DOCUMENT RESUME

ED 140 936 PS 009 298

AUTHOR Campbell, Mindy; Palender, Carol
TITLE A Piagetian-Based Curriculum for Toddlers.
INSTITUTION California Univ., Los Angeles. School of Education.
SPONS AGENCY National Inst. of Mental Health (DHEW), Rockville, Md.
PUB DATE 76
GRANT USPHS-5-T01-MH-12924
NOTE 46p.; Report No. 4; For related documents, see PS 009 299-300

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS *Cognitive Development; Curriculum Development; *Day Care Services; *Developmental Programs; Developmental Stages; *Preschool Curriculum; Program Content; *Program Descriptions; Teacher Role
IDENTIFIERS *Piaget (Jean)

ABSTRACT

This paper outlines a toddler day care curriculum, based on Piaget's developmental theory, which is suitable for implementation at a laboratory preschool or community college child care center. Implications of Piaget's theory for the curriculum of a toddler program are discussed. The specific program developed is described in terms of guidelines for arrangement of the environment, definition of teacher roles, development of open-ended curricula, decisions concerning developmental appropriateness, and individualization of curriculum and environment. Emphasis throughout the program is on process rather than product. Approximately half the paper consists of specific activities for toddlers accompanied by developmental goals relating the activities to Piagetian concepts. (Author/SB)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED140936

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A Piagetian-Based Curriculum for Toddlers

Mindy Campbell and Carol Falender

This project was supported in part by Grant UPHS-5-T01-MH-12924 as part of the National Institute of Mental Health Training Program in Early Childhood Development Specialization, Norma D. Feshbach, Training Director.

Report No. 4, 1976

Department of Education
University of California, Los Angeles

PS009298

Overview

The purpose of the present project was to develop a Piagetian-based toddler program (for children aged two to three years) suitable for implementation at a laboratory preschool or at a community college child care center. Issues in daycare for toddlers as well as the role of theory in curriculum development are discussed. The adaptation of Piaget's theory to a toddler program is then presented. The specific program developed has a basic developmental orientation and includes guidelines for arrangement of the environment, definition of teacher roles, development of open-ended curricula, decisions concerning developmental appropriateness, and individualization of curriculum and environment. Emphasis throughout is a process rather than product orientation. Specific curricula are presented with attention devoted to developmental goals and relations to Piagetian concepts.

Should There Be Daycare for Toddlers?

Although group care for toddlers can be traced back to the 16th century when John Comenius proposed schools for infants (Lazar & Rosenberg, 1971), the issues of the value, and the detrimental effects, such care may have upon toddlers, children from 18 to 36 months, is still heavily debated. Some of the major issues include toddlers' social skills and readiness for group activity, health concerns of having many very young children together in a group, and the hazards of group care in the development of the attachment to the natural mother.

Developmental psychology textbooks (i.e., Stone & Church, 1973) have typically described the toddler period as one of minimal positive social interaction between peers, thus negating the social value of group daycare. The assumption is that the only beneficial interaction is between toddler and mother. However, Rubenstein and Sandberg (1975) observed peer interactions among toddlers and reported that not only were toddlers capable of positive interactions and social relationships with each other, but they also served as valuable behavior models for one another.

Another concern has been the health hazard of grouping young children together. Caldwell (1972) has responded to this concern by citing a study by Glezen, Loda, Clyde, Senior, Schaeffer, Conley, and Denny (1971) which evaluated the incidence of respiratory illnesses in one- and three-year-olds in daycare compared to children in a large metropolitan community. While incidence was slightly higher for daycare children less than one-year-old, there were no differences for the other groups.

However, the major concern among educators, psychologists, and parents alike has been that of detrimental effects of separation of mother from child upon the development of attachment ties. The primary attachment to the mother is considered the basis of social attachments formed by the child throughout life (Ainsworth, 1969) and is considered an important force in cognitive development as well as in the development of exploration and independence (Ainsworth, 1969; Lewis & Goldberg, 1969). In extreme situations (i.e., institutional settings) characterized by poor adult-child ratios and almost total lack of stimulation, retarded development has been observed, and in part attributed to a lack of opportunity to establish primary attachments (Provence & Lipton, 1962; Yarrow, 1964). In the several studies which have been done with young children in daycare (Blehar, 1974; Caldwell, Wright, Honig, & Tannenbaum, 1970; Sagozin, 1975), two have reported no real differences in attachment behavior between home-reared and daycare children varying in age from 17 to 40 months. One which did report differences (Blehar, 1974) studied very young children in full-day situations.

In general, then, in terms of social development, health, and attachment, it would appear that quality, part-time daycare could be beneficial to the development of young children by providing a setting conducive to the child's total development, both cognitive and social.

Curriculum and Piaget

In general, developmental theory has not played a major role in curriculum conceptualization (Parker, 1974). Although several preschool programs have been derived from Piaget's theory (Kamii, 1972; Kamii &

Radin, 1967; Lavatelli, reported in Parker, 1974; Weikart, 1972), these have been for older children (three- to five-year-olds) and most have used more structured sequences of tasks or activities than would seem compatible either with a toddler population or with Piaget's thepretical position.

The curriculum outlined in this report is based on the developmental theory of Piaget, and focuses upon the creation of the environment and the role of the teacher within that environment.

Piaget describes the development of intelligence as successive, cumulative stages, each a restructuring firmly based in the one preceding it. Of concern for the toddler program to be discussed here are the sensory-motor period, from birth until approximately two years of age, and the preoperational representation period, starting roughly at age two and continuing until the child is about seven years of age. The first stage, sensory-motor development, is directly tied and limited to coordinating feedback from the senses. Seeking and constructing knowledge is not passively received by the child; instead, knowledge is not passively received by the child; instead, knowledge is actively sought and constructed through his/her direct interaction with the world. Only through direct action--grasping, shaking, droping, touching, tasting, etc.--does the child incorporate the object into his/her reality. By acting on objects the child develops schemas or action patterns, or means of interacting with the world. As the infant comes to know that object, (s)he adds that knowledge to his/her cognitive structure.

The best known area of Piaget's theory, the development of object permanence, is the one usually applied to infant and toddler programs to the exclusion of all others. At birth the child is completely egocentric.

(S)he does not yet differentiate aspects of his/her environment nor him/herself from it. Objects only exist while they are in his/her immediate environment or immediate grasp: they lack permanence. It is only as (s)he gains experience interacting with the world and develops a repetoire of action and a framework for understanding it that the child begins to decenter and structure his/her concept of space and his/her relation to the world. The sensory-motor period is a process of increasing externalization. Objects take on substance and permanence as the infant expands his/her experience and cognitive framework.

A clear example of the development of object permanence is the child's search for a missing toy. In the early part of the sensory-motor stage, if a pillow were placed over a toy to which the child were attending, (s)he would cease to look at it and would not try to remove the obstacle. The toy is no longer in his/her environment. However, by the end of the sensory-motor period, the child will not only remove the pillow but search the vicinity to discover the missing toy. Entire infant and toddler curricula have been based upon such exercises.

However, Piaget's theory has much broader implications for curriculum. With the development of symbolic function, or the ability to represent something which is not presently visible (objects, events, or actions), comes the beginning of the internal reconstruction of reality. There are two levels of symbolic function: symbols, which strongly resemble the thing signified, and signs, which are arbitrary and do not resemble the object signified. Language is an example of signs. There are five distinct behavior patterns which appear almost simultaneously and mark the emergence of representation. They are 1) deferred imitation, or imitation separated in time from the perceptual event; 2) symbolic play,

or using one object to signify another not present (ie., using a paper cup to represent a tea pot); 3) drawing what (s)he "knows" rather than what (s)he perceptually sees; 4) mental image, or the formation of internalized imitations; and 5) verbal evocation, or verbal representation, the beginning of language on a symbol level rather than on the sign level (i.e., the child says "meow" after the kitten has disappeared).

In considering the relation of experience to the development of the child's cognitive functioning, Piaget discusses three areas of influence: physical knowledge, logical-mathematical knowledge, and social transmission, or three modes of receiving information. Physical knowledge is direct feedback from objects and the discovery of concrete properties of those objects. Examples include the discovery that apples are red or that balls bounce, and glasses do not, when dropped. Logical-mathematical knowledge deals with feedback from objects but refers to discovering relationships and coordinating actions internally. The child's own actions on the object provide the feedback rather than the physical properties of the object. For instance, a child might line up a series of rocks and count them one way, then reverse and find that the numerical property stays the same. Finding that there are ten rocks is physical feedback, but discovering that the direction of counting does not change that property is coordination of the information and an example of logical-mathematical knowledge.

