

GUIDE TO THE KINDERGARTEN CURRICULUM

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Prepared by the
Curriculum Development Council

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CHAPTER 1 : FOREWORD

1.1 Kindergarten education is a vital part of pre-school services. Children at this stage not only learn fast and experience rapid development in both mind and body, their character also begins to take shape. It is thus important for kindergarten teachers to set appropriate educational goals, design a suitable curriculum and explore effective teaching methods for the children they teach.

1.2 The overall aim of kindergarten education is to provide children with a balanced development in the moral, intellectual, physical, social and aesthetic aspects and to prepare them to be good citizens. The emphasis of nurture, however, should be different for children of different ages. In general, kindergarten children are self-centred, curious, active, imaginative and quick at imitating. They know little and have to acquire knowledge and skills through exposure to the environment and contact with people. The kindergarten curriculum should therefore be well-planned and designed in accordance with the developmental characteristics and individual needs of young children. It is hoped that through sensory experience, observation and experiments, children can learn to adapt themselves to group life, develop an interest in learning and know about the relationship between society and man. In other words, an ideal kindergarten curriculum should be one that allows children to enrich their daily experience, develop basic skills and grow happily in a stimulating learning environment.

1.3 This Guide is prepared by the Kindergarten Co-ordinating Committee under the Curriculum Development Council. Membership of the Co-ordinating Committee includes kindergarten principals, teachers, child care centre supervisors, lecturers of Colleges of Education and inspectors from the Advisory Inspectorate and inspectors from the Curriculum Development Institute. The Guide focuses on the principles of curriculum design and curriculum implementation. Suggestions for activities that suit children's ability and fit in with their daily experiences are set out in the appendices for the reference and use of the kindergartens.

CHAPTER 2 : BACKGROUND

2.1 The White Paper on "Primary Education and Pre-primary Services" issued by the Hong Kong Government in 1981 recommended that kindergarten education should be a one-to two-year course of education which is suitable for children between the age of 3 years 8 months and the age of entry into primary school. In response to that, the Curriculum Development Committee (now known as the Curriculum Development Council) published the "Guide to the Kindergarten Curriculum" in 1984 to provide reference and teaching materials for the upper and lower kindergarten classes. It emphasizes "Learning through play" in kindergarten teaching, that is to stimulate children's initiative to learn systematically through a great variety of activities. The teaching materials are to centre on teaching themes, and an integrated approach is adopted to cater for the needs and interests of children and to cope with the school environment. The "spiral curriculum" mode is recommended for compilation of the curriculum. That is, the scope and nature of activities should vary in levels of difficulty although similar themes are recommended for both the upper and lower kindergarten classes.

2.2 The fact that more women have taken up employment has directly affected the age of children being sent to schools. In order to cope with the need of the society, most kindergartens also operate nursery classes and enrol children at 3 years of age. Individual differences in the physical and intellectual development of the 3-year-olds are quite significant. For children of this age group, their attention span is short and their experience and comprehension is limited. Hence, early childhood educators in general believe that learning is best achieved through flexible and varied activities. In view of the above, the Curriculum Development Council compiled the "Guidelines on Nursery Class Activities" in 1987, the content of which is based on the characteristics of the development of 3-year-old children. The Guidelines recommends various games and activities for young children so as to provide them with routine training and help them to cultivate good habits, to face emotional problems, to develop social skills and to attain a balanced development in both physical and intellectual aspects.

2.3 The Education Department conducted a survey in 1987 to gauge the opinions of kindergarten teachers on the "Guide to the Kindergarten Curriculum" through questionnaire and interviews. It was found that the majority of kindergartens accepted the recommendations of the "Guide to the Kindergarten Curriculum" and adopted the integrated "Thematic approach". Although some schools are limited by objective constraints and cannot fully adopt the thematic approach, judging from the performance of the children, teachers in general find the recommendations of the Guide beneficial to their teaching.

2.4 In order to cope with the development of curriculum, the Kindergarten Co-ordinating Committee of the Curriculum Development Council studied the opinions collected and started to revise the two guides in 1989. It was recommended that the two guides should be combined into one set. The revision was completed and circulated to schools for comment in November 1992. The guide was subsequently revised in the light of the suggestions given and was endorsed by the Curriculum Development Council. It is hoped that this guide will serve as a useful reference for all involved in kindergarten education.

CHAPTER 3 : AIMS OF KINDERGARTEN CURRICULUM

3.1 General aims

3.1.1 The general aims of the kindergarten curriculum are both enabling and preparatory, bridging the gap between the family and an outside social group. The curriculum is aimed at enlarging children's view of the world from their family to that of their school. It should help to produce the well-balanced development of children in the moral, intellectual, physical, social and aesthetic spheres of life. Pedagogical programmes should foster in children a positive attitude towards those aspects of cognitive, emotional and kinaesthetic learning which are important to the success of their future education.

3.2 Specific aims

3.2.1 The general aims may be broken down into selected specific ones for purposes of practical curriculum planning. Some of the more important specific kindergarten curriculum aims are :

Aims related to intellectual development

- (a) To encourage in children a positive attitude towards the acquisition of knowledge and understanding of their world.
- (b) To assist children to develop concentration power, observational, analytical, reasoning and problem-solving skills.
- (c) To lay the foundations of basic numeracy and literacy.

Aims related to communicative development

- (d) To broaden and refine children's innate and family-learned verbal and non-verbal interpersonal proficiency.
- (e) To support and facilitate children's efforts to identify and express their thoughts and emotions linguistically.

Aims related to social and moral development

- (f) To assist children to attain a socially acceptable balance between personal interests and those of their community.
- (g) To develop in children a sense of responsibility, and a positive attitude towards both work and people.

Aims related to personal and physical development

- (h) To foster in children the ability to look after themselves.
- (i) To help children to acquire the skill of giving expression to their feelings, both positive and negative.
- (j) To make children perceive the importance of self-control in operating happily in the kindergarten environment and to train them in this habit.
- (k) To nurture in children a sense of self-esteem, confidence and achievement.
- (l) To further children's dexterity in gross and fine motor skills.

Aims related to aesthetic development

- (m) To stimulate children's imaginative powers and to help them cultivate the ability to appreciate beauty in its various forms.

4.1 The Developmental Characteristics of 3-to 5-year-olds

4.1.1 Early childhood educators should have knowledge of the developmental stages and characteristics of children before they can help to enhance a balanced development of these children effectively. The following is the developmental characteristics of 3- to 5-year-old children in general. However, in view of their individual differences, the following information only serves as general reference and should not be treated as established standards.

4.1.2 The Characteristics of a 3-year-old

(1) The Development of Motor Skills

The fine motor skills of young children's hands develop slowly but with the coordination of hand movement, children will be able to take care of themselves. 3-year-old children in general can eat with spoons and forks by themselves, drink with cups, dress and undress, do up and undo simple buttons, put on and take off shoes without lace. They can also draw a circle or a cross with a crayon. Generally speaking gross motor skills develop faster and children's body co-ordination are better than before. Most young children at this stage like to run, jump and ride a tricycle. Some may still need to rest both feet on one step in mounting a flight of stairs. By three and a half, most will find no difficulty in climbing or descending with alternate foot.

(2) The Development of Concepts

Children's experience directly affects the formation of concepts. At this stage, most children know their names, their sexes and the names of the major parts of the body. They can also understand the meaning of such concepts as 'above' and 'below', 'front' and 'back', 'beside', 'big' and 'small', 'long' and 'short'. They are able to tell whether things are the same or different and name several colours. Sometimes they can use words related to time and quantity, but cannot fully grasp such concepts.

(3) Language Development

The language skills of children develop rapidly at this stage. Basically, they can understand instructions of adults and can use simple language to express their feelings and needs. They can concentrate on listening to simple stories and like to sing simple songs or 'nursery rhymes. They also like to imitate an adult's speech or vocabulary and can formulate short sentences.

(4) Emotional Development

Usually, children entering the age of 3 still hold on to their views but are quite acceptable to adults' advice. On the other hand, children of this age often experience fear and anxiety and need to get a sense of security from adults. They are also very imaginative and will keep talking to their toys and animals to express their feelings and emotions.

(5) Social Development

Children of this age just begin to expand their social circle from their family. Since they are 'egocentric' and often want other people to do what they say, snatching, arguing and even aggressive actions are frequent. They tend to play by themselves at the beginning and gradually get into the habit of sharing toys with other children and following simple rules of games through learning.

4.1.3 The Characteristics of a 4-year-old

(1) The Development of Motor Skills

Children of this age can move their fingers dexterously and are able to draw simple pictures or do easy paper cutting and pasting. They can also construct 'buildings' with toy bricks. They are also capable of dressing, undressing, doing up buttons, brushing their teeth, folding paper and threading beads. Children have a stronger physique and can walk for quite a long distance. They are quick in action and not only are they able to run, jump, climb, and stand on one foot, but are also rather skilful in catching, throwing and riding tricycle.

(2) The Development of Concepts

They have a better understanding of the environment, for example, their time concepts allow them to tell what they usually do in the morning, afternoon and evening. For spatial concepts, they can distinguish positions in the front, back, middle, first and last. They are also able to count from one to ten. They have a preliminary understanding of the concepts of classification of objects. They are able to distinguish between what is light and heavy, thick and thin, long and short. Some of them can even tell the right from the left.

(3) Language Development

Children can speak clearly and say whatever they think of. They like to ask questions and can give brief descriptions of pictures and talk about their everyday life. They are also able to say simple words and use opposites.

(4) Emotional Development

Although they cannot control themselves sometimes as they may show strong affinity or dislike and may brag or exaggerate, 4-year-old children in general can observe simple rules. They will do things to court favour from the adults.

(5) Social Development

They have become more self-disciplined and are willing to observe the rules of the game. They are polite to other people and have learned to say 'Thank you', 'Sorry', etc. They can also get on with strangers. But they still have very vague concepts of right and wrong, knowing only that behaviour receiving punishment is bad and that followed by praise is good.

4.1.4 The Characteristics of a 5-year-old

(1) The Development of Motor Skills

They can control the movement of their wrists; use pencil and painting brush skilfully; fill colour in an assigned area; design simple art and craft work. They are good at using scissors and folding papers. In taking care of themselves, they know how to eat with chopsticks, pick up food and comb their hair by themselves. Children of this age are able to walk at an adult's speed. They find it easy to walk on a narrow lane and are rather skilful in climbing, crawling, sliding and swinging. They can also dance to the music and play games.

(2) The Development of Concepts

They have acquired the basic concepts and skills of reading, writing and early mathematics. They understand the concepts of time, space, quantity and classification of objects quite well. They can put objects of different length, height, width and size in correct order and are able to count from one to twenty. They can also tell the general contents of pictures after looking at them.

(3) Language Development

The grammar and structure of children's language are more or less the same as adults'. They can communicate with family members or other children and are able to talk in turn without digressing from the subject. They can also give a logical account of what has happened recently. They can also transmit simple messages and enjoy telling stories.

(4) Emotional Development

Being more stable in emotion, they begin to express emotions by language, have good self-control and are willing to accept sincere criticism from adults. Occasionally, however, they still need the instructions of the adults.

(5) Social Development

In terms of self care ability, they have become more independent. They can choose suitable clothes, bathe by themselves and do some simple housework. As to social behaviour; they begin to choose peers they like. They also participate in co-operative games with several children and are willing to abide by the rules of the game. Besides, they have also learnt to protect the weak and small and to console others.

4.2 Children's Learning

4.2.1 What is Learning?

4.2.1.1 Learning is a self-motivated psychological activity which enhances children's knowledge, skills, habits and manners both in terms of quality and quantity, resulting in a change of behaviour that may persist.

4.2.1.2 Learning originates from the external stimulus experienced by children. Responding to incoming stimulus, their innate learning motives are aroused, resulting in behavioural changes. For instance, when children see their teacher demonstrate the production of folded pattern for the first time, their curiosity, creativity and desire to do the same will be aroused. They will thus pay close attention to every step demonstrated by the teacher, which is memorized, transformed into images that are stored in their memory. When they are given the opportunity to apply what they have memorized, they will make folded pattern by themselves. With more practice, they will become more skilful and creative in the work. It is through this process that they will be able to master the skills of producing folded pattern.

4.2.2 The Conditions for Learning

4.2.2.1 Learning is in fact affected by internal and external conditions. Internal conditions refer to the prerequisites the children should possess for learning. These include physical health, a mature mind, power of comprehension and stable emotions. Using the production of folded pattern as an example, the children should be able to concentrate and observe the demonstration by the teacher; they should be able to understand the details of every step; they should also know how to control the painting brush, sprinkle the water colours, fold, flatten the paper and draw.

