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ABSTRACT

Kindergarten children in three school districts were observed to measure the variance in their abilities upon entering school as well as the variance in the literacy-related instruction they received. The school districts differed in their early childhood education philosophies, as reflected in their kindergarten programs, their choices of materials, and the ways teachers grouped students. The primary goal of the classroom observation system was to measure the time teachers spent in various activities throughout a typical school day and to record sequentially each teacher-initiated instructional interaction, instructional interaction in terms of to whom it was directed, any feedback teachers gave to student responses, and the praise and corrective statement interactions that teachers initiated to manage their classes. Results showed that teachers of half-day kindergarten programs provided more literacy-related and content area instruction than did teachers of whole-day classes. This suggests that instead of focusing on whether school districts should move to whole-day instead of half-day kindergarten programs, it may be more important to study systematically not only what is actually happening in a variety of programs, but also the long-term effects of various kindergarten programs with an academic focus versus programs that are individualized for teachers and students. (Appendixes include selected pages from the reading materials used.) (HOD)

APPENDIX A

Selected Kindergarten Materials from District A

Abstract

This is a report of methodology and results of observations for 14 kindergarten classes in three school districts participating in a longitudinal study of reading comprehension development and science concept acquisition. Measures of instructional materials, instructional and non-instructional time, frequency of literacy-related interactions and feedback, as well as teachers' allocations of turns to whole classes and to individual students show substantial differences between school districts and great similarities between teachers within districts with one slight exception. On all measures, the teachers of half-day kindergarten programs provided more literacy-related activities, etc. than did teachers of the whole-day classes. Results are also discussed in terms of the affect that curriculum appears to have on the programs as well as the need for careful descriptive research on whole-day and half-day kindergarten programs to determine program differences instead of simple mandates for an increased school day.

A Look at Instruction in Kindergarten: Observations of Interactions in Three School Districts

This report presents a description of the setting and subject population, kindergarten instructional materials, and kindergarten teachers' instructional practices for literacy-related activities from a longitudinal study of reading comprehension development in progress since 1983. The descriptions in this report are for the first of two cohorts participating in this research. The research plan is to follow each cohort from kindergarten through fifth grade while systematically measuring the characteristics of textbooks used with these subjects and the way their teachers spend time and interact while delivering instruction. Measures of student achievement, stable home variables, and home variables related to literacy will also be taken each year of this work. The long-term product of this research will be to develop a causal model to explain how students learned to comprehend what they read.

We have engaged in a study in three school districts. We have begun studying kindergarten children in order to measure the variance in kindergartners' entering school abilities as well as the variance in literacy-related instruction in kindergarten.

Setting and Subjects

Three school districts in Illinois are participating in this study. District A is a somewhat self-contained small town in the

center of the state. It has a fairly homogeneous student body of about 90 children in four half-day kindergarten classes taught by two teachers. This district is known for its high student performance in reading comprehension. District B is in a small town that is a short drive from a larger town to which many of its citizens commute to work. This district has seven half-day kindergartens of 160 children, four teachers, and a tradition of average student achievement in reading.

The school participating from District C bears some resemblance to urban schools. It has a heterogeneous student population. These children are of mixed socioeconomic and ethnic backgrounds. White, Black, and Hispanic children make up this portion of the sample. Sixty-five children attended full-day classes with three teachers. Bilingual students in this school receive instruction in Spanish as well as instruction in English.

These districts have different philosophies about early childhood education, and these philosophical differences are reflected in their kindergarten programs, in both the districts' choices of materials and the ways the teachers group students to deliver instruction. To illustrate these differences the next portion of this paper will describe the instructional materials used in the kindergartens in the three districts.

Instructional Materials

The amount of instructional content students cover and the pace at which they move through curricula are factors in how much

they learn. Therefore, we deemed it important to analyze the instructional materials used in each of the three districts. Two of the three districts used published reading programs in kindergarten. District C was the exception.

District A first used Alpha K Time (New Dimensions in Education, Inc., Undated) for teacher-directed whole class lessons. For approximately six weeks, about midway through the school year, instruction in Alpha K Time overlapped with whole class instruction in Houghton Mifflin's Getting Ready to Read and the Practice Book (Lewis, Harrison, Durr, & McKee, 1979a). Teachers then divided their classes into homogeneous small groups for instruction in Scott Foresman's We Look and See (Gray, Monroe, Artley, & Arbuthnot, 1956) and three Macmillan pre-primers: Opening Books (Harris & Clark, 1970a); A Magic Box (Harris & Clark, 1970b); and Things You See (Harris & Clark, 1970c) for the last few weeks of the school year. Taken together, these materials provide a large number of phonics activities that focus primarily on letter sounds and a fairly large number of reading vocabulary words. Selected pages from each of these materials appear in Appendix A.

District B used the Harcourt, Brace, Jovanovich (1983) reading program for kindergarten through fifth grade. This was the first year that all kindergarten teachers were expected to implement the program. The kindergarten teachers used Look, Listen, and Learn (Early et al., 1983) with all students in

heterogeneous groups. Each group met with the teacher on the average twice a week, starting at the beginning of the school year. About midyear, each teacher completed the first book, tested students for mastery, and then moved over half the students in each class into the second book, Sounds, Symbols, and Sense (Early et al., 1983). Students who failed the mastery test spent the remainder of the school year primarily doing teacher-made materials that focused on discriminating letter names and other similar activities. All but one teacher then had three homogeneous groups that received instruction about twice a week in Sounds, Symbols, and Sense. These kindergarten materials concentrated phonics activities on beginning consonants (no vowels were introduced) and a small number of sight words. In addition, this program included a substantial number of other activities such as pictures to sequence. The results of the analysis of these two curricula appear in Table 1. Sample pages from Look, Listen, and Learn and the Practice Book appear with brief descriptions in Appendix B.

Insert Table 1 about here.

District C teachers and administrators describe their instructional program as "language-experience" and eclectic. No teacher kindergarten grouped for instruction. Teachers often worked individually with children who sought out their teacher's

help. This time was then frequently spent with students dictating stories which their teachers wrote to accompany pictures the students had drawn. Therefore, there was no common textbook curriculum in these classes, although one teacher used the first half of the Peabody Language Program (Dunn, Smith, & Dunn, 1981). Each teacher did have activity charts and various literacy-related opening exercises.

The Peabody materials were the most difficult to analyze. First, by design, each lesson is "different," except for activities to introduce puppets used in the lesson and a song, "Is Everybody Ready?", which is to be played at the beginning of many lessons. Second, this is a language program, and therefore, the activities are quite different from those found in most reading readiness programs.

A few types of activities did appear in more than one lesson. Those activities and the number of lessons in which they appear are shown in Table 2. In addition, several lessons included activities such as "Acting out a Poem About Hands," "Discussing Skin," or "Making Sounds Using Body Parts."

Insert Table 2 about here.

The Language Experience Approach resulted in unique vocabulary for the three classes within District C. No single word was introduced in all three classrooms. During the year,

Teacher 1 introduced 25 words and approximately 75 sentences; Teacher 2 introduced 7 words (the names of the days of the week) and 13 sentences; while Teacher 3 introduced 60 words and 11 sentences to use daily during opening exercises. In addition, Teacher 3 systematically taught letter sounds and blending to her whole class several times each week.

In summary, this study involves three school districts, approximately 317 children, and fourteen teachers. Six teachers taught half-day classes of 150 minutes each. Five of these six teachers taught both morning and afternoon classes. Three teachers taught full-day classes, and bilingual students received instruction in Spanish as well as in English. Two of the three districts used instructional reading programs that varied substantially in the number of phonics concepts and vocabulary words taught in kindergarten, while teachers in the third district developed their own eclectic programs.

Methodology

The next portion of this paper presents the research base from which our observational system and coding systems were developed as well as our specific observational procedures. A detailed overview for the heuristic model and all measurement models for this longitudinal study appears in Meyer, Linn, and Hastings (1985).

Procedures for Data Collection

The primary goal of our classroom observation system is to measure the time teachers spend in various activities throughout their typical school days and to record sequentially each teacher-initiated instructional interaction. We record each instructional interaction in terms of to whom it was directed. In addition, we record any feedback the teachers gave to student responses. We also tally interactions that teachers have to manage their classes generally with praise and corrective statements to individuals or groups.

The procedures for collecting these data are:

1. To tape record while simultaneously making written transcripts of entire school days. Within each transcript we noted the time each activity began and ended. We also wrote down in abbreviated fashion the words teachers used when interacting to elicit student responses.

2. Each student wore sandwich board-like name tags with their names and unique numbers. Observers had alphabetical by first name listings of each student for each class and each student's identification number. These materials and procedures allowed us to record teachers' instructional interactions and the number of the student addressed.

Small groups also have numbers to differentiate their heterogeneity or homogeneity and the frequency with which they

meet. Interactions to the whole class were coded with a whole-class number code.

3. The primary goal during an actual observation was to have a near-complete abbreviated transcript of all literacy-related and science-related activities that occurred in that classroom that day.

4. We also collected all student work for one week of each observational round. We then counted the percentage of correct student responses on each worksheet as well as the type of work and categorized it into three categories: (a) literacy-related with no written text; (b) literacy-related without written text; and (c) other. Sample student work and information recorded for our computer files are shown in Appendix C.

5. At the conclusion of each day's observation, we interviewed the teacher and asked these questions:

a. Was this a typical day? If this day was not typical, what made it unusual?

b. Have there been any interruptions since you were last observed?

c. Are there any roster changes or new groupings of children since our last visit?

d. Are you using any new instructional materials?

A portion of a transcript appears in Figure 1.

Insert Figure 1 about here.

Our continuous coding system and model for literacy-related and science activities are supported by empirical research, particularly the work of Stallings and Kaskowitz (1974); Fisher, Filby, Marliave, Cahen, Dishaw, Moore, and Berliner (1978); Anderson, Evertson, and Brophy (1979); Barr (1983); and Meyer (1984).

We anticipated that many kindergarten activities would last for short periods of time, and kindergarten schedules would frequently include a variety of activities related to literacy sprinkled throughout the school day. For these reasons, we chose to observe classes for full school days. Therefore, for half-day classes, we observed for 2.5 hours during each observational round. For whole-day classes, we observed the entire school day, 330 minutes. We observed each class nine times at roughly two and a half week intervals between October and April. Care was taken to vary observations for the days of the week. Each class was observed by at least three observers. Inter-rater reliability was above .88 the four times it was checked throughout the school year with paired observations, staff practice on selected audio tapes, and double-coded transcripts.

In summary, our observation procedure was to spend whole days in each classroom tape recording and making hand-written

transcripts with our focus on the teacher. Where the children went, we went. We observed the bilingual children's instruction in Spanish and English. We wrote each instructional, verbal interaction the teacher had with either the whole class, a small group, or individual children. Each child and each group was identified with a unique identification number. We tallied each management statement the teacher made in one of four categories: praise to an individual or group, or criticism of an individual or group, thus keeping separate instructional and management statements. These nine rounds provided data on approximately 25,000 minutes of kindergarten instruction.

Coding Classroom Observations

Activities. As soon as the abbreviated classroom transcripts were complete, we coded all of the data. The first step was to name each activity and calculate the elapsed time the activity took. Most activities such as "opening exercises," "show and tell," or recess were obvious to observers. Whenever an observer had a question about what a teacher would call an activity, we asked the teacher during the exit interview. The range of activities coded appears in the top portion of Figure 2.

Insert Figure 2 about here.

Time. Elapsed time is calculated simply by subtracting the time an activity ended from the time it started. In all cases,

what the teacher said was the marker for recording time. For example, if a teacher said, "Now start putting everything away," the time was recorded for the beginning of a transition period. The transition ended when the teacher said something like, "Now I'm going to read 'The Story of Christopher Columbus' to you"--an obvious beginning of a new activity.

Interactions. All of our interaction categories appear in the central section of Figure 2. Everything instructional a teacher said that demonstrated that students were expected to respond was coded as an interaction. For example, when a teacher said, "Everyone, what sound does the word mat begin with?", we coded this as a letter sound interaction to the whole class, 99. If, on the other hand, a teacher said, "Make the letter m with me. First, go down. Then, move your pencils back up here . . .", these instructions were coded as three procedural interactions (21's) to the whole class. In this example, the activity is handwriting with procedural interactions directed to an entire class.

Feedback. Feedback occurs after a teacher initiates an interaction and gives a group or student the opportunity to respond. For example, the most common feedback teachers give is to say "ok," or "good." The interaction chain would go like this: Teacher says, "What letter does the word mat begin with?" A student responds, "m." The teacher says, "good."

Teacher feedback to student responses ranges from a simple repetition of the student's answer as in the last example where the teacher might have said, "yes, m," to calling on another student, lauding the student's response, or saying nothing. Feedback categories appear at the bottom of Figure 2.

Results

What did we find as we looked at these fourteen classes of kindergarten students? The next portion of this paper presents descriptive results of activities, allocated time, variance in the frequency of interactions and instructional feedback, and teachers' consistency with their morning and afternoon classes. All results presented here are averages by class from nine full-day observations for nine teachers teaching 14 classes.

Figure 3 shows the flow of activities and time spent in each activity for a typical day for one teacher from each district.

Insert Figure 3 about here.

Descriptions of the Classes

Activities. Several between district differences are immediately apparent when looking at Figure 3. District A had two transitions and little other non-instructional time during its 150 minute "day." District B had three transitions, recess, and three sessions of teacher-assigned centers. Teacher-assigned centers resulted in blocks of time during which the class was

heterogeneously grouped into five or six small groups. Groups worked independently except for the center at which the teacher taught the kindergarten reading program. District C students typically spent their time in long periods of free play; three "Activity Times"; in transition (eight times on this day); at recess (twice); lunch, or snack.

Allocated time. Table 3 presents the means and standard deviations in minutes for the nine teachers. Time reported here is for minutes of decoding, decoding plus other types of instruction such as social studies, science, or in teacher-assigned centers. Non-instructional minutes are reported as well. Time spent between signalling the end of one activity and beginning another (transition), recess, and opening and closing exercises are all examples of non-instructional time.

Insert Table 3 about here.

