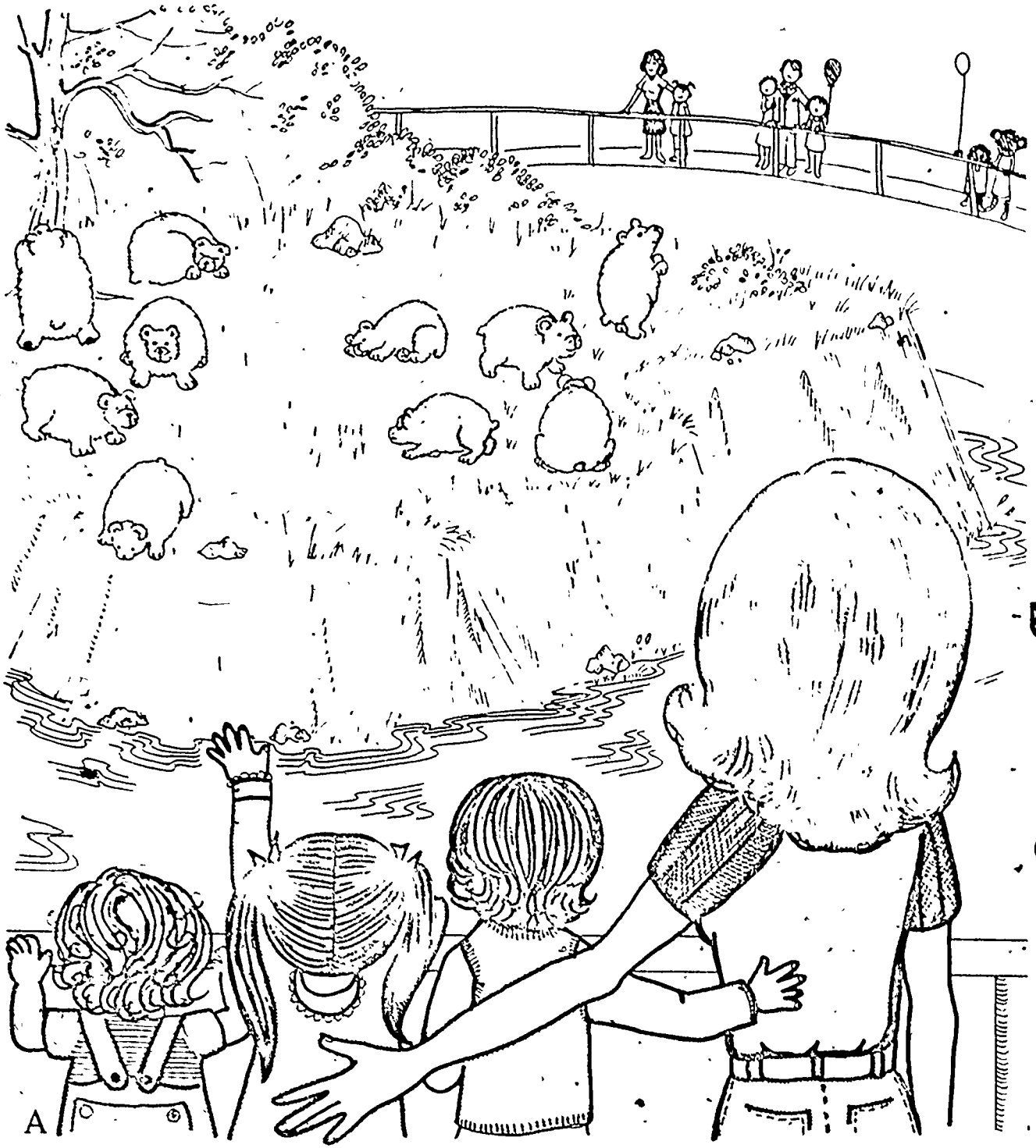
Listening to a story told by a member of his family can provide a child with a pleasurable experience. Incorporating experiences from your childhood, create a five minute story and relate it to your child.



Assembling puzzles provides children with a pleasurable learning experience and helps them develop skills in using their hands. Encourage your child to assemble this puzzle, which depicts a vehicle, assisting him if he needs help.