External conditions refer to the living environment of the children, that is, whether suitable conditions for learning and interesting learning materials are available. Once again, taking folded pattern as an example, if the paper and water colour supplied by the teacher are not attractive, if the teacher refuses to give the children the opportunity to practise and if the children are not provided with water colours and paper at home, they will not be motivated to learn (even though the so-called folded pattern is in their memory), let alone mastering the skills required. Thus, each and every condition mentioned above will affect children's learning.

4.2.3 How Learning takes place

4.2.3.1 Effective learning should be self-motivated and not passive. In other words, given the appropriate external and internal conditions, children will, through direct participation, gain knowledge and skills and change their attitudes and habits. For example, the following situation will motivate the children to learn more about 'a policeman' :

In everyday life, children may get some impression of a policeman on the streets or from television series. They will be more deeply impressed if they see policemen give help in an emergency. Based on this, the teacher would set appropriate teaching objectives, choose appropriate teaching materials, arrange activities and prepare teaching aids according to the needs and ability of children so as to motivate them to study and thus achieve the desired results.

4.2.4 Areas of Learning

4.2.4.1 Areas of learning include development of cognitive abilities, learning of physical skills and the cultivation of appreciation and affection. These will affect children's habits, attitudes, interests, values, power of appreciation and social adaptability.

4.2.4.2 Knowledge, concepts, skills and attitudes are both the contents of learning and the results achieved by children after carrying out learning activities.

- (1) Knowledge : Knowledge means the understanding of things. The teacher should take into consideration the interests and comprehension power of children in choosing teaching materials. To children of the nursery class, the most important knowledge is the knowledge about oneself. As they gradually grow up, they will divert their attention from themselves to the people and things in the environment. The teacher should then use common objects and phenomena as examples and guide them to learn through appropriate means. For instance, in teaching children about the sun, the moon and stars, it would be more effective to initiate active learning with consideration of children's ability and interests. Conversely, if the teacher merely emphasizes on introducing the names of the nine planets, children may be able to repeat the names by rote, but their memory will be short-term and learning which is detached from their needs and experience will be ineffective.
- (2) Concepts : Concepts are formed by generalizing the common features of things and phenomena. Generally speaking, children will have to undergo a series of activities in order to grasp a certain concept. For example, the concept of 'change' is very abstract. However, through such activities as making jelly, mixing colours, observing how trees undergo changes during winter and summer, children will gradually note that many things familiar to them will, under certain conditions, change in their form, colour and state. Thus the concept of 'change' is gradually formed.
- (3) Skills : Skills refer to the ability to accomplish a task. The teacher can judge whether children can grasp a certain skill by observing their behaviour. For instance : on communication, whether they are able to communicate with other people verbally or use simple words or pictures to express their ideas; on physical ability, whether they are able to run, jump, walk, etc. by co-ordinating their limbs or whether they can write,

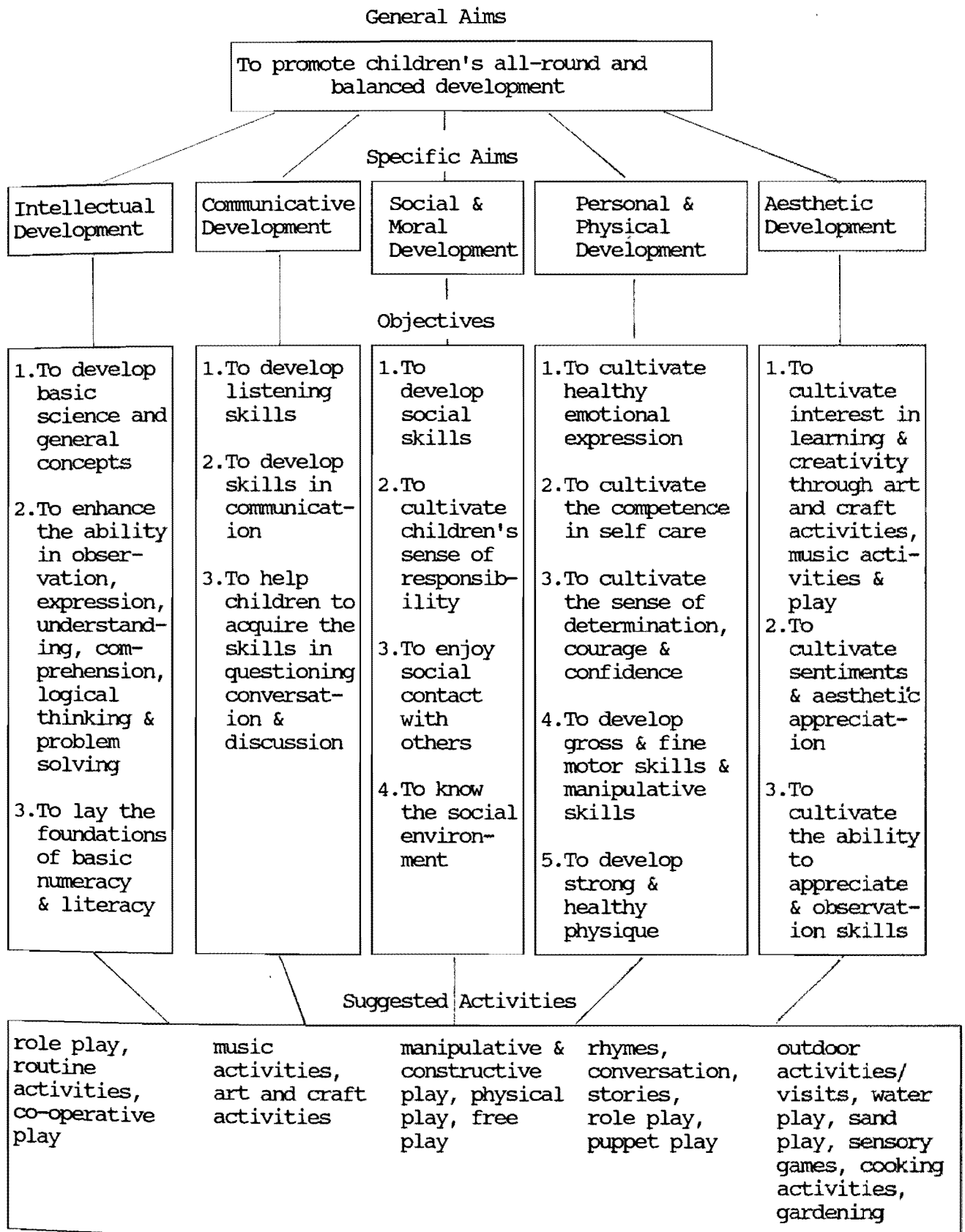
cut paper, stick pictures, etc. by co-ordinating their hands and eyes; on self-care, whether they can dress, clean and eat by themselves; on social skills, whether they can play and accomplish a task with others co-operatively and respond to other people's attitude. Training in skills should be provided through diversified activities so that children can have the opportunity to practise. For instance, in teaching social skills, the teacher may create a suitable environment, say, Home corner, Art and Craft corner, to help children experience interpersonal contact through such activities as role-play, co-operative painting, etc.

- (4) Attitude : Attitude refers to value, power of appreciation and a person's orientation in behaviour. A child's attitude will be affected by his degree of maturity and his family background. The behaviour of teachers at school, the teaching objectives and activities will affect the development of the children's attitude.

4.2.4.1 While some areas of learning mentioned above are particularly manifested in certain learning activities, in most circumstances the elements of learning are integrated. For example, in introducing 'Rabbits', children will be able to learn about the appearance and behaviour of rabbits by observation. If they are given the opportunity to feed rabbits, they will learn how to feed and take care of rabbits and develop a caring attitude towards small animals. They will understand that like human beings, rabbits also need food and rest and that both rabbits and human beings are animals. In this way, the concept of 'animal' will be gradually formed.

4.3 From Aims to Practice

4.3.1 The aims of kindergarten curriculum are to promote the all-round and balanced development of children, helping them to grasp concepts and consolidate their knowledge through participation in play and activities.



(Note : As there are many kinds of activities, the above examples are not exhaustive and serve as reference only.)

4.4 The Curriculum

The contents and forms of learning activities in kindergartens have to be consistent with educational goals and policies, and to take into consideration the children's interests and abilities, an integrated approach should be adopted. Undue emphases on subject teaching should be avoided. To enable kindergarten teachers to get a better understanding of the various activities covered in the curriculum and the approaches to be followed, the scope of learning and principles of teaching in the following areas are provided for reference :

- (1) Emotional and social development
- (2) Physical play
- (3) Language development
- (4) Early mathematical experience
- (5) Experience in natural science and
- (6) Creative activities
- (1) Emotional social and moral development

Early childhood is often referred to as the 'pre-socialization period'. This period is vital for the emotional and social development of children. On reaching the age of three, children's emotional responses become more differentiated and their personality becomes more distinct. Teachers should appreciate the strengths of the individual child whenever possible and avoid making comparisons among them. They should encourage children to express their own ideas and feelings. As far as possible, they should accept children's emotions and provide appropriate guidance. However, teachers should also maintain classroom routines in a mild but firm manner; at times, they may even have to impose restrictions on certain behaviour of children, such as attacking others aggressively or damaging things out of anger. By the age of five or six, their response will become more mature. They will try to express their emotions in ways which are acceptable to adults. To promote the social development of children, teachers should help them understand the relationship between the individual and society, learn the appropriate behavioural patterns in getting along with others and appreciate the importance of teamwork, so that they can derive pleasure from their social life. Social life entails certain objective standards and generally accepted behavioural patterns and practices, which are what we call moral standards. Only when these standards are maintained can people with diverse aspirations live together happily and harmoniously. To achieve these objectives, we have to incorporate relevant learning experiences into every aspect of the kindergarten programme so as to make them part of children's daily life.

The emotional and social development of children may be fostered by :

- (a) Routine training
 - (b) Development of good habits
 - (c) Provision of social experience
- (a) Routine training

Routine training, as its name implies, is concerned with daily routine rules, i.e. the basic procedures and practices one follows when dealing with people and handling matters. Children often get a sense of security out of such orderliness and regularity, therefore getting themselves ready to learn.

I Objectives

1. To help children learn how to do things in an orderly manner.
2. To encourage children to build up self-confidence.
3. To train children to be co-operative, to exercise self-control and observe discipline.
4. To help children look after themselves.
5. To cultivate a sense of responsibility.

II Principles of application

1. Detailed planning is required before routine training. Appropriate procedures should then be worked out for implementation of the plan on a step-by-step basis.
2. Rules should be set in accordance with the abilities and needs of children.
3. The teacher should explain to children the importance of observing rules so that they would like to accept and follow them.
4. The teacher must constantly remind children of such rules with patience, and give them sufficient time to learn how to follow these rules.
5. The teacher has to be sincere and patient in giving guidance to children, take note of the ability of individual children and observe their reactions in activities, giving them proper assistance when necessary and setting an example for them to follow.

6. The teacher has to be consistent about observation of the rules if the expected results are to be obtained.
7. The teacher can make use of interesting activities to guide the children to observe such rules.
8. Organisation of activities must be in line with school facilities and utilization of space.
9. Teachers should praise and encourage children who observe the rules.
10. If some children are found to have failed to observe a certain rule, the teacher should check whether the rule is too harsh for the children so that it can be modified accordingly. Meanwhile, extra guidance should be given to those children to enable them to follow the rule gradually.
11. There should be frequent contacts with parents to let them know about the significance and scope of routine training given to the children. More optimal results in education can be achieved through better communication between home and school.

III Scope of learning

1. Daily routines :

As children attending school for the first time will find the school environment new to them and feel anxious about it, it is desirable for the teacher to spare some time every day to teach them about the daily routines so as to prepare them psychologically for what to expect after a given activity. This will not only help children alleviate their anxiety and acquire a sense of security, but also enable them to develop the concept of time from their own daily experiences. The teacher can make use of a time-table in the form of pictures arranged from left to right to introduce each session of activities to the children and brief them on the activities indicated by the picture following. This procedure will familiarize the children with the daily schedule, and will help them form the habit of reading horizontally-aligned characters as a preparation for future reading.

2. Rules and politeness :

In the interests of the children's own safety, and in view of the need for them to learn to respect and get along with other people, it is necessary to formulate a set of rules which they are expected to observe within their capabilities. Children would be pleased to discuss with adults the rules to be observed. Routine practices should be introduced to the children gradually. Before children are required to follow a specific rule, the need for such a rule should be explained to them clearly and concisely. Meanwhile, various methods should be used to help them comply with the rule. The following are some of the examples in routine training :

a. Learning to observe rules :

- queueing
- listening : listening attentively;
listening to the instructions for assembly.
- tidying up : restoring things such as toys or chairs to their original place after use.
- observing rules for different activity corners.
- others : speaking softly, no dashing about in the classroom, taking good care of public property; putting scrap paper and litter into litter bins.