District A teachers, with their substantial reading curriculum of phonics concepts and vocabulary, averaged at least twice the amount of time in decoding that District B teachers spent and over four times the number of minutes teachers in District C allocated. Total minutes scheduled for instruction vary far more between districts than do non-instructional minutes in Districts A and B. District C with its 330 minute day is

spending about sixty percent of its time in non-instructional activities.

Frequency of interactions. Table 4 presents another way of comparing these three districts and the teachers within the districts. Decoding interactions included teachers' questions or directive statements to students about letter sounds, letter names, beginning consonants, or whole words. Teachers in District A averaged 2-3 times as many decoding interactions as District B teachers, and close to four times as many decoding interactions per observational round as District C teachers.

Insert Table 4 about here.

Text-tied interactions included questions children were asked to answer from their background knowledge and questions teachers asked while reading stories to the class. Text-tied interactions also included questions teachers asked while students looked at texts of sequencing exercises or other types of activities. With one exception, classes in Districts A and B averaged about the same number of text-tied questions during each of the nine observations, but two out of three District C classes received more of these kinds of interactions.

The third type of interaction is for procedural instructions and questions. District A classes received more practice in

following directions than did students in either District B or District C.

Instructional feedback. Positive feedback included confirming students' responses, praising, as well as leading (teachers staying with students who have made an error to produce a correct response), or modeling by the teacher to help a student get a correct answer. Negative feedback included telling a child that her or his answer was wrong, calling on another child, or ignoring an incorrect response. Table 5 shows that District A classes received by far the most positive as well as generally the most negative feedback, though negative instructional feedback is low for all of the 14 classes.

Insert Table 5 about here.

Allocating turns. In addition to measuring time allocated to decoding and other instruction, frequency of decoding, text-tied and procedural interactions, and positive and negative feedback, we measured teachers' allocated turns. We view allocated turns as practice for the whole class, a group, or an individual. Table 6 shows the frequency of how turns were dispersed to the whole class or individuals for decoding and teacher-directed centers during all of our nine full-day observations.

Insert Table 6 about here.

Whole classes in District A received around 600 or more turns, whereas the District B and C classes ranged from 3 to 242 turns to the whole class. Equally dramatic differences are apparent when comparing the number of interactions individual students averaged in these fourteen classes. District A students averaged from 700 to 900 turns, District B students' turns ranged from a little under 100 to over 350 turns, and District C students ranged from around 20 to well over a hundred turns, depending upon their class.

Consistency of Instruction in Morning and Afternoon Classes

Five of the six teachers in Districts A and B taught both morning and afternoon classes each day. This schedule provided a unique opportunity to measure teachers' consistency with different classes of students. Figure 4 shows plots of morning and afternoon minutes allocated to decoding for these five teachers. These plots show that four of the five teachers allocated very similar amounts of time to decoding during each observational round for both of their classes.

Insert Figure 4 about here.

Plots of the frequency of decoding interactions for Districts A and B (shown in Figure 5) show even greater consistency for these teachers with all of the five teachers interacting with almost identical overall frequency in decoding with their morning and afternoon classes.

Insert Figure 5 about here.

Discussion

What have we learned from observing in these kindergartens? First, we have a great deal of variance in the cluster of instructional variables related to literacy. These clusters consistently show between-district differences. One teacher in District A is consistently more like the other teacher in District A than either is like any teacher in District B or District C.

District A teachers have substantial curricula to cover. They consistently allocate time to cover it. They teach to the whole class and then to homogeneous groups. They also engage in frequent interactions directed to the class and to individuals. These teachers also provide generous amounts of feedback to help students learn letter sounds and words.

District B teachers are rather consistently moderate. They have a curriculum to cover, and they allocate time to do it. The time they devote is far less than that allocated by District A

teachers because most of District B's kindergarten instruction is with rotating groups of students during center time. Teachers do not meet with each group every day. Rotating center groups subsequently results in reduced interactions with entire classes as well as fewer turns to individuals.

District C teachers, without a curriculum to guide them, are least like each other than any of the teachers in either District A or District B. They allocate time for instruction less consistently, and then average the lowest number of decoding interactions of all teachers in this sample. They also deliver far less positive or negative instructional feedback, and with the exception of Teacher 2 have far fewer interactions with individual students during literacy-related activities.

All of the results show dramatic between-district differences. It is important to review these differences in light of the allocated schoolday time available to the teachers of these half-day and full-day classes. Teachers in Districts A and B had less than half the number of minutes (150 in contrast to 330) available to them each day than were available to teachers in District C. Yet, they consistently pack in substantially more literacy-related and content area instruction.

The results of these observations suggest that instead of focusing on whether school districts should move to whole-day instead of half-day kindergarten programs, it may be more important first to study systematically not only what is actually

happening in a variety of kindergarten programs, but also the long-term effects of various kindergarten programs with an academic focus versus programs that are more individualized for teachers and students. Systematic descriptive research (with measures of change in student performance) in this area is critically needed as numerous school districts now hotly debate the merits of whole-day versus half-day kindergartens with little or no regard for how time is spent and the resulting changes in student performance.

References

Alpha K Time, New Dimensions in Education, Inc., Undated.

Anderson, L. M., Evertson, C. M., & Brophy, J. E. (1979). An experimental study of effective teaching in first-grade reading groups. Elementary School Journal, 79, 193-223.

Barr, R. (1983, April). A sociological approach to classroom instruction. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, Canada.

Dunn, L. M., Smith, J. O., & Dunn, L. M. (1981). Peabody language development kits--revised. Circle Pines, MN: American Guidance Service.

Early, M. (1983). Sounds, symbols, and sense. New York: Harcourt, Brace, Jovanovich.

Early, M. (1983). Look, listen, and learn. New York: Harcourt, Brace, Jovanovich.

Fisher, C. W., Berliner, D. C., Filby, N. N., Marliave, R., Cahen, L. S., & Dishaw, M. M. (1980). Teaching behaviors, academic learning time, and student achievement: An overview. In C. Denham & A. Lieberman (Eds.), Time to learn. Washington, DC: USOE/NIE Printing.

Gray, W. S., Monroe, M., Artley, A. S., & Arbuthnot, M. H. (1956). We look and see. Chicago: Scott, Foresman & Company.

Harris, A. J., & Clark, M. K. (1970a). Opening books. London: Macmillan.

Harris, A. J., & Clark, M. K. (1970b). A magic box. London: Macmillan.

Harris, A. J., & Clark, M. K. (1970c). Things you see. London: Macmillan.

Lewis, J., Harrison, M. L., Durr, W. K., & McKee, P. (1979a). Getting ready to read. Geneva, IL: Houghton-Mifflin.

Lewis, J., Harrison, M. L., Durr, W. K., & McKee, P. (1979b). Practice book. Geneva, IL: Houghton-Mifflin.

Meyer, L. A. (1984, April). Teachers' comprehension questions: What functions might they serve? Paper presented at the annual meeting of the American Educational Research Association, New Orleans.

Meyer, L. A., Linn, R. L., & Hastings, C. N. (1985). The heuristic and measurement models driving a study of reading comprehension development and science knowledge (Tech. Rep. No. L-2). Urbana: University of Illinois, Center for the Study of Reading.

Raphael, T. E. (1980). The effects of metacognitive awareness training on students' question answering strategies. Unpublished doctoral dissertation, University of Illinois, Urbana, IL.

Soar, R. S. (1973). Follow-through classroom process measurement and pupil growth (1970-71): Final report. Gainesville: College of Education, University of Florida.

Stallings, J. A., & Kaskowitz, D. (1974). Follow-through observation evaluation, 1972-73. Menlo Park, CA: Stanford Research Institute.

Table 1

Decoding, Vocabulary, and Other Skills Covered in Instructional Materials in Districts A and B

District	Number of: Phonics Activities	Vocabulary Words	Other Activities
A	264	122	0
B	57*	20	73

*Beginning Consonant activities dominate the Sounds, Symbols, and Sense Program. No other phonics activities appear in these materials.

Table 2

Repeated Activities in Peabody Language

Activity	Number of Lessons it Appears in
Prepositions	2
Definitions	13
Following Directions	7
Who, What, Where, When Questions	3
Comparatives/Superlatives	4
Classification	16
Occupations	5
Actions	3
Shapes	3
Opposites	5

Table 3

Instructional and Non-Instructional Time--Means and Standard Deviations for Nine Observational Rounds (N = 14 classes)

		Minutes Allocated to Decoding		Total Minutes Allocated to Instruction		Non-Instructional Minutes	
	Teacher 1	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
District A 150 MIN	AM Class	29.56	(17.61)	88.44	(21.73)	53.56	(12.68)
	PM Class	28.11	(16.58)	92.67	(20.48)	49.78	(10.78)
	Teacher 2						
	AM Class	26.00	(16.13)	81.78	(17.98)	62.67	(12.39)
	PM Class	27.22	(13.93)	71.89	(26.63)	64.00	(13.29)
	Teacher 1						
	AM Class	14.78	(10.57)	68.67	(12.60)	71.44	(9.88)
	PM Class	15.22	(12.33)	64.78	(15.02)	71.11	(9.29)
	Teacher 2						
District B 150 MIN	AM Class	10.44	(9.40)	78.89	(19.42)	72.78	(29.90)
	PM Class	10.00	(7.05)	70.22	(18.36)	68.22	(12.44)
	Teacher 3						
	AM Class	2.11	(4.26)	87.89	(18.62)	53.89	(9.12)
	PM Class	0.00	(0.00)	86.44	(19.74)	56.78	(10.91)
	Teacher 4						
	AM Class	.44	(1.33)	73.44	(16.36)	73.22	(12.08)
	Teacher 1	6.33	(11.64)	97.33	(25.70)	225.00	(28.07)
District C 330 MIN	Teacher 2	6.89	(4.26)	126.33	(24.81)	190.67	(24.38)
	Teacher 3	3.00	(9.00)	86.33	(16.11)	234.22	(15.53)

Table 4

Literacy-Related Interactions: Decoding, Text-Tied, and Procedural

Means and Standard Deviations (N = 14 classes)

		Decoding		Text-Tied		Procedural	
	Teacher 1	$\bar{x}$	SD	$\bar{x}$	SD	$\bar{x}$	SD
District A 150 MIN	AM Class	127.89	(57.88)	81.44	(40.50)	67.67	(51.60)
	PM Class	112.22	(30.17)	103.89	(52.93)	103.89	(52.93)
	Teacher 2						
	AM Class	124.33	(50.24)	45.00	(30.69)	59.00	(24.34)
	PM Class	125.67	(55.96)	40.00	(21.66)	53.22	(23.35)
	Teacher 1						
	AM Class	69.11	(52.95)	49.11	(14.40)	46.22	(25.05)
	PM Class	67.56	(62.37)	4c 56	(15.62)	39.67	(17.56)
	Teacher 2						
District B 150 MIN	AM Class	35.56	(26.18)	30.56	(12.12)	27.89	(13.79)
	PM Class	33.67	(19.66)	24.44	(17.36)	21.56	(16.12)
	Teacher 3						
	AM Class	72 89	(64.72)	43.11	(28.34)	38.67	(18.30)
	PM Class	69.33	(50.67)	28.89	(25.01)	29.67	(23.75)
	Teacher 4						
	AM Class	43.00	(28.22)	40.00	(30.47)	30.22	(17.14)
	Teacher 1	22.00	(27.46)	75.78	(29.31)	11.33	(14.20)
District C 330 MIN	Teacher 2	37.11	(17.99)	91.67	(35.97)	33.22	(28.05)
	Teacher 3	30.56	(17.10)	58.89	(32.47)	6.78	(8.47)

Table 5

Frequency of Instructional Feedback (N = 14 classes)

		Positive		Negative	
	Teacher 1	$\bar{x}$	SD	$\bar{x}$	SD
District A 150 MIN	AM Class	285.22	(138.60)	15.44	(8.19)
	PM Class	307.78	(124.78)	11.22	(8.87)
	Teacher 2				
	AM Class	245.44	(76.98)	8.00	(11.57)
	PM Class	232.22	(81.59)	12.11	(14.62)
	Teacher 1				
	AM Class	141.44	(23.31)	2.33	(2.18)
	PM Class	136.44	(42.43)	1.89	(2.37)
	Teacher 2				
District B 150 MIN	AM Class	102.44	(40.44)	6.67	(5.72)
	PM Class	86.00	(40.29)	6.67	(5.92)
	Teacher 3				
	AM Class	174.22	(77.84)	8.89	(11.36)
	PM Class	148.78	(84.49)	5.44	(6.88)
	Teacher 4				
	AM Class	118.78	(63.52)	4.00	(3.39)
	Teacher 1	127.44	(46.77)	8.67	(8.77)
District C 330 MIN	Teacher 2	181.44	(51.47)	9.00	(7.84)
	Teacher 3	111.33	(41.91)	7.11	(7.59)

Table 6

Distribution of Interactions During Reading and T-Directed Centers

(N = 14 classes)

		Whole Class		Individual Students	
	Teacher 1	N	TOTAL	Mean	SD
District A 150 MIN	AM Class	23	592	698.35	(139.23)
	PM Class	24	606	769.46	(64.96)
	Teacher 2				
	AM Class	24	776	922.75	(53.43)
	PM Class	23	656	812.30	(35.99)
	Teacher 1				
	AM Class	24	235	361.91	(66.76)
	PM Class	23	242	339.83	(52.79)
	Teacher 2				
District B 150 MIN	AM Class	23	197	208.39	(6.11)
	PM Class	23	184	196.13	(6.31)
	Teacher 3				
	AM Class	24	31	130.50	(67.32)
	PM Class	21	3	83.95	(51.67)
	Teacher 4				
	AM Class	21	23	117.90	(46.58)
	Teacher 1	25	55	61.40	(3.12)
District C 330 MIN	Teacher 2	21	122	137.29	(6.48)
	Teacher 3	21	13	21.65	(14.73)

Figure 1

Portion of a Completed Transcript

(1)

P I	P G	C I	C G	11/29/83
	1	1111	1111	

Teacher, AM

TAPE ON SIDE 1

	8:30	Collecting milk money
	8:35	Pledge
	8:38	c to rug
TE		What does Mr. B. have on him → 17
LN		What letter does Mr. B. have on him? 17-7
		T → E Let's listen to Mr. B's song.
	8:41	All c on rug. 9 goofing around.
		Mr. B's song plays.
	8:43	Mr. B sent in
BK		Rem. those 3 boys of beautiful buttons
		How they broke their promise
		Let's see if
TE		What's this a picture of?
BK		Why sent him a bicycle?
TE		What's this a picture of?
BK		Why sent?
BK		What else sent?
TE		What's this a picture of?
BC		What does baby begin with?
BC		" " boy " "
BK		" else does Mr. B want?
BK		How many boys here have GI Joes?
TE		What's this?
		What does it begin with?

