DOCUMENT RESUME

ED 272 525   TM 860 431

AUTHOR   Claus, Richard N.; Quimper, Barry E.
TITLE   Prekindergarten Program Process Evaluation Report,
              1985-86.
INSTITUTION   Saginaw Public Schools, Mich. Dept. of Evaluation
              Services.
PUB DATE   Feb 86
NOTE   27p.
PUB TYPE   Reports - Evaluative/Feasibility (142) --
              Tests/Evaluation Instruments (160)

EDRS PRICE   MF01/PC02 Plus Postage.
DESCRIPTORS   Behavioral Objectives; *Classroom Observation
              Techniques; Cognitive Objectives; *Compensatory
              Education; Educational Assessment; *Formative
              Evaluation; Parent Participation; Preschool
              Education; *Program Evaluation; Program
              Implementation; Psychomotor Objectives; *School
              Readiness
IDENTIFIERS   Education Consolidation Improvement Act Chapter 1;
              *Prekindergarten Activity Observation Checklist;
              Saginaw City School System MI

ABSTRACT
         A process evaluation was conducted of the Saginaw,
Michigan Public Schools' Prekindergarten Program. During the 1985-86
year, 454 children participated, based on their Prekindergarten
Readiness Screening Device scores. The half-day program was funded
through Chapter 1 of the Education Consolidation and Improvement Act
to develop the school readiness skills of 4-year-olds. The Chapter 1
Prekindergarten Activity Observation Checklist was used to determine
program implementation and to identify strengths and weaknesses which
might influence program outcomes. Program supervisors conducted one
observation, and two evaluators repeated it one month later. The
checklist covered activities related to educational objectives, as
well as parent role, development of language and self esteem,
behavior modification, and learning center management. It was
concluded that: (1) having two observations at each site was useful;
and (2) the supervisor's feedback encouraged participants to follow
guidelines. Additional expressive language activities and a teacher
manual were recommended. (The objectives and the checklist are
appended). (GDC)

EVALUATION REPORT

PREKINDERGARTEN PROGRAM PROCESS
EVALUATION REPORT

1985-86

DEPARTMENT OF EVALUATION SERVICES

- PROVIDING ASSESSMENT, PROGRAM EVALUATION AND RESEARCH SERVICES -

Saginaw Public Schools

Saginaw, Michigan

PREKINDERGARTEN PROGRAM PROCESS
EVALUATION REPORT

1985-86

An Approved Report of the
DIVISION OF ADMINISTRATION AND PERSONNEL
Department of Evaluation, Testing and Research

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February, 1986

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PROGRAM DESCRIPTION

Saginaw's Prekindergarten Program, which has been in operation for the past sixteen years, is funded through Chapter 1 of the Education Consolidation and Improvement Act (ECIA). It is designed to provide four year-olds with an environment that will enable them to develop skills needed for future success in school. The ultimate purpose of this program is to prepare inner city children, many of whom came from backgrounds that may not have equipped them with these skills, for entry into kindergarten. The program has goals and objectives (see Appendix A) that children, teachers, and parents work toward throughout the year. After a year of prekindergarten, these children should at least be on par with other children as they enter kindergarten.

This year there were 454 children enrolled at thirteen buildings, one of which operated a half-day session.* For the eighth consecutive year, the standardized 27 item Prekindergarten Readiness Screening Device (PRSD) was individually administered. Selection for this year's program was based on the preschooler receiving a raw score of 19 or below. A total of 516 children were screened this year (1985-86) as opposed to 488 screened last year (1984-85).

The prekindergarten staff included a director, 13 certified teachers, 13 teacher aides, and a graphic arts/clerical aide. With the exception of the half-day sites, each school operated two sessions, one from 8:45 a.m. to 11:15 a.m., and another from 12:30 p.m. to 3:10 p.m. Class sizes varied from 13 to 20 children per half-day session.

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*Full day programs are operating at Baillie, Coulter, Emerson, Haley, Heavenrich, Houghton, Jones, Morley, J. Rouse, J. Loomis, Webber, and Longfellow. A half-day session operates at Salina.