- b. Cultivation of polite manners comprising both verbal and non-verbal expressions.

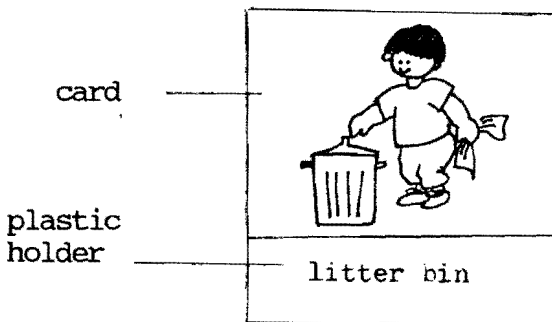
Non-verbal expression : e.g. smiling, eye contact, nodding, being kind to others, sharing, appropriate manners in giving and taking, physical contact, no cutting in when somebody is speaking, etc.

Verbal expression : ability to use a variety of expressions, such as 'good morning', 'good-bye', 'please', 'thank you' and 'sorry', in an appropriate and sincere manner.

IV Suggestions for application

As young children (in particular children attending school for the first time) do not have good comprehension and are rather self-centred, it is not easy for them to understand why they have to observe rules. Besides setting a good example, the teacher should also exercise patience in giving guidance to the children so that they will have sufficient time to get familiar with the rules. The teacher can make use of stories, nursery rhymes, conversation, sharing, discussion and incidental teaching. Cues for the children could be in the form of :

1. Displaying posters/pictures which remind children of the rules and regulations
e.g. . I should read quietly
. I should walk gently
. I should not dash about in the classroom
2. Introducing nursery rhymes which encourage good behaviour
3. Displaying pictures which illustrate 'proper' behaviour.



(Children are asked to pick out the cards which illustrate proper behaviour and insert them into the plastic holders as appropriate.)

4. Games/songs

e.g. the greeting game - children are free to move about while the teacher is playing the piano or while music is being played. When the music stops, everybody also stops and then turns to the one standing by his/her side, greeting each other by saying, 'good morning, (name)', or 'good-bye, (name)' or sing the 'greeting song' or 'good-bye song'.

5. Actively conducting such campaigns as 'walking gently', 'keeping clean', 'punctuality' and 'good behaviour', etc. The good behaviour of children should also be extolled and encouraged. Such campaigns should be promoted through the whole kindergarten and be regularly reviewed.

V Allocation and utilization of space and resources

The teacher should be careful in the utilization and allocation of space so as to reduce the risk of accidents and help the children observe the routine rules :

1. Teachers should pay attention to allocation of "quiet" and "active" activity corners when deciding on the physical arrangement of the classroom and outdoor space. The areas for riding tricycles, waiting, running/jumping, sand and water play should be properly marked to prevent children from being knocked down by tricycle whilst running or jumping and to prevent the sand from being mixed up with water. The 'reading corner' should not be set up next to the 'home corner' to prevent children from being disturbed while reading.
2. The number of participants for the activities of a given interest corner should be specified, with the provision, where possible, of certain items of equipment to facilitate compliance with the rule. For instance, if a home corner is limited to 4 players at a time, then 4 colour bands may be provided and each player is required to wear one. This will not only enable the teacher to monitor the number of participants, but also help children observe the rules of fair play and avoid unnecessary disputes.

(b) Development of good habits

Children have a strong urge for independence and want to accomplish everything by themselves. They enjoy sharing the work of adults. One of the aims of the kindergarten curriculum is to encourage children to develop good habits and acquire independence. In this regard, the teacher should devise suitable programmes for children to learn to look after themselves and acquire the knowledge of self-care, hygiene, table manners and safety.

I Objectives

1. To satisfy the physical needs of children.
2. To help children develop good personal hygiene habits
3. To help children adapt to social life.
4. To encourage children to work independently.
5. To cultivate self-confidence and a sense of responsibility.

II Principles of application

Children need to learn and enhance their skills through concrete experience and repeated practices. Therefore, in teaching children the skills of self-care, the teacher should :

1. Know the developmental characteristics of the children and employ the approaches and equipment appropriate to their faculty, so that they can enjoy the learning process with a sense of accomplishment.
2. Have a careful and detailed planning, clearly work out the steps and the approaches to be adopted before giving guidance to the children.
3. Give sufficient time for children to learn and should not offer immediate assistance when a child fails to meet the expectations lest he will be deprived of the opportunity and the right to practise.
4. Admit the limitation of children's ability and try to prevent them from getting frustrated. Each step taken should be based on the ability of the children and guidance should be offered with care. If necessary, help them complete the most difficult part of the task.
5. Be aware of individual differences and should not expect all children to finish a job at the same time.
6. Show positive response to a child's good performance by praising him verbally or by commending him with such cordial gestures as smiling or nodding.
7. Set a good example and be consistent in word and deed, thus providing an exemplary model for the children.
8. Keep in touch with parents for consistency at home and in school.

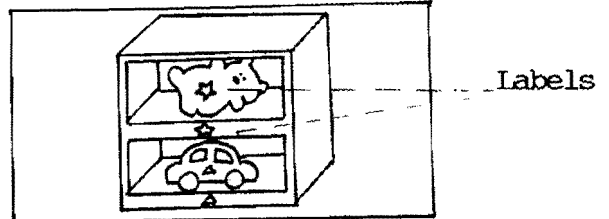
III Scope of learning

Children should be taught to take care of themselves, get along with others and develop good hygiene habits within their abilities. This will not only prepare a child for independence, but also develop his fine motor skills and improve his eye-hand co-ordination.

1. Self-care - placing the satchel properly
 - buttoning up/zippping
 - folding handkerchiefs/folding aprons
 - putting on/taking off aprons, socks and shoes
 - getting and restoring toys
2. Hygiene habits and table manners :
 - cleaning the face and washing hands
 - keeping the body clean
 - keeping the clothing as tidy as possible
 - taking food on one's own, pour water into cups, and maintain a balanced diet
 - do not disturb others at meal
 - do not keep the food in the mouth for too long
 - do not speak while swallowing the food
 - tidying up after meals
 - tidying up before going to bed
 - tidying up after getting up
 - do not disturb others while taking an afternoon nap
3. Safety awareness : Be aware of safety at home, in school, during out of school activities and on public transport.

IV Suggested methods of training good habits

1. Incidental teaching : e.g. cleaning face. Ideally, the teacher should provide the children with a mirror for this purpose.
2. Using labels as an aid : Toys and toy cabinets may be attached with labels and children are told to put the toys in the cabinet bearing the same label.

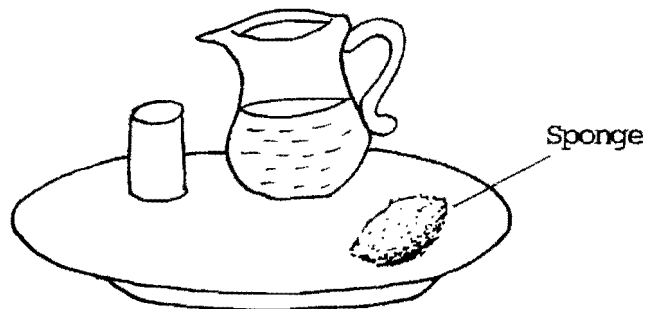


3. Small group learning : Certain activities which require children to experience and practise for themselves, like doing up buttons and folding aprons, should be taught either individually or in groups , so that everybody has enough time for more practice.
4. Working out clear and systematic working procedures :

A task is broken down into a number of elaborate steps according to the abilities of the children. The teacher should teach them how to do it step by step. For example,

Pouring water :

Equipment : A cup, a water jar (or a measuring glass) half-filled with water, and a piece of sponge being placed on a tray.



Steps :

- a. Instruct the children to grip the water jar with the right hand, pick up the sponge with the left hand and hold it against the mouth of the jar.
- b. Move the water jar towards the cup.
- c. Pour water from the water jar into the cup.
- d. Restore the water jar to its place.

Washing hands :

Steps :

- a. Instruct the children to plug the sink properly.
 - b. Turn on the tap and fill the sink with a suitable amount of water.
 - c. Turn off the tap.
 - d. Wet the hands.
 - e. Apply soap and then put it back to its place.
 - f. Wash the hands.
 - g. Pull up the plug and replace it properly.
 - h. Shake off excess water in the sink.
 - i. Wipe the hands.
5. Providing opportunities for repeated practice.

Incorporate the skills learned into daily routines as snack time, toileting and taking meals, so as to provide children with the opportunities to practise repeatedly. As time passes, children will not only master the skills, but also gradually regard such tasks as part of their responsibilities.

6. Making use of a duty roster (can be in a pictorial form) to let children perform such tasks as watering flowers and feeding little animals in turn.
7. Guiding children to observe general safety rules and table manners by making use of games, stories, nursery rhymes and pictures, etc.

(c) Provision of social experience

In the kindergarten stage, the teacher should help children acquire basic knowledge of themselves through sensory games and practical experience in accordance with their age, experience and interests. From learning about themselves, they will come to know about their family as well as the people and things they come across in their daily life. In this way, children will gradually broaden their horizon of knowledge about the social environment, their experience of life will be further enriched through direct observation, free exploration and personal involvement. They will develop a strong interest in the environment and to satisfy their need for more knowledge, they will learn to get along with other people harmoniously.

I Objectives

1. Expand children's social circle and help them understand themselves and the social environment in order to cope with the needs of living.

2. Encourage children to pay attention to personal hygiene and the cleanliness of the local environment.
3. Let children understand the close relationship between the individual and society.
4. Provide children with opportunities to participate in social activities so that their social skills can be developed.
5. Help children to develop the right attitudes in dealing with people and things so that they can enjoy social life.

II Principles of teaching

1. Children should be provided with a stimulating learning environment and suitable opportunities according to their interests, abilities and needs. Meanwhile, they should also be encouraged to participate in activities. They should learn through play and practice and derive satisfaction and a sense of achievement from the learning process.
2. Stress should be placed on the heuristic method of teaching with the use of appropriate teaching aids to enhance the interest of children in learning. "Spoon-feeding" lecturing and compulsory memorizing should be avoided.
3. Teaching is not necessarily confined to the classroom. The teacher should make use of the physical environment of the school and the resources nearby, e.g. gardens, outdoor playgrounds, parks, markets and shops to organize activities like outings and visits for the children, so that they can learn from direct experiences.
4. The teaching materials chosen by the teacher should fit in with the season or the festival to ensure a close relationship between the children's learning and practical life.
5. Appropriate counselling and incidental teaching should be given if the children start a dispute, become emotionally unstable, or are particularly intrigued by a haphazard incident.
6. The teacher should set an example for the children to follow. For instance, she should keep her deeds in accord with her words at all times, display positive attitudes, treat people courteously and pay due regard for other people's feelings.
7. Children should be given ample opportunities of making choices for themselves, so that they can learn how to make judgements, develop self-confidence and acquire independence. However, the teacher has to bear in mind the limited judgement and analytical power of the children and should not give too many items for them to choose.

8. Children should be given sufficient time and opportunities to practise their social skills and to adapt to rules of society.

III Scope of learning

1. Help children understand their role, responsibilities and the relationship of the individual to the family and the society :
 - a. Know and care about oneself.
 - b. Know and care about the family.
 - c. Know and care about the school.
 - d. Know about and respect the social roles.
 - e. Be acquainted with community facilities and take part in related activities.
 - f. Know about local customs, culture and festivities.
2. In moral education, the teacher should set good examples to the children and encourage them to develop good conduct and habits through daily experience and routine activities, such as :
 - a. Develop a positive self concept
 - b. Helping and co-operating with each other.
 - c. Being affectionate, polite and considerate.
 - d. Showing respect for the elders.
 - e. Being concerned with social affairs, taking good care of public property and observing social ethics.
 - f. Paying attention to order and safety.
 - g. Caring for plants and animals and appreciating the natural environment.

IV Guidelines on activities

1. Conduct moral education through daily school activities, e.g. applying the rule of taking turns in snack times, toileting and other activities.
2. Let children learn through various activities such as role play, co-operative or imaginative play and games.
3. Make flexible use of the existing resources in the school. Apart from buying additional equipment, the teacher can make use of the existing furniture and equipment for games and activities. In practice, the same set of equipment used for the layout of a home corner can also be utilized as a shop, a post office, a hospital or a supermarket and the like.

4. Take advantage of other favourable conditions where appropriate, e.g. enlisting the support of parents in organizing outings and visits. (Please refer to the section on visits and outings under the topic "Experience in natural science")
5. Design special activities opportunely. For example, the following measures may be taken to help 3-year-old children adapt to the new school environment at the start of the school term :
 - a. Have new pupils divided into small groups and start school on different dates.
 - b. Meet with parents of new pupils.
 - c. Extend the daily school programme gradually to the normal school hours.
 - d. If necessary, allow parents to stay with their children on a temporary basis. However, the duration should not be too long or it may add to the distress at separation.
 - e. It is not necessary to follow a rigid time-table and curriculum in the first two weeks of the new school term.
 - f. Reserve some time daily for children to choose their favourite activities, toys and playmates.
6. Conduct different kinds of activities such as conversation practice, group sharing or class activities so as to provide different socializing opportunities.