Figure 2

OBSERVATIONAL CATEGORIES AND CODES

Activities

10 Non-Instructional Time
- 11 snack, lunch, rest, recess, bathroom
- 12 free play (children choose)
- 13 open/close exercises
- 14 transition

20 Teacher-Directed Instruction
- 21 Art, Music, Cut & Paste, P.E.
- 22 Science
- 23 Decoding
- 24 Math
- 25 Social Studies (incl holidays)
- 26 Writing
- 27 Language
- 28 Small Group Decoding
- 29 Small Group Reading
- 30 Workbook Assignments
- 31 Teacher-Assigned Centers
- 32 Show & Tell
- 33 Adult Reading
- 34 Independent Work Preparation
- 35 Test-taking practice
- 36 Library
- 37 Spelling

40 Independent Work

50 Other
- 51 Movie, party, rehearsal, etc.
- 52 Testing

Interactions

10 Text-Tied Comprehension
- 11 Background Knowledge
- 12 Vocabulary
- 13 Text Explicit
- 14 Text Implicit
- 15 Opinion
- 16 Sequencing, Prediction
- 17 Word Comprehension
- 18 Sentence Comp: TE
- 19 Sentence Comp: TI
- 20 Summaries
- 21 Procedural O's or Instruc's

30 Story Grammar Referents
- 31 Setting: TE
- 32 Plot: TE
- 33 Character: TE
- 34 Theme: TE
- 35 Setting: TI
- 36 Plot: TI
- 37 Character: TI
- 38 Theme: TI

40 Other
- 41 General Probe
- 42 General Review
- 43 Correcting Work

50 Decoding
- 51 Letter Sounds
- 52 Whole Word
- 53 Letter Naming
- 54 Spelling
- 55 Rhyming
- 56 Sounding Out Words
- 57 Sentence Reading
- 58 Paragraph Reading
- 59 Blending

60 Oral Language Development
- 61 Word Repetition
- 62 Phrase or Sentence Repetition
- 63 Word Production
- 64 Phrase or Sentence Production

70 Grammar
- 71 Parts of Speech
- 72 Usage
- 73 Capital Letters
- 74 Punctuation

Figure 2 (Cont'd)

Feedback

11 Calls on Another, Ignores
12 Repeats, Reconfirms, Lauds
13 Negates
14 Repeats Question/Direction
15 T Models or Gives Answer
16 T Leads
17 Gives Rule
18 Encourages, Gives Hint
19 Homework Assign or Written Feedback
20 Quality Dependent
21 Asks for Explanation
22 Teacher Extends
23 Teacher Suggests Re-examine

Figure 3
Activity Flow of a Typical
Day in Each District

DISTRICT A (150 MIN)	DISTRICT B (150 MIN)	DISTRICT C (330 MIN)
OPENING EXERCISES	OPENING EXERCISES	OPENING EXERCISES
8 MIN	9 MIN	15 MIN
DECODING	MUSIC	LANGUAGE
22 MIN	6 MIN	4 MIN
TRANSITION	SOCIAL STUDIES	DECODING
9 MIN	8 MIN	5 MIN
CASUAL CONVERSATION	TRANSITION	LANGUAGE
3 MIN	10 MIN	13 MIN
LIBRARIAN READING	T-DIRECTED CTRS	SOCIAL STUDIES
8 MIN	15 MIN	4 MIN
LIBRARY BOOK SELECTION	TRANSITION	ACTIVITY TIME
9 MIN	12 MIN	30 MIN
TRANSITION	MUSIC	TRANSITION
6 MIN	5 MIN	7 MIN
INDEPEND WK PREP	T-DIRECTED CTRS	HOUSEKEEPING
13 MIN	13 MIN	2 MIN
INDEPENDENT WK & FEEDBACK	RECESS	SNACK
17 MIN	20 MIN	7 MIN
SNACK	T-DIRECTED CTRS	TCHR RDG STORY
13 MIN	3 MIN	7 MIN
DECODING	TRANSITION	SCIENCE
30 MIN	3 MIN	16 MIN
CLOSING EXERCISES	SHOW & TELL	TRANSITION
12 MIN	9 MIN	6 MIN
	PARTY	RECESS
	14 MIN	23 MIN
	TCHR RDG STORY	TRANSITION
	14 MIN	3 MIN
	CLOSING EXERCISES	LUNCH & NAP
	9 MIN	65 MIN
		TRANSITION
		6 MIN
		MATH
		16 MIN
		ACTIVITY TIME
		20 MIN
		TRANSITION
		6 MIN
		TEACHER RDG STORY
		7 MIN
		TRANSITION
		5 MIN
		RECESS
		13 MIN
		TRANSITION
		2 MIN
		ACTIVITY PREP
		9 MIN
		ACTIVITY TIME
		20 MIN
		TRANSITION
		6 MIN
		PARTY
		5 MIN
		CLOSING EXERCISES

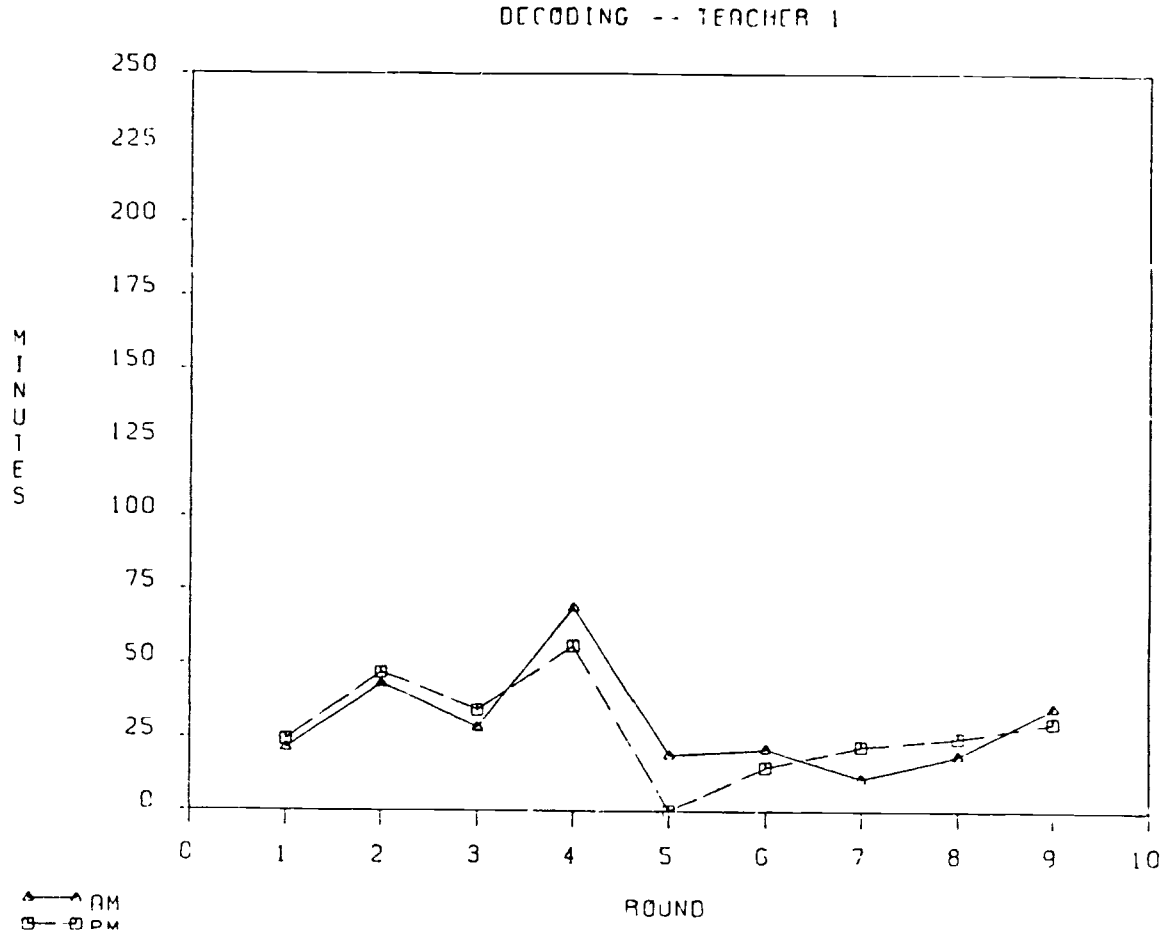
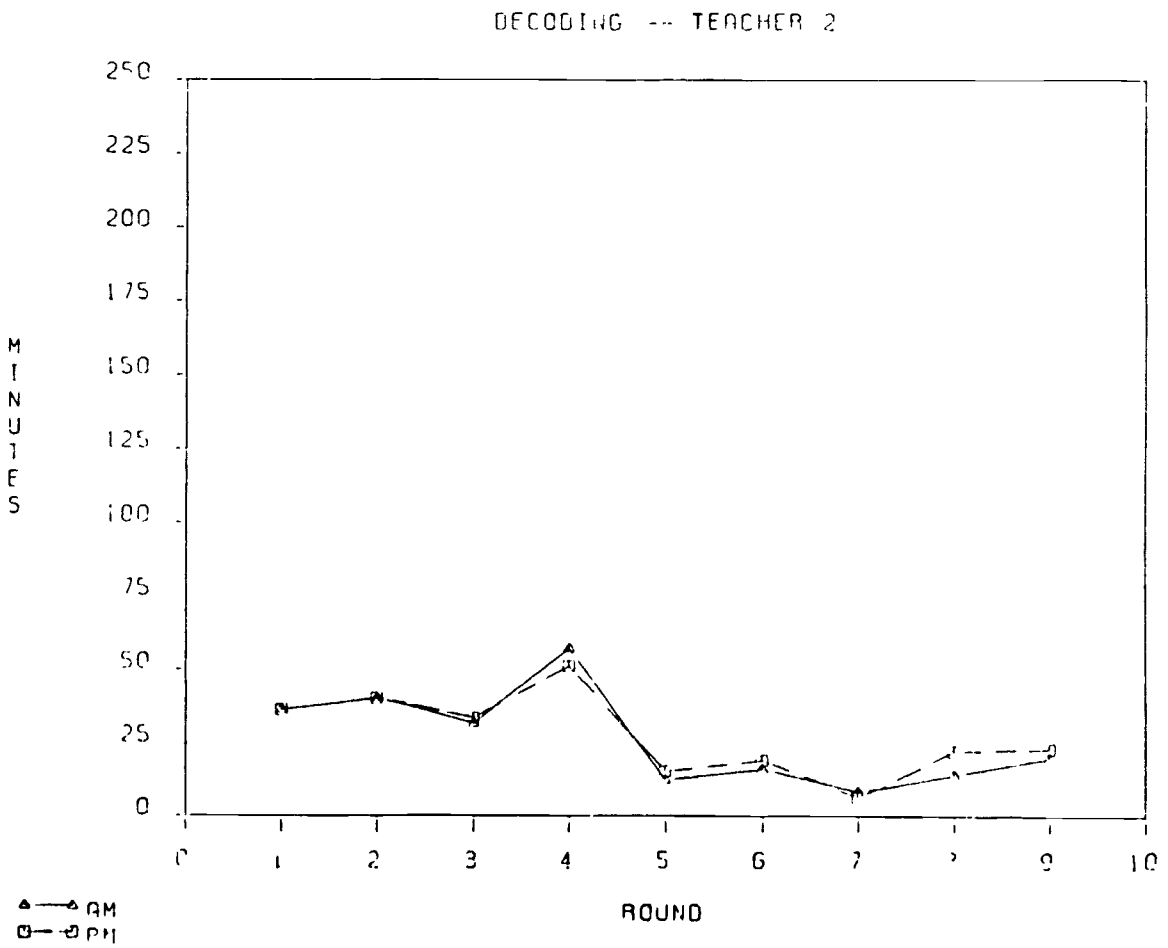
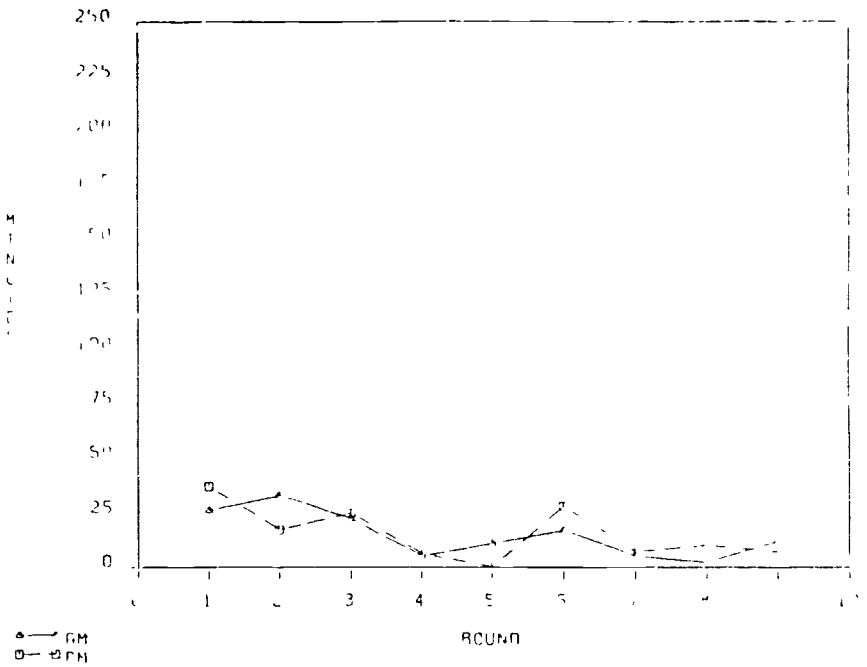
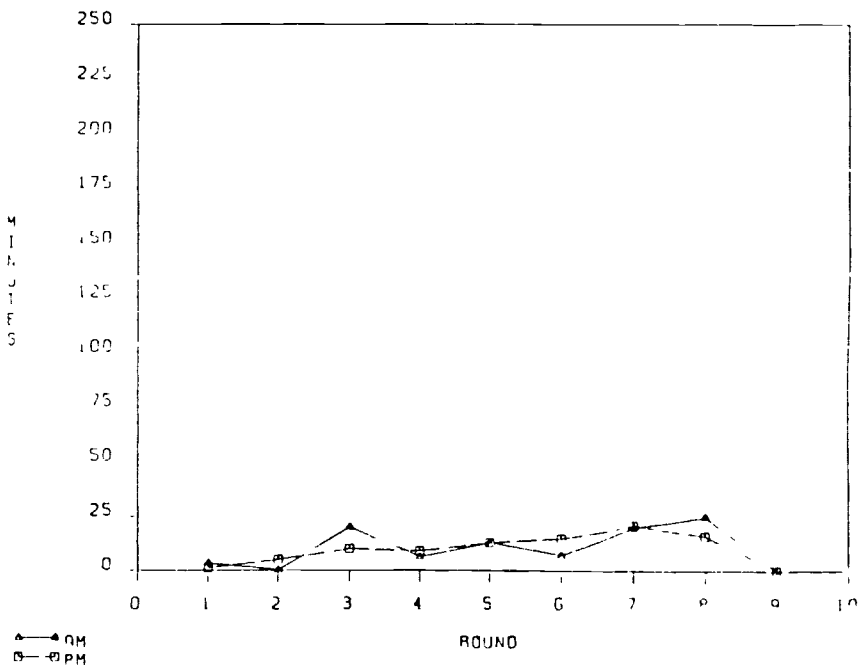


