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ABSTRACT

Introduced by a parable on the value of children's play, this guidebook includes a list of 10 developmental functions of play, a discussion of matters for consideration in selecting and organizing equipment and facilities for early childhood programs, and a description of indoor and outdoor program resources for children's activities. Various characteristics of children (as individuals and in groups), of programs, and of equipment are pointed out to aid in planning a play area. In addition, 13 guidelines are offered for arranging space and materials in a room. Description of indoor resources focuses on furniture, art, music, dramatic play, block play, manipulative materials, movement experiences, food preparation, woodworking and carpentry, sand and water play, mathematics, science, and language. Description of outdoor resources centers on providing a hill, sand, water, swings, a climbing apparatus, playhouses, blocks, loose materials, a gardening area, animals, a group activity area, a wheel toy area, a quiet place, and a natural area. Questions to consider in planning an outdoor play area are offered. In conclusion, print and nonprint resource materials are listed. (RH)

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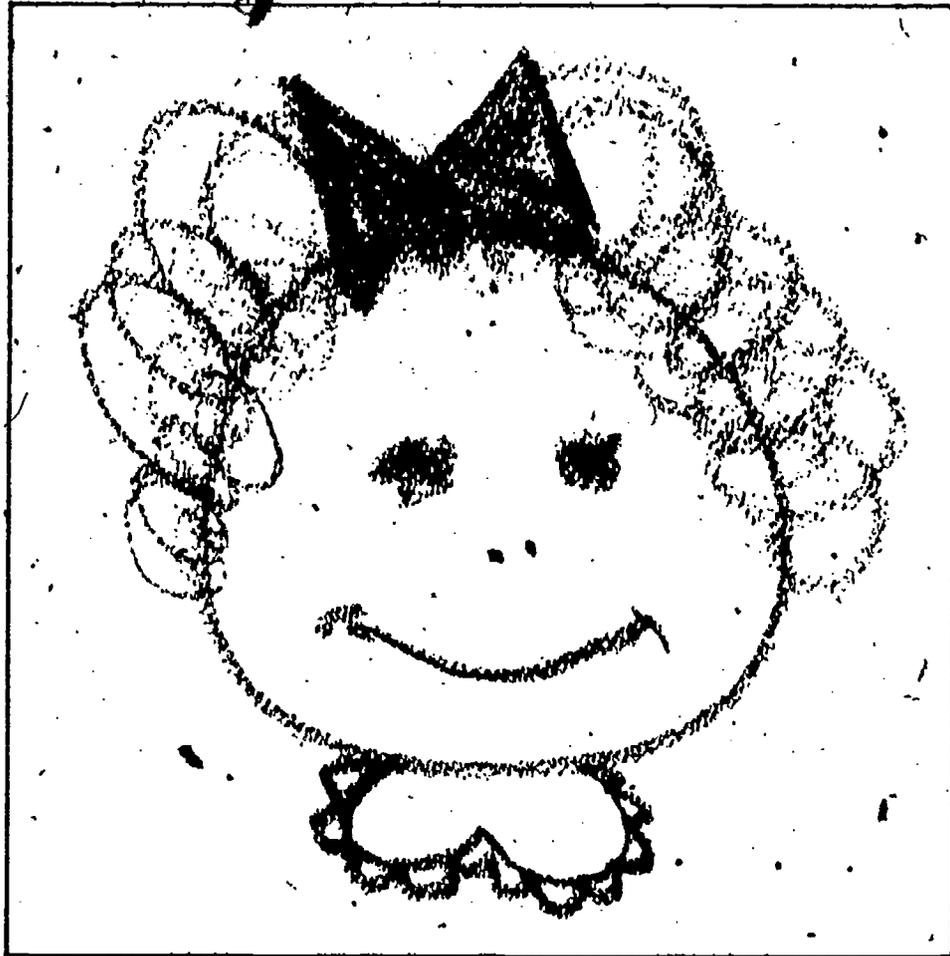
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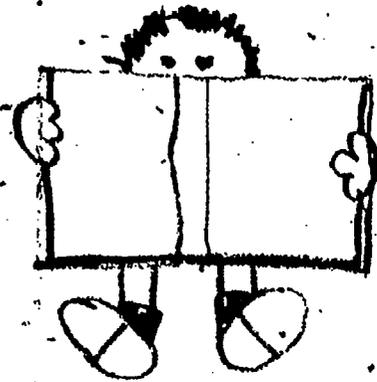


PLAY

**“A Child Does not play
Because he is young;
he is young in order
that he might play”**

—Karl Gross—

Once upon a time there was a village and in it were its children, its men and its women. One day into this village came a visitor, and he looked and saw many things.



"I should like to see what the children are doing," he said to himself.

There are many activities going on; it was difficult to see everything. But as he looked, he saw a child deep in a book, reliving the adventures someone had written down. And the child paused in his reading to look up at a visitor who asked.

"There are so many things going on, how is that you spend your time reading?"

To which the child replied,

"I choose to read today, and I chose this book by a favorite author of mine."

The visitor continued to observe. He saw some children carrying all manner of objects. They are getting ready tables, chairs, food, and happy surprises for others. Their activity must have made them weary, but still they continued.

"What keeps you going?" asked the visitor.

"Ah," said the children, "we planned for guests. We want to carry out our plans well."

Thus saying, they continued their plans and preparations.

The visitor continued his observations. He saw the child manipulate some of the materials and then he saw him read intently; and then he saw the child experiment again.

"Couldn't someone else easily get that to work for you?" asked the visitor.

"Perhaps," said the child, "But I want to find out for myself and to feel that I have discovered it for myself. I can seek and receive help when matters get too difficult."

And saying thus, the child went on with his experimentation.

The visitor continued on his way and saw a child painting.

"Why do you paint?" asked the visitor of the child. Scarcely audible, he heard her say,

"I feel as though I must paint the beauty of apple trees in bloom."

Just as the stranger approached another group to find out what they were doing, he heard one of them say,

"I want to stop for now." With these words he turned and left his companions.

It was then that the stranger approached a group of adults.

"I have observed the children's activities," he said.

"Tush!" said some. "Frittering their time away."

"Work!" said others. "That's what they're doing! They won't work that hard when we tell them to."

"Play!" said still others. "Just child's play!"

With the adults still debating the worth of the children's activities, the visitor returned to the groups of children.

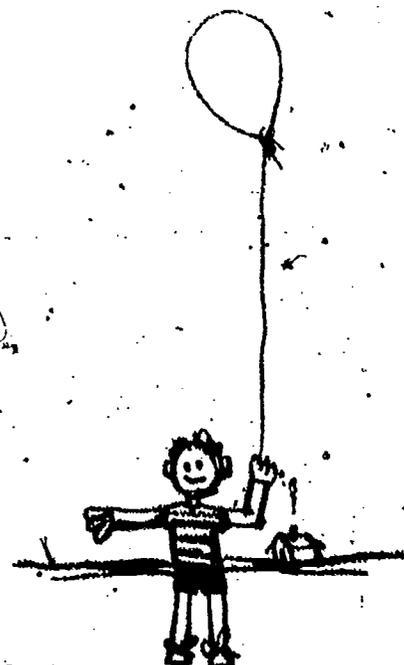
"Tell me," he said, "What did you do today?"

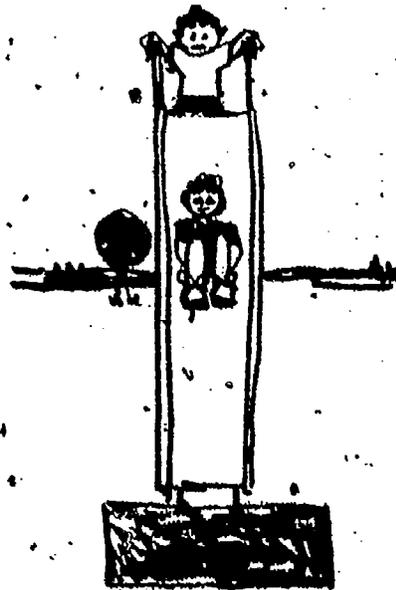
"We played," they answered.

And being a wise man, he contemplated upon what he had seen: he had seen children choose, and plan and experiment, and create and even terminate their own activities. To them, they are doing what they wanted to do and they called it play. And the stranger saw that it developed their bodies, and minds, and hearts.

And it was good."

1 Cornelius, Ruth "What Did You Do Today?, We Played"
Childhood Education, Vol 36, No 7, March 1960, pp 302-303





"Child's play" — What does it mean to you?

Does it imply an easy activity, a mere time-wasting nonsense, something that is too unimportant to be worthy of adult attention?

If it does, then the time has come for you to revolutionize your thinking. Child's play is anything but frivolous, easy and unimportant. It matters enormously. The way a child plays, the objects with which he plays, his own attitude to his play and that of the adults around him, can colour his entire life.

In fact, to a child, play is life; play is fun. Play is the way in which he spends virtually every waking hour, the way he learns about himself and others around him, how to master his environment and to find his place in it.

Since play, not only by children but adults, is a universal activity; it may seem unnecessary to assert that play is valid. But within recent years there has been a strong movement to restrict the play of children to adult-imposed patterns in order to promote formal learning, especially preparation for school. We need, therefore, to be reminded of the validity, indeed the imperative necessity of play in human development.

We know that the child does half his learning before he is four years old, another 30% before he is eight and only 20% during the remaining years of elementary and secondary education. In other words, almost everything that children learn during the first eight years is learned through play; for a child spends more time at play during this time than in the classroom.

A child's play influences his total growth: physical, emotional, intellectual and social.

First, through play, the child develops motor skills. He strengthens his muscles, improves his coordination, develops gross and fine motor movements, achieves an orientation of his body to the space around him, how to respond to stimuli in this space and how he relates to it.