(2) Physical Play

I Objectives

1. To help children develop their fine and gross motor.
2. To enhance children's basic motor skills and help them develop agility.
3. To help children build up a good physique and cultivate their love for physical activities so that they will have a balanced development in their body and mind, and become healthy and happy children.
4. To cultivate children's will-power, develop their leadership skill, boost their confidence, encourage them to express their emotion and learn to control themselves.

II Principles of Application

1. While the rate of physiological and psychological development is different for individual children, the development of physical ability for all children is progressive and follows a set pattern. For instance, children learn to sit before they can stand, walk and

run. It is also easier for them to control their large muscles than their small muscles. The teacher should therefore pay attention to the physical development of individual children and understand the functions of various kinds of activities so as to make the right choice.

2. The major function of physical play for children is to develop their large muscle control. Movements related to everyday life, such as walking, running, jumping, crawling and throwing are considered as suitable activities.
3. Equipment chosen should be suitable for different activities and some of the equipment should be made accessible to children.
4. The content of learning must be simple, encourage creativity and may be carried out in the form of play, or even incorporated with story-telling and music activities.
5. The activities can take place indoors or outdoors according to needs.
6. The teacher should pay attention to safety measures, for example, equipment should be checked regularly; a safe venue should be chosen and sufficient routine training should be provided for. While activities are in progress, the teacher should pay attention to the surroundings and the limited ability of children, and be alert at all times and prepared to take necessary action for safety purposes.
7. The teacher should allocate time for conducting physical activities every day, the duration of which may be extended if children's interest is high. Activities should be slowed down gradually before coming to a halt.
8. Simple demonstrations are much better than long and tedious explanations, but rules concerning the activities and points to be noted must be explained clearly. The teacher should give children adequate time to practise. Children should be encouraged to carry out the activities on their own initiative instead of being forced to do so.
9. The teacher should give children the chance to try, imagine and imitate. She should also participate in the activities so as to create a natural and pleasant atmosphere.

III Scope of learning

1. Training in basic movements of the body:

The main purpose is to provide training in basic skills in everyday life. The basic movements can be classified into the following two types according to their nature.

a. Locomotor movements :

walking, jogging, running step and jump, jumping with both feet, jumping with one foot, side-rolling, climbing and penetrating.

b. Non-locomotor movements :

swinging, wriggling, balancing, bending and stretching.

2. Use of small equipment :

Training in passing and catching, throwing and catching, casting and aiming, etc. can be provided by making use of different kinds of small equipment. Children will also learn to co-operate with others and follow rules through playing games.

3. Rhythmic and expressive activities :

As children like to imitate, the teacher can give them appropriate instructions and help them to express their feelings and ideas with the aid of simple music and beat.

(3) Language Development

The main aspects of language development are :

Use of language (this includes the ability to comprehend and the ability in verbal expression), reading and writing ability, i.e. listening, speaking, reading and writing. For kindergarten children, the learning process should start from comprehension, then basic verbal communication skills, reading and finally writing. However, these language skills are complementary in the process of learning.

(a) Use of Language

I Objectives

Mastering the use of language is a solid foundation for language development. Kindergarten children should be trained to speak with clear and accurate pronunciation and to communicate with other people in correct intonation and complete sentences in :

1. expressing their opinions and needs;
2. asking questions;
3. explaining/justifying their actions; and
4. reporting what they experience every day.

II Principles of teaching

1. The teacher should motivate children by making use of objects they encounter in everyday life or things that can arouse their interest. She should also guide them in describing, reporting, questioning and expressing their opinions.

2. Training in speaking should be carried out whenever appropriate (for instance, during assembly, play time, snack time, interest activities, etc.). It is not necessary to include a 'conversation' session in the time-table.
3. The teacher should use words easily understood by children when talking to them.
4. The teacher is a good talking partner of children. During conversation, she should listen with patience, allow children sufficient time to think and give proper responses. Let them know that their teacher enjoys listening to them.
5. Conversation should be carried out in a relaxed and pleasant atmosphere. If children have any difficulty in expressing their ideas, the teacher should give them guidance and encouragement to build up their confidence in speaking.
6. The teacher should let children speak more and encourage them to use complete sentences.
7. The teacher should let children express different views and have different responses. Generally speaking, it is not necessary to arrive at a consensus or find a definite exact answer.
8. The teacher should set an example and help children speak with accurate pronunciation and correct intonation in a polite and natural manner.
9. The teacher should play the role of a good 'language model'. When children are asked to describe a scene' or answer a question, she may either elaborate what has been said or let them carry on.

III Scope of learning

1. Listening

At the early stage, children learn language mainly by imitating other people in wording, tone and grammar. Language training should thus include helping children to concentrate in listening, understanding what other people say and making appropriate responses promptly.

2. Conversation

The content of conversation should be extended from oneself to concrete matters :

- a. oneself and one's family members or relatives and friends
- b. things that children encounter every day
- c. habits and courtesy

- d. general knowledge of society
 - their surroundings
 - what they see and hear during holidays
 - interesting things
 - haphazard incidents
 - people who help us
- e. social intercourse
 - telephone conversation
 - shopping
 - visits/greetings
 - meetings (birthday party, celebration, etc.)
 - going to restaurants

3. Stories

The teacher should choose stories with interesting and healthy content suitable for children's level with such teaching aids as puppets, muppets, paper dolls, pictures, slides or real objects. She should present the stories in an interesting way and help to train the children in listening.

Story-telling is a kind of language training. Generally speaking, kindergarten children cannot repeat a full story. After telling a story, the teacher may ask simple questions about the story, repeat part of the story, play the roles in the story or repeat the conversation in the story by using such teaching aids as puppets and muppets.

4. Nursery Rhymes and Riddles

- a. Efforts should be made to arouse children's interest in recital and training them in accurate pronunciation and fluency. Children should not be forced to memorize nursery rhymes in a rigid way.
- b. Nursery rhymes can be taught in conjunction with learning activities and themes. Teachers can also collect or design their own teaching materials. The content should be related to children's experience and the words used should be suitable for their level.
- c. The teacher should emphasize oral training when teaching nursery rhymes. It is not necessary for children to understand and write the words used in the nursery rhymes.

5. Play

Through these activities, children will also learn to express thoughts, experience and their concepts of the surroundings. Children can learn through games and such activities as conversation, listening, describing pictures, nursery rhymes, riddles, role-play/imaginative play.

(b) Development of Reading Skills

I Objectives

1. to develop children's interest in reading and help them form good reading habits.
2. to broaden their scope of knowledge by reading.

II Principles of teaching

For 3-year-old children, it is only necessary to focus on pre-reading activities.

III Scope of learning

1. Pre-reading activities

a. The teacher should help children to learn to co-ordinate their eyes and hands and consolidate their memory through games so that they can develop their reading, thinking and problem-solving skills in future. She may prepare such aids as tangrams, jigsaw puzzles, photos, sequential pictures, dominoes for children to play games such as matching, classification, fitting parts of drawings together, re-arranging the pictures in the right order or domino games. Although all these teaching aids perform similar function, the teacher should use a variety of aids so that children will not feel bored. Children should be encouraged to take active participation in general activities and activities requiring close observation and comparison.

b. Books are one of the major sources for obtaining knowledge and concepts. In reading interesting books, children will be attracted by the beautiful illustrations, and they will also be eager to know the meaning of the words and sentences. They will thus develop an interest in the language and enjoy talking about the interesting plot of the story among themselves.

In selecting reading materials for children, due consideration should be given to their age, level and experience. The following are points to be noted :

- the story should be interesting with a healthy theme.
- the plot should be simple and repetitive with vivid characters and simple content so as to enrich the imagination of children and gratify their curiosity.
- the illustrations should be colourful and attractive, have simple but vivid characters, and are thematically explicit.
- the language and vocabulary used should be simple.

Books for children can either be made or purchased by the children themselves. The teacher may encourage children to collect posters, postcards, used books, newspaper cuttings, calendars, pictures in advertisements, can labels, photos, drawings, etc. for compiling picture books. If it is necessary to add simple words in the books, the teacher may ask the children to cut out printed words from other books/newspapers, or to write down the words that they know.

The teacher should show that she loves reading story books. To arouse children's interest in reading story books, she can tell stories with books, regularly introduce new books to them and read story books with them, giving additional information where appropriate. In this way the children will be guided to observe details and have a deeper understanding of the stories.

As children's attention span is very short, it is not necessary to have a fixed period for class reading.

In the classroom, a well-lit book corner should be set up. There should be comfortable chairs or mats for children to sit down and read without being disturbed. There need not be too many books. Apart from interesting reading materials, it is desirable to include books related to the teaching theme of the week. For instance, if the theme is 'Family Members', books on 'Home Appliances', 'Family Life', 'Home of Children in Different Countries' and 'Safety at Home' are all relevant.

Children should be encouraged to read library books before and after lessons and during interest activities time, and to restore the books in the right place after reading and keep the books in good shape.

2. Learning Characters

After children have had enough pre-reading activities, they may start to learn characters. Learning characters is a transitional stage from the use of spoken language to the learning of written language. The teacher should, in choosing appropriate characters and phrases to be taught to improve children's reading ability, refer to the following points.

- a. The characters should be closely related to the everyday life and experience of the children.
- b. Simple characters should be taught first, and then complex ones. Characters of similar forms should not be taught within a short time to avoid confusion.

Single characters can be taught first, and then phrases. These characters and phrases can be further extended into simple sentences during revision.

In introducing new characters, the teacher can explain with objects, pictures, action, facial expressions and examples. In order to consolidate children's knowledge of the language, pictures and objects in classroom could be matched with word cards. She can even collect or produce relevant books and put them in the book corner. In addition, she may arrange different kinds of games to provide opportunities for repeated learning. Children will be able to learn characters through such individual and collective activities as matching pictures to word cards, domino games and guessing riddles.

Children should know the form, pronunciation and meaning of a character. If children identify a certain character just from its position in the book instead of grasping the form of the character, their memory of the form of characters will not be accurate.

(c) Development of Writing Skills

I Objectives

1. To prepare children for writing.
2. To teach children the right posture in writing.
3. To teach children the right way of holding pencils.
4. To teach children simple sequence of strokes.

II Principles of teaching

1. The teacher should not force children to hold pencils and write before they are ready for it.

2. Children often lack confidence when they start to learn writing. The teacher could encourage children to write in wet sand, on desk top or magic board with their finger tips.
3. Children can have practice with different kinds of writing instruments, and writing should not be restricted to squared paper and exercise books only.
4. The characters introduced to children should be simple and easy to write.
5. Children should only write a few characters every time. Excessive writing should be avoided.
6. The teacher should give appropriate guidance and support to children according to individual needs.

III Scope of learning

1. Pre-writing activities
 - a. Children will be able to achieve eye-hand co-ordination, hand-brain co-ordination and flexible control of fingers through games, art and craft activities and routine training.
 - b. The teacher could ask children to draw things that they see in everyday life.
 - c. Only when children grasp the skills of holding the pencil properly can the teacher ask them to draw lines within a confined area.
2. Writing characters
 - a. Teacher should teach children the right posture in writing and the right way of holding pencils.
 - b. Children may learn to write characters, phrases and sentences which are simple, familiar, easy to write and related to their daily life.

(4) Early Mathematical Experience

I Objectives

Mathematics is closely related to our daily life. The teacher should introduce basic knowledge in mathematics to children according to their age, experience and interests through various kinds of mathematical activities. The objectives of introducing mathematical concepts are as follows :

1. To help children develop their memory and power of concentration, observation, reasoning and logical thinking.
2. To help children establish the concept of number, shape, space and time and learn about simple computations.
3. To cultivate in children the right learning attitude which would serve as the foundation for learning mathematics in future.
4. To stimulate children's interest in mathematics.

II Principles of teaching

1. The formation of early mathematical concept is only part of the general learning activities in the kindergarten curriculum. It should be conducted in accordance with the development of children's interest, and in integration with other learning activities.
2. Teaching mathematics is not restricted to a specified time-tabled period. The teacher ought to make use of every opportunity to introduce and consolidate mathematical concepts through games and activities. The introduction of each mathematical concept should be clear and systematic, concentrating on one attribute a time and progressing gradually.
3. In conducting mathematical activities, attention must be paid to children's intuition and interest. The teacher should carefully select activities which are suitable to the children's standard and make use of appropriate objects or teaching aids to encourage active participation of the children. It is intended that children will derive satisfaction from the activities and develop self-confidence.
4. As thinking and language are closely related, the development of language and formation of concepts are complementary. Children should be encouraged to discuss the things they encounter in their daily life. They should be given the opportunities to talk, to communicate among themselves and with the teacher. 'Spoon-feeding' approach should be avoided. Children should be given the opportunities to explore and discover ideas on their own as far as possible.
5. The teacher should use the mathematical vocabulary correctly but the teaching of mathematical jargons such as 'sorting', 'matching', 'combination' and 'statistics', etc. may not be necessary.