Social transmission refers to information passed on socially: a parent telling a young child that an object is called paper, or that hitting is not appropriate; a child's imitation of someone cooking.

With the new structures, the child's concepts of space, causality and time develop. As objects take on substance and permanence, they

define the child's space. The young child decenters, expands and coordinates the environment. What had been a succession of separate spaces is coordinated and (s)he places him/herself in that space.

Causality involves if-then relationships. These relationships are difficult for the young child because the process between the observable "if" and the "then" (product) must be abstracted. As with object permanence and space, the world is composed of a series of events which are not always connected in time. But through the same processes of increased decentering, expanded experience, and development of cognitive structures, the child comes to recognize the connection between event A and event B and his/her own ability to initiate action with a certain result.

Time is closely related to causality. The child's concept of one event following another is the beginning of the temporal concept. Time is the elaboration of causal relations. As the child develops his/her cognitive framework (s)he can coordinate those relationships and expand his/her concept of time to include sequence. Waking up in the morning is followed by getting dressed which is followed by changing clothes, etc.

Though these major areas of development have been discussed separately they are very much related and intercoordinated. Each process contributes to the child's construction of the reality (s)he perceives and thus aids in the understanding of each other's concept. Representation, the major developmental achievement for toddlers, influences and is influenced by the developing concepts of object permanence, space, time and causality.

So far this discussion has emphasized the cognitive aspects of development. However, the child's intellect does not develop in isolation from his/her affective development. In fact, Piaget has been quoted as

saying that there are no cognitive mechanisms that are without affective elements and there is no affective state that has no cognitive element (Kamii, 1973). Piaget considered affect the energy behind intellectual functioning. Affect does not in itself create structures, but it influences the choice of structures and schemas employed through intrinsic motivation and curiosity. Therefore affect can accelerate or impede intellectual development. Since the two aspects are inseparable, it is expected that their development be parallel. The decentering that allows the child to differentiate him/herself from the environment also leads to a differentiation of objects and people in that environment and of emotional responses to those people.

Piaget's Theory Translated Into Curriculum

The environment for toddler daycare

The toddler program must provide a rich environment conducive to intellectual development. Piaget's primary implication in this area is that the environment be one which the child can act upon and manipulate. At the sensory-motor stage actions are direct, and motor schemas and thinking are the coordination of action. With the onset of symbolic function, actions may be internalized and physical production of the actions is not always necessary. Since toddlers are in transition from the sensory-motor to the preoperational stage and in the process of developing representation, the center's environment should be accessible to direct action. Shelves should be low and open for storage and display of materials. (That is, with the obvious exception of shelves that need to be inaccessible or locked for safety.) A variety of objects will be

reachable at any given time but not so many as to be overwhelming. Materials will be rotated frequently from storage to these open shelves.

Unlike Montessori programs, this educational implementation of Piaget's theory does not call for a certain type or set of materials. In fact, any materials are acceptable as long as they are appealing and encourage active exploration. The toddler program materials may include a variety of household objects (pots, spoons, plastic cups, etc.), traditional toys for children of this age group (blocks, push/pull toys, play telephones, etc.), and materials for fine and gross motor use. Appendix A is a list of suggested materials for toddlers.

The emphasis for a Piagetian-based toddler program is on the use of the materials. Through their individually developing action schemas and the coordination of action, the children can manipulate the materials and extend and adapt their repetoire of action.

A second, related implication for the program's environment, which follows directly from the concept of learning through action, is that experience cannot be transmitted verbally. While verbal communication has been a traditional means of education, it is not adequate for intellectual development as explained by Piaget. Another's reality and structure (such as the teacher's) cannot be superimposed on the child's construction of reality. Understanding comes through an internal structuring of a concept to the individual's total framework. Thinking at different stages of development is not only quantitatively different but qualitatively different as well.

A third implication of Piaget's theory for a toddler environment has to do with the role of peer interaction. Representation, the ability to symbolize an action or object internally, greatly accelerates the

child's process of decentering. (S)he begins to see him/herself in relation to the world rather than vice versa. (S)He can also begin to represent him/herself in various situations, e.g., playing house. The room environment should be conducive to communication and interaction among peers. Through such interaction with other children, the child gains models, and different perspectives. Free flowing areas and material groupings in an area with adequate space are essential. Movable furniture such as shelves, freestanding bulletin boards, and chairs and tables define areas, yet provide flexibility for rearrangement. Grouping of materials by interest areas would facilitate peer interaction. The interests and activities of the children must influence the particular arrangement.

Role of the Teacher

In defining the role of the teacher in a Piagetian-based toddler program, there are two things the teacher is not: the teacher is not a passive observer nor is s(he) an instructor passing on specific information at predetermined times. The teacher is there to "minimize instruction and facilitate construction" on the part of the child (Kamii, 1972); s(he) is child- rather than subject-oriented. His/her major roles are to set up the environment, direct the action, and encourage the development of the child's reasoning.

In setting up the environment, the teacher can arrange it to promote discovery. An example would be setting up a water table and making appropriate toys and smocks available. Or the teacher can arrange the environment to make discovery inevitable; for instance, storing all of the classroom balls in one box and having them returned there at clean-up

time. It is essential that the child be provided with choices, so that decisions and selection occur.

In directing the action within the classroom the teacher should follow the children's interests, not impose preconceived ideas or outcomes. If water play is set up, the teacher would not direct everyone to play with boats but allow each child to develop his/her own schemas. The children's response and the direction of an activity may suggest the next one. Thus, a central role for the teacher in a Piagetian-based program is to encourage the child's discovery and construction of his/her own reality, developing his/her cognitive abilities through action.

Piaget, in his own work with children provided an example on how to interact with children to promote their own reasoning. He used a clinical method of inquiry. Rather than a prearranged set of questions in reference to a given activity, Piaget followed the child's direction of thought. The initial response a child made would direct the course of actions or questions to follow. Piaget encouraged the child to elaborate on his/her direction of thinking without disrupting it. The teacher, too, can employ this method of interaction. (S)he can unobtrusively encourage the child to expand an action schema, test it against objects or other people, or integrate other schemas and expand his/her repetoire. As Piaget does, the teacher attempts to expand the child's reasoning without disrupting it. This flexible method of inquiry should provide the toddlers' teacher with more information about the individual child's pattern of thought than a set of questions the child might not understand or misinterpret. The curriculum must remain flexible to allow for individual differences in temperament, style, and level of cognitive functioning. For examples of Piaget's mode of inquiry, see the suggested readings section, books by Piaget.

In setting up a Piagetian-based toddler program a great deal of responsibility falls on the teacher. It is the way the teacher structures the environment, directs the use of materials, and responds to children that will incorporate Piaget's ideas or not. Given an understanding of Piaget's framework of intellectual development, the teacher can intervene to elaborate each child's direction of reasoning. It also follows that since development is an individual and personal process for each child, activities for teaching and the direction of inquiry cannot be predetermined. The responsibility to incorporate these Piagetian implications lies with the teacher and relies on his/her understanding of the process of cognitive development.

How much training and experience with Piaget's theory is necessary? A general understanding of Piaget's view of development as it relates to toddlers is important for the teacher, but (s)he need not have had great quantities of academic work on the subject. More important are the teacher's personality and attitudes toward children, qualities such as warmth, respect for others, and enthusiasm. For toddlers, it is critical that the teacher be verbal, responsive, and genuinely concerned for the children's welfare, as well as have knowledge of developmental psychology.

For toddlers, a ratio of 1:3 is advisable to allow the teachers to organize, direct and respond to individual children. This would include one teacher, one assistant or aide (who handles much of the physical aspects), and one student teacher scheduled throughout the day for ten toddlers. In larger groups, more aides, student teachers, or parent volunteers could be enlisted, with the prerequisite of preservice and inservice training supervised by the teacher.

Content of a toddler program

This section is ~~divided into the developmental areas discussed in Section IV. It is~~ meant to provide an outline of key experiences for toddlers. As previously stated, each child is different, constructing his/her own intellectual framework. Therefore, activities cannot be laid out according to "what to do when." Rather, this is a collection of areas to explore and provide starting points for manipulating the environment. Though listed in terms of goals or objectives, emphasis is on processes rather than products. Though they are discussed separately, in actuality social-emotional development, cognitive development, and the different areas of experience are integrated.