Second, play increases hand-eye coordination in a child, that is, the ability to visually perceive an object and perform a coordinated movement response to it.

Third, play encourages an understanding of laterality and directionality in a child. The child experiences a conscious awareness that one is called "left" and the other "right" and that one can move and can locate himself relative to these two sides.

Fourth, play enhances skills in communications and verbalization. Children recognize the possibilities in expression through physical movement. A word, or a phrase, or an activity may be expressed only in movement or it may encourage the use of new and exciting words-twirling, flying, etc. As well, the child learns the names and meanings of what he encounters not only by being told in words but by making those words personally meaningful.

Fifth, play increases awareness of the senses. With his sensory capacities the child learns not only to look but to see, not only to hear but to listen, not only to touch but to feel and grasp what he handles. He tastes whatever he can get into his mouth and he begins to smell what he encounters. No program of teaching and adult instruction could adequately provide for his own personal observations, activities and direct knowing. Play provides an opportunity to master each of these sensory experiences and increased sensory input in turn increases cognitive awareness of the environment.



Sixth, play enhances creativity. It increases the child's capacity to perform a task which requires ingenuity in formulating an answer that is not readily suggested by the materials themselves or by another person. It provides an environment free of inhibiting factors and open to expression of thought.

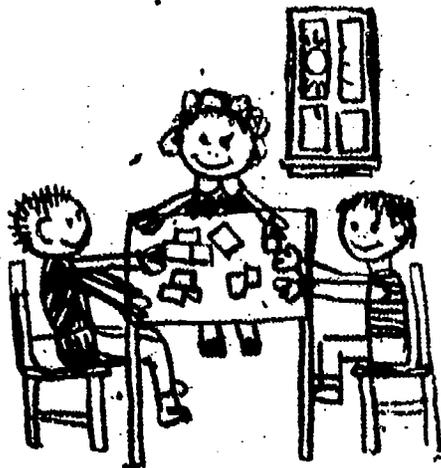


Seventh, play extends the exploratory drive of children and given this freedom of exploration, learns about himself and his environment.

Eighth, play offers an opportunity for socialization — the chance to play with other children and to learn the art of group processes and group sharing.

Ninth, play strengthens serial memory ability — the ability to remember a series of things, of letters in a word, or of words in a phrase or of a series of movements within a skill, or a series of skills within a game.

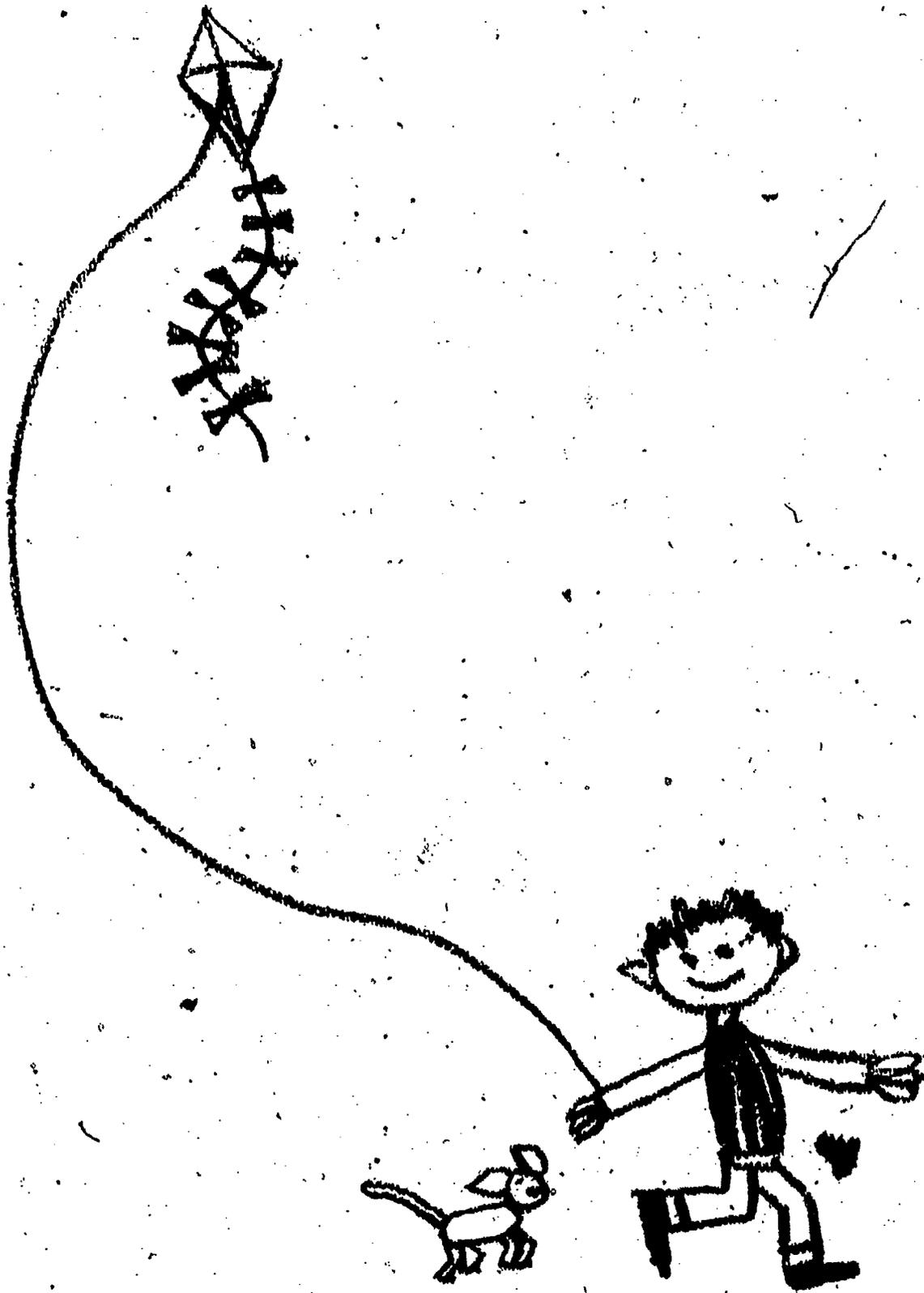
Tenth, play promotes logical problem solving. It provides an opportunity for the child to experiment with the environment in order to resolve any undesirable situation.

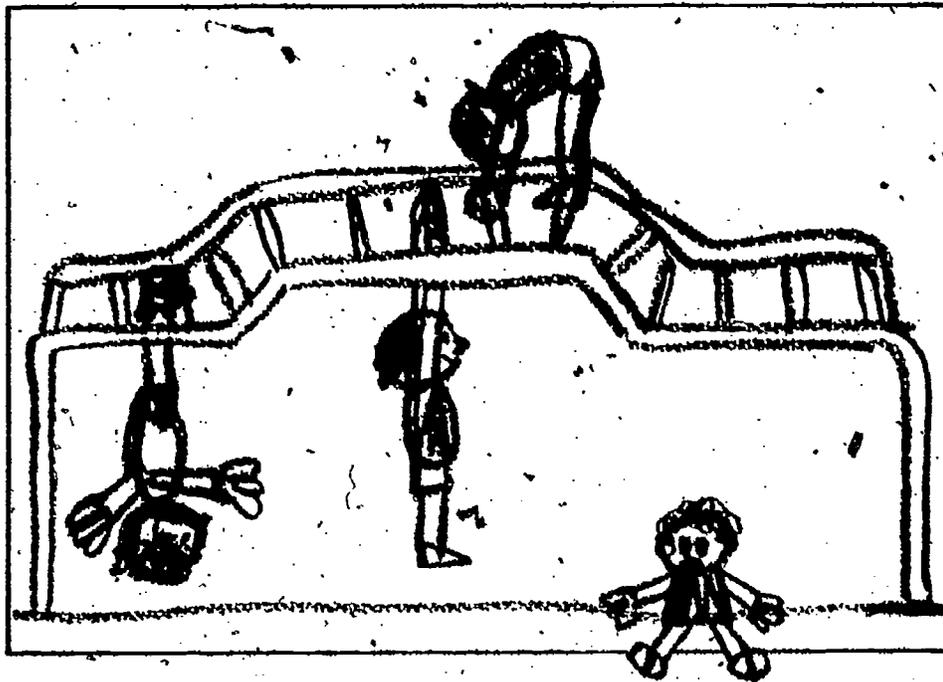


The values of play could continue indefinitely.

Thus, what looks like "mere child's play" to the unobservant, is not really that simple at all, but an incredible ability of the human animal to develop himself in almost every waking moment. To play, to explore, to imitate, to manipulate, to experiment — therein lies true validity.

Regardless of the value of play as an aid in the development of abilities and skills needed for adult living, we must not lose sight of the fact that just being a child is important too! Play is a child's business. Play should be fun. In fact, whatever the impact of early experiences upon later abilities, providing opportunities for children to live happily and fully as **children** is, in itself, a most worthy goal for parents and teachers alike.





Selection and organization of Physical Resources.

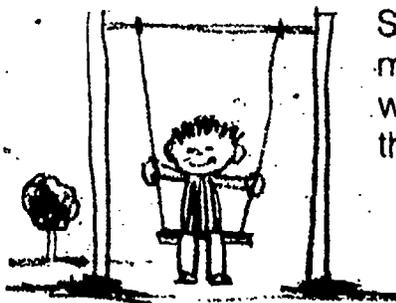
(1) Considerations in Selecting Equipment

E.C.S. programs may vary according to the needs and resources of the children, teachers, parents and communities within which they operate. In choosing equipment for an E.C.S. program, parents, teachers, and other planners should keep in mind a number of important factors. Characteristics of children, the program, and the equipment itself must be considered before purchasing begins.

(a) Characteristics of Children As Individuals:

Children grow in many ways: physically, emotionally, socially and intellectually. Children entering an E.C.S. program will display a broad range of growth in each of these developmental areas. Selection of equipment must, therefore, take into consideration these variations in growth patterns.