Appendix F

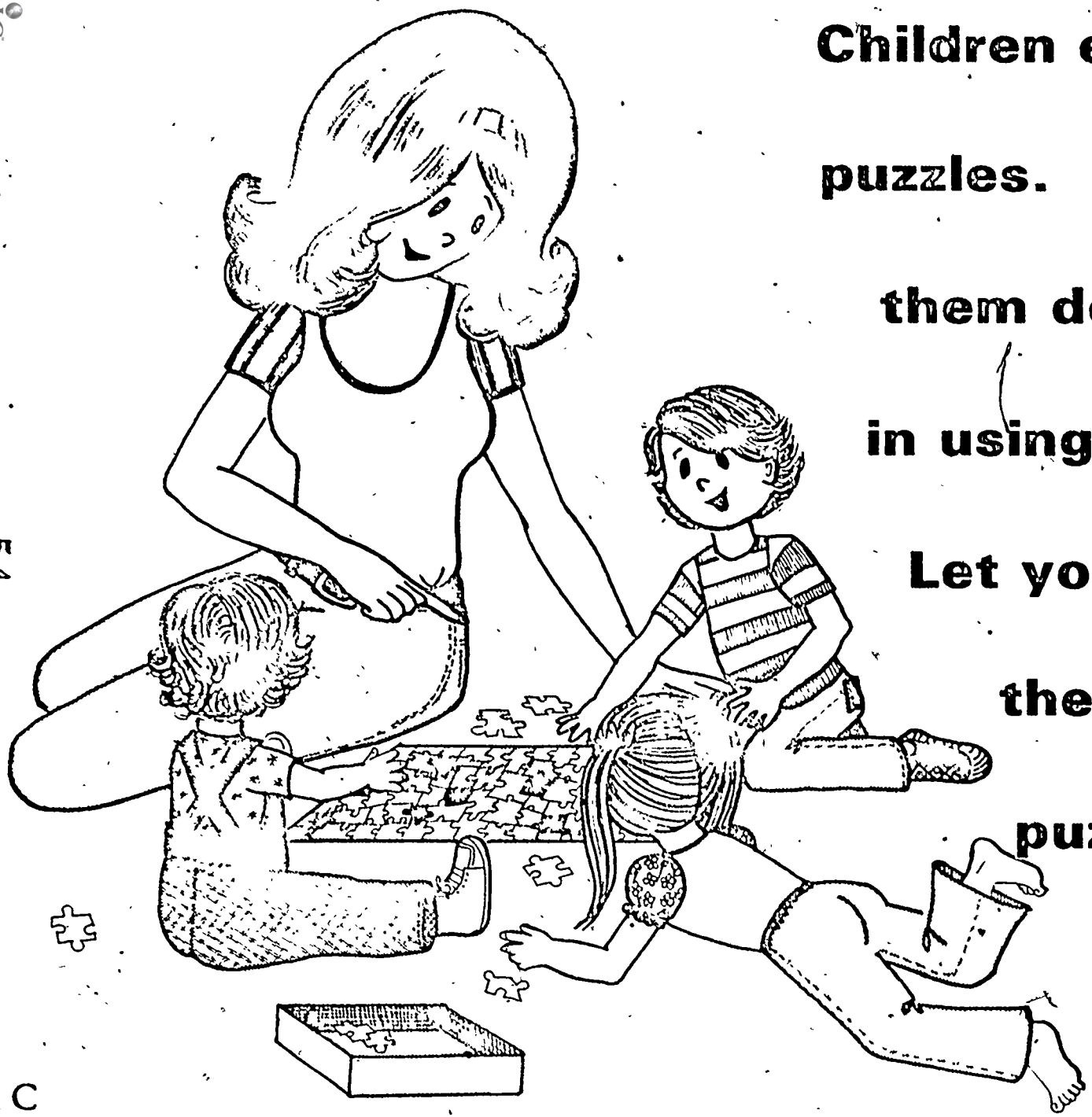
Fifth Grade Reading Level Instructionally Illustrated
Bear, Story, and Puzzle Parent Activities



A

One important skill children must learn is to group objects. Using the bears, help your child divide them into groups of five.