PROCESS EVALUATION PROCEDURES

A process evaluation involves monitoring a program throughout the year to determine if the program is being implemented as planned. This makes it possible to identify strengths and weaknesses that might influence program outcomes. For this program, the process evaluation was accomplished by on-site observation of classrooms by both the program supervisor and two evaluators. Both the supervisor and evaluators used the Chapter 1 Prekindergarten Activity Observation Checklist (see Appendix B) for the observations. The program supervisor observed all classrooms between January 14-30, 1986; while the two evaluators observed all classrooms between February 10-20, 1986.

PRESENTATION AND ANALYSIS OF PROCESS DATA

· Half-day observations were conducted by the supervisor in January, 1986 and by the evaluators in February, 1986. These observers used the same checklist that focused both on program activities related directly to product objectives as well as general issues related to how activities were conducted (i.e., use of parents and aides; teacher behaviors related to language and self-esteem development; behavior modification; and management of learning centers).

All thirteen sites were observed by both teams. It was the shared expectation of those involved that the feedback of the results of the observations in January would result in some observeable change in February findings by the evaluation team.

The tabulated results of the checklist are presented on the following pages for both the supervisor and evaluators.

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CHAPTER 1 PREKINDERGARTEN ACTIVITY
OBSERVATION CHECKLIST
1985-86

(N=13 centers observed by both supervisor & evaluators)

Types of Activities*	Evaluators Learning Center	Group	Supervisor Learning Center	Group	% Difference (Evaluators-Supervisor) Learning Center	Group
Gross Motor Coordination**	5 (38.5%)	12 (92.3%)	3 (23.1%)	10 (76.9%)	15.4	15.4
Eye-Hand Coordination (Gross and Fine Motor and Manipulative)**	13 (100.0%)	6 (46.2%)	13 (100.0%)	4 (30.8%)	0.0	15.4
Properties of Object; i.e., Shape, Color, Hardness (five senses)**	10 (76.9%)	4 (30.8%)	7 (53.8%)	1 (7.7%)	23.1	23.1
Grouping and Regrouping (i.e., classification)**	4 (30.8%)	2 (15.8%)	3 (23.1%)	2 (15.8%)	7.7	0.0
Temporal Ordering of Events	4 (30.8%)	6 (46.2%)	1 (7.7%)	2 (15.8%)	23.1	30.4
Social Knowledge (i.e., work roles)	1 (7.7%)	5 (38.5%)	3 (23.1%)	4 (30.8%)	-15.4	7.7
Transitive Relations (i.e., length, height, weight, shades, hardness)	7 (53.8%)	6 (46.2%)	4 (30.8%)	1 (7.7%)	23.0	38.5
One-to-One Comparison (i.e., matching, pouring, getting coats, rearranging collections)	9 (69.2%)	6 (46.2%)	12 (92.3%)	2 (15.8%)	23.1	30.4
Copying Specific Shapes (i.e., cutting, pantomime, drawing)	8 (61.5%)	6 (46.2%)	9 (69.2%)	5 (38.5%)	-7.7	7.7
Linear Order (i.e., straight lines, counting)	4 (30.8%)	3 (23.1%)	3 (23.1%)	7 (53.8%)	7.7	-30.7
Expressive Language: Labeling (i.e., will name various objects in room, in a picture, etc.)	1 (7.7%)	2 (15.8%)	5 (38.5%)	7 (53.0%)	-30.8	-38.0
Expressive Language: Mean Length of Utterance (i.e., encourage, completeness of sentences, length, etc.)	0 (0.0%)	12 (92.3%)	0 (0.0%)	7 (53.8%)	0.0	38.5
Expressive Language: Semantics (i.e., descriptors, modifiers, etc.)	0 (0.0%)	10 (76.9%)	1 (7.7%)	4 (30.8%)	-7.7	46.1
Expressive Language: Plot Extension (i.e., predictions, cause and effect, conclusions)	0 (0.0%)	9 (69.2%)	0 (0.0%)	5 (38.5%)	0.0	30.7
Record of Parental Participation Being Maintained	--	13 (100.0%)	--	13 (100.0%)	---	0.0

*Refer to ECIA Chapter 1 Prekindergarten Activity Key for a detailed explanation of the types of activities (see Appendix A).