Children, because of the area in which they live, may have specific needs to be met. For example, an urban E.C.S. program with children who have all attended play schools may not need the same equipment as a rural E.C.S. program with children who may have had few prior group experiences.



Some children, because of a handicap of one kind or another, may have special needs (strengths as well as limitations) which must be kept in mind when selecting equipment for their use.

Some awareness of developmental characteristics of young children can help guide selection of equipment. An overview of the early years from birth through eight reveals the following general characteristics and needs:

- rapid development of language;
- refined use of all senses;
- developing perceptual ability;
- increasing ability to organize experiences in logical concepts;
- behavior and concepts are primarily egocentric;
- learning through direct experience, active manipulation and experimentation;
- exploration of the world of symbols;
- primary identity and frame of reference is with the family;
- increasing awareness of own identity as a person;
- increasing awareness of body in relation to movement and space;
- varying attention spans;
- developing skills in both gross and fine motor areas;
- seeking independence from adults;
- seeking warmth and security in relation to adults;
- curiosity about the world;
- desire to be with and relate to peers;

solitary play at first, later parallel and co-operative play are added;
enjoyment of imaginative, dramatic, socio-dramatic, and fantasy play.

Above all children develop at different rates in each strand of growth. Individual differences must always be respected and equipment selection varied accordingly. The complete nature of child development demands careful consideration of their needs in planning equipment for all programs.

When equipment is selected with children in mind some of the following questions might be asked:

Does the equipment and material fit human needs and not rigid stereotypes of male and female characteristics?

Is the equipment suitable for the developmental levels and needs of the children?

Is the size appropriate for the children? Are the materials large enough for the children to handle easily? Are a variety of sizes needed? This applies equally to paint brushes and chairs.

What dimensions of learning and/or development do the materials and equipment make possible?

Do the children have the thinking and physical skills required to operate the equipment?

As a Group:

In addition to noting the individual characteristics of children, planners must also keep in mind the **group** of children with which they are working. Questions such as the following will aid planners in deciding **how** many pieces of **what** equipment in **which** sizes to order:

How large is the group?

Will there be children of various ages in the group?

Will there be children with special needs in the group?

What is the ratio of staff to children?

(b) Characteristics of the Program

Directions:

Before selecting equipment, planners should examine carefully the objectives and emphases of the program which grow out of the needs of the children. The following areas **may** be emphasized in **some** programs. If so, we must ask the question: What kinds of equipment will aid a program in providing for:

perceptual development;

motor development;

cognitive or intellectual development;

emotional and affective development;

contact and socialization with other children and adults;

language development and communication;

development of positive self concept;

self-expression;

socialization for school behavior;

learning how to learn;

attainment of information;
learning in small groups;
learning in large groups;
individual learning experiences;
problem solving skills;
real life experiences; and
use of instructional materials?

Role of the Staff:

E.C.S. operators should keep in mind that the role of the staff will to some extent result in a decision of what is, and what is not, to be purchased. If parents decide that they want the staff to construct a learning environment for the children the equipment selection might be somewhat different than if the parents prize specific teaching/learning situations. The important consideration is not the equipment itself, but rather how the children will use the equipment. The role of the staff directly determines this.

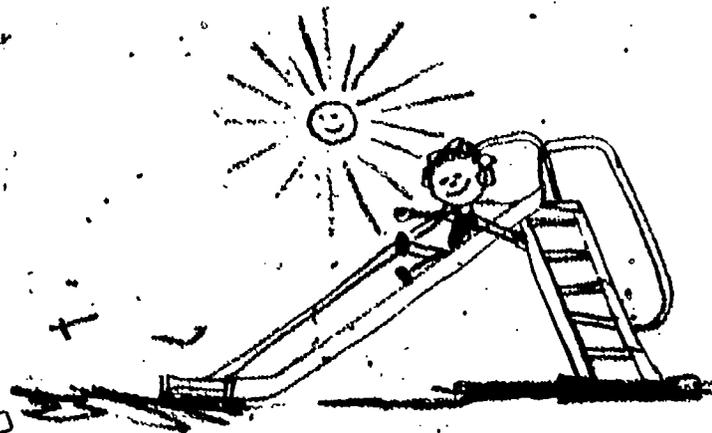
Scheduling and Organization:

The scheduling and type of programming decided on by the operators of a program will have implications for the purchase of equipment. Each type of organization may require specialized kinds of materials.

At **what** times on **which** days do program activities occur?

Does the program run full days or half days? (Is lunch and/or rest equipment needed?)

Is there a home-based program?



(c) Characteristics of the Equipment

Many considerations affect the amount and type of equipment used in a program. Questions to consider in providing the needed resources are:

Can the equipment be used for more than one purpose?

Is the equipment suitable for one child at a time?

Small groups? Large groups?

Is the equipment safe? (rounded edges, non-poisonous nonflammable paint, sturdy construction)

Is the equipment **durable**?

Can it withstand a lot of usage?

Can it be easily cleaned?

Are parts easily replaceable?

Can it be repaired easily?

What is the value in terms of money and/or time? This must be balanced with the potential benefit to the program.

What kind of space does the equipment require?

What kind of storage space does the equipment necessitate? Is this kind of storage space available? Can storage areas be made to help the organization of theme centers?

What can be made locally by parents, teachers, and community?

What can be collected from home and the community?

(2) Considerations in Organizing Equipment and Facilities

As with equipment selection, room arrangement depends on individual program goals, methods, available space, and storage. These factors

constantly need to be kept in mind when planning learning environments for children.

A practical way to arrange equipment and materials is in activity centres. These centres should arise from and serve the needs, capabilities and interests of the children. They should be flexible centres of organization, growing and changing with the teacher and particular group of children.

Typical E.C.S. centres may include:

open area for large group activity;

quiet area for individual activity;

book or library centre;

assembly centre;

housekeeping (or other centre or centres for dramatic and socio-dramatic play);

art centre;

math centre;

science centre;

sand centre;

water centre;

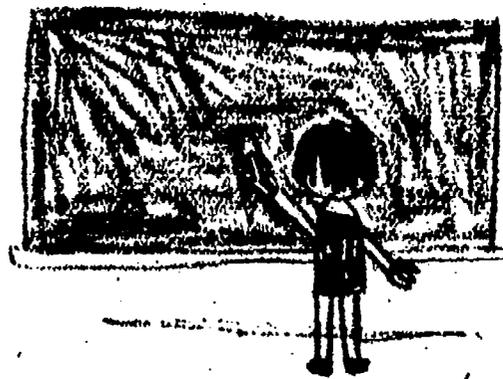
food preparation centre;

woodworking and carpentry centre;

manipulative materials centre;

music centre;

construction centre.



The following guidelines can aid in the arrangement of space and materials within a room.

Space should be arranged to meet the goals and objectives of the program.

The room should provide for flexibility of arrangement, allowing reorganization when necessary to enrich children's experiences.

Equipment and materials most often used together should be placed in close proximity.

The location of permanent and movable storage areas should be taken into account when arranging materials.

Children should have clear pathways (check at child height!) through the room.

Popular centres might be separated to distribute children throughout the room.

Materials and equipment should be arranged to encourage independent use, clean-up and storage by the children.

The room should allow staff to supervise and interact with the children with a maximum effectiveness.

Activities needing water should be placed near washing facilities. Location of bathrooms may be a consideration.

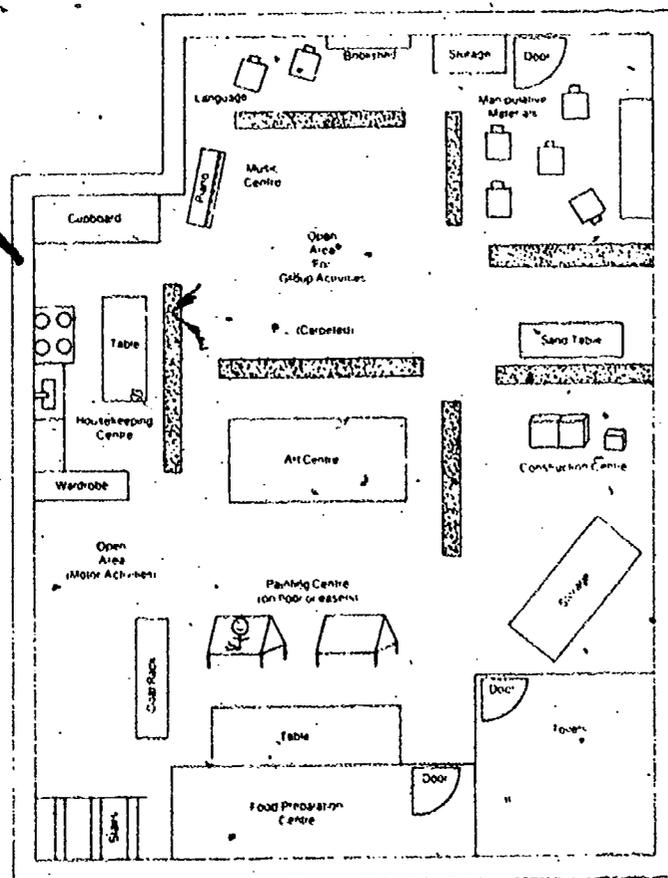
Quiet activities should be away from avenues of traffic and from noisier activities.

Open space should be provided for such activities as blocks and movement.