Physical Knowledge: This area has to do with feedback from objects in the child's environment and his/her own body.

- Develop an awareness of objects in the environment.
- Be aware of one's own body as an object in the environment with specific identity.
- Respond to the environment with the body.
- Use all of the senses to explore and discover.
- Coordinate body movements.
    - Move self in different situations (large motor coordination).
    - Manipulate toys and objects (small motor coordination).
- Increase and expand one's repetoire of action.
    - Use the same action in different situations to explore.
    - Use different actions in the same situations to discover.

Logical-Mathematical Knowledge: This is the child's coordination of feedback from the environment to discover relationships. Piaget

discusses three specific categories of logical-mathematical knowledge: classification, seriation, and number. Logical-mathematical knowledge refers to the coordination of feedback; therefore, the categories overlap.

Classification relates similarities and differences leading to grouping and sorting of objects according to the properties of the objects.

- Recognize attributes (color, size, shape).
- Recognize identical objects.
- Group objects according to general classes (dolls, blocks, balls, etc.)
- Recognize gross differences.
- Sort objects according to general class differences.

Seriation is relating various differences.

- Identify differences (first in dichotomies, then in trichotomies).
- Recognize relative differences (starting with trichotomies).
- Match objects in sets with relative differences (long/short, large/ small, light/heavy, loud/quiet).

Numeration is more than mere counting, but is the relationships and properties of numbers and one-to-one correspondence.

- Recognize relative amounts (large/small, many/few, more, another).
- Count by rote.
- Understand and use in practical situations the number one (then two, etc.).

Time: Time is the expansion of the child's concept of causal relationships. From if-then situations the child develops his/her ability to recognize sequences. Initial sequences are very personal temporal relations (eat, sleep, play).

- Recognize causality in a variety of situations.
- Initiate cause and effect action sequences.
- Notice temporal sequences of two events and respond accordingly (such as getting a blanket for a nap after lunch).
- Recognize the end of an activity.
- Recognize changes in temporal sequences.

Space: Beginning with the child's awareness that objects are stable and consistent in the environment, the child constructs a personal space and his/her relationship to objects in that space. (S)he gradually expands that personal space as (s)he incorporates more objects and coordinates separate spaces. (The kitchen and bedroom combine to form a concept of the house.) School is an entirely new space.

- Move self around the classroom.
- Find objects in the classroom.
- Expand one's environment.
- Understand simple spatial relations (up/down, in/out, on/under).
- Locate an object hidden in a limited area.
- Find an alternate path for one's self when one direction is blocked.
- Move objects around the classroom.
- Find alternate path for objects when one path is blocked.
- Change an object and/or its relation to the space (fold, bend, stretch, build, take apart, rearrange).

Representation: A particularly important area for toddlers, symbolic function greatly expands the child's ability to conceptualize and deal with the environment. There are two levels of representation: symbols and signs.

Symbols are totally personal, developed by the child and having meaning only for him/her. They strongly resemble the thing signified.

- Imitate actions.
- Recognize whole objects by sound, touch, taste or smell.
- Use objects symbolically in play (pretending).
- Construct an object to represent another (with clay, pipe-cleaners, blocks, etc.).
- Draw, paint or color a picture.
- Coordinate a picture with the real object.

Signs are socially determined. They are arbitrary and do not resemble the thing signified. Language is a complex group of signs.

- Correctly label (right names for object or people).
- Receive feedback about language usage.
- Hear language used (stories, descriptions).
- Respond to directions.

Affective-Social Development: Though Piaget focused on cognitive development in much of his research, he recognized the interdependence of cognition and affect. The child also functions in a society that has complex structures and expectations. Piaget saw affect as the energy behind cognition, as capable of moving development forward or retarding that developmet.

- Direct one's self.
  - Demonstrate curiosity and be active.
  - Make own decisions and select own activities.
  - Develop confidence in those decisions.
  - Communicate and take care of needs.

- Relate to other people in the environment (adults and children).
  - Share when appropriate.
  - Work in groups or alone.
- Learn socially determined expectations and appropriate behavior (using the bathroom when necessary, washing hands when they are dirty, etc.).

Activities

The following is a selection of activities for toddlers. This section is not intended to provide a daily guide for working with toddlers but rather to show activities that have been developed using a Piagetian base. To provide a complete "cookbook" of Piagetian tasks would be diametrically opposed to the theoretical interpretation implicit in this program. Activities must be interpreted for individual children and related to the specific level of development of the group of children participating in the particular activity. Thus, many activities are open-ended, providing unlimited possible adaptations. The goals listed relate the activity to the development of the child's total cognitive framework.

Group and individual activities (both teacher-assisted) are included, as both offer important experiences for toddlers. Peers provide an additional dimension in the child's development, serving as models for new behavior and reflecting new interpretations of old behaviors. Individual times allow the child to work with the teacher. Independent (without teacher assistance) activities are also included to provide times for the child to play alone. A chart of important dimensions of the activities is provided (see Table 1).

In addition to individual and group classroom activities such as those suggested here, field trips and the role of everyday experiences are also important in the toddler's curriculum. Field trips broaden the child's range of experiences and provide knowledge (s)he can relate to and symbolize in play. A child cannot mentally represent a bus or pretend to ride on one if (s)he has never had that experience. Also, everyday activities such as snack-time, washing hands, and coming or going are not breaks in the learning process but parts of it. One-to-one correspondence can be learned passing out napkins to each child, and putting on one's coat requires coordination of body movements and body awareness.

Teaching is a creative process. Keeping objectives in mind and reflecting the abilities and interests of the child, the teacher can use many situations and activities to activate learning experiences and then follow the direction the children take that experience.

General Guidelines for Developing Activities for Toddlers:

Activities should be developed with flexibility in mind to make them appropriate for children with different rates of development and styles of interaction.

Choose activities that reflect the interests and abilities of the children participating.

Structure the environment to support or extend each activity. If children show an interest in fish or pets, provide books, movies, or field trips related to the subject.

Keep the physical abilities of the toddlers in mind and carefully consider safety factors in any activity. (I.e., toddlers may "mouth" small articles--are they edible?)

Activities should be action-oriented, designed for the children to participate directly.

Materials should be manipulative rather than primarily representative. Don't depend on pictures; try to have real objects.

Activities should be divergent and open-ended, having multiple directions, rather than convergent, with only one direction or solution. Thus, they will be open to individual adaptations and variation.

Use goals as a starting point for developing activities, not as an objective.

Be creative and have fun.

ACTIVITY: BALLOON BOUNCE (INDIVIDUAL OR GROUP: TEACHER SUPERVISED)

GOALS: Physical Knowledge
-Coordinate body movements: Move self in a large space to reach the balloon..

TIME:
-Initiate cause and effect action sequences: The child hits the balloon and makes it bounce up.

SPACE:
-Move self around an area: The child moves in relation to the balloon.
-Find an alternate path when one is blocked.
-Change an object's relation to space: Make the ball go up and down (or pop!)
-Spatial relations: Up.

MATERIALS: Large sturdy balloon (Use caution with balloons and young children. A broken piece of balloon could be inhaled. Choose a heavy gauge balloon, don't overinflate, and supervise the activity.)

PROCEDURE: Have a large clear area. Outside is good or move furniture in the classroom to open up a large area. Let the children feel the balloon, push on it. Explain that many balls bounce up and down on the ground but this ball goes up too. By hitting it up in the air they can make it float or bounce on the ceiling. Start the balloon up and demonstrate keeping it in the air. Then let the children interact with it. Do not stop the activity if they change it. Verbally reflect what they do and let them procede. If the balloon should pop, explain that the air inside the balloon came out very fast and made a loud sound. Collect all of the broken pieces and blow up another balloon if the children are still interested.

VARIATIONS:
1. Toddlers also enjoy blowing soap bubbles. They can blow them up in the air and run and catch them.
2. Toy stores often sell an inflatable ball of light rubber that has a stretchable handle. It can be bounced off of the hand and come back. It is a good size and weight for toddlers.
3. Another type of ball available has a sturdy handle and is made to sit on and bounce. Keep it in the grass or on a padded area as falls are likely.
4. Soft foam balls (Nerf) are good for the classroom. They can be thrown and will not harm any object that might be in the way.