..ctivities plus some aspect of work on physical knowledge should be part of the daily classroom program.

1. If parents are in the classroom during your observation, what role(s) do they play? Indicate the frequency and approximate time spent.*

	N	Evaluator Average time in minutes	N	Supervisor Average time in minutes	Difference in Average time in minutes
a. Aide	9	49.8	8	77.5	-22.7
b. Tutor (one-to-one)	6	40.5	0	0.0	40.5
c. Observer	6	40.7	7	35.0	5.7
d. Guest Speaker	1	10.0	0	0.0	10.0
e. Other - Center	4	25.0	7	62.9	-37.9

Suggestions for improvement or extension:

	Evaluators	Supervisor
● Interact with children and/or prepare materials rather than just observing	3	4
● Recommend that a parent help in each session	0	1
● Key questions should be planned for to make the experience more meaningful	0	1
● Allow the children to do their own work	1	0

2. Describe general tasks the aide performed during the observation. Indicate the frequency and approximate time spent.

	N	Evaluator Average time in minutes	N	Supervisor Average time in minutes	Difference in Average time in minutes
a. Prepare materials	11	21.6	12	48.1	-26.5
b. Tutor (one-to-one)	6	10.3	0	0.0	10.3
c. Entire group activity leader	2	12.5	3	10.0	2.5
d. Small group activity leader	10	45.0	2	40.0	5.0
e. Other-Center	5	39.0	12	67.5	-28.5
f. Other-Teacher Helper	8	21.2	7	22.1	- 0.9
g. Other-Observer	3	19.4	3	28.3	- 8.9

*Parents were present in 9 and 10 rooms for evaluators and supervisor respectively.

Suggestions for improvement or extension:

	Evaluators	Supervisor
● Reduce number of negative comments	0	6
● Materials should be in place and ready to go for each session	0	1
● Aide should act as a model for children during activities	0	1
● Observation by aide should be kept to a minimum	1	1

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3. To what extent is language development encouraged by the teacher? Indicate the number of teachers encouraging and frequency of each strategy.

	Evaluator		Supervisor		
	N	Average Frequency	N	Average Frequency	Difference in Number
a. Acts as model	10	(3.4)	9	(--)	1
b. Provides conducive environment	12	(3.3)	11	(--)	1
c. Provides appropriate activities	10	(3.2)	12	(--)	-2

Suggestion for improvement or extension:

	Evaluators	Supervisor
• Need to add activities to encourage both formal and informal language development	0	7
• Many opportunities for informal language development were evident	0	5
• Need to include more planned language experiences	0	3