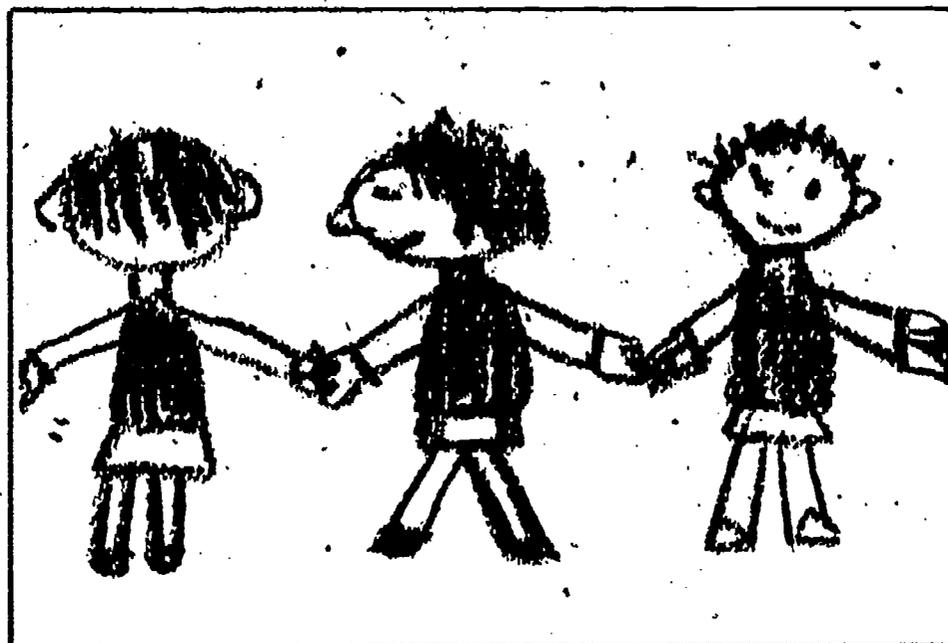
Health, safety and fire regulations, available lighting, and electric outlets may influence room arrangements.

Storage areas, shelves and room dividers can be utilized to separate activity areas.

The following floor plan illustrates how a center **might** be organized keeping in mind the suggestions noted above:



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Physical Resources For Children.

The following suggestions are provided as illustrations of the wide range of ways in which equipment can be organized to promote healthy child development. Many other possibilities exist. Although the materials noted in the following pages are grouped according to theme and/or interest areas, the selection of versatile equipment will allow operators to group and regroup the pieces many times through the year.

(1) Indoor Resources

(a) Furniture

Furnishings may vary considerably, however, any equipment selected should be:

Safe: Large pieces should not be easily tipped over. Nonpoisonous paint and rounded edges are important.

Sturdy: Furniture needs to withstand lifting, pulling and pushing.

Adapted to the space: The kind, size and amount of furniture selected depends on the available space and the intended uses.

Adapted to the size of children.

Surfaced for use by children: It is helpful if surfaces are easily cleaned, finished to resist water and paint, and not easily chipped.

↑ Furniture for Early Childhood Centres usually falls into the following categories.

Tables: (movable and able to be utilized in combination with each other; 20-24 inches high depending on the size of the children).

Chairs: (10-14 inches high depending on the size of children)

Lockers: for children's belongings (well anchored, accessible and with adequate storage space).

Shelf units and storage space: (low, open shelves for equipment available to children).

Room dividers.

Large, soft chairs.

Equipment for Lunch and/or rest: (cots, blanket, food preparation equipment).

Full length mirrors.

Rug and large pillows.

(b) Art

Some goals are: to allow children the chance to creatively express thoughts, feelings, dreams and visions.

Drawing: large pencils, large wax crayons, chalk/chalkboard paper of all kinds charcoal briquets

Painting: tempera paint
finger paint
brushes (variety of widths)
paper of all kinds
water & paint containers
sponges
easels with clips
smocks
rack for drying pics.
food coloring
pudding

Sculpture: sand (wet & dry)*
flour and salt dough
plasticine
clay
paper bags, boxes,
egg cartons
straws, toothpicks
dirt

Collage: materials of all kinds
paper of all kinds
adhesives
scissors

(c) Music

Some goals are: To provide opportunities for creative expression.
To aid development of listening and co-ordination skills.

the child's body

record player (a tape recorder is an alternative)

records (many libraries have record lending services)

instruments to accompany children's movement and singing possibilities, if available, include a piano

autoharp, xylophone, guitar or drum

Rhythm instruments for children

(homemade equivalents are in parentheses)

drum (bottom of plastic basin, coffee cans with plastic tops)

cymbals (pie tins, lids)

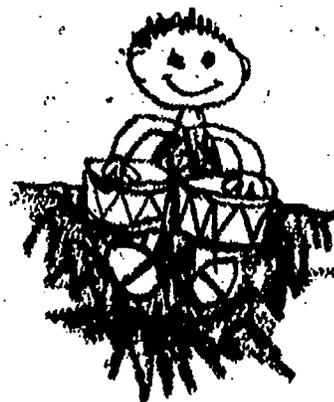
maracas (small cans filled with gravel)

rhythm sticks (sticks, dowel with serrations)

sand blocks (sandpaper on blocks of wood)

tambourine (pie tin with bottle caps attached)

triangle (large nail suspended on string)



(d) Dramatic Play

Some Goals Are: to aid development of language, manipulative skills, concepts, sensory awareness, and ideas for music and art. To provide opportunities for creative expression.

Equipment and materials should stimulate dramatic and socio-dramatic play:

doctors, nurses
pilot, stewardess
taxicab driver

fisherman, farmer
post office worker
fireman

Playhouse:

childsize furnishings (stove, refrigerator, table, sink)
housekeeping tools
dress-up clothes
full length mirror
telephone
dishes, cooking utensils
empty food containers
dolls

Camping:

flashlight, sleeping bag
mess kit, logs, grill
rope, binoculars
knapsack, canteen

Garage:

used washed motor parts
tools, oil funnel, oil cans
key chain, keys
coveralls and rags
autoposters and catalogues

Beauty Parlor:

mirror, hair curlers
bobby pins, towels
plastic basin, make-up
combs, brushes, scarves
wigs, magazines, hair net

(e) Block Play

Some Goals Are: to aid development in areas such as intellectual growth, perceptual development, motor development and problem solving skills. Can be used with individuals or small groups of children.

When possible, all blocks should be of hardwood, smoothly sanded with a protective coat of linseed oil. * Obtain metric scale blocks, if possible.

- * solid unit blocks
- * solid table blocks
- * hollow large blocks

Accessories should be provided as the children need them. The children will determine the purposes to which they are put.

figures (rubber, plastic or wooden) of family, community people, zoo animals, domestic animals, farm animals

vehicles (rubber, plastic or wooden) trains, trucks, cars, airplanes, buses, tractors, boats

coloured cubes

samples of tiles, linoleum squares and rugs

shells, pebbles, small stones, little sticks

variety of small containers

lumber scraps

familiar signs

popsicle sticks, tongue depressors

rubber tubing

pulleys

old appliances and machines

cash register

pictures

(f) Manipulative Materials

Some Goals Are: to aid development of visual discrimination, hand-eye co-ordination, memory, matching and classifying.

Puzzles (hardwood are best, some big, some small)

parquetry blocks nesting boxes, cans

beads and bead strings pounding sets

pegboards and pegs lotto games

sensory items to feel, taste, see, hear and smell

carpentry and woodworking materials

magnetic letters and numbers

flannel board and flannel figures

typewriter for children's use

pictures to group, to put in sequence and to order

attribute blocks

snap blocks

coloured wooden cubes

old clocks and appliances to be dismantled and put together

construction materials (Canadian logs, meccano sets, tinker toys, styrofoam, etc.)

blocks

card games

(g) Movement Experiences (Open Area, Motor Area)

Some Goals Are: to aid development of thinking and problem solving skills, creativity, large and small muscle co-ordination and strength.

Movement experiences such as walking, running, climbing and crawling can be provided throughout the day when consideration is given to using the child's body as "equipment" in itself.

Climbing:

Jungle gym, sectional indoor climber, ladders, stairs, trees, knotted ropes, nets (stretched and attached on three sides), hanging rope climber

Crawling:

large barrels, kegs, pipes, tires, benches, chair, tunnel

Rolling:

mats

Pedalling:

tricycle, bicycle, pedal vehicles

Balancing:

walking boards

Throwing:

bean bags, balls of various sizes

Lifting:

boxes, boards, blocks

Kicking:

balls

Swinging:

enclosed swings, open swings, tire swings

Sliding:

slides, portable slide or board attached to climber, table or platform

Rocking:

rocking horse, rocking boat

Jumping:

ropes, bouncing boards

Pushing With Legs:

tetter totter, scooters, wagon boards with castors

Pushing With Arms:

medicine ball, broom, wheelbarrow, shovel, push toys, boxes, sponge mop

Pulling:

pull toys, wagons with loads, rakes, hoes

Pounding:

clay, hammers and nails

Stretching:

bars and swing rings, climbing ropes, jungle gym, suspended ladder

Dance:

percussion instruments, record player with records

(h) Food Preparation

Some Goals Are: to aid development of gross and fine motor skills, following directions in sequence, counting, measuring, classifying skills, and understanding principles of nutrition.

Cooking activities may be carried on with or without heat and/or cooler sources:



Food Supplies

peanut butter
stuffed celery
sandwiches
fruit salad
vegetable salad
ice cream
fruit
milkshakes
lemonade

Equipment

hot plate
electric frying pan
blender
refrigerator (portable cooler)
oven
mixing and eating utensils

(I) Woodworking and Carpentry

Some Goals Are: to aid development of gross and fine motor control, perceptual awareness, problem solving and language.