ACTIVITY: BLANKET PLAY (INDIVIDUAL OR GROUP: INDEPENDENT)

GOALS: Space
-Move self through space: The child moves in a new, limited area.
-Locate hidden objects: Without being able to see the objects, the child will search for them in a limited area.

Physical Knowledge
-Respond to the environment with the body: The child will discover means of moving his/her body in an unusual area.
-Sensory awareness: Child will locate objects by touch.

MATERIALS: One or two large blankets (a parachute also works)

PROCEDURE: Before children arrive in the morning or before they come in from outside play, lay the blanket out in an open space on the floor. Hide several small soft toys underneath. Don't instruct the children on what to do or what they will find but rather give them time to explore and to apply their own modes of interaction. If the children don't interact with the blanket at all, they may need reassurance that it is o.k. to crawl under and on it, move it, etc.

VARIATIONS: 1. Hide several toys under the blanket but ask the child to find a specific toy. (S)He will need to locate it by touch alone. If the child brings out a different toy, do not say it is wrong but rather label it. Tell the child what (s)he did find.

ACTIVITY: BURIED TREASURE (INDIVIDUAL OR GROUP: INDEPENDENT)

GOALS: Physical Knowledge
-Sensory awareness: The child uses his/her sense of touch to explore and discover.
-Expand action repetoire: The child applies different actions to find hidden toys.

Space
-Locating objects: Looking for hidden objects in a limited space.

Representation
-Symbol level (recognizing whole/part relationships): Child may identify the hidden object before seeing it.

MATERIALS: Sandbox or sand table
Small toys (that will not be damaged by sand. Examples: plastic cups, rubber balls, plastic chips, spoons, etc.)

PROCEDURE: Bury several small toys in the sandbox or sand table. Smooth over the top of the sand. The children may either be told that there is buried treasure or leave the toys to be discovered in play. Encourage the child to describe and label what (s)he finds before (s)he pulls it out.

VARIATIONS: 1. Tell the children exactly what is hidden. The teacher may put up pictures of the objects. Ask the child to find a specific toy and just that toy. (If the child does pull out a different toy, label it and then ask him/her to try again to find the requested toy.)
2. Tell the children exactly what's hidden and how many of each object (two balls, one spoon, two cups). Emphasize how many the

child finds. Match objects to pictures to reinforce the concept and let the child see if there are more.
3. Items can be hidden in a box with holes on the side. Take a cardboard box (not too large for small arms to reach around) and cut a hole in each side. Cover holes with a piece of cloth taped at the top and hanging over the hole. Put the hidden treasure in through the top and close the flaps. Let the child identify the object or objects by touch and then pull them out to confirm. Change the hidden object frequently.

ACTIVITY: COOKING (GROUP: TEACHER ASSISTED)

GOALS: Physical Knowledge
-Sensory awareness: The child will use senses of touch, taste, sight, and smell to explore and discover.

Logical-Mathematical Knowledge
-Number: Experience with amounts used in cooking various recipes.

Time
-Temporal sequence: The child can deal with the sequences in cooking, what comes first and the finished product.
-Causality: The child can initiate and recognize cause and effect; the making of the item and the finished product.

Space
-Change an object's relation to space: The parts combine to make a whole that is unique.

MATERIALS: What ever items are needed for the specific recipe to be cooked. Wooden spoons are good for stirring, giving a good grip for toddlers. Plastic knives can be substituted for sharp metal ones when children do easy cutting. Plastic bowls placed on a dampened wash cloth cuts down on slipping when children stir.

PROCEDURE: Choose simple recipes to cook. Keep procedures short for toddlers. Let the children taste and smell each ingredient (even the less pleasant ones such as vanilla, if the child wants to).
Some suggestions for cooking:
Jello (cubed or mixed with dessert topping)
Pudding (add fresh slices of banana to instant pudding mix)
Fresh fruit salad (let the child cut the bananas, pineapple, orange sections, grapes, etc.)
Muffins
Butter (made by shaking heavy cream in a small jar; add salt)
Peanut butter sandwiches (try different breads)
Carrot-raisin salad

ACTIVITY: FANTASY PLAY (GROUP: INDEPENDENT)

GOALS: Logical-Mathematical Knowledge
-Classification (recognize attributes): The child will recognize and use materials that are appropriate for a certain play role.
-Classification (sort according to general class): Use materials appropriate for each role.

Representation
-Symbol level (symbolic play): The child uses objects in play to represent roles or objects.
-Symbol level (imitate actions): The child imitates actions (s)he thinks are appropriate for the role.

MATERIALS: The teacher provides the props to encourage or support fantasy play. Some kits that might be made available (one or two at a time):
House: Kitchen appliances (may be cardboard boxes with ink marker drawings), plates, cups, dolls, blankets, dress-up clothes, dolls and doll clothes, doll bed.
Grocery store: Empty cans (watch out for sharp edges), cash register, play money, plastic food, paper bags, pads of paper and pencils, doll buggies may be used as shopping carts.
Doctor/Nurse: Band-aids, cotton balls, plastic stethoscope, doctor bag, raisin pills, blankets, pillows, white smocks, nurse hats.
Postman: Bag to hold the mail, old and new envelopes, stamps (used or Christmas and Easter Seals), hat, blue jacket, badge.
Fireman: Length of plastic hose, short steps (or a small wooden box or block), toy firetruck, red jacket, hat, badge, boots.
Policeman: Blue jacket, badge, hat.

PROCEDURE: Provide the materials (one or two kits at a time) in an area set aside for fantasy play. Support the activity with short movies, stories, and picture books. Children will invent their own means of using the materials.

ACTIVITY: FINE MOTOR TABLE (INDIVIDUAL; INDEPENDENT)

GOALS: Physical Knowledge
-Coordinate body movements: The child can manipulate toys and objects.
-Expand action repetoire: Use different actions on the same object and the same action on different objects.

Logical-Mathematical Knowledge
-This will vary with the specific toy but may include number (How many pop beads?), seriation (match large and small shapes), and classification (matching identical shapes or sorting).

Time
-Causality: Many manipulative toys involve cause and effect relationships (Jack-in-the-box).

Representation
-Symbol level (construct something that represents another object): The child may make a picture with pegs or build something with the blocks.

MATERIALS: Some suggestions:
Nesting cups or nesting measuring cups
Pop beads
Puzzles
Shape box
Large pegboard with chubby pegs
Boxes and colored chips or wooden pegs to sort
Jack-in-the-box
Lock box
Cards with pictures to match (May be made from identical magazine pictures glued to cards.)
Small blocks (At least 2" square)
Busy box
Berry box and yarn to sew through it
Dressing doll

PROCEDURE: Set up a fine motor table in a separate area of the room. Put out several table toys and let interested children choose. Do not tell the child which toy to choose or how to use them unless the child seems frustrated. Let the child explore, discover and invent. Change the toys occasionally, putting some away until a later date. Try to promote reasoning. Ask the child what (s)he has, what it does. Ask other children to compare.

VARIATIONS: 1. A similar procedure may be used with large motor activities in a larger area. Rotate items that are available to interact with. Encourage children to find new ways to use objects.

ACTIVITY: FINGERPAINTING WITH PUDDING (INDIVIDUAL OR GROUP; INDEPENDENT OR TEACHER ASSISTED)

GOALS: Representation
-Symbol level (drawing): The child may draw a picture, represent an object, in the pudding.

Physical Knowledge
-Sensory Stimulation: Several senses (touch, taste, sight, smell) are used simultaneously.
-Coordinate body movements: The child will use his/her hands in a variety of movements.

MATERIALS: Smocks
Instant pudding, milk, bowl
Fingerpainting paper, masking tape

PROCEDURE: Lay the paper out around a table and tape each piece in place to prevent shifting when the children paint. Making the pudding may be a separate cooking activity or the teacher may prepare it ahead of time. Place the bowl of pudding in the center of the table where the children can reach it and scoop pudding onto their paper. If no one has tasted it after a few minutes, the teacher might take a taste. If the children don't imitate, tell them it's pudding. (It probably will not be necessary to tell

them to taste it.) Encourage the children to talk about and label their drawings. Accept any answer. Symbols are personal. Let them observe each other and the different ways of drawing in the pudding. Dry the pictures thoroughly in the sun or by a heater. They may be kept several days.