Figure 4
District A





DECODING -- TEACHER 2



DECODING -- TEACHER 3

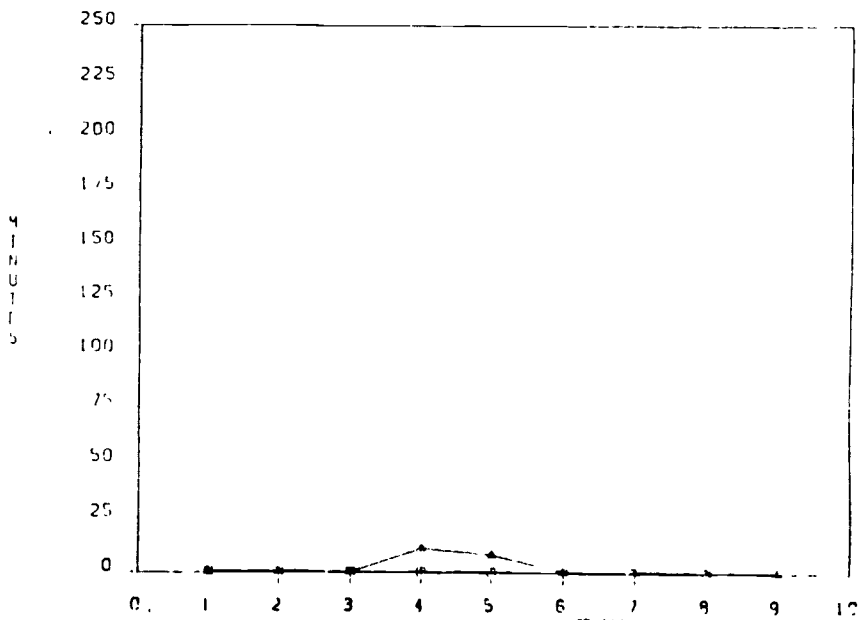


Figure 4 (Cont'd)

District B

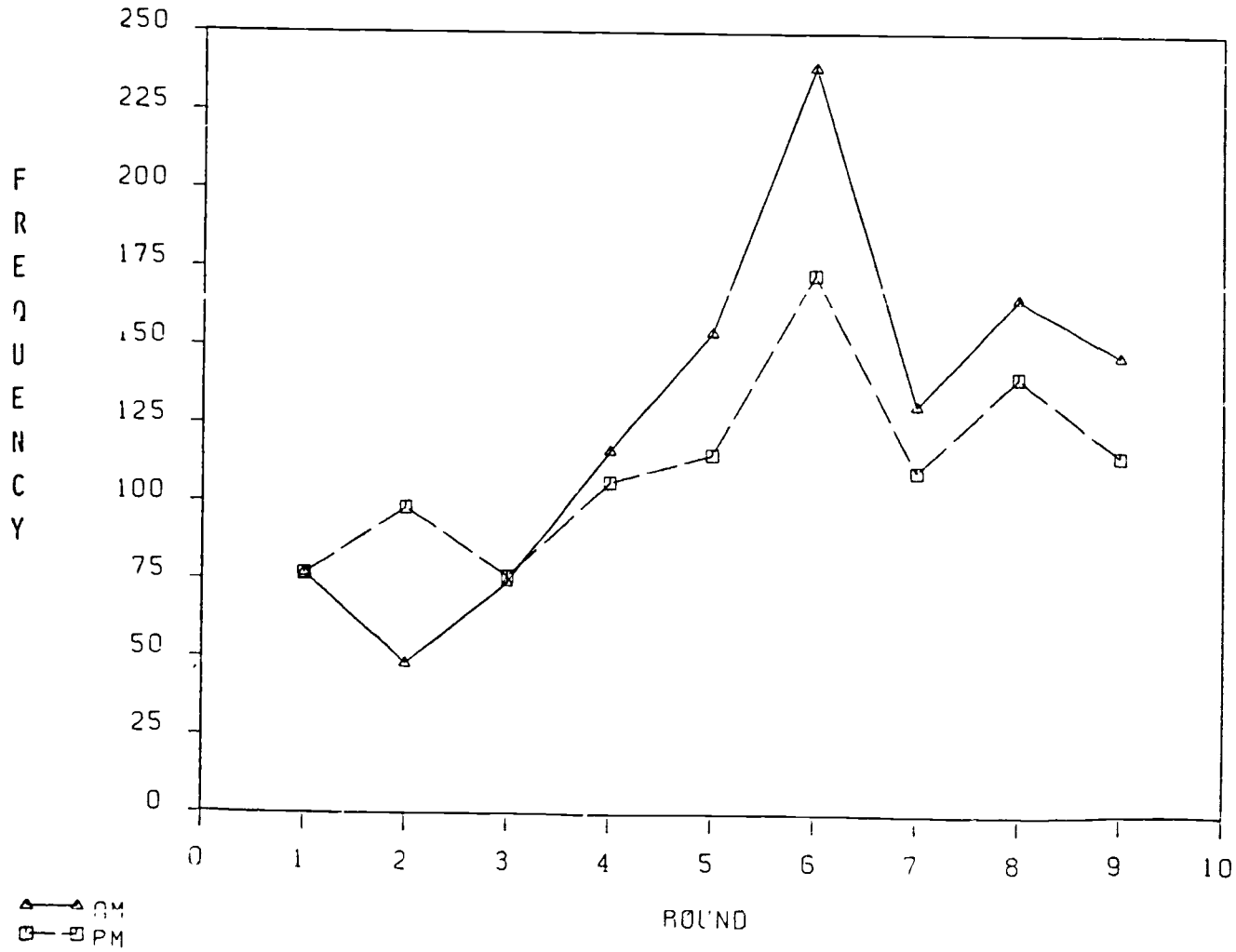
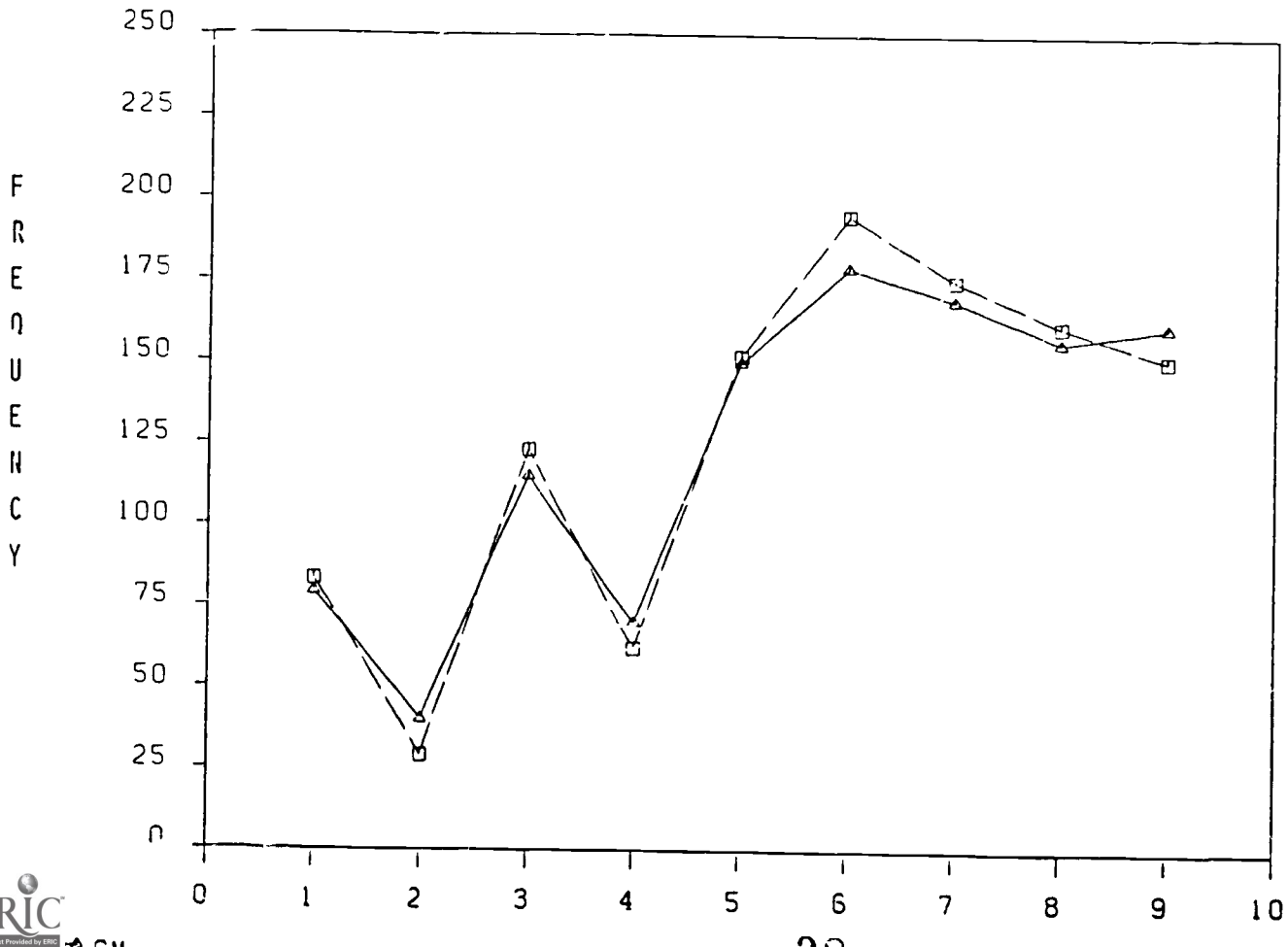
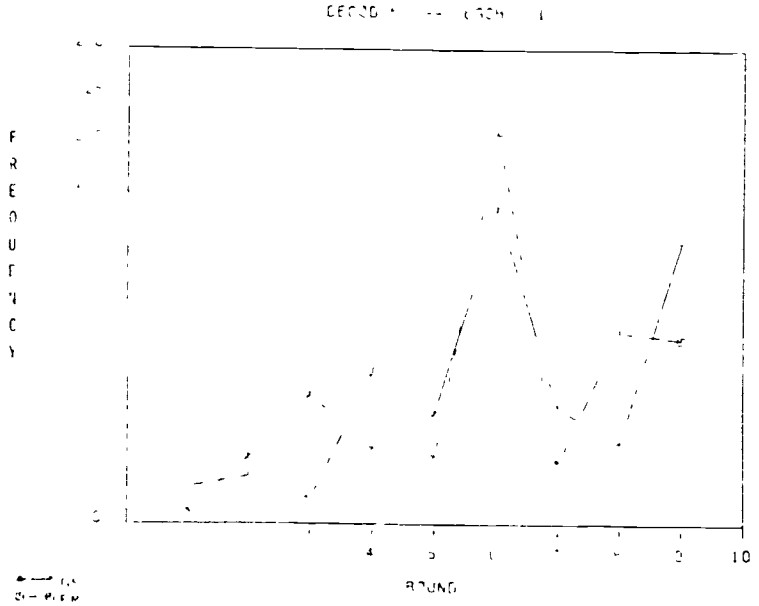
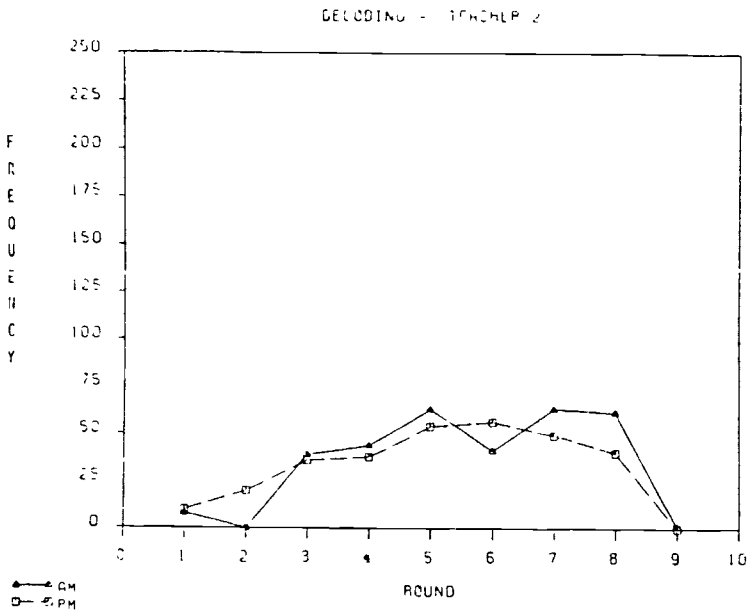