The staff needs to prepare the environment that provides safety and encourages the children's creativity and inventiveness:

large tree stump

solid wooden working surface with vice or C-clamps

tools (the real thing) such as hammers, saws, screwdrivers, bit and brace
scrap wood (best if grain runs lengthwise as this reduces splitting; white pine and spruce are best)

nails with heads of assorted sizes

tacks (large headed and upholstery)

sandpaper

screws, hooks and eyes, fastening devices, wire and other accessories

dowels, molding, mill turnings

floor tile scraps, masonite, pegboard, composition board, linoleum,
formica, aluminum stripping, cork, plastic, fabric scraps, bottle caps,
styrofoam

white glue

large wooden pencils with thick leads

brushes and paint

varied lengths of rope and string

rulers and steel measuring tapes

storage for tools (pegboard), nails and screws (separate containers) and
wood (cardboard cartons, baskets, or bins)

(j) Sand and Water Play

Some Goals Are: to aid development of language concepts,
creativity, socialization, mathematical and scientific concepts,
motor development and problem solving.

Sand Play

sand table (or a large basin)

sand (dry, damp, wet or very wet)

graduated measures

shovels, buckets, plastic containers of various sizes

old kitchen equipment (muffin tins, bread pans, etc.)

funnels, strainers, colanders, sieves, spoons

balance

people and animal figures

toy trucks, cars, tractors, etc.



Water Play

water table (plastic dishpan, metal wash tub, portable wading pool)
floor protection under water play area (if necessary)
mops, sponges, plastic coverall aprons
Unbreakable cups and containers of all sizes and shapes (clear plastic if possible)
egg beaters and wire whisks
funnels of different sizes, sieves, colanders, plastic meat basters,
squirt bottles, shaving brushes, eye droppers
flexible, plastic tubing of different diameters,
rubber dolls, dishes to wash
objects that sink and float
small sprinkling cans, bottles with sprinkler tops
food colouring
boats, corks, pails
thermometer (metric)



(k) Mathematics:

Some Goals Are: to aid development of understandings in sorting
and classifying, counting, measurement, volume and shape.

Children develop mathematical understandings as they manipulate and rearrange materials and talk about their experiences.

* **Whenever possible metric scale equipment should be provided.**

Sorting and Classifying:

shells, buttons, coloured beads, mosaic shapes, bottle caps, nails, blocks,
cooking materials, collage materials, paint, tongue depressors, dominoes,
cuisenaire rods

Counting:

beads, dice games, trucks passing along the street, apples for snacks, cooking materials, flannel board shapes and figures, blocks, rhythm instruments

Ordering:

nesting boxes, jar tops, flannel board cut-outs, cuisenaire rods, bottles with coloured water

*** Measurement:**

Linear sticks — sticks, tape measures, yardsticks, rulers, carpentry and woodworking materials, unifix cubes

weight — scales of all kinds, sand, clay, plasticine

*** Space and Shapes:**

solid and flat shapes, objects with spatial properties and different patterns, games that require fine distinctions in shapes, geoboards, construction objects, blocks, painting and drawing materials, balls, hoops, climbing apparatus, unit blocks, geometric inset puzzles, parquetry blocks

*** Volume and capacity:** containers for liquid and dry measuring, water, sand, clay, cooking materials

Time: stop watches, clocks, egg timers, calendars

*** Temperature:** thermometers

(I) Science

Some Goals Are: to aid development of ability to actively process information received through the senses.

*** Whenever possible metric scale equipment should be provided.**

Observation:

- sight — colours (paint, food colouring, paper, melted crayons), living plants, rocks, animals, wood pieces, leaves, tree bark, different kinds of nails and screws, magnifying glasses
- smell — spices, flowers, the air in different locations, fruits, perfumes
- touch — sandpaper of various grades, cloth of different textures, skins of various fruits and vegetables
- taste — variety of foods
- hearing — musical instruments, records, tape recorder, sound making materials, sounds in the environment

Inference:

any materials that stimulate explanation of observations

Use of Space/Time Relationships:

materials that involve the study of shapes, symmetry, motion and their change with time

Classification:

materials to sort and group according to similar properties such as shells, buttons, shapes, rocks, cloth materials, floating and non-floating objects, vegetables, fruits, insects

Using Numbers:

materials that encourage the use of numbers (see materials under mathematics section)

*** Measurement:**

materials that involve measurement of length, weight, capacity, volume, time and temperature

Prediction:

materials that stimulate children to forecast what future observations will be; predictions need the possibility of testing.

(m) Language

Some Goals Are: to aid development of listening, viewing, reading, writing and speaking skills for immediate and/or future use.

Hardware:

(What can be borrowed or shared?
What has to be purchased?)

- record player
- tape recorder
- radio
- television
- slide projector
- filmstrip projector
- film project
- listening center (headsets)

Software:

- picture books
- discussion pictures
- puppets
- dress-up clothes
- picture charts
- objects appealing to a variety of senses
- flannel board

A language center can always be enhanced by:

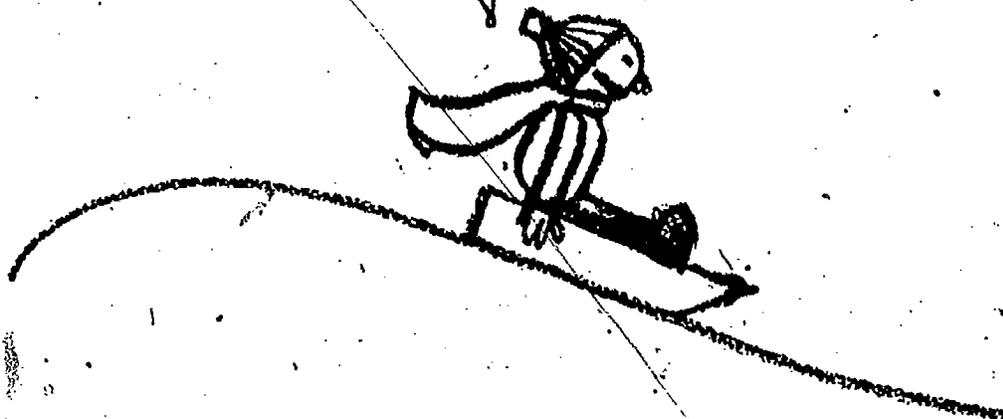
- book display area (low shelf or table)
- rug
- pillow(s)
- stuffed chair(s)
- rocking chair(s)

(2) Outdoor Resources

The importance of an exciting, stimulating and well-planned outdoor play area cannot be overstated. Children need an opportunity, not only to enjoy, but to experience the out-of-doors and what it has to offer — the chance to watch a ladybug, to feel the cool grass against their skin, to talk to a chipmunk and touch a tree; to run and jump and skip and hop with all the freedom we can offer and in doing so, to unconsciously develop physically, emotionally and mentally. In order to provide a wide range of experiences and ensure maximum development in these areas the outdoor environment might include some of the following elements.

(a) A Hill

A flat play area can easily be made more interesting by the use of dirt mounded up to form hills. To get the earth, arrange with a building contractor to dump earth from a building excavation. The earth can be dumped on the playground and shaped into the required form. Once made it can be used during all seasons and for a variety of experiences. It serves as an excellent runway for toboggans, sleds and homemade go-carts. If desired, a slide chute can be set into one side. The hill, of course, eliminates the danger of high platforms on traditional slides and is especially good for small children.



b) Sand

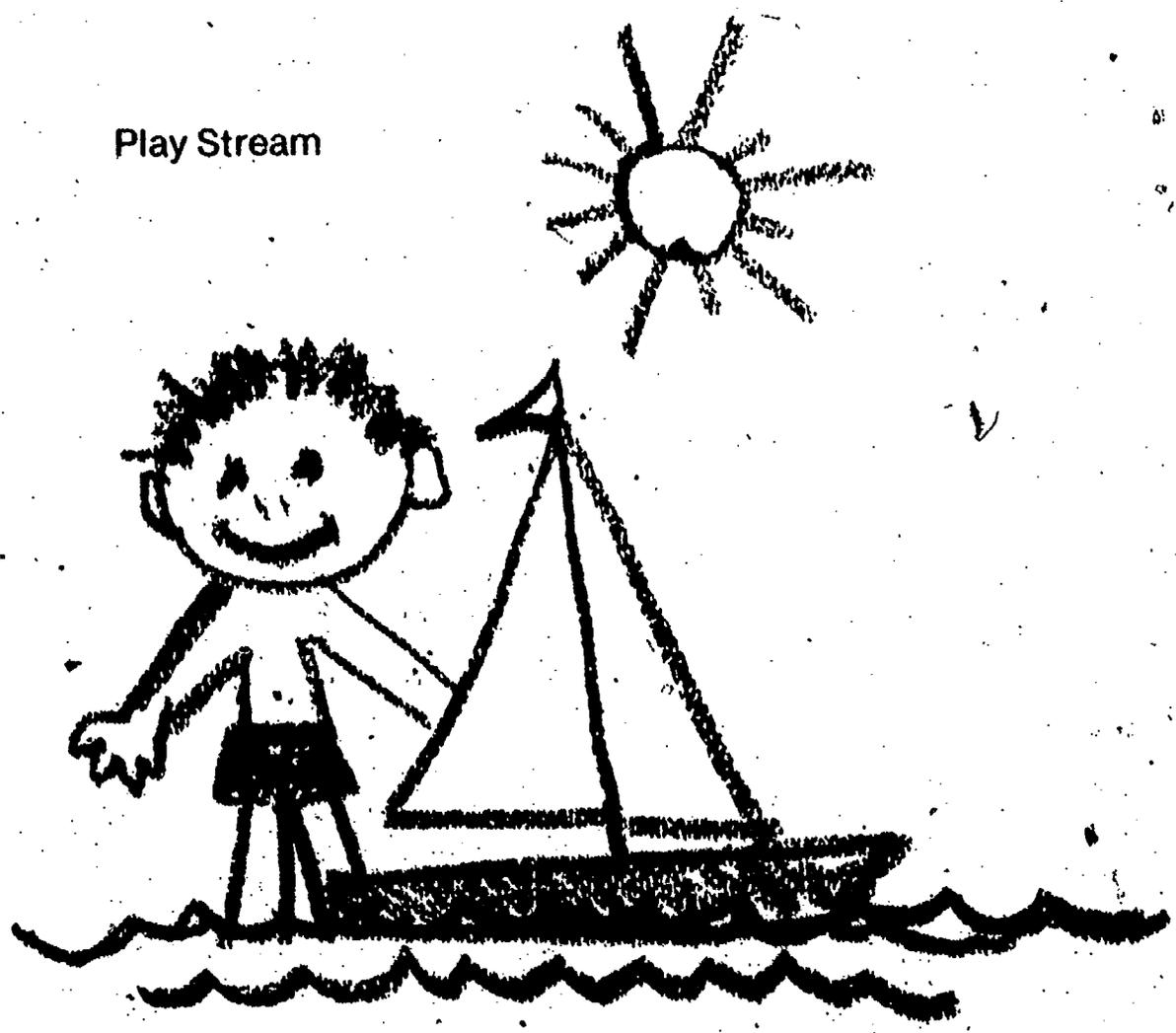
Sand is nature's most manipulative, creative substance and no play area is complete without it. Although it should be available throughout the play area, sand under the climbing apparatus is never a substitute for a true sand play area. Sand should be made available in such a way that it does not blow out of its container or into eyes. It should be deep enough to make castles plus have available accessories such as pails, sieves, spoons etc., to extend the variety of its uses.