VARIATIONS:
1. After the paintings have dried, let the children touch them again and note the difference. Have each child identify his/her own picture.
2. Another painting technique uses cleaned, used deodorant roll-on bottles. Fill with tempera/fingerpaint. Colors and designs are rolled on the paper. One color can be rolled over another.
3. Powdered paint added to sand creates a textured art medium. The children can "draw" designs on the paper with squeeze blue bottles or finger paste. Then let them spoon on the colored sand in a box and let the child turn the glue covered paper over in the box. Sand will stick just to the glued sections.
4. A stand-by drawing medium is soap bars on windows. Let the children wipe their designs away with a wet cloth when they are done.

ACTIVITY: FOOTPRINTS (GROUP OF TWO AT A TIME: TEACHER ASSISTED)

GOALS:

Physical Knowledge
-Body awareness: The child uses and sees a "picture" of a part of his/her body.
-Expand action repetoire: The child will use a familiar action (walking) in a new way.

Time
-Causality: The child can recognize a cause and effect relationship in walking and leaving footprints. (S)He initiates the action and stops at the end.

Representation
-Symbol level (recognize a graphic symbol): See the footprints (s)he made.
-Symbol level (part/whole relationships): The footprints are a symbol of the action of walking.

MATERIALS:
Paint, brushes
Newsprint or a long roll of paper
Dishpan filled with warm soapy water, towels
Two chairs
Plastic painting cloth or large oilcloth to protect the floor

PROCEDURE: Spread the plastic or oilcloth on the floor for protection. Roll out a length of paper (about 6') and place a chair at each end. Put the paint by one chair and the dishpan of water and towels at the other. With shoes and socks removed and pants rolled up, one child sits in the chair by the paint while another child paints the bottoms of his/her feet. Let the child walk the

length of the paper, leaving footprints. At the other end (s)he steps into the soapy water and cleans his/her feet with some teacher help. Label one print so (s)he can find his/her footprint later. The child who did the painting is next to get his/her feet painted and walk the paper. Continue until each child has had a turn.

VARIATIONS:
1. If the children have an opportunity to visit the beach, let them make and look at footprints in the sand. Or if there is a sandbox that may be used this way, walk barefoot in that.
2. Do the painting activity with hands. Each child can paint his/her own hand and print it on a length of paper taped to a table top.
3. If there are distinct differences, point out large and small footprints. (Maybe a teacher will volunteer to make a comparison print.)
4. After the prints are dry, let the child retrace his/her path and walk it again.

ACTIVITY: HIDE AND SEEK (GROUP; INDEPENDENT OR TEACHER ASSISTED)

GOALS:

Physical Knowledge

-Body awareness: The child recognizes his/her body as an object in the environment with identity.
-Coordinate body movements: Move self in different situations.
-Expand repetoire of action: The child may use different actions to discover classmates.

Space

-Move self through space: Child moves through the classroom searching to find a place to hide.
-Locate hidden objects: The child searches for classmates.

MATERIALS: None needed

PROCEDURE: Explain that this is a game where every one hides in the classroom so no one can see them. Then someone goes around and tries to find everyone who is hiding. Give the children some examples of hiding places (under a table, behind the door, in the closet). The teacher may be the searcher first to demonstrate the looking technique. As children are found let them join in the search for the others. Talk as you search (I'm looking under the desk: now I'm looking behind the bookshelf and I found Mary!).

VARIATIONS:
1. Have child hide several large balls or dolls and then let the others search for the object.
2. Hide a large object (or a child) and tell the other children if they are getting close or going far away as they search. Tell which child is close. But keep the chatter simple and specific.

ACTIVITY: I CAN DO WHAT YOU CAN DO (INDIVIDUAL; TEACHER ASSISTED).

GOALS: Representation
-Symbol level (imitating actions): The child will be following the teacher's movements.

Physical Knowledge
-Coordination of body movements: Child will make his/her body move as the teacher's does as seen in a mirror or directly.

MATERIALS: Large unbreakable mirror

PROCEDURE: The teacher suggests that (s)he can do what the child can do. If the child seems interested, imitate his actions as closely as possible. Move in front of a mirror so the child may see him/herself as well as the teacher. Suggest reversing the activity and let the child imitate the teacher. Start with movements similar to ones the child used previously then extend into simple but original actions. Keep the activity short.

VARIATIONS: 1. Looking in the mirror, imitate an everyday activity such as combing hair, brushing teeth. Ask the child if (s)he knows what you are doing. This can be used to signify a change in activities. Pretend to be putting on a coat can symbolize time to go outside or pretending to eat could symbolize snack time. Ask children what you are doing and what time it is.
2. Looking in the mirror, ask children to tell you what they see (other children, certain toys). Or go around the room and point to objects and let them identify them from their mirror's vantage point.

ACTIVITY: JACK-IN-THE-BOX (ONE OR TWO; TEACHER ASSISTED)

GOALS: Representation
-Symbol level (imitate actions): The child will imitate the teachers's actions and/or the Jack-in-the-box's movement.

Time
-Initiate cause and effect sequences: The child starts the Jack-in-the-box sequence expecting certain results.
-Notice temporal sequences: The child will imitate the pop-up action after the music begins.

MATERIALS: Jack-in-the-box (or other such pop up toy)

PROCEDURE: After the children have had some experience with the Jack-in-the box and seem able to anticipate the "pop", the teacher can demonstrate the action by squating down, head tucked in. Sing the melody or have the child turn the Jack's handle and provide the music. Pop-up at the appropriate time. The child may just observe at first but encourage him to try.

VARIATIONS: 1. Add another dimension to the game by using a cardboard box. The child can crouch down inside and pull the flaps over the top (if it is not frightening for him/her) and pop-up at the appropriate time as the Jack-in-the-box is played.
2. Try to be another toy. If there is a moving dog or duck on a string, let the child imitate its movements.

ACTIVITY: LOOK AND SEE (INDIVIDUAL OR SMALL GROUP; TEACHER ASSISTED)

GOALS: Physical Knowledge
-Object awareness: The child will identify objects from the environment.
-Sensory stimulation: The child will use sight in a new way to explore the environment.

Space
-Locate objects: Using "binoculars", the child identifies areas and objects in the environment.

Representation
-Symbol level (recognize whole from a part): Identifying objects from a limited view through the binoculars.
-Symbol level (construct something to represent another object): The child is making pretend binoculars.
-Sign level (correctly label): Naming what (s)he sees through the binoculars.
-Sign level (hearing language used): Listen to other children describe what they see.

Logical-Mathematical Knowledge
-Classification (identifying attributes): Recognize descriptions of objects.
-Number (using numbers): Count two rolls to use.

MATERIALS: Two empty toilet tissue rolls per child; tape

PROCEDURE: Show the children the real binoculars and let them look through each end. (Teacher may discuss concepts of large and small.) Then suggest each child make his/her own. Demonstrate how to tape the two rolls side by side and assist only when necessary. Then encourage the children to look around and tell what they see. Some children may simply label what they see. Encourage them to tell what it looks like.

VARIATIONS: 1. Ask the child to locate specific objects using the binoculars. Or children can look for something with a particular attribute (red, round, moving) and label it.
2. Make a telescope out of one or two paper towel rolls.
3. Get several magnifying glasses and have the child look through and then compare with looking through the binoculars.

ACTIVITY: MAKING PLAYDOUGH (INDIVIDUAL OR GROUP; TEACHER ASSISTED)

GOALS:

Physical Knowledge

-To see parts become a whole: The child will have an opportunity to combine the different textured materials into a smooth dough.
-Sensory stimulation: The child can touch, taste and smell the product.

Representation

-Symbol level (construct something to represent an object): The child can manipulate the dough to represent objects from the environment.

Space

-Changing objects in space: The child can roll, stretch, pound, divide or combine the dough to change its relation to space.

MATERIALS:

Salt, flour, water, food coloring
Bowls, forks, ¼ cup measures
Recipe: Per child
¼ cup salt
¼ cup flour
¼ cup water

PROCEDURE: Have a bag of flour, salt container and bowl of water centrally located on the table along with ¼ cup measures. Premeasure salt and flour into individual bowls. Let them see the two ingredients, touch and taste if they wish. The child may scoop a measu[illegible] full of water to add to their bowl. Several drops of food coloring may also be added. The child then stirs with his/her fork until the mixture begins to hold together and then mix with the hands. Let the child poke, squish, pound and pull the dough. Toddlers are likely to taste the mixture. Encourage them to talk about it. Is it salty? Do you like it? Store dough in an airtight container.