Figure 5
District A

DECODING -- TEACHER 2







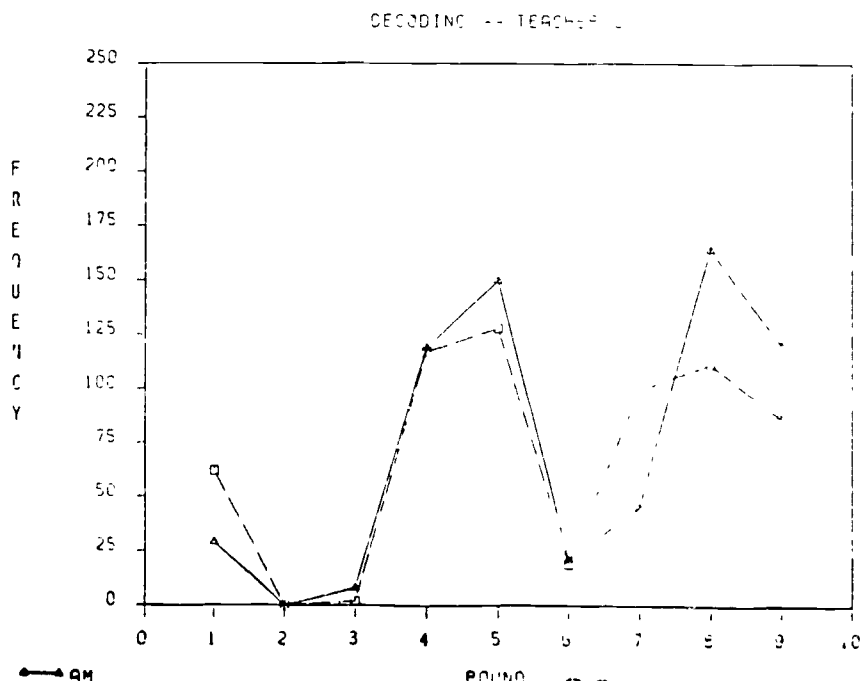


Figure 5 (Cont'd)

DISTRICT B

Appendices

APPENDIX A

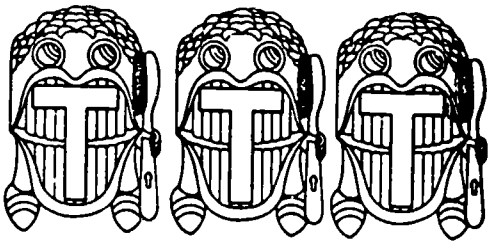
Selected Kindergarten Materials from District A

Selected Teacher-Presentation Page From
Alpha K Time

All text that follows is excerpted from the Teacher's Guide of Alpha K Time (New Dimensions in Education, Inc., Undated).

2T 1

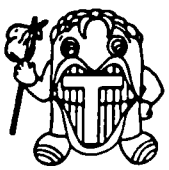
PLANNING AND PREPARATION: Huggable, Mr. T; Mr. T's Picture Squares; a bag for Mr. T; scarf; ruler, yardstick or other stick; Record #5; paper plate with Tall Teeth drawn on it; Alpha Time Master #27.



Wrap Mr. T's Picture Squares in the scarf. Tie the scarf to a ruler, yardstick or other kind of stick so that it looks like a hobo stick. Rest this hobo stick against Mr. T. Play Mr. T's song (record #1, side A, band #2) to set the mood for Mr. T.

HEARING THE T SOUND IN TALL TEETH

Let the children discover Mr. T and his hobo stick.



Mr. T has packed his things. He is leaving. He says he won't stay unless he may have the same thing that Mr. M has.

What could Mr. T mean? (Mr. T would like a sound.)

From what did Mr. M get his sound? (Munching Mouth)

Why won't Mr. M ever forget his sound? (Mr. M's Munching Mouth is his special feature.)

Drawing Conclusions: How Mr. T Can Get A Sound

How can Mr. T find a sound that he will never forget?

Lead the children to the conclusion that Mr. T can get his sound from his Tall Teeth.

Say Tall Teeth for Mr. T so that he can hear the first sound when you say *tall*, and when you say *teeth*.

Where is your tongue when you say tall, and when you say teeth?

Help the children discover that when they make the T sound in Tall Teeth, their tongues are behind their upper teeth.

Call attention to Mr. T's scarf.

Mr. T says he doesn't remember what he put in the scarf. He wants you to open his scarf and show him each thing that is in it. This will help him to remember.

Using Related Vocabulary

Have the children take out each of Mr. T's Picture Squares, show it to the class, and name it for Mr. T (i.e., tiger, toothbrush, tent, telephone, table).

After each picture is named, repeat the name—emphasizing the initial T sound. Let the children discover that each object starts the same way as Mr. T's Tall Teeth.

Mr. T says that you always prove everything for Mr. M. *Prove It* is so much fun, he wants you to play *Prove It* with him.

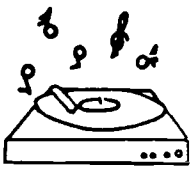
Descriptive Language:
Loud—Soft
Fast—Slow

Mr. T remembers that sometimes when you sang the Prove It song, he was far away—but he could still hear you. What kind of voice did you use then? (loud)

Other times, Mr. T could not hear us when we sang the Prove It song. What kind of voice did you use then? (soft)

How else can we sing the Prove It song for Mr. T? (fast and slow)

Singing The Prove It Song



Distribute Mr. T's Picture Squares to five children. Play record #5, side A, band #3. As the Prove It song is sung, a child holding a Picture Square will name it and prove it for Mr. T. Then he may place the Picture Square in Mr. T's bag.

Replay the song, giving another child the chance to prove one of Mr. T's Picture Squares.

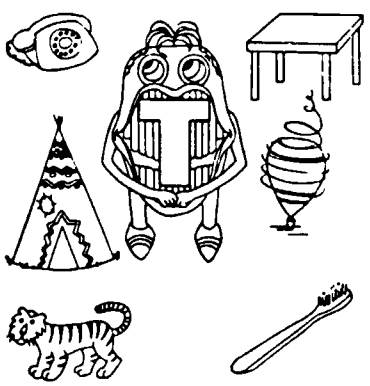
Tell the children that Mr. T has a game he would like to play with them. Show them the paper plate with Tall Teeth drawn on it.

Mr. T likes the sound he has from Tall Teeth. He also likes the way we sing the Prove It song. He gave us this special plate we may use for a game. Mr. T wants to tell us how we can play the game.

Playing A Tossing Game To Reinforce T Sound In Initial Position

Directions: Distribute Mr. T's Picture Squares. One child is Mr. T. The children holding the Picture Squares show them to Mr. T. He calls out the name of one of the pictures (e.g., tiger). The child holding the tiger picture calls "Tall Teeth—tiger." Mr. T turns, tosses, spins or twirls the paper plate to the child holding the tiger picture. That child catches it and then becomes Mr. T. He gives his Picture Square to a child who did not get one. The game continues as long as interest is sustained.

TYING IT TOGETHER



Give each child a copy of Alpha Time Master #27 to look at and discuss.

Which Letter Person do you see in the picture? (Mr. T)

Tell Mr. T the names of the things in the picture (tiger, toothbrush, tent, telephone, table and a top).

Prove each thing for Mr. T.

Why does Mr. T belong in this picture? (The pictures start with his sound.)

Let Mr. T touch something that starts with his sound.

The children may connect Mr. T to one or more objects that begin with his sound by using lines, straws, strings, pipe cleaners, ribbon, and tape.

ON THEIR OWN

Children may choose from the following activities:

Sorting And Classifying

Using Mr. T's and Mr. M's Picture Squares in a sorting game:
Begin with only 4 Picture Squares—3 for Mr. T, 1 for Mr. M. The child has to pick the one picture out of four which does not belong. For example, if the four pictures are of a tiger, a telephone, a table and a mouse, the child should take out the picture of the mouse—because mouse begins the same way as Munching Mouth, while tiger, telephone and table begin the same way as Tall Teeth. (Two or more children can work together, changing the card combinations and listening to each other Prove It.)

As the children become more proficient, more Picture Squares may be added and finally, all ten squares may be sorted into two groups of five. As more squares are added in later lessons, the sorting becomes more and more complex.

Sound Discrimination

Continuing the Mr. T game, using the paper plate with Tall Teeth drawn on it.

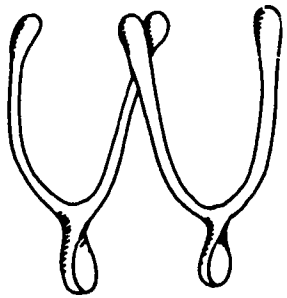
Visual Memory Game

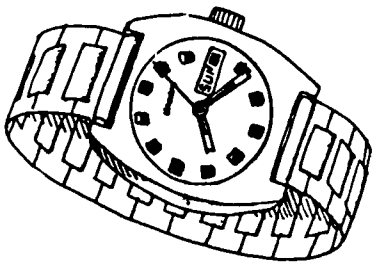
Naming and proving all the things that begin with T on Picture Card 1.

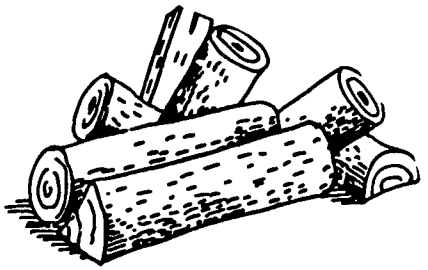
Using Mr. T's Picture Squares in the Memory Game. (See *Games* section of the manual.)

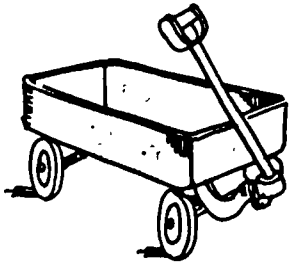
Selected Page from Houghton-
Mifflin's Getting Ready to Read

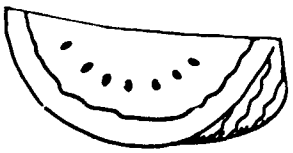
All text that follows is excerpted from Getting Ready to Read (Houghton Mifflin, 1979).

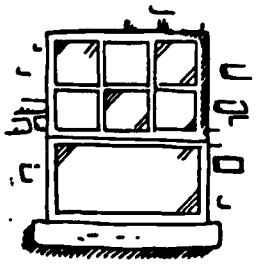


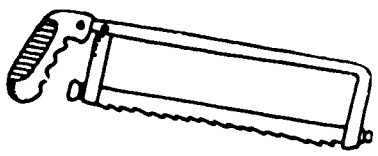


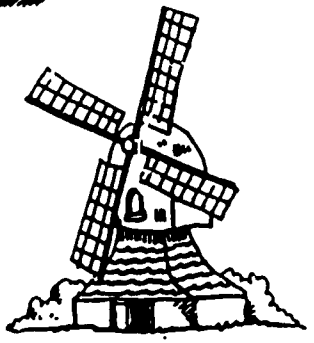


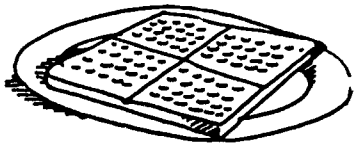


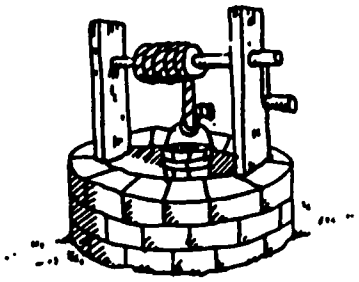






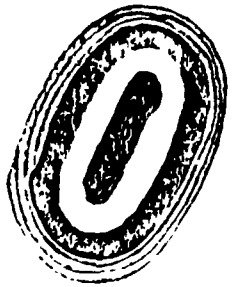






v V V

v



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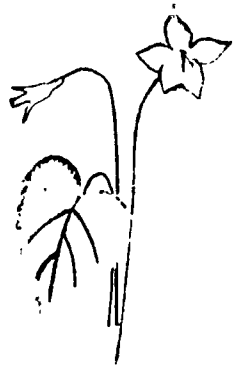

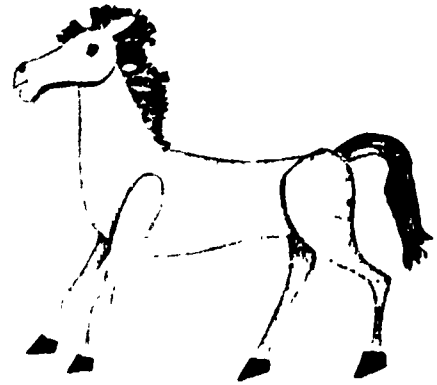

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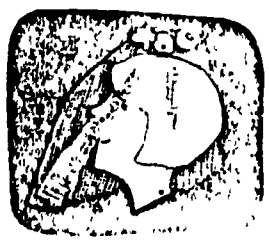
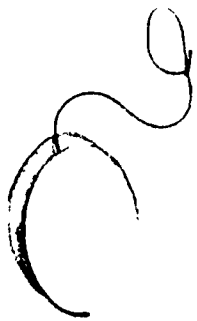
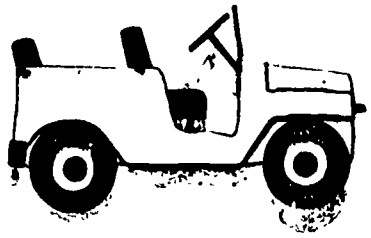
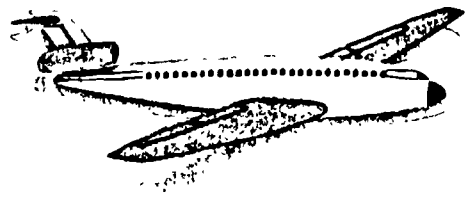


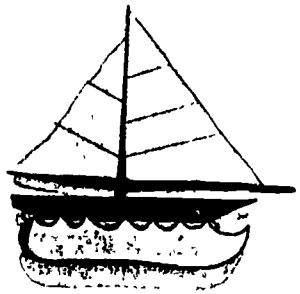


We will go in a **jet.**

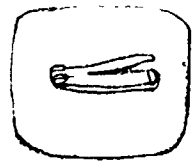


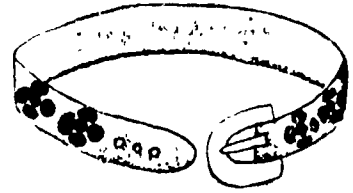


A **beet** is in a  .