c) Water

Water is essential both in terms of the enjoyment children derive from it and its developmental value for all ages. Without it, the item just mentioned, sand, loses much of its value. Water can be provided in hundreds of ways, from a simple tap, hose, pump, fountain, stream or pool! The method by which it is provided may indicate to some degree how it can be used. For instance, simple play streams can stimulate creative constructive and cognitive development. A stream can be dammed or bridged, waded in, used for sailing boats and a variety of other experiences.

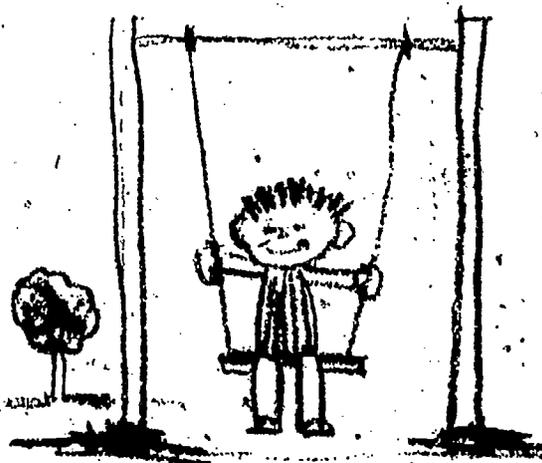


Play Stream



d) Swings

Swings have been an element of outdoor play areas since their initial inception and with good reason. They can contribute to physical development in a variety of ways and often serve as an emotional retreat and consoler. In planning swing areas, safety is a primary concern. They should be placed to discourage children running behind them or mounting them from the back. As well, materials other than steel must be considered. Seats can be made of leather, plastic, tires or inner tubes, with rope to hang them.

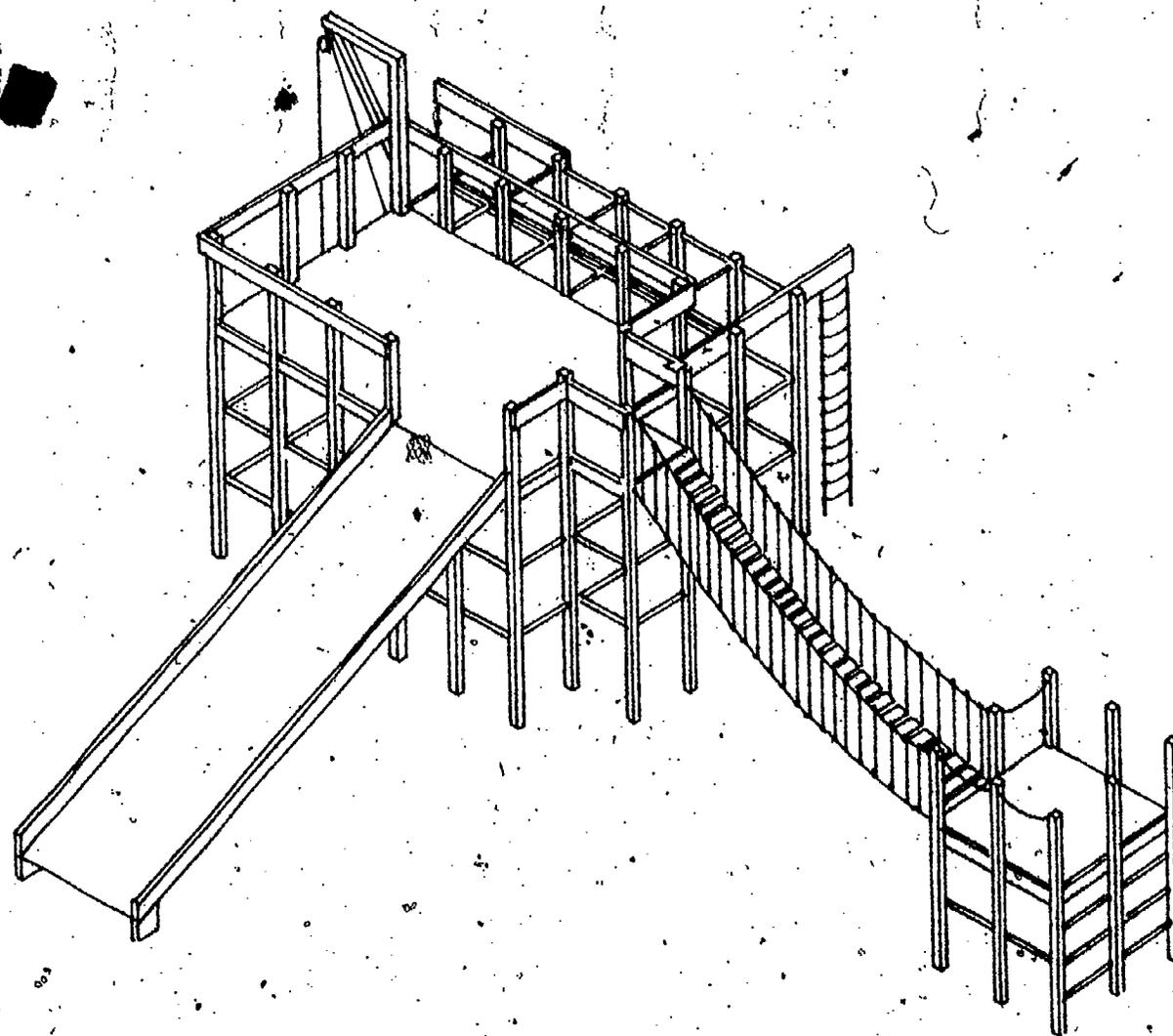


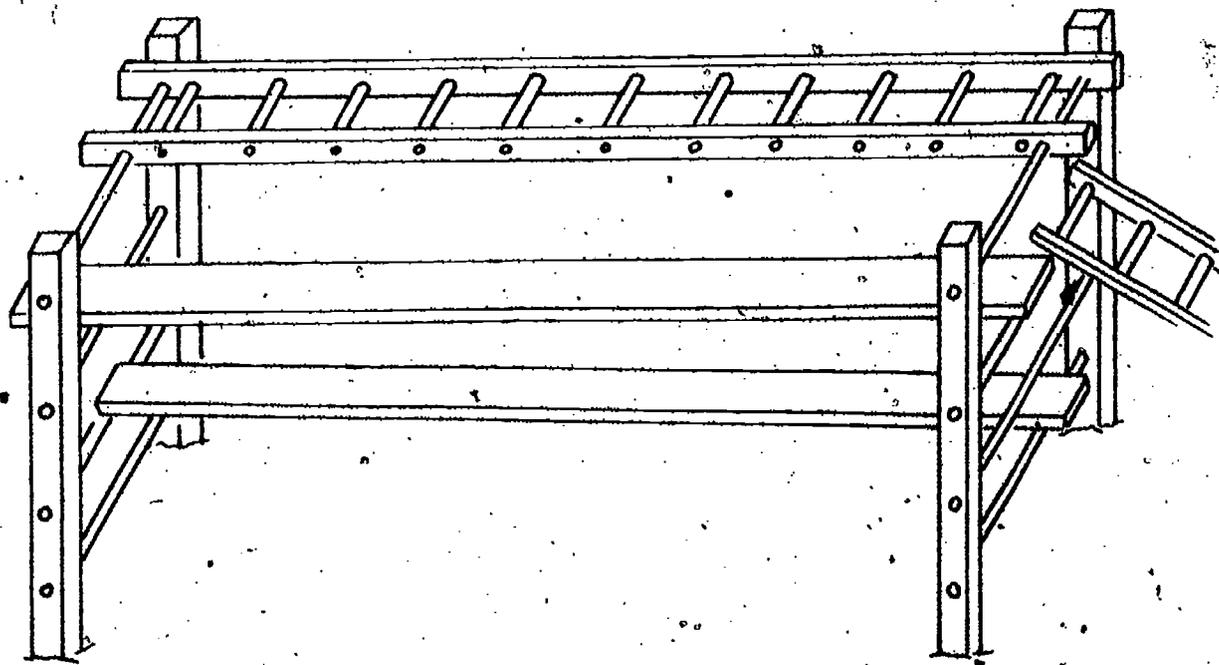
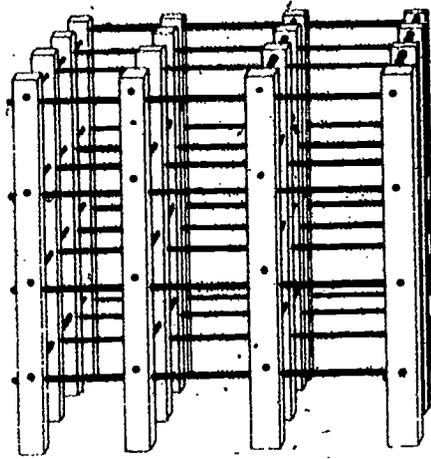
Climbing Apparatus

Old fashioned jungle gyms have many good qualities. They can be scaled to any height and encourage clambering up, weaving through and hanging down. Made of wood rather than metal they combine better with boards and ropes; also it eliminates the slip and the danger of lips sticking to it in winter. Additions to the jungle gym can extend its value — knotted ropes on a gibbet, fireman's poles, ropes, trapezes, ladders, bridges, pulley rides and ropes - hanging straight, knotted or unknotted, stretched horizontally for hand-over-hand travel — all present excellent challenges and are useful in adding imaginative play to the purely physical.