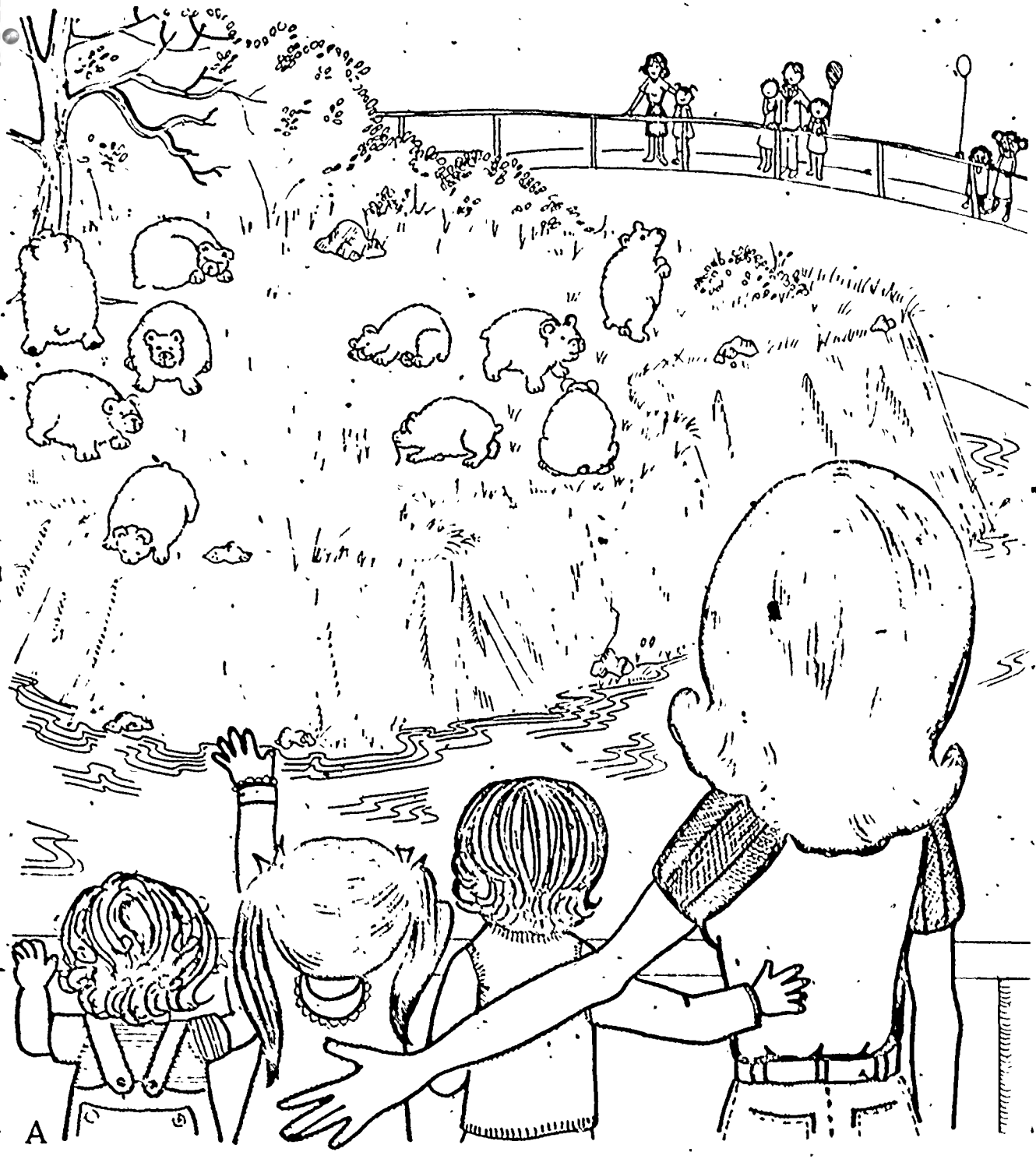
Children enjoy listening to a storyteller, who is a family member. Using your own experiences as a child, make up a five minute story and tell it to your child.



Children enjoy working puzzles. Puzzles help them develop skills in using their hands. Let your child put the automoble puzzle together. Help him if he needs it.

Appendix G

Second Grade Reading Level Instructionally Illustrated
Bear, Story, and Puzzle Parent Activities



Children must learn to put things in groups. Help your child put the bears in groups of five.