A **pin** will go on a  .





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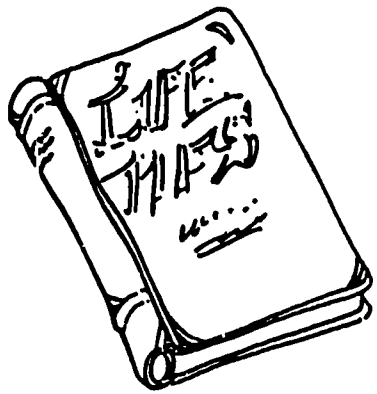
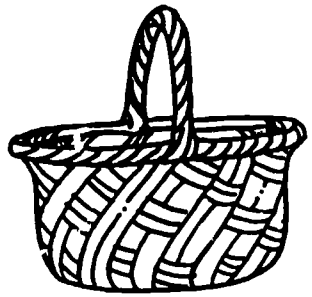
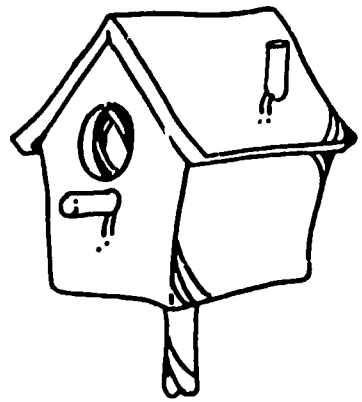
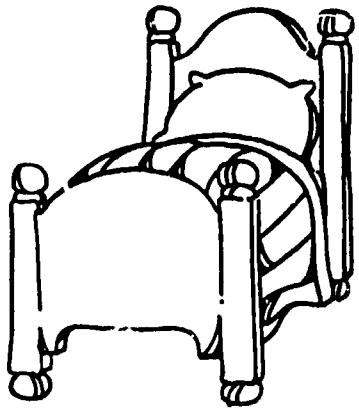
Mifflin's Practice Book

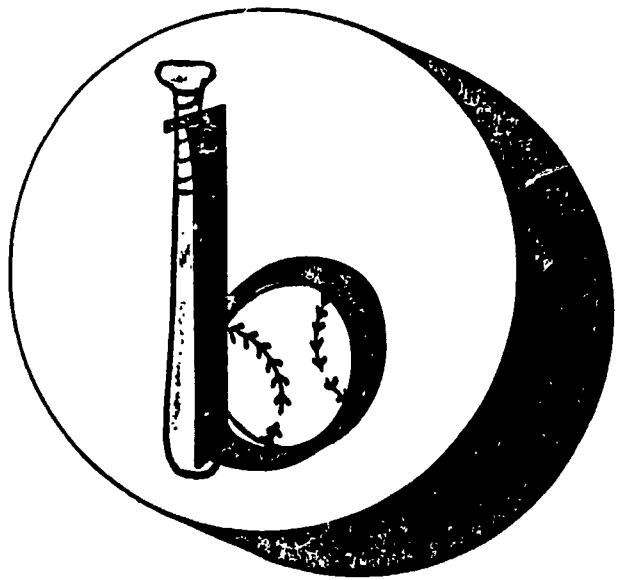
All text that follows is excerpted from the Practice Book (Houghton Mifflin, 1979).

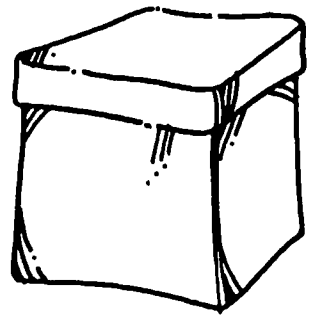


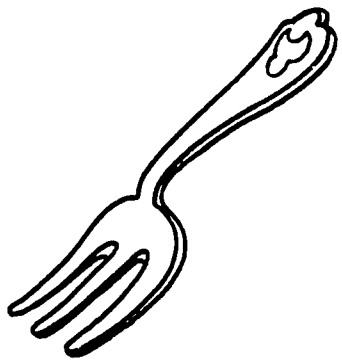


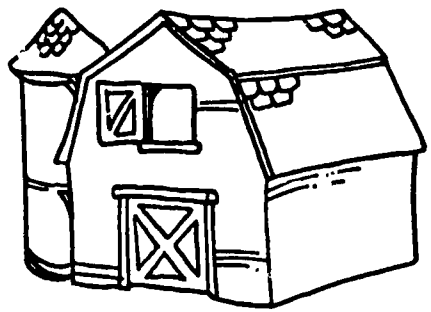


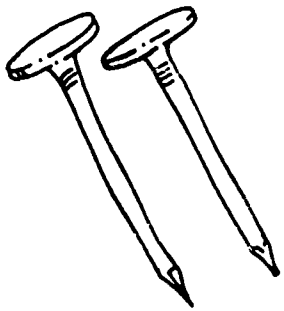


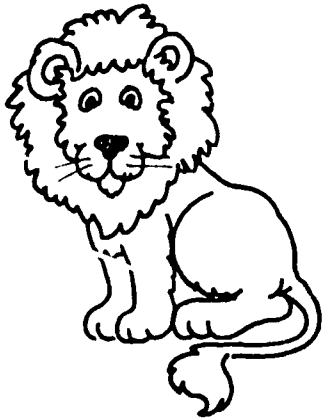




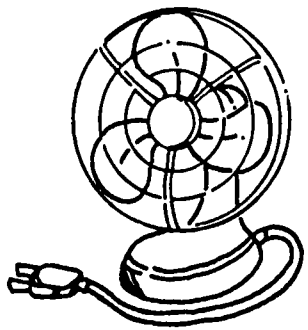




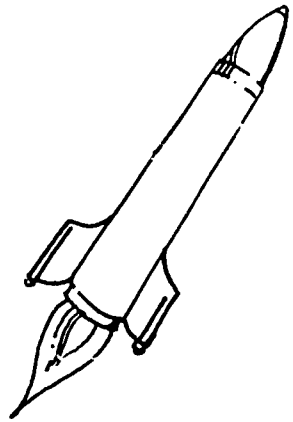


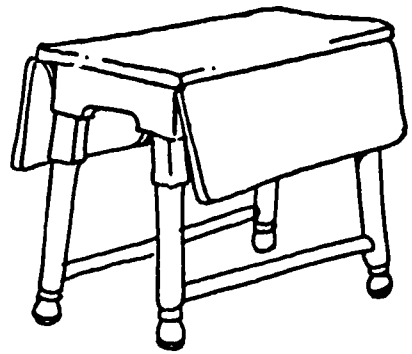


n

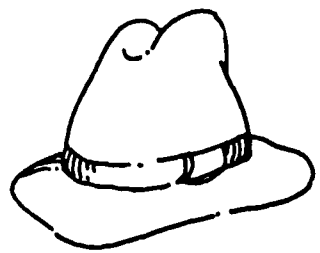


d





t



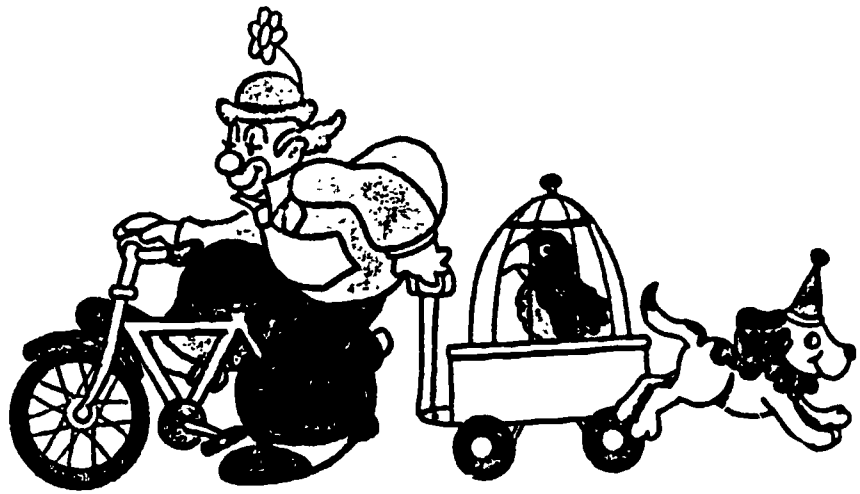
n

A  is on a  .

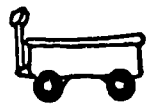
A  is in a  .

A  is not in a  .

A  is in a  .



A  will go on a  .

A  will go in a  .

A  is in a  .

A  is in a  .

Selected Page From Scott Foresman's

We Look And See

All text that follows is excerpted from We Look and See (Scott Foresman, 1956).

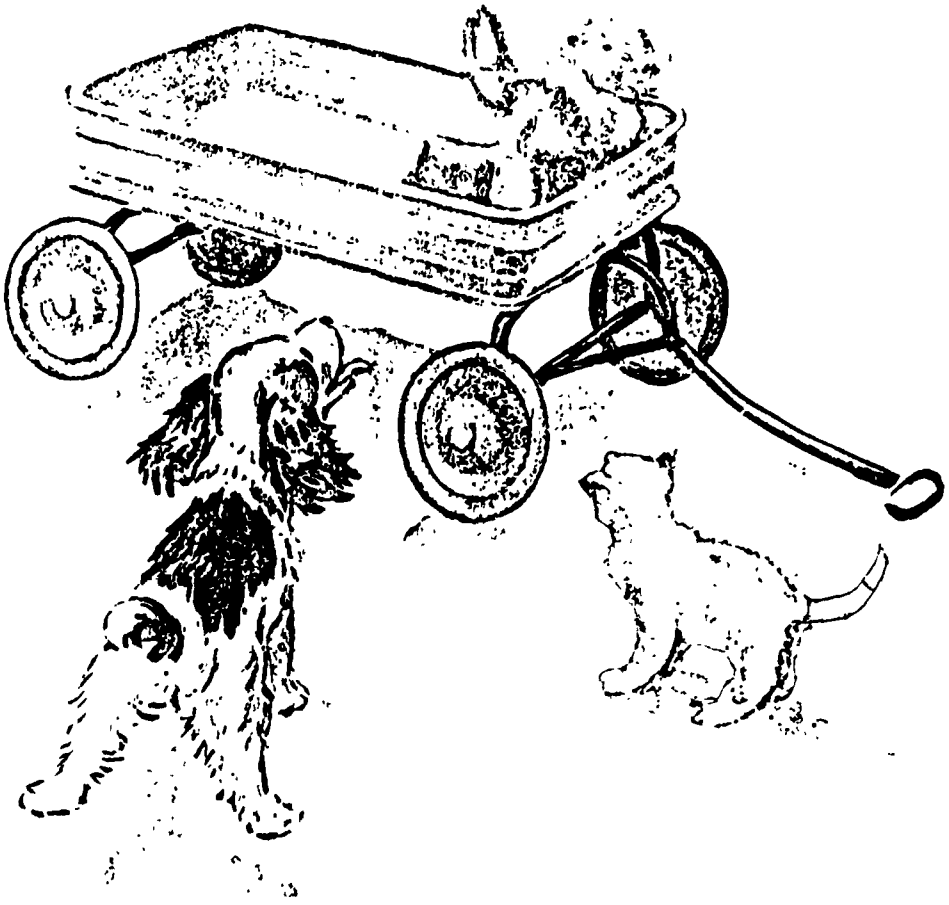
Come, Dick, come.

Come and see.

See Tim.

See Spot and Puff.

Look, Dick, look.



Go, Go, Go

Selected Page From Macmillan's

Opening Books

All text that follows is excerpted from Opening Books (Macmillan, 1970).

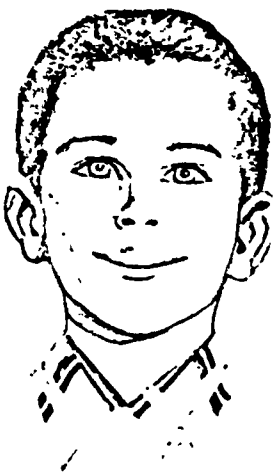
Who?