III Scope of learning

1. Pre-number activities

Through pre-number activities such as 'sorting', 'matching', 'comparing', and 'ordering', children are helped to develop the concepts of size, quantity, length, weight, thickness and height, etc. and the appropriate use of mathematical vocabulary.

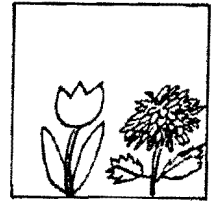
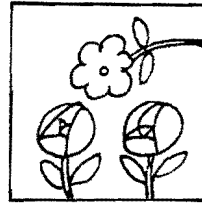
a. Sorting

The teacher may use toys, objects or specially designed teaching materials to help children distinguish the similarities and differences of various objects, and to sort/classify different objects according to their attributes, e.g.

- i. Put objects of the same colour together

red

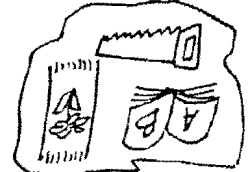
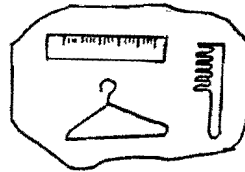
other colours



- ii. Sort objects according to other attributes

plastic

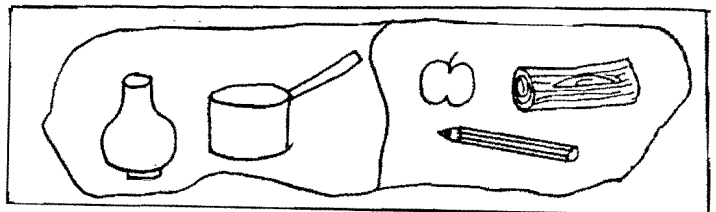
other materials



- iii. Discuss the shapes/attributes of objects with children and guide them to decide independently the methods of sorting.

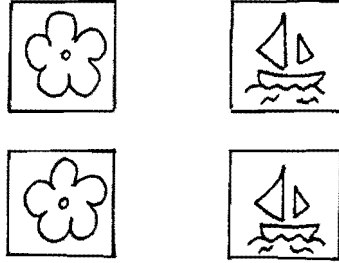
hollow

solid

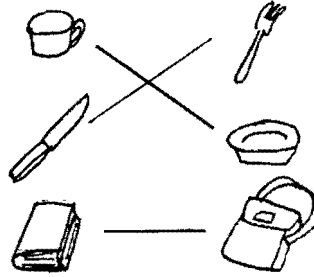


b. Matching

Let children put two identical objects into pairs.



or match objects that have close relation with each other.



By repeating the above activities children may be further introduced to the concept of one-to-one correspondence.



Through sorting and matching activities, children may observe things better. They will study the objects carefully, identify them and draw conclusion. This is the foundation for comprehension and logical thinking.

c. Comparing

Comparing is the third vital pre-number activities. In making comparisons between objects, children will develop the concepts of size, length, weight and thickness, etc. Teachers should provide suitable environment for children to observe, identify and compare the size, length weight and thickness of objects. Furthermore, through one-to-one correspondence activities, the teacher may gradually guide children to understand the concept of differences in quantity. They may then have a preliminary understanding of addition and subtraction. They will also learn some mathematical vocabulary such as 'many', 'more' and 'less' etc.



d. Ordering

After children have acquired a good understanding of the concept of comparing the teacher should ask children to compare the size, length and thickness among three or more objects. Children are helped to understand the concept of ordering when they seriate the objects according to certain attributes. If children have acquired the ability to count, such occasions can be used to introduce the concept of ordinal numbers e.g. first, second and third etc.

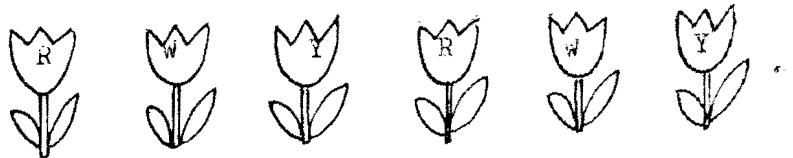
To build up the concept of ordering teachers can start off by using objects that can be arranged in an order, such as a set of plastic cups or jigsaw puzzle boards of different sizes so that children may arrange the objects from the biggest to the smallest or vice versa. The children can see and touch these objects in the course of practising and the actual experience they have may further strengthen their concept of ordering. The teacher may also try arranging the objects in a certain pattern e.g. :

Ordering by shapes :



Ordering by colours :

Red White Yellow, Red White Yellow



The teacher should set the example with real objects first and let children follow suit, and then encourage them to draw the picture on paper.

2. Shapes

As most objects in our daily life are three dimensional, the teacher should help children learn about shapes with concrete objects. Children may learn about shapes in games such as fitting tangrams, building bricks, and playing with plasticine etc. Besides, children should be encouraged to discuss the shape of objects they see in their daily life, collect pictures and stick them on a scrap-book in order to strengthen their knowledge on shapes. Children may also be helped to develop their imagination by piecing together paper-cuts to form different pictures or patterns.

3. Spatial concepts

Children may be taught to identify the positions of front and behind, up and down and in between etc. through activities in school such as lining up, seats arrangements, outdoor and indoor games. Upper kindergarten class children may also learn to differentiate the left from the right.

4. Concept of time

The teacher should make use of children's daily activities to report time and introduce the concept of time. It is not necessary to introduce the knowledge of reading time from the clock at this stage. The teacher may also make use of a daily record of the weather, class time-tables, birthday parties and festivals of the year for children to name the days in a week and then help them to acquire the concept of day, month and year.

5. Measurement

The teacher may help children measure the desk with a book; measure the classroom by footsteps and weigh school bags by hand or with a simple scale. The concept of volume may be introduced through sand and water play. As regards the concept of measurement at kindergarten level, more emphasis should be placed on direct comparisons. The introduction of standard units is not required at this stage.

6. Counting and simple computation

a. Counting within 20 --- Children may be taught the quantity and order of numbers within 20 through counting different kinds of real objects. In teaching numbers, the teacher should not merely ask the children to recite the numbers, as it will only make them memorise the numbers by rote without really knowing the relationship between the number and the actual quantity. In teaching counting, the teacher should always provide real objects for children to touch and count one by one. The counting of numbers should be introduced systematically.

For nursery class, counting from 1 to 5 is considered enough. The teacher should design more activities to help children understand the relationship between the numbers and the quantity within 5. If children really understand the meaning of numbers at this stage, it will be much easier for them to learn the quantity within 20 when they move to higher classes.

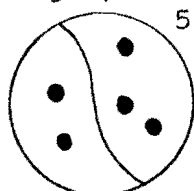
As regards writing numbers, it is not advisable to start at nursery level. In lower kindergarten class the writing of numbers should be taught according to the ability of individual children. The progress of counting numbers and writing numbers need not be the same.

b. Combination of numbers within 10

Children should be introduced the combination and computation of numbers within 10 after they have developed an accurate concept of numbers. Children should be guided to compute with concrete objects and through games so that they may learn from actual experience.

In teaching computation, the teacher should make use of concrete objects to conduct simple verbal computation activities. As the ability to read and the power of comprehension of kindergarten children are very limited, word problems should not be introduced. The teacher may conduct simple and direct verbal computation making use of their daily experience. It is not advisable to introduce complicated computation such as consecutive addition and mixed computation in the kindergarten curriculum. Children of higher ability may be allowed to compute within 18, however, they should not be pushed if it is observed that they cannot do so. Computation formula may be introduced only when the children have acquired a good understanding of counting and composing numbers with real objects. Generally speaking, the introduction of computation formula may begin with recording real objects, therefore it is more appropriate to adopt a horizontal expression.

e.g. (Narration) 3 plus 2 equals to 5;



5 minus 3 equals to 2.

After that, proceed to using signs of +, -, = :

Record all the basic combinations of addition and subtraction within 10.

Note : The combination of numbers is the first step to introducing the concept of addition and subtraction. Formal written calculations should be introduced at a later stage. The signs of addition, subtraction and equation are used here as recording of real objects, and not for calculation.

c. Statistics

Statistics at kindergarten level is only a means of counting and computation. Thus detailed analysis is not necessary. In conducting statistical exercise, the teacher should prepare some pre-printed stickers on the objects to be counted and ask the children to arrange the printed pictures one by one to produce a pictogram, thus making the presentation of data more attractive and easier to compare.

7. Knowledge of bank notes and coins

To kindergarten children, money exchange is quite beyond their comprehension and therefore the teacher should not expect too much from them. Children may be helped to identify the colour, shape, size and value of the various kinds of bank notes and coins through activities like sorting, comparison and matching etc. When children have sufficient knowledge on bank notes and coins, games like 'Buying and selling' and 'Play Shop' etc. may be conducted.

(5) Experience in Natural Science

Kindergarten children are self-centred. They understand the people and things around them through personal experiences. Many of the things that they encounter in everyday life are closely related to science. Thus, the teacher should, taking into account the age and experience of children, guide them in observing, exploring and experiencing the environment so as to promote their knowledge of the environment, satisfy their curiosity and thirst for knowledge, strengthen their problem-solving ability and help them to develop an exploring attitude to learning. In this way, children will be able to lay a solid foundation for future study.

I Objectives

1. To expand children's sphere of experience, stimulate their here-and-now interest in the environment, and promote exploratory learning.
2. To help children develop an ability to observe through contact with nature.
3. To help children cultivate a love for animals and plants.
4. To help children understand the relationship between man and nature, and to arouse them concern about their living environment.
5. To help children develop problem-solving skills.

II Principles of Teaching

1. In arranging learning activities the teacher should take into account the ability, interests and daily experience of children.
2. The teacher should encourage children to participate in learning activities so as to get first-hand experience.
3. The teacher should carry out the activities personally before asking children to do so and make all necessary arrangements to ensure that the activities will be conducted safely and smoothly.

4. The teacher should ask children to employ such methods as classification and comparison during experiments so as to get more accurate results.
5. Learning activities should be easy for children to make observation or there should be immediate, conspicuous changes.
6. The activities should be in line with teaching themes.
7. The procedures of activities should be simple.
8. The activities should be conducted in groups.
9. The teacher should ask children to present or record the results of activities by making use of tape-recorder, pictures, tables, samples or simple words.
10. The teacher should avoid using scientific terms not easily understood by children.
11. The teacher should make use of any opportunity to teach. For example, the teacher may share experience or observe the scene in the streets with children after a typhoon or rain.

III Scope of Learning

Science and everyday life are inseparable. It is best for kindergarten children to learn science from their actual experience. Thus, the things they see in everyday life may be included in learning.

1. The form and growth requirements of animals.
2. The form and growth requirements of plants.
3. Natural phenomenon, e.g. the sun, the moon and stars; seasonal and climatic changes; fine, cloudy and rainy weather; thunder, lightning, etc.
4. The properties of such matters as sand, water and magnets.
5. The relationship between daily necessities and life.

IV Suggested Activities and Equipment

Apart from related group activities, the teacher can also set up a Nature Corner and arrange visits.

1. The Setting Up and Use of a Nature Corner

The setting up of a lively Nature Corner in the classroom provides opportunities for children to acquire knowledge of nature through collecting, observing, caring for animals and plants, experimenting and keeping records. Such activities are likely to arouse their interests in learning.

The teacher can make use of the Nature Corner to carry out various learning activities. The role of the teacher here is not only setting up the Nature Corner and encouraging children to contribute, but also directing their active participation, such as changing water in the vases, watering the plants, sorting and labelling samples, as well as giving guidance and instructions as to how pet animals may be kept, such as feeding them with an appropriate amount of food. It is advisable for the teacher to supervise, guide and instruct children in the daily routine work.

a. The Discovery Table

The discovery table should be of suitable height so that children can see the objects on display easily. There should be sufficient space round it for children to touch, observe and compare the objects. Tops of low cupboards, low and wide window sills or shelves can be alternatives in case of crowded classrooms.

The objects displayed on the discovery table should be of aesthetic worth, and should be changed regularly according to the season and teaching themes so as to arouse children's curiosity and motivate them to learn.