VARIATIONS:

1. When making playdough, coffee grounds, sand or uncooked rice may be added to provide different textures.
2. Once the child is familiar with the mixture, (s)he can be encouraged to expand his/her repertoire of action. The teacher may demonstrate how to roll a ball or rod shape. Encourage children to imitate but do not dictate the action. The child will apply his/her individual action schemas. The teacher role is to serve as a model. Added materials may be made available such as rolling pins (or wooden block cylinders) and cookie cutters.
3. As children manipulate the dough, encourage them to relate the shapes to real objects. Ask what the shape looks like, or the reverse, suggest making something. Accept any answer or shape that the child offers. Symbols are personal; that's how it looks to him/her.
4. When a child has sculpted a shape (s)he likes, place the model on a cookie sheet and bake at 200 degrees for one hour. The hardened models may be painted or decorated.
5. Shapes (such as diamonds, circles, or squares) can be cut out of rolled playdough and a hole poked through with a pencil.

These shapes may be baked, painted and strung on dental floss or string. Talk about the shapes and let the children sort them by shape.

6. Allow children to measure their own ingredients and make the dough. Children will need supervision scooping two measures of flour, one of salt, one water. Exact measurements are not important so let the child do the measuring with as little help as possible. Emphasize two flour, one salt, one water. Write the numerals 1 and 2 on the flour and salt containers and bowl of water. Count measures out loud.

7. Use the same basic ingredients in a cooking activity. Make cookies or biscuits and butter. Compare smell, texture and taste.

ACTIVITY: MAKING PUPPETS (INDIVIDUAL OR GROUP; INDEPENDENT OR TEACHER ASSISTED)

GOALS: Logical-Mathematical Knowledge
-Classification (recognize attributes): Identify the parts to go on the puppet.
-Number: How many of each item is needed for the face.

Physical Knowledge
-Body awareness: Look at their own face and see what the puppet needs.

Representation
-Symbol level (symbolic play): Pretending with puppets.
-Symbol level (graphic symbol): The child can draw a face for the puppet.

MATERIALS: Small brown paper bags (the candy size; ask at the local grocery or drugstore)
Water-base felt tip pens or crayons
Sample puppet and hand mirror

PROCEDURE: Let the children watch the teacher make the face on a sample puppet. Count and label: one nose, one mouth, two eyes, two ears, hair. Put the puppet on and demonstrate making it talk, look around, etc. Leave the sample puppet, materials, and a mirror for self examination of the activity table. Do not assist unless asked or if a child seems frustrated. Accept any face a child makes, though you may ask what each mark represents. If a child wants a puppet but does not want to make it, draw the face for him, label and count as you go.

VARIATIONS: 1. The bare hand can be a puppet. Using water base felt tip markers, draw eyes, nose, mouth, and hair on the thumb side of the closed hand. Demonstrate that moving the thumb makes the puppet open its mouth.

2. The fingers can also be puppets. Draw the faces on the tips of the fingers palm side. Encourage the children to have the fingers talk to each other.
3. Make sock puppets. Children may glue on precut bits of felt for eyes, nose, etc.

ACTIVITY: MATCHING PICTURES AND OBJECTS (INDIVIDUAL; INDEPENDENT OR TEACHER ASSISTED)

GOALS: Representation
-Symbol level (recognize a graphic symbol): Identify objects by pictures.

Physical Knowledge
-Object awareness: The child will identify objects from his immediate environment.

Logical-Mathematic Knowledge
-Classification (recognize attributes): The child needs to focus on specific attributes to identify objects.

MATERIALS: Large, clear pictures of common objects (color; may be Polaroid or cut from magazines if good match with the real object used).
Tape
"Real" objects (examples--telephone, hard boiled egg, cup, envelope, ball, can, pencil, etc.)

PROCEDURE: Tape the pictures to a table or counter top. Start with all of the objects matched to their appropriate pictures. Let the child take them away and then replace them one by one.

VARIATIONS: 1. Mix the objects. Put the wrong object on each picture and let the child correct.
2. Using small amounts of picture/object matches add the dimension of number. That is, have a picture of one cup, two pencils, one ball, but have several of each object available. Keep the numbers small. The child may simply match one object per picture regardless of one to one correspondence. Accept this. The teacher may point out the number as another aspect, not that the child did the activity wrong.
3. Have a picture of part of the object (half of a pencil, the stamped corner of an envelope, the bottom of the telephone). Let the child match whole to part and ask if (s)he can point out on the object which part is pictured.
4. For advanced children, let the child draw his/her own pictures and match them to objects. Put up different children's drawings above a display of the real objects.

ACTIVITY: NEIGHBORHOOD WALK (GROUP; TEACHER ASSISTED)

GOALS: Physical Knowledge
-Object awareness: The child will be looking for interesting objects from the environment.

-Sensory stimulation: Using the senses to explore and discover.
-Coordinate body movements: Move self through different situations.

Space
-Expand the environment: Explore the local area.

Representation
-Sign level (correctly label): Name the objects found on the walk.

MATERIALS: One brown paper bag per child

PROCEDURE: Take the children on a neighborhood walk. Give each child a paper bag to collect interesting things they might see. Watch carefully what is picked up. If it is inappropriate or not safe, explain that some things need to stay outside. Name each item the child chooses. Keep walks short. When ready to return to the classroom, let the children lead the way and orient themselves to the area. Back in the classroom let each child display what (s)he found on a colored piece of construction paper. Compare and label.

VARIATIONS:
1. Many of the items could be glued to the construction paper for more lasting displays.
2. Or flat items (flowers, grass, leaves) may be laid between two sheets of waxed paper and ironed to seal. Place newspaper between the waxed paper and iron and use low heat.
3. On a later walk let the children decide where to walk ahead of time and let them lead the way. Let them find the way back as well.

ACTIVITY: NURSERY RHYMES WITH FLANNEL BOARD (GROUP; TEACHER ASSISTED)

GOALS: Representation
-Symbol level (graphic representation): Child sees pictures used to represent action.
-Sign level (correct label): Objects will be named as they are presented.
-Sign level (hearing language used): The child hears the rhythm and descriptions of language.

Time
-Recognize temporal sequences: The child sees the progression of events in a nursery rhyme.

MATERIALS: A board covered with felt or flannel.
Felt pieces cut to represent the basic objects in a nursery rhyme.

PROCEDURE: Have felt pieces cut and ready to represent each major character or object in the story. Introduce each character and name each object before beginning. Read the rhyme at least twice pointing to the characters and objects. Explain new or difficult words. Then read it again. Nursery rhymes are excellent for toddlers because they are short, have a distinct rhythm and tell a story.

VARIATIONS:
1. After showing a rhyme on the flannel board, the teacher could read it from a children's picture book of rhymes. Ask the children to help. Let them point to the characters and name them if they can. The children will see two representations of the story (flannel board and pictures).
2. Children may act out a rhyme with which they are familiar. They can go to sleep under the haystack like little boy blue or sit on a tuffet like another little child.
3. Sing simple action songs. (Some nursery rhymes have music associated with them.) Repeat often and keep words and actions simple. Toddlers will join in as they are able. Examples: The Itsy-Bitsy Spider, Open/Shut Them, or This is the Way We...

ACTIVITY: OBSTACLE COURSE (GROUP; INDEPENDENT OR TEACHER ASSISTED)

GOALS:
Space
-Body movement in relation to a variety of objects: The child moves himself/herself and objects through the environment.
-Arrangement of objects in space: The child participates in the placement of objects in the environment.

Physical Knowledge
-Extension of action repertoire: The child applies and adapts actions in a variety of situations.
-Coordination of body movements: Practice using large muscles.

MATERIALS: Furniture from the classroom, pillows, blocks, cardboard boxes, inner tubes, and yarn.

PROCEDURE: Initially, the teacher sets up a specific path for the course, placing objects in the way to climb over, go around or under. Mark the path with a length of yarn for the children to follow. Yarn may be taped into place to create jagged or curved lines. Include a variety of directions (under, over, through). Safety must be carefully considered. Use caution with heights and moves requiring developed balance. Respect personal interpretations of the course.