Tree houses and look-out towers that have many different methods of ascent and perhaps pails on pulleys serve a double purpose of physical and dramatic play. Many designed climbing structures made of heavy timber for example, or concrete play structures look nice but are not constructed with the child's physical development in mind. They offer little challenge

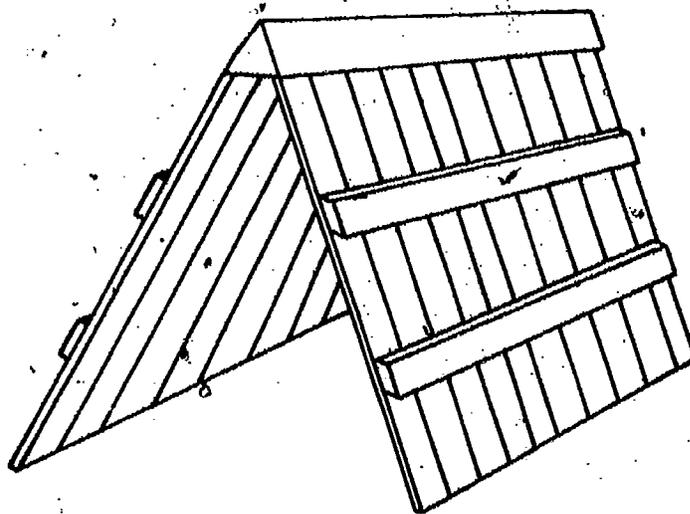
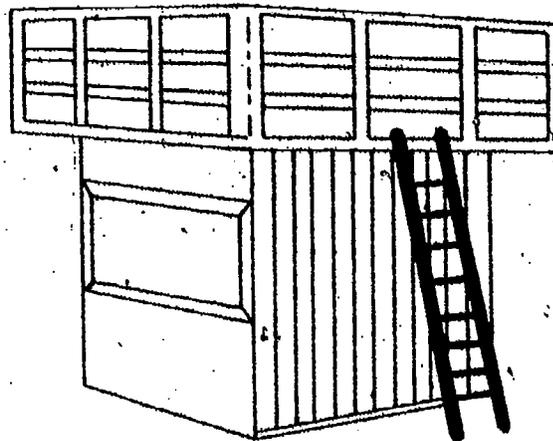
and limited muscular exercise and take up too much space. Climbing structures that are made in the shape of animals or airplanes etc. only satisfy the designer's fantasy, not the child's imagination, and usually sacrifice elements for physical development.

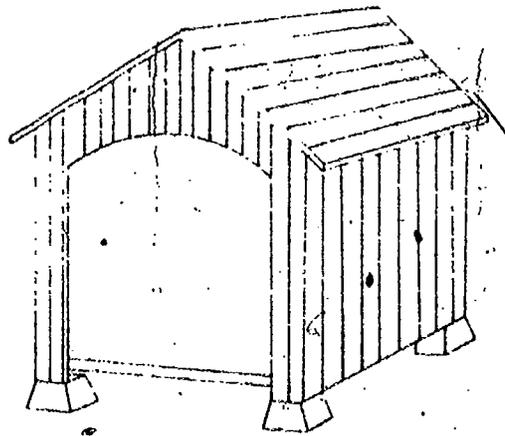
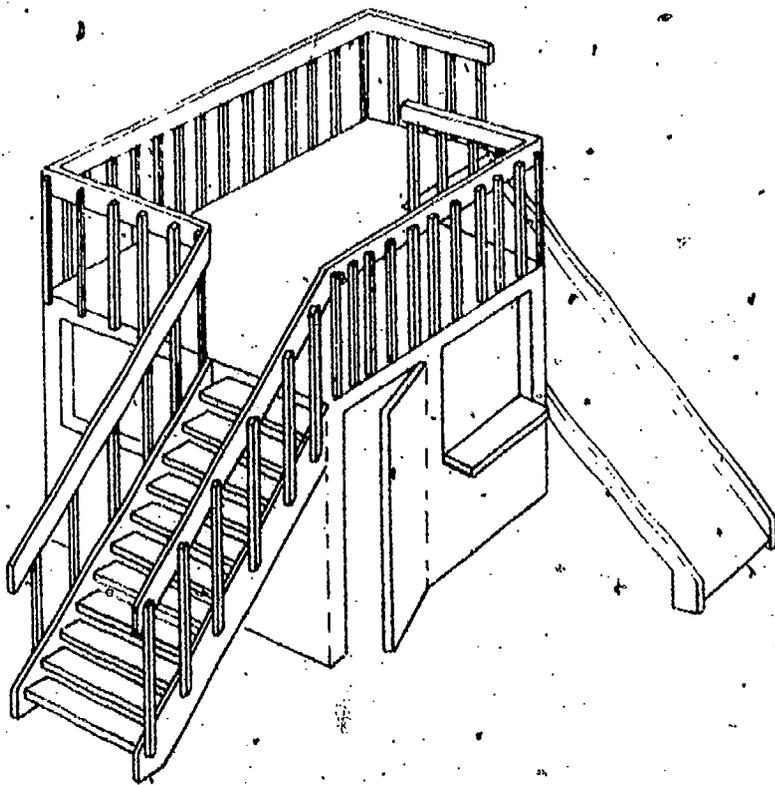




f) Playhouses

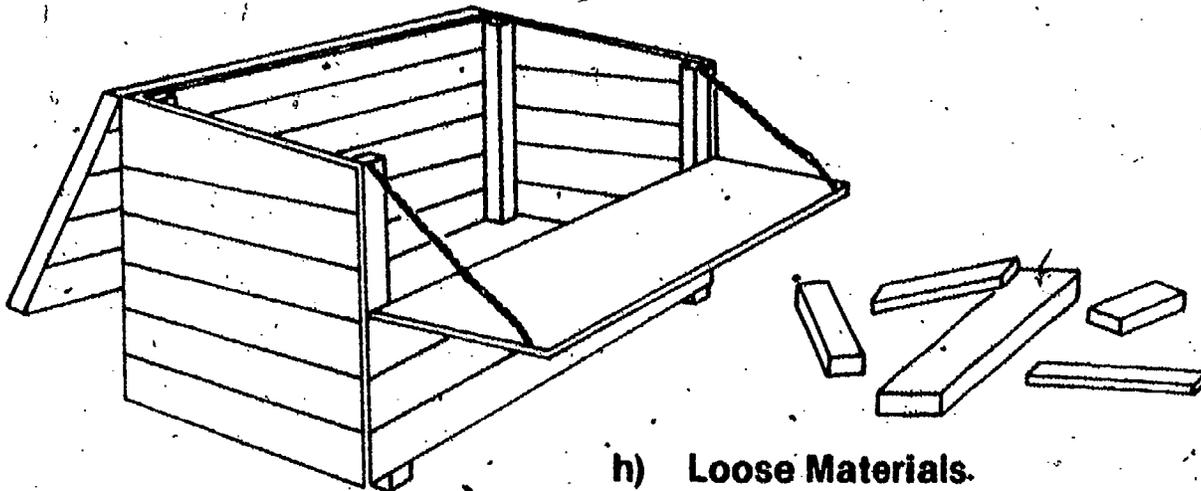
Playhouses encourage social play and should be inviting, not too stark, but neither big or fancy. Structures and objects that invite doing things together and "let's pretend play" or just talking and doing nothing form important ingredients in outdoor play areas. There are all kinds of playhouses, but whether it is crude and rough or a charming miniature cottage, it will delight the children. They can take the form of playhouses, tree houses, sitting places, caves, nooks, Indian teepees, the House of the Three Bears, a grocery store or a robber's den.





g) Blocks

Blocks serve as an excellent medium for creative play outdoors as well as indoors. They should be of a variety of sizes, all the same color, numerous in number and come complete with storage area.



h) Loose Materials.

Loose materials are essential for outdoor play areas and the more there are and the more variety, the more creative combinations result. Wooden boxes of different sizes; boards; small ladders; saw horses; large unit, solid or hollow blocks; loose wood in different sizes — if all painted the same color — will give a modular effect and dissention due to color preference will be eliminated. Old tires, lengths of clothes line and beautiful junk such as wash tubs, old pots and pans and dress-up clothes all extend play.