Mary

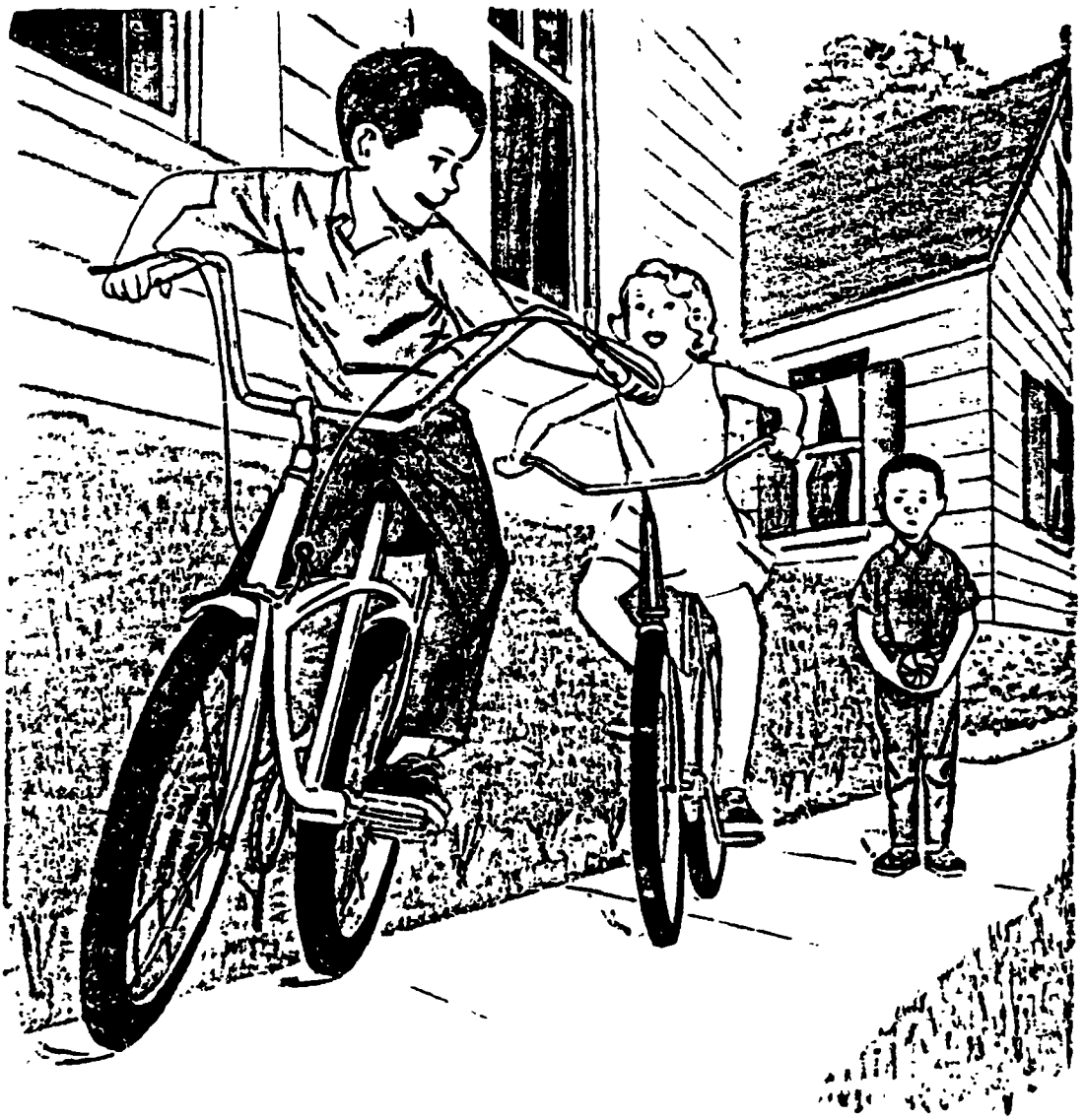
Mike

Debby

Van



Jeff



Mary said, "Ride, Jeff!"

Jeff said, "Ride, Mary, ride!"

WORD LIST

The words introduced in OPENING BOOKS, first preprimer, are listed below in the order of their appearance. They are of two types:

. **Developmental (boldface type):** Words which the authors anticipate most pupils will not be able to identify independently. They are used as the medium for developing word-analysis skills.

Skills Practice (regular type): Words which many pupils will be able to identify with the word-analysis skills that they have developed but for which other pupils will require more supervised skills practice.

For a complete description of categories, see the Teacher's Annotated Edition and Guide to accompany OPENING BOOKS.

WHO?.....*Page 6*
- 6. who*
- 7. Mike*
- 8. Mary*
- 9. Jeff*
- 10. and*

WHO RIDES?.....*Page 11*
- 11. **rides**
- 12. Van*
- 13. **can, ride**
- 14. — —

WHO CAN RIDE?.....*Page 15*
- 15. — —
- 16. — —
- 17. — —
- 18. **with**

POLICEMEN CAN RIDE....*Page 19*
- 19. **policemen**
- 20. **can't**
- 21. **the**
- 22. — —

CAN MIKE PLAY?.....*Page 23*
- 23. **play**
- 24. **said**
- 25. **ball**
- 26. **I**

MIKE PLAYS BALL.....*Page 27*
- 27. plays
- 28. **get**
- 29. Debby*
- 30. **want**
- 31. **to**
- 32. wants

COWBOYS.....*Page 33*
- 33. **cowboys**
- 34. cowboy
- 35. — —
- 36. — —
- 37. — —
- 38. **a**

WHO PLAYS COWBOY?.....*Page 39*
- 39. — —
- 40. — —
- 41. — —
- 42. **bike**

COWBOYS AND BIKES.....*Page 43*
- 43. bikes
- 44. **not**
- 45. **is**
- 46. — —
- 47. — —

CAN MIKE RIDE?.....*Page 48*
- 48. — —
- 49. — —
- 50. — —
- 51. — —

POEMS (*to be read by the teacher*) *Page 52*

*Introduced in the readiness book WE BEGIN

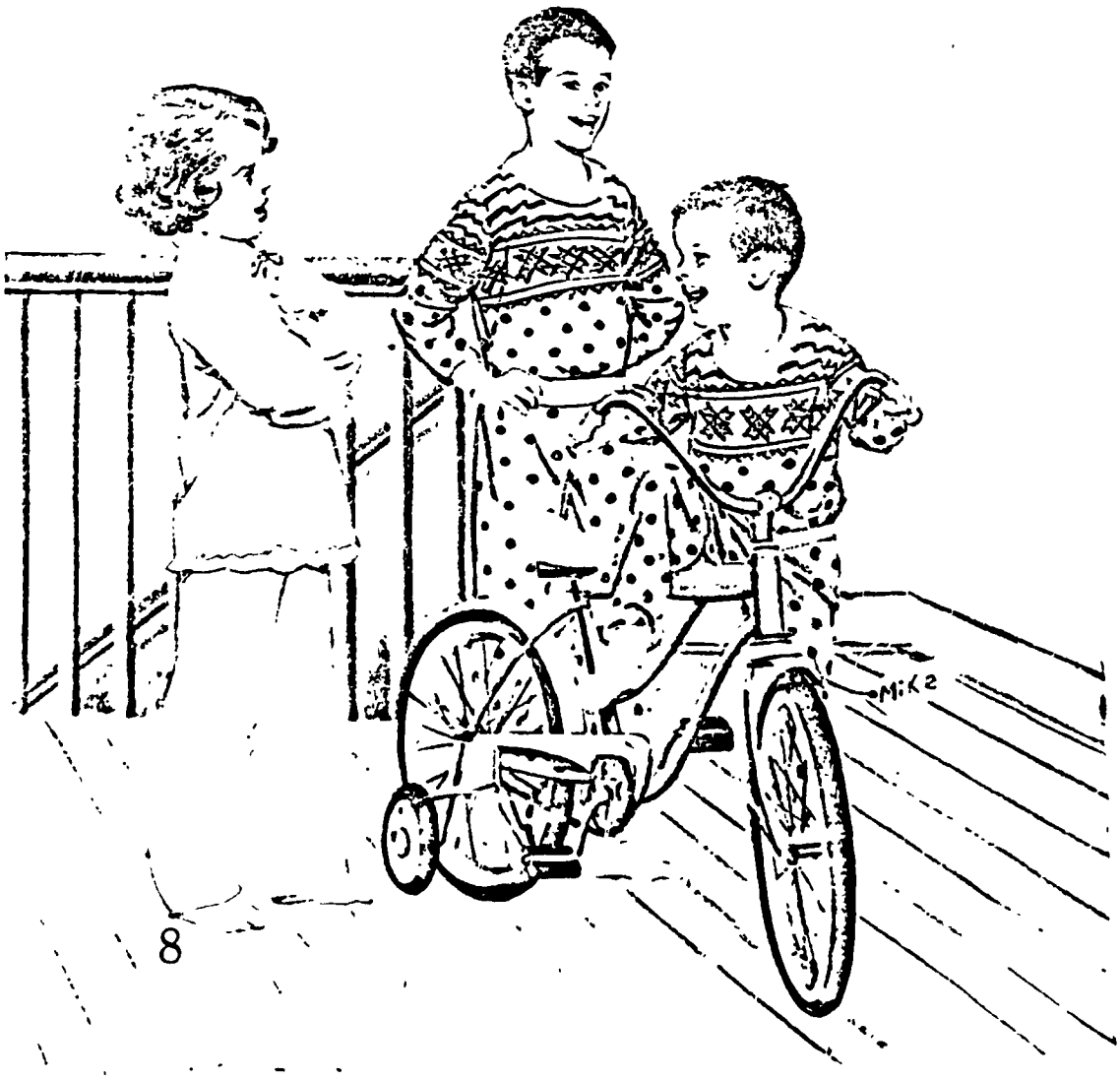
Selected Page From Macmillan's

A Magic Box

All text that follows is excerpted from A Magic Box (Macmillan, 1970).

Mike said, "I can get on the bike.
I want to get on."

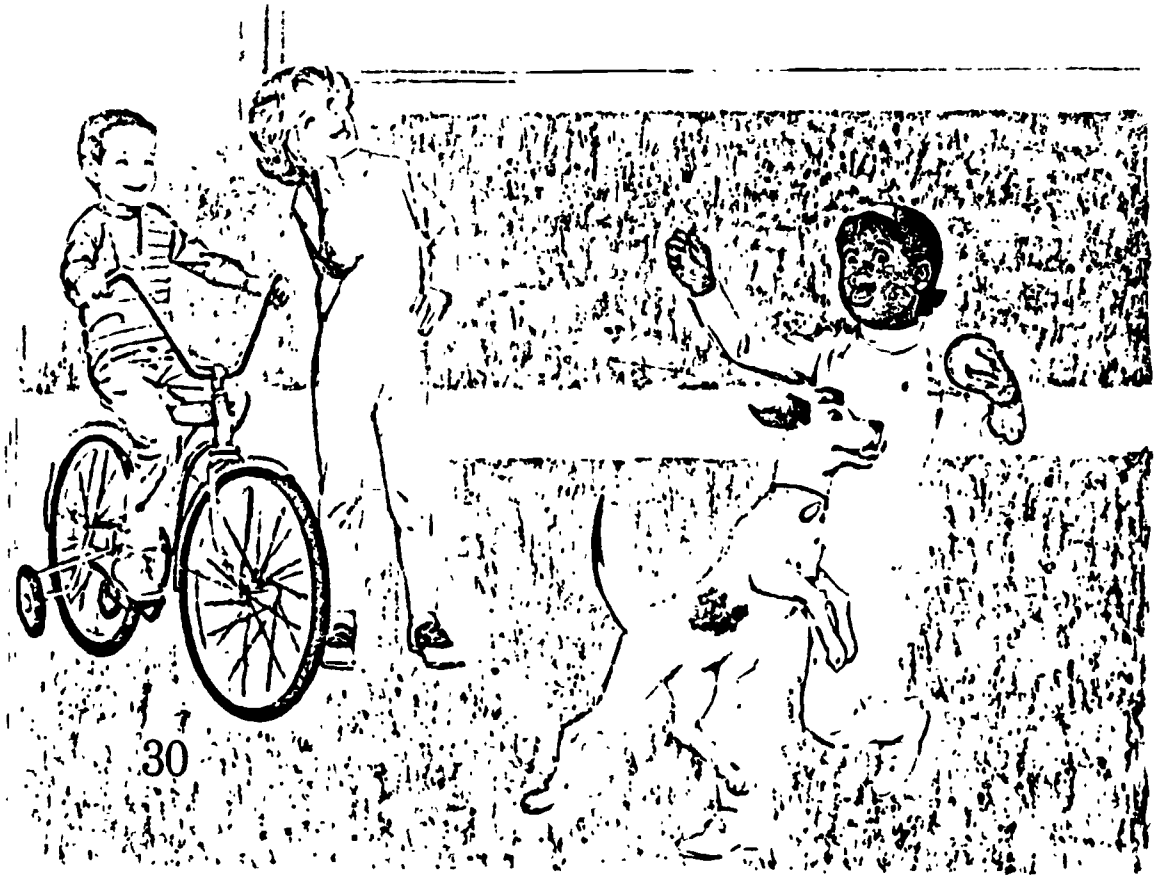
Mary said, "Not here.
Mike can't ride here."



8

Debby said, "Get down, Bolo.
Get down!
Go and get the ball."

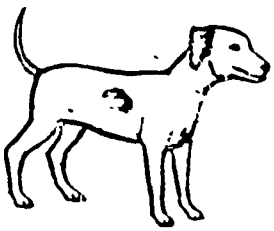
Mike said, "He did!
Bolo did get the ball.
He wants to play."



A a

B b Billy

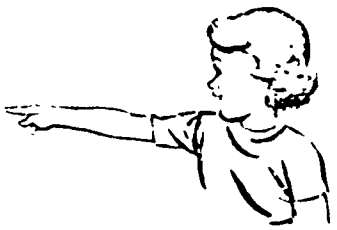
Bolo



C c come
Come

Jeff said, "Come here, Mike!"

comes
Comes



Mary said, "Here he comes!"

Selected Page From Macmillan's

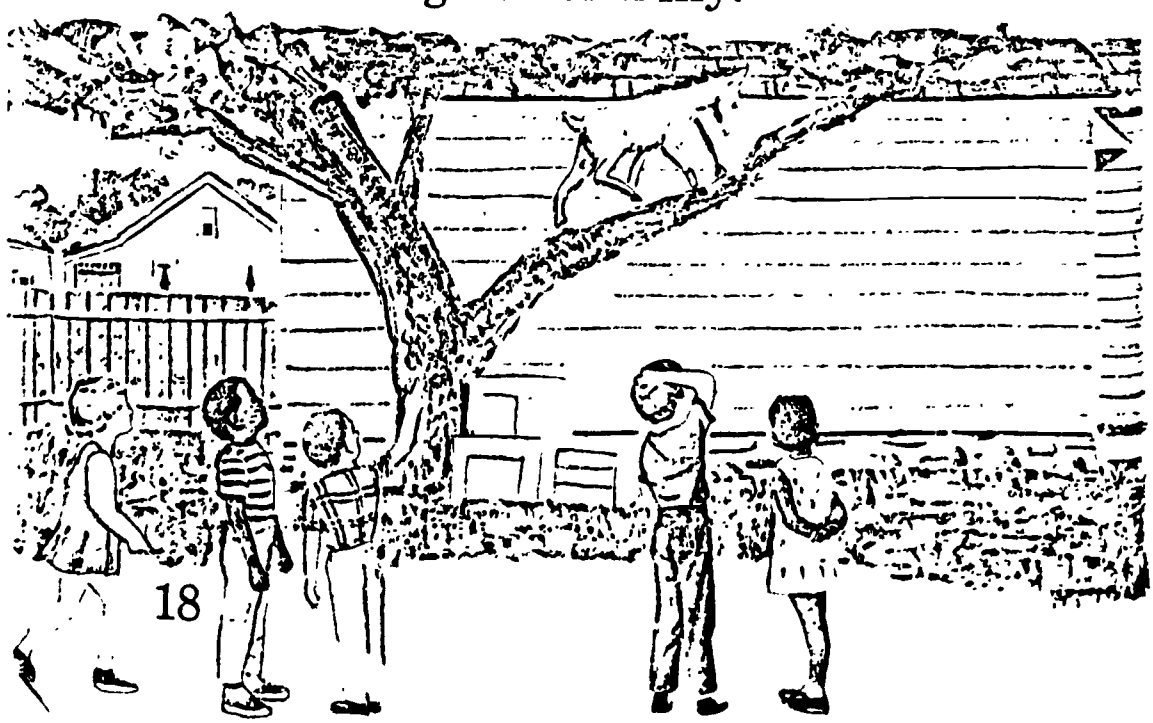
Things You See

All text that follows is excerpted from Things You See (Macmillan, 1970).