4. To what extent is building the positive self-esteem of the child evident in the classroom? (i.e., accepting atmosphere, feeling tone, positive attitude of adults, verbal responses, recognition, body language)

```
1...............2...............3...............4...............5...............
Few if any efforts                                              Many efforts
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The average ratings for evaluators and supervisor on the building positive self-esteem scales were approximately the same with an average rating of 4.1 and 4.2 respectively.

Remarks:

	Evaluators	Supervisor
• Self-esteem builders:		
- Positive remarks were witnessed (e.g., "Oh, nice smile; It's nice to see people smiling at us - just the way you smile.")	8	1
- Treat children with positive attitude	7	1
- Treat children with respect, accepting responses and attitudes	5	5
- "Sweet but firm" overall approach	2	1

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- Comes naturally for teachers and aides when both feel confident and special about themselves	0	1
● Self-esteem can be more positively enhanced by:		
- Taking an opportunity to show and say warm specifics in a positive manner	2	4
- Reducing negative remarks	1	3
- Acting with enthusiasm and warmth	1	2
- Positively stating expectations (clearly stating and enforcing)	0	2
- Communicating to children about their specialness	1	1

5. To what extent is behavior modification or increasing productive student behavior practiced? Indicate the number of teachers employing behavior modification and average frequency of use in the classrooms where observed.

	Evaluators		Supervisor		Difference	
	Child N Average Frequency	Group N Average Frequency	Child N Average Frequency	Group N Average Frequency	Child N	Group N
Positive Reinforcement						
Social approval	13 (15)	8 (5)	13 (-)*	13 (-)	0	-5
Privilege	1 (1)	0 (0)	0 (0)	0 (0)	1	0
Tangibles	0 (0)	0 (0)	2 (-)	1 (-)	-2	-1
Extinction	5 (2)	2 (1)	1 (-)	1 (-)	4	1
Negative Reinforcement	8 (4)	1 (1)	9 (-)	10 (-)	-1	-9

*The supervisor did not record the frequency of occurrence.

Remarks:

	Evaluators	Supervisor
● Need to explain expected behavior followed by positive remarks	0	6.
● Lots of positive reinforcement (social approval)	0	3
● Positive reinforcement over used	0	3
● Positive reinforcement used with discretion	0	3
● Neither positive or negative reinforcement was used, yet behavior was acceptable	0	3
● Over use of negative reinforcement or misuse of negative reinforcement	0	3
● Negative reinforcement used sparingly	0	2
● Negative reinforcement was followed with expected behavior and then positively reinforced	0	1

6. How are the learning centers used and managed?*

	Evaluators	Supervisor	Difference
a. Average number of centers	6.5	8.9	-2.4
b. How managed (expressed as a percentage)?			
- Independent	30.8%	7.7%	23.1%
- Adult Directed	7.7%	0.0%	7.7%
- Both Independent and Adult Directed	61.5%	92.3%	-30.8%
	100.0%	100.0%	

c. Teachers' role (expressed as a percentage)

- One center	53.8%	23.1%	30.7%
- Floating	46.2%	76.9%	-30.7%
	100.0%	100.0%	

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SUMMARY AND RECOMMENDATIONS

To summarize the results and formulate a set of recommendations, a meeting was held on March 21, 1986 between the Supervisor of Early Childhood Education and the Manager of Program Evaluation. One initial conclusion was that having two observations at each site was quite useful in gauging the effect of the supervisor's comments. Though having a dual set of observations is time-consuming, both reviewers felt that the supervisor's feedback had a noticeable impact on participants to more closely follow proposed guidelines. Hopefully, this procedure can be repeated in the future even more productively when more precise definition of certain program elements exist (e.g., parent as aide, tutor, and center leader; proper use of extinction; teacher's role in the management of centers, etc.). What follows are the highlights that emerged during this sessi, that sought to identify strengths, weaknesses, and possible recommendations for further program refinements.

The review of the observational results yielded the following strong points.

- It is particularly encouraging that program activities related to properties of objectives, temporal ordering of events, trans-s.tive relations, and expressive language (i.e., mean length of utterance, semantics, and plot extension) increased signifi-cantly (23.0% to 46.1% more frequent) during the second obser-vation.

- Records of parental participation are being visibly maintained in all classrooms.

- The variety of jobs parents perform in the classroom is greatly expanded over the past five years and the amount of "time on task" for meaningful classroom roles has also increased.

- Aides are used in a multitude of roles that range from preparing materials to leaders of large group activities.