Objects on display may include :

- Common flowers of the season
 - Common vegetables and fruits of the season
 - Plants that grow easily, e.g. broad beans, red beans, green beans, onion bulbs, carrots, etc.
 - Little creatures like silkworms, butterflies, dragonflies, tropical fish, goldfish, tadpoles, snails, earthworms, etc.
 - Stones, pebbles, shells, etc.
 - Fruits, seeds
 - Barks of trees, twigs, leaves
- b. Flower vases, pots and other receptacles

The various receptacles may be purchased or produced from junk materials

c. The Aquarium and Vivarium

The aquarium should best be wide-mouthed for good ventilation with some coarse sand and a few pebbles placed at the bottom. Suitable pond plants such as

duckweed can ensure adequate supply of oxygen for little creatures inside (e.g. goldfish, tropical fish). Children can observe, appreciate as well as learn about the lives and habits of these creatures.

Vivarium for such creatures as snails, frogs and tortoises can be made out of transparent plastic boxes, wide-mouthed plastic bottles or shallow basins to give children chance to observe their growth and living habits.

d. Display Board

A good place for the display board is the wall near the discovery table, where information relating to the exhibits like pictures, a weather chart, a duty roster and a pictorial nature diary may be shown.

e. Magnets

Apart from magnets of different shapes, there should be different kinds of objects, such as, metal strips, feathers, clips, small stones, ceramic tiles, cork, paper, iron nails, iron lids, wood splinters, etc. Let children find out about magnetism from trying with the objects mentioned above.

f. A magnifying glass

Children should be encouraged to observe objects more closely through a magnifying glass.

2. Visits and Outings

The teacher should plan visits/outings for the purpose of affording learning opportunities outside the classroom. Such activities will help children experience group life, expand their scope of living and give them chance to observe and contact the outside world. In the process of observation, children will get to know the environment and its changes and enrich their scientific and social knowledge. For all these reasons, the school should try its best to organize such activities.

The following points may help the teacher in planning :

a. Preparation

i. After deciding upon the purpose, date, time and place of visits/outings, the teacher should visit the site prior to the actual outing, contact the persons-in-charge of the place and give a brief introduction of the site to the children.

ii. Inform parents of the outing, seek their permission for their children to participate and request them to complete the reply slip. Parents can be invited to assist in taking the children to the visits/outings.

- iii. The teacher should brief children on the purpose, place and points to be noted prior to the outing. For example, if they are to visit a supermarket, the teacher may make use of relevant pictures to discuss with the children, arouse their interest in learning, and guide them to make in-depth observation according to their level.
- iv. It is not advisable to organize visits and outings to spots far away from school. If transportation is required, arrangements should be made well beforehand.
- v. The teacher should make plans for grouping and supervision. Children should go on an outing in groups, each of which is put under the supervision of an adult. The adult should know the children in his/her group well to give them a sense of security. He/she should have a list of their names. The teacher and group leaders should both be responsible for all the preparation and note the safety and health condition of the children.
- vi. Prepare suitable equipment and assist children in collecting, observing, interviewing and recording.
- vii. The first-aid kit should be brought on all trips.
- viii. For safety purposes roll-calls should be made both on assembly and dismissal.

b. Guidance during visit

The teacher should guide children to make observation in accordance with the teaching objectives, for example, when the children are observing small rabbits, teachers should guide them by asking enlightening questions e.g.

- i. What grows on a rabbit's head?
- ii. What colour are its eyes?
- iii. What colour is its fur?

Children will gain knowledge about small rabbits in all aspects through observation and answering these questions. For smaller children teachers should let them observe one thing/phenomenon at a time so that they can learn more easily.

In the process of observation, not only should the teacher ensure that children see clearly, but she should also give them suitable opportunities to feel, smell, hear and taste. Sensory experience can reinforce children's observation.

In the same way, the teacher may ask older children to observe and compare two or more things for example, a rabbit, a tortoise and a guinea pig, at the same time. Thus children will have a better and more accurate understanding of these animals.

During outings, the teacher should draw children's attention to the scenery, seasonal characteristics and their impact on the growth patterns in plants and animals. If possible, she may also alert them to evidence of seasonal characteristics and changes in the school garden or the surroundings, or ask them to make simple records.

- c. Visits and outings must be in line with classroom teaching. Follow-up activities must be carried out in the classroom after each visit/outing. This can be done by encouraging children to talk about the trip so as to develop their power of expression; or asking them to draw pictures, make records or picture books about it. As for the things that children have collected during the visit/outing, the teacher can help them in sorting, lead them to appreciate and make further observation, which will help to consolidate their knowledge.

(6) Creative activities

Creativity is an innate and spontaneous potential in a person. With a crayon or any drawing material in hand, a young child may start to make scribbles. Though they may appear to be only a meaningless mess to adults, such scribbles are expressions of the child's thoughts. On other occasions, when the child hears some music, he may make body movement to the rhythm or tap with anything in his hand. (Of course the beat he makes may not be accurate.) All these casual scribbles and tappings reveal his desire to express himself and his strong intention to create. Therefore, when children enter the school, the teacher should help them develop and cultivate their creative potential.

A good way to stimulate creativity in a child is to provide him with various materials, for example, natural materials like sand and clay, toys such as blocks and a good store of junk for role-playing, art and craft and other creative activities. The child can express himself freely and the experience he gains in such activities will broaden his mind and will remain as sources of creative inspiration. The following art and craft activities as well as music activities are useful in developing children's creativity :

(a) Art and Craft Activities

I Objectives

1. To satisfy the children's creative desire.

2. To cultivate children's creative ability and aesthetic appreciation.
3. To enrich children's imagination and to satisfy their curiosity.
4. To enable children to express their feelings, enjoy their creative work, attain a sense of achievement and develop self-confidence.
5. To satisfy the children's curiosity to explore materials.
6. To develop children's fine motor skills and their eye-hand co-ordination.
7. To cultivate children's power of observation and their spirit of co-operation.

II Principles of Teaching

Learning activities should be designed to allow children to express or interpret their inner feelings in their own ways. Adults must show respect for and give praise to the children's expression or interpretation in order to bring their creative potential into full play.

III Suggested Activities

1. Art and craft activities may be arranged for the whole class within a specified period of time, or for one group of children when group teaching is adopted. Moreover, they may be chosen as an interest activity at the end of a certain task, on individual basis.
2. The teacher should make adequate preparation in advance and organise various activities for the children to use different types of materials.
3. The teacher may arouse children's interest through stories, nursery rhymes, music, conversation, slides, pictures and real objects.
4. The teacher should not give too much suggestions, constraints or guidance to the children. In the course of creation, the children should not be disturbed unnecessarily.
5. Children should be trained to fetch materials by turn or to assist in distributing and collecting in groups.

6. There is no need for the teacher to stop children from talking to one another when they are at work. However, the teacher should pay attention to the content of their conversation and guide them to discuss or express themselves when appropriate so as to enrich their imagination. The teacher should also encourage the children to talk to one another when they are doing group work in order to cultivate their spirit of co-operation.
7. In the course of activities, the teacher should give constructive encouragement and show appreciation to each group/individual.
8. As children differ in their ability and pace in working, some children may not be able to finish their work within a specified period of time. The teacher may use her discretion to allow them to continue with their work if their interest in the work is still great.
9. The children should be trained to pack and tidy up different materials.
10. The works of art and craft activities may be used to decorate the classroom or returned to the children so that they can show them to their family members.

IV Selection of Subject Matter

The subject matter should be selected according to children's age, ability and experience. As a child of three has not yet acquired a firm grip of the pencil, he should not be asked to 'fill-in' colours on an outlined drawing or draw pictures. In fact, it is a happy and satisfying experience for him to apply colours with crayons or paint brushes, and scribble freely on a large piece of drawing paper. As the children grow older, they will acquire more experience and abilities. The teacher can select subject matter for art and craft activities with reference to the following principles :

1. According to children's experience - the theme of art activities can be based on children's daily experience such as :
 - things they see every day (for example, flowers and plants, toys, vehicles) and people in daily contact (for example, family members, friends and the people who help us, etc.)
 - encounters at game activities and birthday parties, on picnics, and during visits.

- special festivals like Christmas and Mid-Autumn Festival, etc.
 - news or incidents.
2. Through imagination - the element of novelty from stories, songs, music and nursery rhymes can enrich children's imagination.
 3. According to a teaching theme - for example, for the theme 'Family', children can be asked to make masks/portraits/puppets of members of their families, or to draw their ideal homes.

V Types of Teaching Materials

The teacher should allow children to create and to express themselves with the use of different art materials so as to develop their abilities and interests. Moreover, activities should be organised according to the children's abilities. The following are examples on teaching materials suitable for nursery class, and lower and upper kindergarten classes.

1. For children of nursery class :
 - a. Picture-making :

Stamping, water-resist painting, folded patterns, joining dots, surface texture rubbing, patterns with rolling marbles, marble and finger painting.
 - b. Creative activities with different types of materials :

There is no limit to what children may find interest in or store as treasure. They may give great value to some trivial and insignificant objects which the adults may call 'junk', for example, a shell, a pebble, a small box or an empty can. The teacher can easily make use of the children's interest to develop their creativity by devising some creative games or art and craft activities with the use of different materials. Moreover, she may let the children create and design freely with the use of newspaper, magazine paper, wrapping paper or paper bags in various activities like kneading, rolling, tearing and pasting. The emphasis of such activities is on the fun and experience gained during the course of creation. Therefore, the teacher need not insist on tidiness and the quality of the end-products, nor should she punish or mock a child whose work does not meet her standard.

c. Clay, Plasticine and Play Dough

These are very pliable materials. The teacher should allow children to beat, pound, pinch, knead, roll and press such materials in order to satisfy their desire to create and enhance their development in various aspects.

2. As children of lower and upper kindergarten classes are more mature, they can be engaged in a larger variety of activities. The following examples are for teachers' reference :

a. Picture-making

i. Painting and drawing (simple sketching)

Children should be allowed to draw freely, using various tools and colouring materials.

ii. Simple pattern-making

Children are encouraged to use colours or different materials like leaves, flowers, pebbles, oddments of fabrics, buttons, colour papers, gift wrappings, magazine paper, blocks and potatoes to make patterns of symmetry or repetition in various methods including painting, pasting collage, folding and stamping.

iii. Collage

Materials such as colour paper, magazine paper, tissue paper, threads, fabrics, straws and pith, etc. can be used to make pictures by tearing, cutting and pasting.

iv. Simple printmaking

Stamping, object printing, paper printing, stencil printing and polyboard printing, etc. can be introduced.

v. Group work

The class may be divided into small groups and the children can draw on the same large piece of paper. As an alternative, the children may draw individually on the same theme. The pictures drawn are then cut out and stuck onto a large piece of drawing paper to form one big masterpiece of group work.

b. Three-dimensional work

A variety of three-dimensional toys, ornaments and tools can be made from paper boxes, paper bags, empty cans, clay, plasticine, etc.

c. Paper work

Using white paper, colour paper or tinfoil children are encouraged to do simple cutting, piercing and pattern work, and be followed by folding activities of a simple nature.

VI Materials and Equipment

1. Materials

a. Drawing materials

Wax crayons, oil pastels, coloured chalk, coloured pencils, felt pens (sign pens), paint brushes, poster paint (liquid or powder form), tempera colours, finger-paint, etc.

b. Natural materials

Pebbles, flowers, leaves, pith, wood, shells, etc.

c. Different types of materials

Gift wrappings, magazine paper, newspaper, paper boxes, paper bags, paper cups and plates, tissue paper rolls, sponge, peanut shells, lollipop sticks, ice-cream cups, straws, buttons, oddments of fabrics, threads, scraps of soft wood, etc.

d. Paper

Cartridge paper, sugar paper, white newsprint, crepe paper, tissue paper, cardboard, etc.

e. Others

Clay, dough, flour, plasticine, styrofoam, etc.

2. Equipment

Easels, brushes, scissors (safe and sharp), paste, printing blocks, etc.

VII Evaluation and handling of children's artwork

1. Art and craft activities in the kindergarten should not be used as a means to teach children to produce works that are good by adult standard, neither should they be regarded as a kind of skill training. Such activities should be looked upon as a means of helping children to express themselves and gain satisfaction. Therefore, teachers should not judge children's artwork by the standard of the adults, nor should they emphasize on 'neatness'. Moreover, there is no need to mark or grade children's work.
2. As children express their feelings through art, their artwork reveal their inner world, daily life, feelings and imaginations. For this reason, the teacher should not ask children to follow a sample in drawing or painting, nor impose adults' thoughts on their pictures. They should try to understand the children from what they have drawn and, through conversation, help the children to express their ideas more substantially.
3. One of the objectives of art and craft activities is to develop children's aesthetic ability. However, teachers should accept that children may have different interpretations of beauty and their choice and matching of colours is a revelation of their subjective mind rather than the objective truth.
4. Another objective of art and craft activities is to develop children's fine motor skills. Therefore, the teacher should encourage children to paint and draw spontaneously and happily. She should understand that children at this age have limited ability of wrist and finger movement. Thus she must not emphasize on meaningless colouring and should avoid colouring exercises, especially at the nursery and lower kindergarten levels.
5. The display of children's artwork can help them to acquire a sense of achievement. Whenever possible, the teacher should display all the children's work on boards. If the space in the classroom is inadequate to display the artwork of the whole class, the teacher must make arrangement to exhibit the work of every child in turn over a certain period of time.
6. Children should be given opportunities to introduce their artwork and to learn to accept and appreciate the work of others.
7. Children's pictures can be bound into a book, and simple descriptions may also be added for the children to read.