VARIATIONS:
1. On subsequent courses let the children help construct the path and obstacles. Suggest an object and let them decide where and how to use it.
2. Create a path with no obstacles, only yarn marking a turning path. Tape in curves, zigzags, circles, or around the class.
3. Set up an obstacle course designed for the children to drive through with push/pull toys or on their hands and knees with a toy truck.
4. Suggest going through the obstacle course backward, sideways or crawling.
5. Informally, an obstacle course for toddlers can simply be changes or additions to the room arrangement. After children are familiar with a particular classroom structure, change a section. Move the snack table to another part of the room; turn a shelf around; or move an activity area. Add something. Hang

crepe paper strips in a doorway or cover a table with a blanket. The children will adapt to the new set up within the context of everyday actions.

ACTIVITY: OPEN/CLOSE (GROUP; TEACHER ASSISTED)

GOALS:

Physical Knowledge

-Body awareness: The child will focus on how the hands, eyes, and mouth move.

-Expand one's repetoire of action: Using the same action in different situations.

Logical-Mathematical Knowledge

-Classification (recognize general classes): The child will look for objects in the class of things that open and close.

-Seriation (recognize relative differences): Things can open, open more and more.

Space

-Changing an object's relation to space: Opening and closing different objects.

Representation

-Sign level (correctly label): Name the items that open and close.

MATERIALS: Objects around the classroom that open and close.

PROCEDURE: Explain that many things move. Parts of the body move. Let the children think of and demonstrate parts of the body that move. When hands, mouth or eyes are mentioned, specify that the movement can be open and close. Demonstrate each and let the children move each. Then suggest looking for other things around the classroom that open and close (drawers, doors, cupboards, boxes, windows, toy chest, books). Give each child a chance to find something. Name each thing they find if they cannot. What other uses each object has can also be mentioned. (You open a book to read it; you close it when you are done.)

VARIATIONS:

1. Find objects that are big/small; high/low (based on whether the child can reach it or not); light/heavy (based on whether the child thinks (s)he can lift it).
2. Find an object in the classroom that is a particular color.
3. The children could learn a song about opening and closing hands.

Open, shut them (Move hands)
Open, shut them
Give a little clap (Clap hands)
Open, shut them
Open, shut them
Lay them in your lap (Clasp hands in lap)

ACTIVITY: PEEK-A-BOO-WHO (GROUP: TEACHER ASSISTED)

GOALS: Representation
-Symbol level (recognize a whole from a part): Child will attempt to recognize another child by only a part showing.
-Sign level (correctly label): Name children.

MATERIALS: Two large pillow cases

PROCEDURE: This activity is appropriate only after the children know each other well. Children are divided into two groups separated from each other's sight. One child from each group is covered by a pillow case and guided to the other group. As the child stands covered in front of the children, the teacher raises the case slowly. The other children attempt to guess who is underneath based on the parts that show. If the children don't guess correctly, continue to raise the case slowly until the child appears. If they do guess correctly, continue to raise the case slowly until the child appears. If they do guess correctly, remove the sack quickly. Continue the process with each child until all of the children have changed groups. Move quickly between each child so the game will not take too long and the children lose interest.

VARIATIONS: 1. Have the child talk from behind a screen (perhaps as they arrive in the morning) and encourage children to guess who it is.
2. Let the children record their voices on a tape. Can they identify themselves when it is played back? their classmates?

ACTIVITY: SENSORY TABLE (INDIVIDUAL; INDEPENDENT OR TEACHER ASSISTED)

GOALS: Physical Knowledge
-Sensory stimulation: Using all of the senses to explore and discover.
-Expand action repetoire: The child can use the same actions (smell, taste, touch, hear) in different situations.

Representation
-Symbol level (part/whole relations): Recognize whole objects by a part.
-Sign level (correctly label): Name the items being used.

MATERIALS: Some suggestions:
Touch: pieces of fabric (satin, canvas, burlap, swiss dot, velvet); miscellaneous items (sand, sandpaper, cotton, wood, rocks). See hidden box activity.
Taste: for part/whole relationships (apple, orange, lemon, chocolate chips and chocolate chip cookies, banana, carrots); for comparison (dates, prunes, raisins; lemon, lime, orange, grapefruit; blackberries, blueberries, strawberries, raspberries; salt, sugar, flour; lettuce, celery, radishes)

Smell: flowers, bottled flavorings, peanut butter, lemon, onion, orange.
Sound: bells and other musical instruments; baby food jars filled with sand, cotton balls, bottle tops, dried beans. (Tape lids on firmly)

PROCEDURE: Have a sensory table set up in a separate area. Lay out items for the children to explore independently.
Touch: Make a ringed notebook of fabric textures. Samples are often available at fabric stores or ask mothers who sew to send in scraps. Glue or tape the top of each piece of fabric to each page. Miscellaneous items may be laid out on the table and each child may add one item from the classroom that (s)he likes to touch.
Taste: Demonstrate part/whole relationships by showing the whole original item and pieces to taste. Put cut pieces in a bowl by the "whole". Keep samples small and watch for overzealous tasters. For taste comparisons, set out samples of similar edibles. Do not expect children to identify the differences but rather discover differences and similarities.
Smell: In the spring, ask children if they have any flowers in their gardens. (Or grow some at school) If so, ask them to bring a few to share with the others. Set them all on the sensory table and let the children compare.

ACTIVITY: Shoe Pile (group, teacher assisted)

GOALS: Logical-Mathematical Knowledge
-Classification (recognize attributes): The child will focus on the attributes of his/her own shoes.
-Classification (recognize identical objects): The child can match one shoe to the other.
-Classification (recognize gross differences): The child can compare his/her shoe with his classmate's.
-Numbers (Use numbers in practical situations): The child is looking for one shoe; he has one.

Space
-Locating objects: Child will search for his/her shoe in a specific area.

MATERIALS: One shoe from each child

PROCEDURE: Have each child take off one shoe (helping only if necessary). Each child places his/her shoe in a pile in an open area. Look at the pile and encourage comments about what they see. Then have each child focus on the remaining shoe. What color is it? Does it have shoelaces? Then let the child search for his/her own shoe. If (s)he chooses the wrong one, point out the attributes of the found shoe and of his/her own shoe. Have the child try again. Give assistance putting shoes on only as necessary. Give the child a chance to try to do part of it him/herself.

VARIATIONS:
1. Do the same activity with coats or sweaters. Give children a chance to focus on the attributes of their coats and then put them in a pile. Let each child find his/her own.
2. When children are quite capable of finding one shoe, have them take off both. They will need to find one (using representation or trial and error) and then match it to the other.
3. Or try the activity with one shoe and one sock.

ACTIVITY: WHOSE TURN IS IT? (GROUP; TEACHER ASSISTED)

GOALS: Logical-Mathematical Knowledge
-Classification (recognize attributes): The child will focus on his/her own and his/her classmates' personal attributes.
-Classification (recognize gross differences): The child may notice differences and similarities.

Physical Knowledge
-Develop self awareness: Child sees him/herself as an object in the environment with attributes and identity.

MATERIALS: None needed

PROCEDURE: When children are breaking from a group activity and going individually to another activity (such as taking turns going to the bathroom, snack table, or leaving for the day) make a game of whose turn it is. The teacher describes a particular child bit by bit until the child recognizes him/herself or the other children recognize him/her. Attributes used in the description should be prominent and when possible have personal meaning for the child (such as a new dress or red shoes (s)he has boasted about). If a child is having difficulty recognizing him/herself maintain eye contact with him/her. If two children recognize themselves in the same attributes, emphasize the similarities.

VARIATIONS:
1. Turn the game into a general classification activity by asking for all of one attribute. Examples: all of the boys, all of the children with green on, all of the children wearing shoes.
2. Use pictures of the children. Hold one up and let the child recognize him/herself in two dimensions.
3. A more difficult variation would be comparison of two children's attributes such as which is shorter (taller), has longer (shorter) hair, is wearing more (less) yellow.