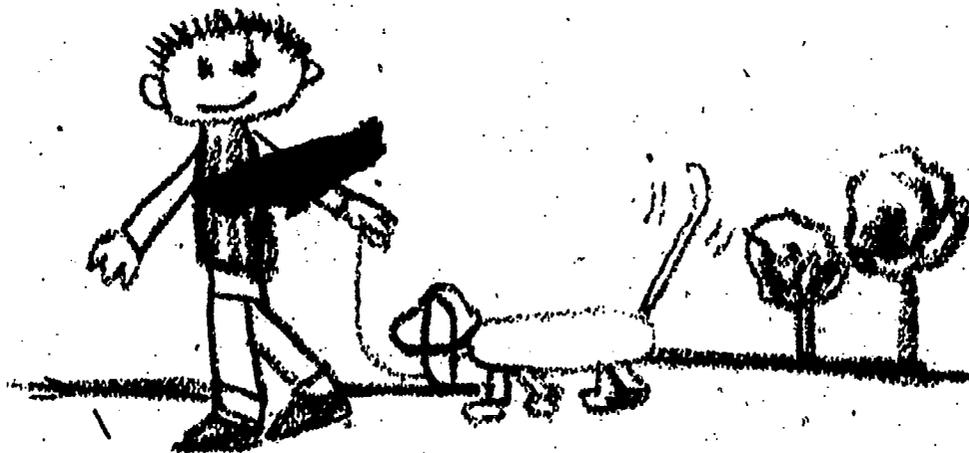


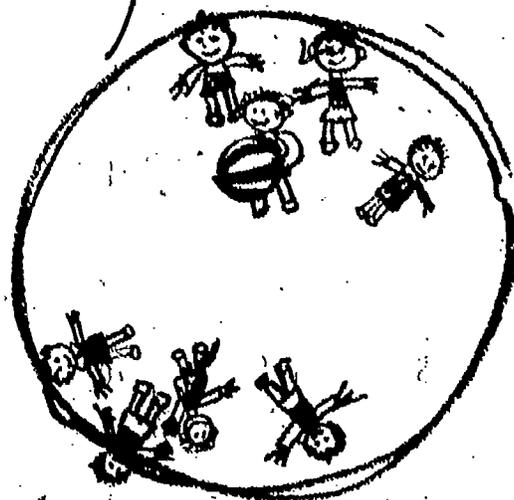
i) Gardening

Gardening is an excellent activity for learning and emotional satisfaction. Good soil, a sunny place, and a source of water need to be allotted and protection from trampling. Vegetables, sunflowers and other annuals make satisfactory gardens for impatient beginners.

j) Animals

Rabbits, gerbils, birds, goats, fish and even some farm animals can be housed on the play area. The care and feeding of animals is an important part of a child's development.





k) Group Activity Area

Open space for casual games should be laid out in such a way as not to interfere with construction, quiet or creative play, and so as not to be dangerously close to physical activity apparatus. A play area that is completely cluttered with equipment does not recognize the child's patterns of switching from concentrated, constructive play to informal play and back again.



l) Wheel Toy Area

A hard, smooth path or roadway for tricycles, wagons and other child-driven wheel toys, preferably away from quiet activities, is an excellent addition to an outdoor play area, particularly for pre-schools. Stop signs or red, yellow and green lights can be made and painted by the children. Traffic can be regulated by using chalk to outline boundaries, crosswalks and one-way streets. Children can act as policemen directing traffic. Gas stations can be easily made by using an old oil drum with a short length of hose. A bell counts the gallons of gas. Bottle caps can be used for money. A garage and parking area can also be set up.

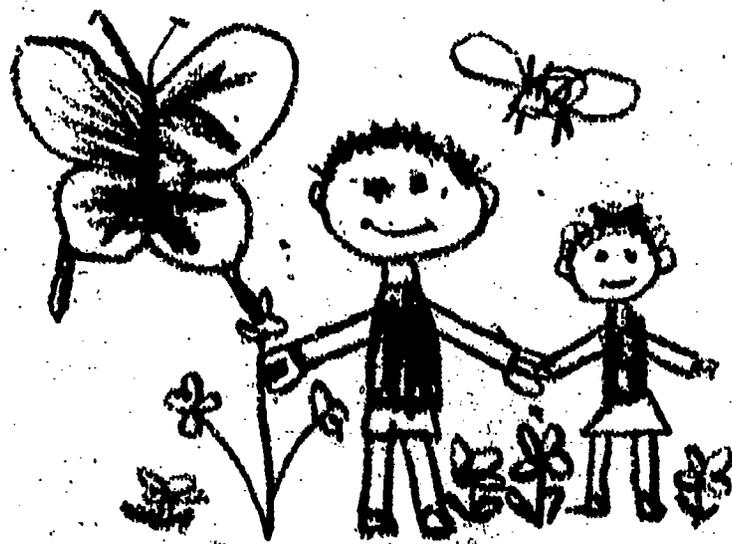


m) Quiet Place

One part of the play area should be maintained for quiet activities or simply a place of rest. It should be away from the centre of activity and provide some shade.

n) A Natural Area

If possible, retention of a natural area of trees and grass and bugs and flowers is most desirable. The experiences possible in such an area are endless and provide a rich, rewarding happening for any child.



In planning an outdoor play area, a number of questions must be considered:

1. Has the play area been designed with the **interests of the children** in mind?
2. Will the play area be appropriate for **year 'round use**?
3. Has the best possible **selection of equipment** been made? Is the equipment **multi-purpose**?
4. Is the equipment **well constructed** and **durable**?
5. Is the play area **safe**? Is the equipment **safe**?
6. Has the **age group** been considered in planning the play area?
7. Has the equipment been placed in the best possible **physical arrangement**?
8. Has consideration been given to **storage** of equipment?

BIBLIOGRAPHY

1. Central Mortgage & Housing Corporation: **Creative Playground Information Kit**
2. Cornelius, Ruth - "What Did You Do Today, We Played," **Childhood Education**, Vol. 36, No. 7, March 1960, pp. 302-303
3. **Creative Playgrounds Catalogue.**
4. Frank, L. K. - "Play is Valid", **Childhood Education**, March, 1968, pp. 433-440.
5. Michigan State University: **Children's Games and Play Equipment.**
6. Moffatt, John: **Inside, Outside, Upside, Downside.**
7. Snell, D. A. - "Edmonton Downtown Y. M. C. A. Pre-School."
8. Weininger, O. - "Child's Play: Is It Really That Simple?" **Early Childhood Education**, Vol. 7, No. 1, Winter 72-73, pp. 6-12.

APPENDIX B
RESOURCE MATERIALS

SUPPORT MATERIALS - PRINT

- ANKAR, D. Teaching children as they play (In **Young Children**, May 1974. Pages 203-13.
- ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL Play soapes: two case studies. Washington, 1973, 16 p.
- ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL Play: Children's Business and a Guide to Play Materials (1976)
- ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL Selecting Educational Equipment and Materials For School and Home (1976)
- BARNES, K.E. Preschool play norms: A Replication (From **Developmental Psychology**, 1971, Vol. 5, No. 1. Pages 99-103).
- BORICH, G.D. Evaluating educational programs and products. Englewood Cliffs, N.J., Educational Technology Publications, 1974, 491 p.
- CANADIAN TOY Toy buying guide (Article from **Canadian Consumer**, November, 1973. Pages 1-6)
- COURTNEY, R. Education is play (Article from **Childhood Education**, 49, 1973, Pages 246-50).
- CROWE, B. The playgroup movement. London, Allen and Unwin, 1973, 205 p.
- DAVIS, D. Playway: education for reality; an interest/play center approach for early childhood education. Minneapolis, Winston Press, 1973. 251 p.
- GRAVEY, C. Some properties of social play. (In **Merrill-Palmer Quarterly**, July 1974. Pages 160-80.
- HERRON, M. A toy can be more than a plaything. (Article from **American Education**, 8, 1972. Pages 21-4.)
- INTERNATIONAL PLAYGROUND MATERIAL Things (Regular articles from Day Care and **Early Education**.)
- McINTYRE, I. An examination of a play environment and its effects on the total development of the preschool child. (Article from University of **Manitoba Study**. Pages 3-20).
- MARTINELLO, M. Playgrounds for learning. (Article from **The Elementary School Journal**, November, 1973. Pages 106-15).
- NIMNIGHT, G.P. The toy library: parents and children learning with toys. Article from **Young Children** 28, 1973. Pages 110-16).
- PRE-SCHOOL, primary and intermediate teaching materials and references. Berkeley, Calif., National Nutrition Education Clearinghouse, 1972. 17 p.
- SHARKEY, T. Building a playground. Newton, Mass., Education Development Center. 23 p.

SUTTON-SMITH, B.

TWARDOSZ, S.

WEININGER, O.

YOUNG, B.B.

SUPPLEMENTARY information on early language and reading Kits. (Article from EPIE Report, no. 62/63. Pages 94-104).

Play pays off. (Article from SR Review, Page 49).

Infants use of crib toys. (In *Young Children*, July, 1974. Pages 271-76).

Child's play: Is it really that simple? (Article from *Early Childhood Education*, vol. 7, no. 1, 1972/73. Pages 6-12).

Take a fresh look around your kindergarten room - Is it conducive to learning? - Is it cheerful? - Is it functional? - Is it the children's? (Article in *Young Children*, March 1975. Pages 160-65).

SUPPORT MATERIALS - NONPRINT

1. Films

- (a) "Serious Business of Play" (16 mm - 22 minutes)
 - importance of play in a child's life.
- (b) "Play in the Hospital" (16 mm - 22 minutes)
 - play programs in a hospital setting
- (c) "Water Safe" (16 mm - 22 minutes)
 - swimming for young children
- (d) "Moving and Learning" (Super 8 mm - 20 minutes)
 - movement activities for pre-school children.

2. Slide-tape

- (a) "In-expensive Additions to Outdoor Play Equipment"
 - Ideas for constructing a creative playground.
- (b) "Waterplay"
 - Ideas and equipment for use in a waterplay center.
- (c) "Parent-Child Toy Lending Library"
 - filmstrip-tape format containing ideas on equipment and how to use it with young children.
 - Serves as a training program for parents.
- (d) "Where Do Children Play"
 - Ideas on setting up play spaces.

3. 2 Slide-Tape

Equipment for Movement Education and Play Programs Prepared by Margaret Ellis, Ph.D. University of Alberta for the Department of Recreation, Parks and Wildlife shows a number of home made and improvised piece of equipment for Movement Education and Play Programs for Young Children.