- Enhancement of the self-esteem of the child by adults was evident in a plurality of the classrooms.

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● Teachers use positive reinforcement often and usually in an effective manner.

● A large number of learning centers are evident in almost all classrooms observed by both the supervisor and the evaluators.

The following areas were discussed with the hope of improving them.

● The daily grouping and regrouping activities (i.e., classification) are observed in less than half of the classrooms by both the supervisor and evaluators.

● Expressive language involving labeling of objects are infrequently observed by the evaluators.

● Generally, expressive language activities need to be increased on both a formal and an informal basis.

● Negative comments by aides and teachers are not always used constructively (i.e., they are not followed by a statement of the expected behavior and positive reinforcement when the expected behavior is observed).

● The fine points of behavior modification (e.g., extinction, use of privileges, varied reinforcement schedules, etc.) seem to be missing in a number of classrooms.

● Quality of activities varied from center to center within a particular classroom and, more importantly, across classrooms.

● Overall, the supervisor, evaluators, and staff must come to agreement on key issues such as definition for the following: e.g., role of parent as aide; role of parent as guest speaker; who should be the floating center leader; maximum number of centers possible and still allowing for quality instruction, etc.

From this discussion, the following mutually agreed upon recommendations were formulated. These program refinements will be implemented during the remainder of this year and throughout the 1986-87 school year.

1. <u>Conduct Task Analysis Necessary to Attain the Regrouping Aspect of Classification.</u> Staff with guidance of the Program Supervisor should conduct such a task analysis from simple to more complex tasks. Undoubtedly, this will involve purchasing additional materials to use in the classification activities that can be standardized across all the classrooms. In addition, teachers will have to make a conscious effort to include this or similar regrouping aspects on a daily basis.

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2. <u>Define Key Elements of Curriculum in Operational Terms.</u> This definitional process would move beyond a curriculum guide per se to specific activities that were appropriate for large group or center applications. Expressive language and re-grouping activities would be two key areas where more specific lessons would be further defined.

3. <u>Provide Inservice on Expressive Language Development.</u> These staff development activities should deal with both formal and informal expressive language development exercises. Sample lesson plans for a day, week, and month should be developed in conjunction with this training. Common themes relative to both formal and informal expressive language development should be covered in these extended lesson plans. Center conducted expressive language activities should also be included.

4. <u>Write a "How To Do Prekindergarten Manual".</u> The staff along with the program supervisor should complete a Prekindergarten Handbook that explains in detail the program's goals, objectives, instructional approach, philosophy, expectations, and procedures. This document would be an excellent tool for all teachers, but particularly for newer ones. This would be an excellent document to define learning center operations more fully (e.g., when should adults float from center to center; quality versus quantity issue related to number of centers; critical centers and free choice centers defined; length of time at any one center; etc.).

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APPENDICES

APPENDIX A

1985-86 CHAPTER 1 PREKINDERGARTEN OBJECTIVES

1. Physical Knowledge

   80% of the pupils will demonstrate properties of and display appro-
   priate behavior for exploring properties of objects by correctly
   responding to two of three items related.

2. Social Knowledge

   80% of the pupils will demonstrate knowledge of social roles by
   correctly responding to at least three of four items related to
   objective 2.

3. Knowledge: Classification

   50% of the pupils will successfully apply two criteria for sorting:
   color and/or form.

4. Knowledge: Logical-Mathematical-Seriation

   70% of the pupils will compare and arrange objects according to a
   given dimension by coordinating transitive relationships of at least
   one of two items of this objective.

5. Spatio-Temporal Knowledge: Structuring of Time

   50% of the pupils will respond correctly to at least 50% of the items
   related to temporal ordering of events.

6. Expressive Language: Labeling

   85% of the pupils will label at least four objects in the birthday
   party picture.