A

A child likes

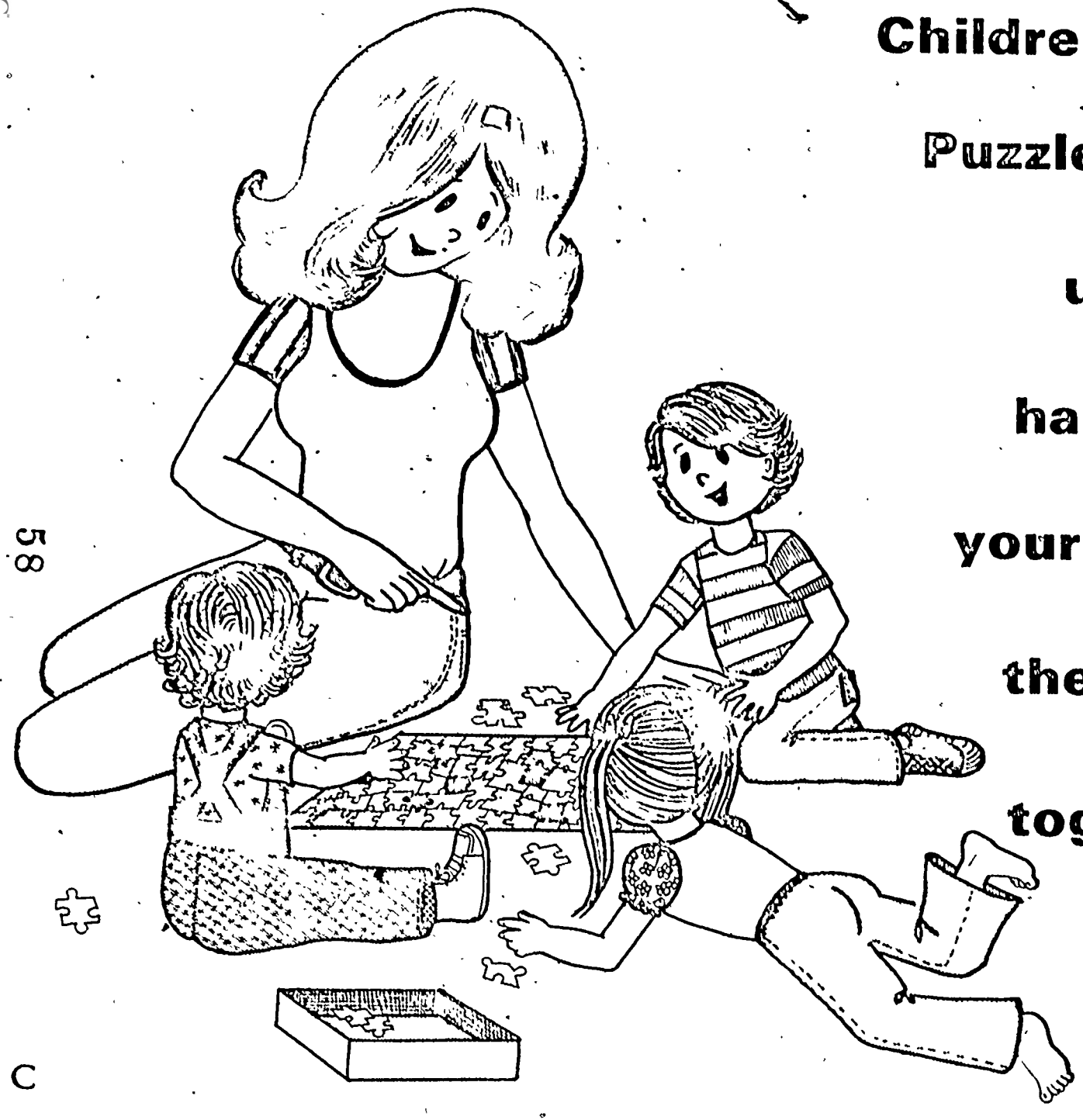
to hear stories.

Tell your child a

short story about

when you were

a child.



Children like puzzles. Puzzles help them use their hands. Ask your child to put the car puzzle together. Help him if he needs it.

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