(b) Music Activities

Human beings show their abilities to appreciate music even at infancy. When a baby hears some melodious sounds he will listen attentively and happily and then respond with innate body movements. At the kindergarten stage, the teacher may help them to develop such potential and interest with appropriate guidance. For example, as the children sing to the music, imitate some movements or sounds or that of animals, or make body movements to the rhythm, the teacher should encourage them to express themselves freely. Moreover, the teacher should show respect for and give praise to their performance.

I Objectives

Music activities should aim at the cultivation of children's interest in music rather than the training of musical skills. As a result, children can obtain fun and satisfaction by participating in various activities. Music activities should be designed in such a way that children can express themselves freely without pressure and acquire knowledge of musical elements such as rhythm, melody, tone and beat.

1. To arouse children's interest in music.
2. To develop children's abilities to appreciate music.
3. To cultivate auditory perception through recognition of the melodic and rhythmic qualities of sounds, e.g. high and low, strong and weak, fast and slow, etc.
4. To develop children's confidence in and ability of singing.
5. To teach children in recognising and playing simple percussion instruments so that they can make use of such musical instruments to create their own music.
6. To develop children's concentration power and encourage co-operation through group performance.
7. To encourage self-expression through the use of free and rhythmic movements in response to the music.
8. To enhance the understanding of the words of songs through music activities and to encourage self-expression through dramatised songs.

II Principles of Teaching

1. Children should have approximately 30 minutes of music activities daily. The teacher should adopt an integrated approach in teaching.
2. The duration and sequence of music activities should be planned with flexibility, taking into consideration the interest of the children.
3. The activities planned must be geared to the abilities of the children.
4. Every child should be given the opportunity to participate in the music activities. Moreover, individual attention should be offered if possible.
5. It is not necessary for music activities to be conducted in the music room. The teacher can make use of tape-recorder or percussion instruments to conduct lessons in the classroom or outdoors.
6. The teacher can select suitable materials for music activities which are related to the theme.
7. As the main objective of music activities is to encourage self-expression through music, the teacher should avoid giving too much demonstration or asking children to repeat the same action.
8. It is not necessary for the teacher to accompany singing with the piano. However, if the piano is used, it would be better if the teacher can play both the melody and the accompaniment part. If she is not able to do so, he can just play the melody.
9. The teacher should try her best to demonstrate correctly with a gentle and clear tone.
10. Musical elements such as rhythm, pitch, intensity, tone and interval should be introduced through various activities.
11. Children's active participation may be encouraged by the teacher's devoted involvement.

III Scope of Learning

1. Listening activities

Teachers may ask children to detect different sounds from the environment or listen to musical pieces.

- a. The teacher should help children to cultivate and develop their listening abilities through various activities, for example, to detect and recognise different sounds from the environment and their tone colour, to identify the sources of sounds and to distinguish whether the sound is loud or soft, strong or weak, continuous or static.
- b. The teacher may record sounds of musical instruments, animals or the natural environment for children to identify and imitate.
- c. The teacher may play very rhythmical music to children and let them express their feelings in drawings.
- d. The teacher may ask children to listen carefully and to identify songs which they know well, so as to develop their power of concentration and memory.
- e. The musical pieces selected for listening activities should be simple and short, so as to cope with the limited abilities and experiences of the children.
- f. The songs, records and tapes chosen should be suitable for the children, for example, music with sharp contrast in tempo and music which is lively and joyous. Moreover, the teacher may make use of pictures, slides or films to introduce some stories about music to the children and arouse their interest.

2. Singing

- a. The teacher may select suitable songs to go in line with thematic teaching, or compose a story with several songs and let the children have singing games or role play with singing.
- b. When a new song is taught, the teacher should demonstrate with good clear tone. She may also ask children to clap their hands, step their feet or perform other rhythmic movement to familiarize themselves with the rhythm and the tune of the song.
- c. The teacher may make use of pictures, stories, movements and musical instruments to stimulate children's imagination about the content of the song.

- d. The teacher should pay attention to children's singing, and stress on singing softly and naturally. The duration of singing activities should not be too long.
- e. The teacher may choose some melodious songs to sing or play from the tape recorder, to attract children's attention and to lure them to sing along.

3. Rhythmic Movement

- a. The teacher may play simple music from the piano or percussion instruments and ask children to respond to the rhythm, for example, clap, step, slide, walk, walk on tip toes, run, jump, leap, etc., or imitate animal gaits and movements.
- b. Using music from the tape recorder or percussion instruments, the teacher may encourage children to create movements from imagination. When the music stops suddenly, children may be asked to freeze in certain postures, such as imitating the form of an aeroplane, a rabbit or an old man. Thus children are trained to have quick responses.
- c. The teacher may use stories or nursery rhymes, accompanied by music or songs, as the theme of rhythmic movements, and ask children to play the characters in the stories.
- d. Rhythmic movement should not be restricted to the movement of the limbs. Besides, there should be sufficient space for free movements.
- e. The content of music games should be related to the daily life of the children.

4. Percussion playing

- a. Percussion instruments include those with fixed pitch and those without. Simple percussion instruments with no fixed pitch are more suitable for kindergarten children. Such instruments include tambourines, Chinese wood blocks, castanets, jingle bells, pair of cymbals, bass drums, side drums, temple bells, inverted bells, shakers, blocks of wood, etc. However, chime bars which are a fixed pitch instrument is also suitable for kindergarten children. Percussion instruments which require more skills such as triangles, xylophones and glockenspiel should be left until the children are mature enough to handle.

- b. The teacher may teach children to make percussion instruments themselves with different types of materials.
- c. Percussion instruments should be used as frequently as possible to arouse children's interest in music activities.
- d. The teacher should introduce a suitable number of musical instruments to children step by step. A music corner may also be set up in the classroom where percussion instruments are placed. Children should be encouraged to play and experiment with the instruments so as to identify their shapes, names and sounds.
- e. Children should be trained to take good care of the instruments and restore them to their place after use. Every child in the class should be given the opportunity to play the instruments.
- f. Before playing the percussion instruments, children should be familiarized with the rhythmic pattern through practices like clapping and stepping.
- g. Besides introducing the musical instruments, the teacher may ask children to make body movement to the rhythm. Movements like patting different parts of the body, clapping, stepping, bumping the knees, opening and closing the mouths to produce sounds of various intensity.
- h. Many sounds in the environment may be reproduced from musical instruments. The teacher may make up stories with songs and let children use suitable instruments to role-play the characters in the stories.

IV Equipment

A kindergarten should have the following music equipment :

1. A piano or any other instruments suitable for accompanying singing and movement, for example, organ, guitar, recorder.
2. A cassette tape recorder.
3. Percussion instruments - triangles, tambourines, castanets, blocks of wood, jingle bells, shakers, pair of cymbals, bass drum, side drum, xylophone, set of chime bars, vibraphone, etc.

4. Home-made instruments

- Teachers may teach children to make their own instruments using different types of materials, for example, putting some dried peas, sand or rice into containers such as plastic bottles or cans.
- Other materials like sand paper, boxes, coconut shells, straws, tin containers ... etc. may also be used.

5. Music corner

A music corner may be set up in the classroom where percussion instruments, home-made instruments, a cassette tape recorder, and pictures related to music may be placed. Children should be allowed to play the instruments, identify the sounds they produce and create their own music.

6. Music Room

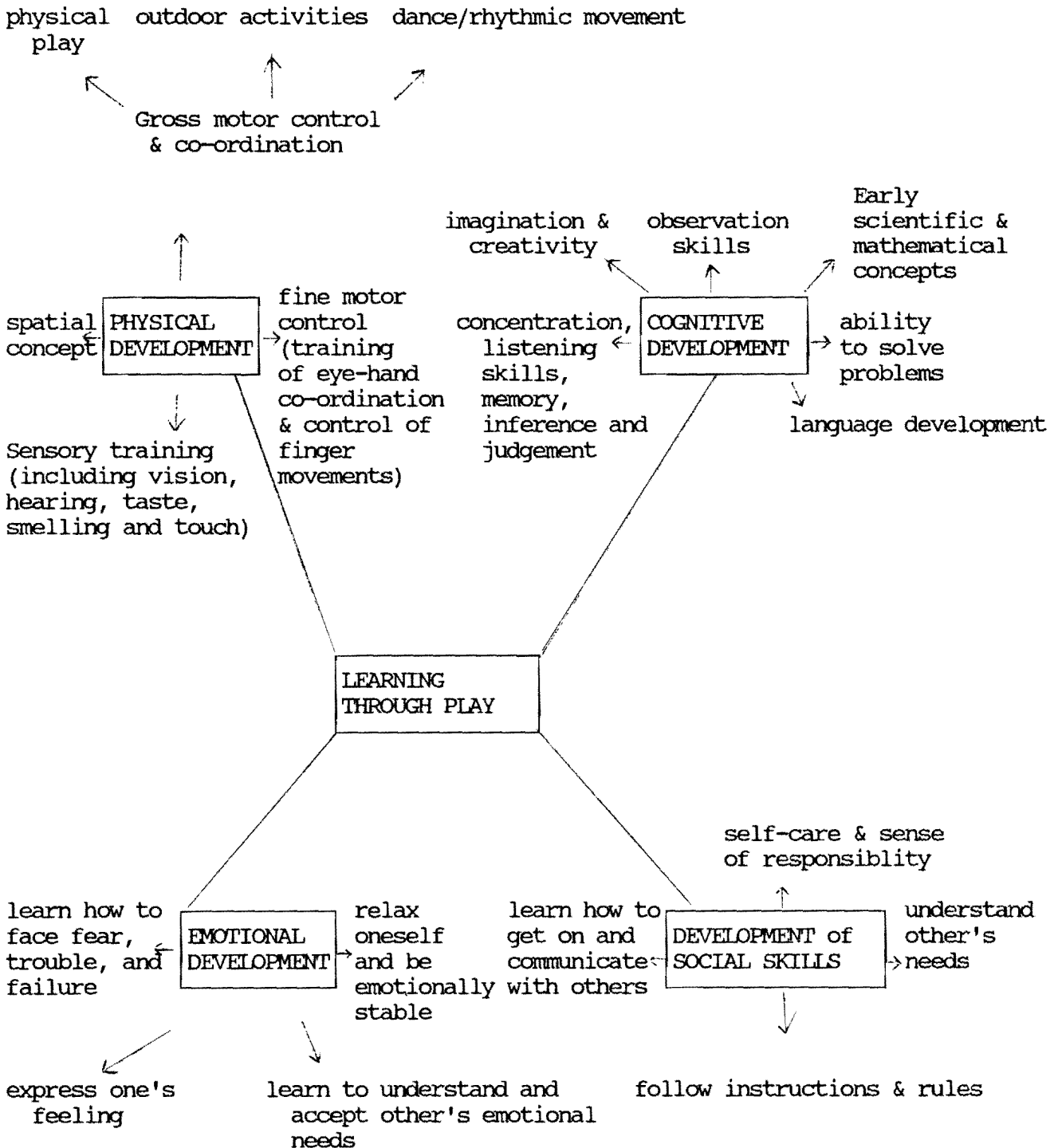
An ideal music room should be sound-proofed and air-conditioned. If this is not possible, the school is still encouraged to consider setting up a separate music room.

CHAPTER 5 : IMPLEMENTATION OF THE CURRICULUM

5.1 Learning Through Play

5.1.1 Friedrich Froebel (1782 - 1852), the founder of kindergarten education, emphasized that kindergartens should organize adequate free play activities for children so as to give them a feeling of playing freely at home. He held that children should learn under a pleasant atmosphere which can stimulate active learning and there should be various kinds of toys materials and natural resources. With a good order in the classroom, children will feel gratified and concentrate on learning. To achieve this objective, we must have an understanding of the physical and psychological development of children as well as their varied needs at different stages and individual differences. In promoting learning, appropriate instructions and stimuli should be given according to the development of individual children. In other words, we should not only set rules and regulations, but also make well-organized plans on teaching themes, teaching methods and implementation procedures prior to any activities. In this way, children will be able to participate in play in an orderly manner and learn actively.