Appendix A

Some Suggested Materials for Toddlers

Physical Knowledge

FINE MOTOR

nesting cups (may be made from clean vegetable cans of different sizes)

pop beads

puzzles (heavy duty puzzles with 2-6 pieces; some have small knobs for easy handling)

pegboard and pegs

Jack-in-the-box (or other such musical pop up toys)

boxes or baskets (good for sorting)

colored chips or wooden shapes (good for sorting)

hammer and wooden nails in a carpenter's bench

turning tops

busy box (a board with several moveable pieces)

lock box (a board that has locks, hooks, or a doorknob)

LARGE MOTOR

blocks (varied sizes ranging from no less than 2" square to 1-2' in length; plastic, foam, wood or cloth)

push and pull toys (on a string or stick)

toy trucks (Firetruck, crane, jeep, dumptruck, etc.)

balls (varied sizes, rubber, foam, cloth)

outdoor equipment (to climb on, slide down, play with, pretend with, move around)

water table and suitable toys (floating toys, buckets, cups, plastic squirt bottles)

sandbox	(or cornmeal table)
large unbreakable mirror	(3-5' long; High enough for a child to see his whole body)
rocking boat	(reverses to stairs)
balance board	(wide board on blocks is sufficient)

Representation

SYMBOL LEVEL	(graphic representation)
playdough, clay, pipecleaners	
materials to draw, color, paint	
chalkboard and large chubby chalk	
SYMBOL LEVEL	(symbolic play)
playhouse furniture	(small stove, refrigerator, sink, doll bed, cupboard; may be simple, cardboard boxes with ink marker drawings will do)
household objects	(measuring cups, spoons, pots with lids, plates, etc.)
telephone	(if possible, a real phone, disconnected; also several play phones)
dolls	(dressing dolls, baby dolls, and a large child size fabric doll; doll clothes)
dress up clothes	(hats, shoes, purses, dresses, pants, etc.)
SIGN LEVEL	
books	(some sturdy picture books available for the children; others for teacher access)
records	

References

Ainsworth, M. Object relations, dependency, and attachment: A theoretical review. Child Development, 1969, 40, 969-1026.

Blehar, M.C. Anxious attachment and defensive reactions associated with day care. Child Development, 1974, 45, 683-692.

Caldwell, B.M. What happens to children in day care? Paper presented as an S. & H. Foundation lecture at Pasadena, Calif., February 1972.

Caldwell, B., Wright, C., Honig, A., & Tannenbaum, J. Infant day care and attachment. American Journal of Orthopsychiatry, 1970, 40(3), 397-412.

Flavell, J.H. The Developmental Psychology of Jean Piaget. New York: Van Nostrand Reinhold Co., 1963.

Glezen, W.P., Loda, F.A., Clyde, W.A., Jr., Senior, R.J., Schaeffer, C.I., Conley, W.G., & Denny, F.W. Epidemiological patterns of acute lower respiratory diseases of children in a pediatric group practice. Journal of Pediatrics, March, 1971.

Kamii, C. An application of Piaget's theory to the conceptualization of a preschool curriculum. In R. Parker (Ed.), The Preschool in Action. Boston: Allyn and Bacon, Inc., 1972.

Kamii, C. A sketch of the Piaget-derived preschool curriculum developed by the Ypsilanti early education program. In J.L. Frost (Ed.), Revisiting Early Childhood Education. New York: Holt, Rinehart & Winston, Inc., 1973.

Kamii, C., & Radin, N. A framework for a preschool curriculum based on some Piagetian concepts. Journal of Creative Behavior, 1967, 1, 314-324.

Lazar, I., & Rosenberg, M. Day care in America. In E. Grotberg (Ed.), Day Care: Resources for Decisions. Office of Economic Opportunity, 1971.

Lewis, M., & Goldberg, S. Perceptual cognitive development in infancy: A generalized expectancy model as a function of the mother-infant interaction. Merrill-Palmer Quarterly, 1969, 15, 81-100.

Parker, R. Theory in early education curricula. In R.W. Colvin & E.M. Zaffiro (Eds.), Preschool Education. New York: Springer Publishing Co., 1974.

Provence, S. & Lipton, R.C. Infants in Institutions. New York: International Universities Press, 1962.

Rubenstein, J. & Sandberg, C. The effects of peers on the toddler's interaction with his mother and with his toys. Paper presented at the meeting of the Society for Research in Child Development, Denver, April, 1975.

Sagozin, A. Attachment in day care children: Field and laboratory findings. Paper presented at the meeting of the Society for Research in Child Development, Denver, April, 1975.

Stone, L.J. & Church, J., Childhood and Adolescence (3rd Ed.). New York: Random House, 1973.

Weikart, D.P. A traditional nursery program revisited. In R. Parker (Ed.), The Preschool in Action. Boston: Allyn and Bacon, 1972.

Yarrow, L.J. Separation from parents during early childhood. In L. Hoffman & M. Hoffman (Eds.), Review of Child Development Research (Vol. 1). New York: Russell Sage Foundation, 1964.

Suggested Readings for Teachers

Readings on Piaget

Elkind, D. A Sympathetic Understanding of the Child: Birth to Sixteen. Boston: Allyn & Bacon, 1974.

Ginsburg, H. and Opper, S. Piaget's Theory of Intellectual Development: An Introduction. Englewood Cliffs, New Jersey: Prentice-Hall, 1969.

Piaget, J. The Language and Thought of the Child. London: Routledge and Kegan Paul, 1952a.

Piaget, J. The Origins of Intelligence in Children. New York: International Universities Press, 1952b.

Piaget, J. Play, Dreams and Imitation in Childhood. New York: W.W. Norton, 1962.

Piaget, J. Science of Education and the Psychology of the Child. New York: Orion Press, 1969.

Piaget, J. & Inhelder, B. The Psychology of the Child. New York: Basic Books, 1969.

Readings on Curriculum Development

Croft, D.J. & Hess, R.D. An Activities Handbook for Teachers of Young Children. Boston: Houghton Mifflin, 1972.

Croft, D.J. & Hess, R.D. An Activities Handbook for Teachers of Young Children (2nd Ed.). Boston: Houghton Mifflin, 1975.

Day, B. Open Learning in Early Childhood. New York: MacMillan, 1975.

Flinchum, B. Motor Development in Early Childhood: A Guide for Movement Education. St. Louis: C.V. Mosby, 1975.

Furfey, P.H. (Ed.) Education of Children Aged One to Three: A Curriculum Manual. Washington, D.C.: The Catholic University of America, School of Education, Curriculum Development Center, 1972.

Lorton, M.B. Workjobs. Menlo Park, California: Addison-Wesley 1972.

CAF:4

Suggested Readings for Teachers

Readings on Piaget

Elkind, D. A Symnathetic Understanding of the Child: Birth to Sixteen. Boston: Allyn & Bacon, 1974.

Ginsburg, H. and Opper, S. Piaget's Theory of Intellectual Development: An Introduction. Englewood Cliffs, New Jersey: Prentice-Hall, 1969.

Kamii, C. An application of Piaget's theory to the conceptualization of a preschool curriculum. In R. Parker (Ed.), The Preschool in Action. Boston: Allyn and Bacon, Inc., 1972.

Kamii, C. A sketch of the Piaget-derived preschool curriculum developed by the Ypsilanti early education program. In J. L. Frost (Ed.), Revisiting Early Childhood Education. New York: Holt, Rinehart & Winston, Inc., 1973.

Piaget, J. The Language and Thought of the Child. London: Routledge and Kegan Paul, 1952a.

Piaget, J. The Origins of Intelligence in Children. New York: International Universities Press, 1952b.

Piaget, J. Play, Dreams and Imitation in Childhood. New York: W.W. Norton, 1962.

Piaget, J, Science of Education and the Psychology of the Child. New York: Orion Press, 1969.

Piaget, J. & Inhelder, B. The Psychology of the Child. New York: Basic Books, 1969.

Readings on Curriculum Development

Croft, D. J. & Hess, R. D. An Activities Handbook for Teachers of Young Children. Boston: Houghton Mifflin, 1972.

Croft, D. J. & Hess, R. D. An Activities Handbook for Teachers of Young Children (2nd ed.). Boston: Houghton Mifflin, 1975.

Day, B. Open Learning in Early Childhood. New York: MacMillan, 1975.

Flinchum, B. Motor Development in Early Childhood: A Guide for Movement Education. St. Louis: C. V. Mosby, 1975.

Furfey, P. H. (Ed.) Education of Children Aged One to Three: A Curriculum Manual. Washington, D.C.: The Catholic University of America, School of Education, Curriculum Development Center, 1972.

Lorton, M. B. Workjobs. Menlo Park, California: Addison-Wesley, 1972.

CAF:4