Mike said, "Look, Van.
Billy can go up the tree.
What will he do?
Can you go after Billy?"

Mary said, "Do something, Jeff!
Get Billy down!"

"I will go up," said Van.
"I will go after Billy."



18

Daddy said, "Here!
Here is a little green for you."

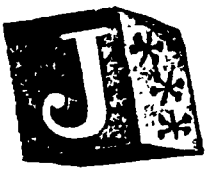
Mike said, "I like red and green.
Make it green with red wheels."

"Yes," said Jeff.
"I will make it green.
And Van can make the wheels red."

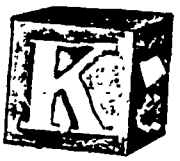
"I will," said Van.

48

J j



K k



L l

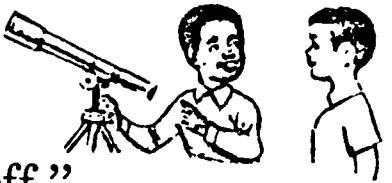
like
Like
likes

Mike said, "I <u>like</u> Billy.
And Jeff <u>likes</u> Billy."

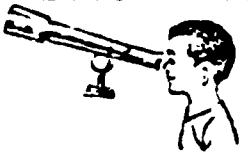
little
Little

The red ball is <u>little.</u>

look
Look
looks



Van said,
"<u>Look</u> here, Jeff."
Jeff <u>looks</u> and sees something.



65

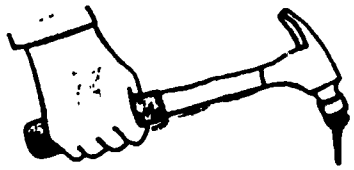
APPENDIX B

Selected Kindergarten Materials

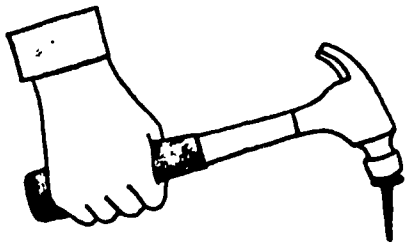
from District B

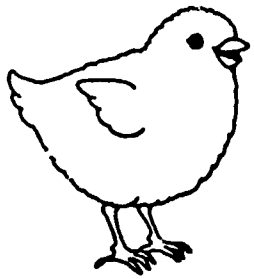
Selected page from Harcourt,
Brace, Jovancvich's Look, Listen
and Learn

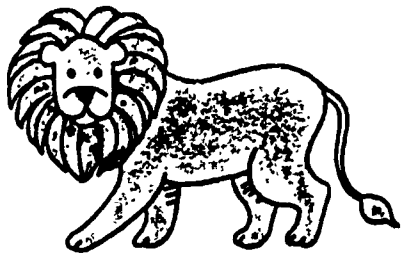
All text that follows is excerpted from Look, Listen, and Learn (Harcourt, Brace, Jovanovich, 1983).

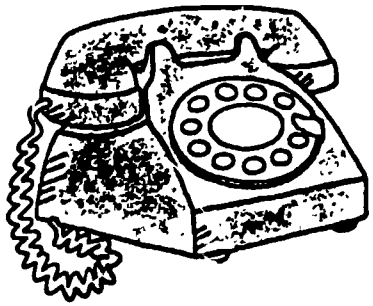


loud

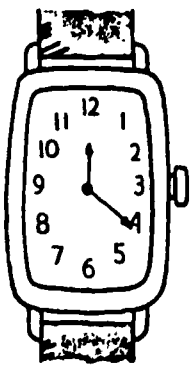








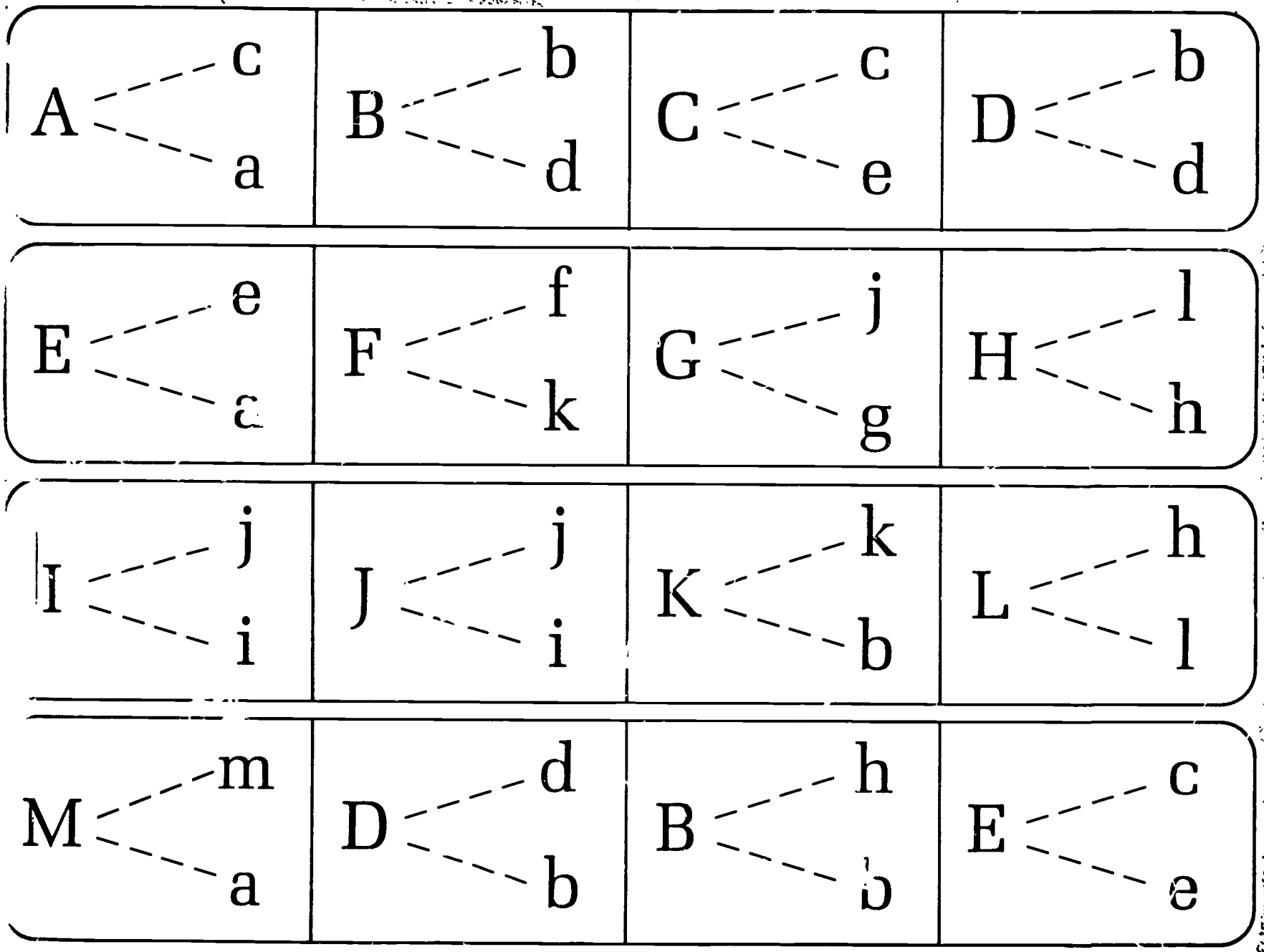
soft



Auditory discrimination of sounds.
Underline the key pictures and the pictures that illustrate the same sounds as the key pictures (See T E. for oral introduction and complete directions.)

WALK	WALK	STOP	GO	STOP	STOP
GO	STOP	GO	GO	WALK	WALK
cat	cat	bug	bug	bug	cat
top	top	top	cat	bug	bug

Visual discrimination of words.
Underline the matching pairs of words. (See T.E. for oral introduction and completion of activity.)



BEST COPY AVAILABLE

atching capital and small letters.
lines from the key capital letters to the small letters that have the same names. (See T.E. for oral introduction and complete directions.)

Selected page from Harcourt,
Brace, Jovanovich's Sounds,
Symbols, and Sense

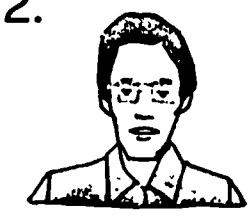
All text that follows is excerpted from Sound, Symbols, and Sense (Harcourt, Brace, Jovanovich, 1983).

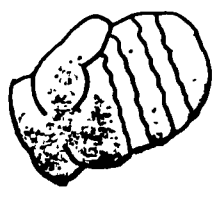
Name _____

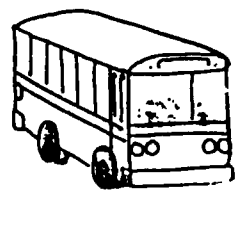
man man man

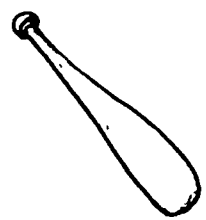
1.

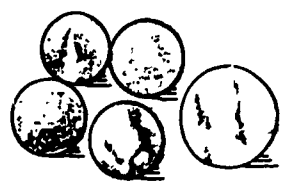
2.



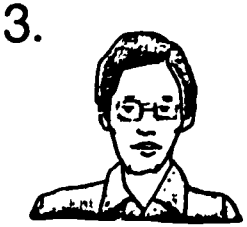


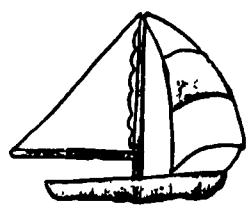


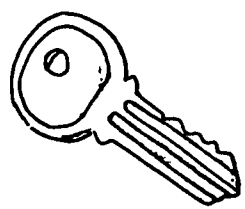




3.



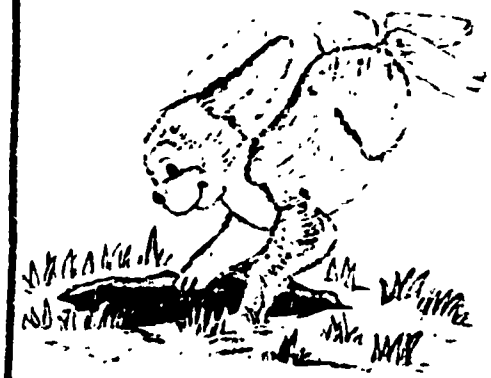




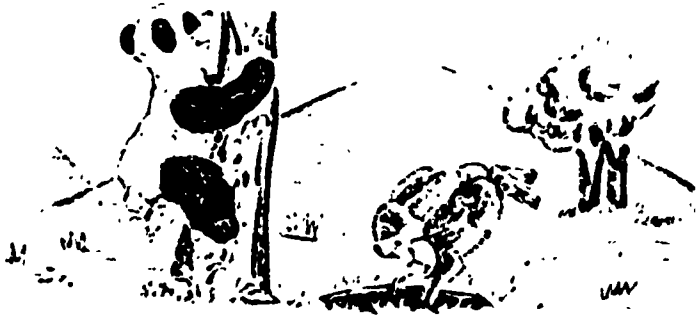
Word Service/Decoding (Phonics): Initial /m/*m*
Write *m* to make a word and for practice.
Draw a line around the two pictures in each row whose names begin like *man*.
Write the letter that stands for the beginning sound in those names.

Name _____

Buffy went ⇧.



Mack went ⇩.



Buffy went ⇧.

Mack went ⇩.

Word Service/Decoding (Vocabulary Review): ***Buffy, Mack, went***
Read each sentence. Write each sentence
Then read the sentences at the bottom of the page.

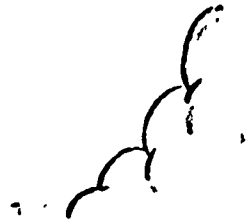
Name _____

1. 

- ○ Buffy and Mack ran in.
- ○ Buffy and Mack went up.

2. 

- ○ The  was in the sun.
- ○ The  ran to Buffy.

3. 

- ○ The sun went in.
- ○ The sun ran and ran.

4. 

- ○ The  ran in the sun.
- ○ The  went in.

Word Service/Decoding (Vocabulary Review): *the, sun, in*
Look at each picture and read the sentences to the right of it.
Fill in the circle next to the sentence that tells about the picture.

APPENDIX C

Coded Student Work
Sheet

T#: 5 | Round: 1 | Cohort: | % success.

PURCELL PMI Student	LLL VISUAL DISCRIMINATION LETTERS p.37 — 20 ITEMS	VISUAL DISCRIMINATION p.38 — 20 ITEMS	p.39 — 9 ITEMS	p.39 — 6 ITEMS							
1	100	100	89	83							
2	100	95	100	100							
3	100	100	100	67							
4	95	70	100	100							
5	100	100	100	83							
6	55	80	100	83							
7	100	95	100	100							
8	100	100	100	100							
9	100	95	100	50							
10	40	25	100	83							
11	100	100	—	—							
12	100	100	100	83							
13	100	90	100	100							
14	100	50	89	16							
15	100	100	100	67							
16	80	75	100	50							
17	100	95	100	67							
18	60	65	100	33							
19	100	100	89	83							
20	100	100	89	50							
21	100	100	75	100							
22	100	100	100	100							