7. Expressive Language: Mean Length of Utterance

   80% of the pupils will use sentences of at least five words to describe
   the birthday party picture.

8. Expressive Language: Semantics

   65% of the pupils will use at least three of five elements of fluency
   in their description of the birthday party picture.

9. Expressive Language: Plot Extension/Expansion

   50% of the pupils will use at least one element of plot extension in
   their description of the birthday party picture.

10. <u>Fine Motor Coordination</u>

    80% of the pupils will successfully perform at least three of four activities involving hand/eye coordination.

11. <u>Spatiotemporal Knowledge: Structuring of Space (order)</u>

    65% of the pupils will correctly respond to topological relationships of order or pattern.

12. <u>Representation at the Symbol Level: Specific Shapes</u>

    65% of the pupils will copy successfully three of four shapes.

13. <u>Gross Motor Coordination</u>

    80% of pupils will successfully complete at least three of four large movements of the body.

14. <u>Parent Participation</u>

    60% of the adult members of the prekindergarten family will participate in school activities at least four times per year.

15. <u>Parent Education Program: Friday Meetings</u>

    60% of the adult members of the prekindergarten family will participate in at least four Friday meetings.

16. <u>Parent Education Program: Home Work Activities</u>

    80% of the adult members of the prekindergarten family will help the child complete at least nine prekindergarten home activities and return them to school.

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APPENDIX B

CHAPTER 1 PREKINDERGARTEN ACTIVITY
OBSERVATION CHECKLIST
1985-86

Teacher's Name_____Observer's Name_____

School_____Date_____Length of Observation_____

Number preschoolers_____

Productive Objective Referent	Type of Activity*	(✓) or C+	Check if Activity Occurred During Observation Period
			Example
13	Gross Motor Coordination**		
10	Eye-Hand Coordination (Gross and Fine Motor and Manipulative) **		
1	Properties of Object; i.e., shape, color, hardness (five senses)**		
3	Grouping and Regrouping (i.e., classification)**		
16	Temporal Ordering of Events		
2	Social Knowledge (i.e., work roles)		

*Refer to ECIA Chapter 1 Pre-School Examples of Pre-School Activities Sheet for a detailed explanation of the types of activities.

**These activities plus some aspect of work on_physical knowledge_ hould be part of the daily classroom activity.

hese activities were part of a learning center.

Product Objective Referent	Type of Activity*	(✓) or C+	Check if Activity Occurred During Observation Period
			Example
4	Transitive Relations (i.e., length, height, weight, shades, hardness)		
4	One-to-One Comparison (i.e., matching, pouring, getting coates, rearranging collections)		
12	Copying Specific Shapes (i.e., cutting, pantomine, drawing)		
11	Linear Order (i.e., straight lines, counting)		
6	Expressive Language: Labeling (i.e., will name various objects in room, in a picture etc.)		
7	Expressive Language: Mean Length of Utterance (i.e., encourage, completeness of sentences, length, etc.)		
8	Expressive Language: Semantics (i.e., descriptors, modifiers, etc.)		
9	Expressive Language: Plot Extension (i.e., predictions cause and effect, conclusions)		
14-16	Record of Parental Participation Being Maintained		

*Refer to ECIA Chapter 1 Pre-School Examples of Pre-School Activities Sheet for a detailed explanation of the types of activities.

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1. If parents are in the classroom during your observation, What role(s) do they play? Indicate the frequency and approximate time spent.

	Frequency	Time
a. Aide		
b. Tutor (one-to-one)		
c. Observer		
d. Guest Speaker		
e. Other		

Suggestions for improvement or extension:

_____

_____

_____

_____

_____

_____

2. Describe general tasks the aide performed during the observation. Indicate the frequency and approximate time spent.

	Frequency	Time
a. Prepare materials		
b. Tutor (one-to-one)		
c. Entire group activity leader		
d. Small group activity leader		
e. Other		
f. Other		
g. Other		

Suggestions for improvement or extension:

_____

_____

_____

_____

_____

3. To what extent is language development encouraged by the teacher? Indicate the frequency of each strategy.

	Frequency	Suggestion For Improvement/extensio
a. Acts as model		
b. Provides conducive environment		
c. Provides appropriate activities		
d. Other		
e. Other		
f. Other		

4. To what extent is building the positive self-esteem of the child evident in the classroom? (i.e., accepting atmosphere,feeling tone, positive attitudes of adults, verbal responses, recognition, body language)

1............2...,.........3............4............5...............
Few if any efforts   Many efforts

Remarks:

_____

_____

_____

_____

_____

_____

19   23

5. To what extent is behavior modification o ncreasing productive student behavior practiced?

	Frequency	
	Child	Group
Positive reinforcement		
Social approval		
Privileges		
Tangibles		
Extinction		
Negative reinforcement		

Remarks:

_____

_____

_____

_____

_____

_____

_____

6. How are the learning centers used and managed?*

a. Number of centers _____

b. How managed? (check as many as apply)

       Independent _____

       Adult directed _____

c. Teacher role

       One center _____

       Floating _____

*Purpose has been indicated on Activity Checklist with a "C" instead of a check mark.

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ECIA CHAPTER 1 -- PRE-SCHOOL

Example of Pre-School Activities According to
Product and Process Objectives

Type of Activity	Activity Examples	
Gross Motor Coordination (large body movements, climbing, walking, rolling)	-Rhythms -Dancing -Jungle gym -Free play activities -Balance beam -Mats--tumbling -Play All equipment -Jumping jiminy -Jump roles--forming circles with activities -Jumping Jacks -Duck Duck Goose -Squirrel in tree	-Johnny works with one hammer -Bear hunt -Acting out Mother Goose rhyme -Rhythm Estamae -Dodge ball -Balls and skateboard -Play house -Roller skates -Snowman activities -Up the steps
Fine Motor Activities--Eye-Hand Coordination (use of classroom tools and materials--cutting, pasting, tearing)	-Art work -Writing on the board -Finger painting -Folding -Stirring pudding -Peg boards -Pouring -Geoboards -Puzzles -Cuisenaire rods -Sorting beads and buttons -TRY -Building Blocks	-Lacing -Weaving -Chalkboards -Flannel boards -Clay -Sand box -Water play -Spreading peanut butter -Coats--button and zippers -Clean up time -Finger plays -Using musical instruments
Properties of and Appropriate Behavior for Exploring Properties of an Object (Shape, color, hardness--using the five senses. Changing shades, measuring, weighing.)	-Making apple sauce, soups, cookies, etc. -Smelling and handling Fruits and vegetables -Sawing wood -Tinkertoys -Sand paper activities -Feeling activities -Snacks--(mixtures) -Snow experiments -Bubble blowing -Straw painting -Furry and other textures toys -Fast and slow inclined plane	-Paper mache -Growing plants from seeds -Cutting -Freezing -Heating -Rolling -Twisting -Frosting -Jello -Butter -Cakes -Paint mixing -Sinking and floating -Color macaroni -Play dough

(ECIA CHAPTER 1--PRE-SCHOOL Continued)

Type of Activity	Activity Examples	
Temporal Ordering of Three or Four Events (structuring time)	-Show and tell -Story--book -Role-playing -Science experiments -Calendar -Preparat n art, lunch, cleanup h me bound	-Growth stages -Finger play -Farmer in Dell -Audio-visual materials
Social Knowledge (world of work and roles of workers)	-Books -Field trips -Films -Visitors -Role-playing -Helpers in the room	-Community workers -School workers -Visiting patrolmen -Postman
One Criterion Classification, Shifting to a Second Criterion Among an Array of Objects (grouping shifting from one criterion to another)	-Color--blocks -Shape -Size -Texture -Tone -Utility -Smell -Taste -Calendar	-Sorting -Attendance--number of girls -Attendance--number of boys -Putting toys away -Doll house -Doll dishes
Relations Among Transitive Relationships (seriation--comparing and arranging things according to a given dimension by transitive relations)	-Length -Height -Weight -Shades of color -Hardness -Softness -Cuisenaire rods -Block tower building -Texture activities	
Conservation of Number by One-to-One Comparison (gross comparison between collections; comparisons by one-to-one correspondence)	-Collections--rearrangement of -Lunch activites -Setting table -Matching -Calendar -Passing anything -Weather	-Getting coats -Right boot -Pouring activities

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Type of Activity	Activity Examples	
Topological Rela- tionships Con- cerning Linear Order (structure of space)	-Games--straight line -Role-playing -Manipulation of Object (rods, blocks, toys) -Poetry -Prose	-Counting days till____ -Finger plays -Bear hunt -AAA -Ten Little Indians
Copying of Specific Shapes	-Line drawings -Sand drawing -Paper cutting -Cookie cutting with clay -"Simon Says" -Tracing -Rubbing	-Pegboard -Geoboards -TRY -Writing chalkboard -Directed copying activity -Pantomine -Exe.cises
Expressive Language: Labeling	-Naming pictures in storybook -Naming items in catalogues -Naming objects in house -Naming items in classroom	
Expressive Language: MLU (Mean Length of Utterance)	-Retelling a story -Expounding child's sentence (i.e., apple-- eat apple--I eat apple--I eat an apple	
Expressive Language: Semantics	-Flannel board stories -Language stories -Emphasizing specific -Grammatical structures: such as ing, past tense, personal pronouns and copulas (verb "to be") and descriptors	
Expressive Language: Plot Extension	-Completing unfinished sentence -Adding endings to stories -Drawing inferences	

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