5.1.2 Play is an experience indispensable to the development of children. Indeed, play is vital to the all-round development of children. While learning and play are interrelated, the kindergarten teacher should have knowledge of the functions of various kinds of play and the method of conducting play in order to achieve the objectives of 'Learning Through Play'. The functions of play are illustrated by the following chart :



5.2 The Arrangement, Design and Use of a Kindergarten Classroom

5.2.1 The classroom plays an important role in providing a learning venue for children. A well-arranged classroom not only creates a delightful atmosphere but will also promote effective learning in all aspects. Therefore, the teacher should have an overall and detailed plan. She should pay attention to the provision of space such as passages in between tables and chairs, the allocation of 'quiet' and 'active' interest corners and the design of display boards and classroom layout that are to match the teaching themes. The classroom should be so designed as to provide adequate space for free movement, easy access to toys and learning materials, and stimulate the children to learn. Some suggestions concerning the layout of classroom are as follows :

- (1) The classroom should be well equipped and big enough to allow space for activities.
- (2) The classroom must be well lit with good ventilation.
- (3) The colour tone of the classroom should be soft and pleasant, cheerful but not striking so that children feel comfortable and at ease, and a merry mood emerges.
- (4) Display boards and strings should be used to display children's work. Dull and monotonous murals and wall papers should be avoided. The display and arrangement of a classroom must vary from time to time to produce fresh stimulation for active learning. The display of children's work should be an encouragement of effort and not merely a merit of best quality. Displayed items should be placed suitably at children's eye-level.
- (5) The toys and teaching aids in the low cupboards and shelves should not be kept there merely for display purpose. Children should be encouraged to use them freely and be trained to put them back after use.
- (6) Activity corners like Library/Book Corner, Nature Corner and Home Corner which suit the children's interest should be set up. There are no fixed and fast rules in the design of these activity corners. If the school premises are under certain restrictions or space is limited, they can have some special set-ups such as movable cupboards and shelves, sand boxes and water tanks on trolleys, etc.
- (7) Tables and chairs should be arranged in groups for the following advantages :
 - (a) More space for the activity corners.
 - (b) Children, when seated in groups, will have more chance to converse. This will enhance the development of language and communication skills and promote a sense of security and belonging.

- (c) Cordial and friendly relationship between the teacher and children could easily be built up and the sombre atmosphere in the classroom will be alleviated.
- (d) Toys and teaching aids may be used more effectively and flexibly, and children may have more fun.

5.2.2 On the whole, the classroom is the venue for children to learn through a variety of activities. To achieve the desired teaching results, the teacher should have a thorough understanding of the teaching environment, design good layout plans for the classroom, and make flexible use of available resources. Some principles of classroom layout are as follows :

(1) Demarcate the area for each activity corner :

(a) A kindergarten classroom usually comprises the following activity corners :

Quiet Activity Corners : Nature Corner
 Library/Book Corner
 Learning Corner
 Art/Craft Corner

Active Activity Corners : Home Corner
 Toys Corner
 Blocks Corner

(b) In order to help children observe the rules, each activity corner should be demarcated and the number of children in each corner should be fixed.

(2) Appropriate locations for activity corners :

If activity corners are appropriately arranged, classroom management will be easier. Therefore the reading corner should not be located next to the Home Corner lest the children will be disturbed.

(3) The equipment and learning resources should be so placed that they are easily accessible and more space will be provided for activities.

(a) Groups of tables should be placed near the cupboards in which the learning resources are kept.

(b) The distance between groups of tables should not be too close. To place groups of tables in a zig-zag way will hinder children's movement and cause bumping.

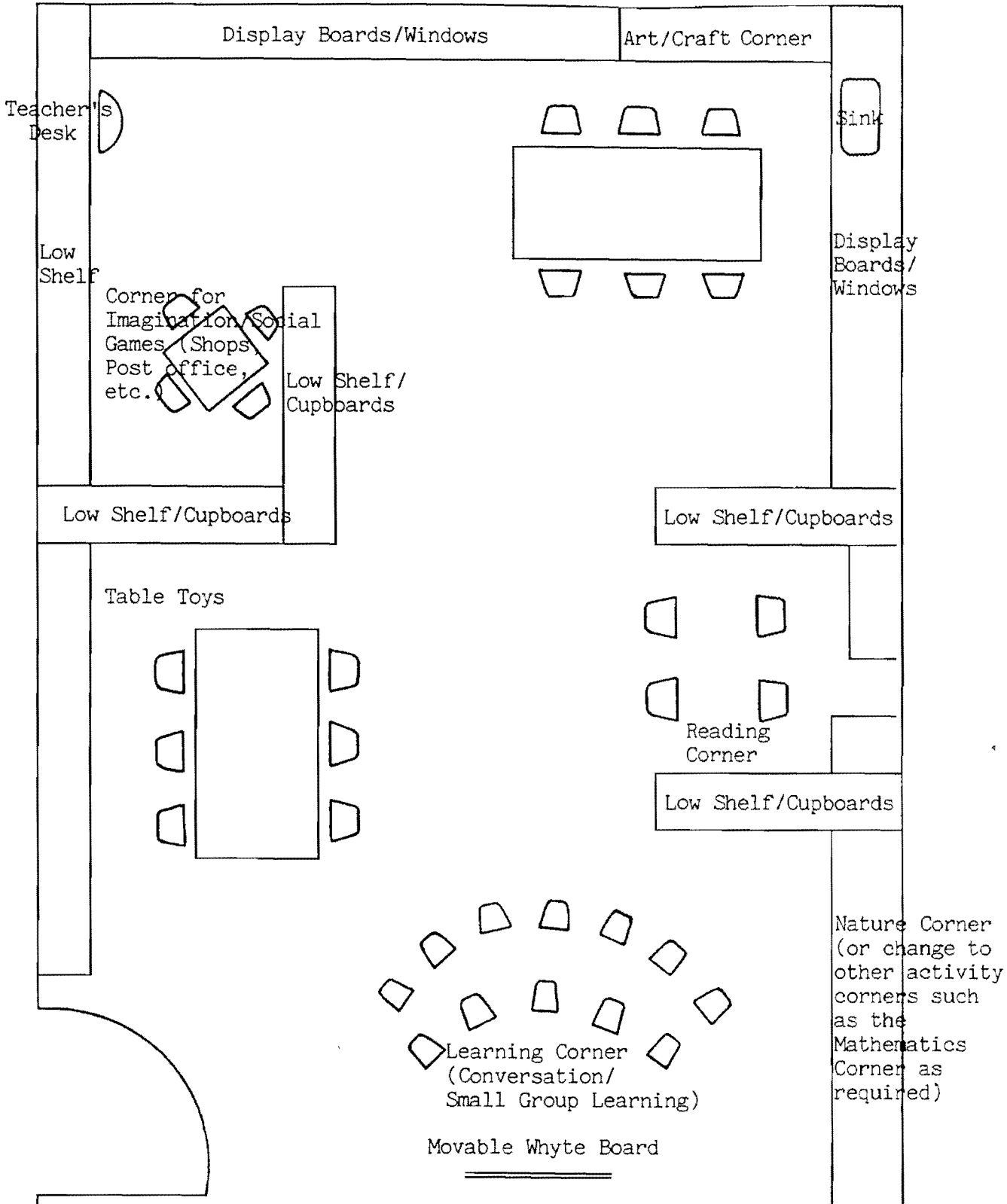
(c) In order to facilitate teacher's supervision, the height of classroom furniture or partitioning boards should not block the view of an adult.

- (4) Furniture which could be used for partitioning purposes should not be put together in one activity centre.
- (5) The furniture should be placed appropriately. It is not advisable to pack too much furniture on one side of the classroom.
- (6) Display boards and potted plants may be used for teaching purposes as well as decoration.
- (7) The equipment in each activity centre in the classroom should be used flexibly in accordance with the teaching theme.

5.2.3 Safety precautions should not be neglected when setting up a stimulating learning environment in the school. If activities take place outdoors, the school head and teachers concerned must make detailed planning and adequate preparation to ensure that sufficient teachers will be deployed to take care of the children, so as to minimize the possibility of accidents. With regard to indoor/outdoor physical play activities, teachers should provide children with proper routine training and develop in them an understanding of the part they should play in ensuring their own safety and that of other children. Moreover, special attention should be paid to the suitability of the venue, as well as the standard and the secure set up of apparatus and play equipment. Regular and careful checking on all play equipment is required to make sure that they are in good condition and safe for use. The joints of iron or wooden facilities are liable to damage or wear and tear. When such conditions are detected, repair work should be done immediately. Teachers are reminded to double check the apparatus and equipment before using them to ensure safety.

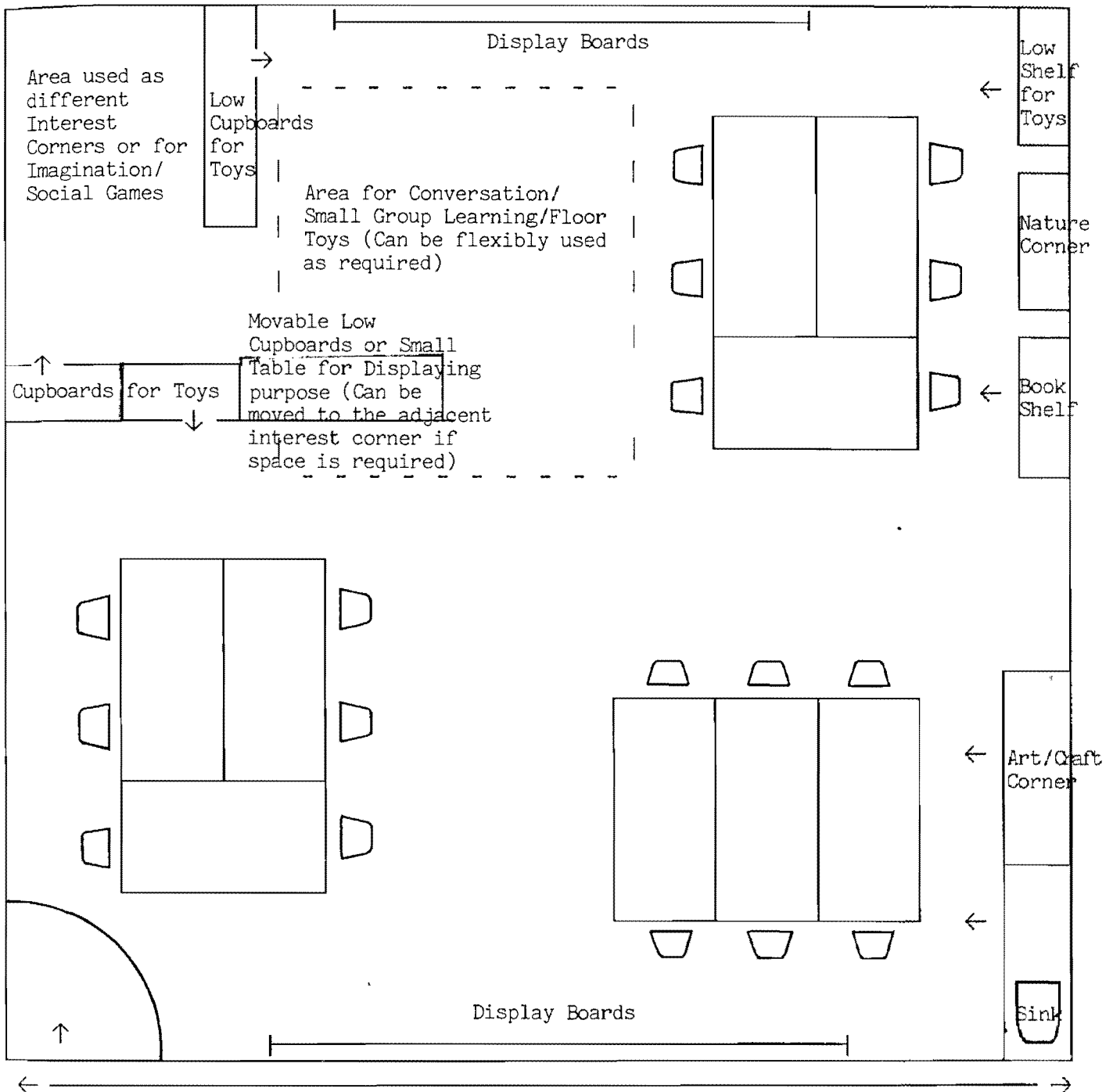
Furthermore, teachers should, whenever possible, familiarize children with some safety precautions about toxic, harmful or lethal objects, potential dangerous actions and dangerous places. Children should be trained to keep calm and respond quickly in case of emergency. Regular fire drills will provide opportunities for such training.

Classroom Layout Plan* - Sample 1



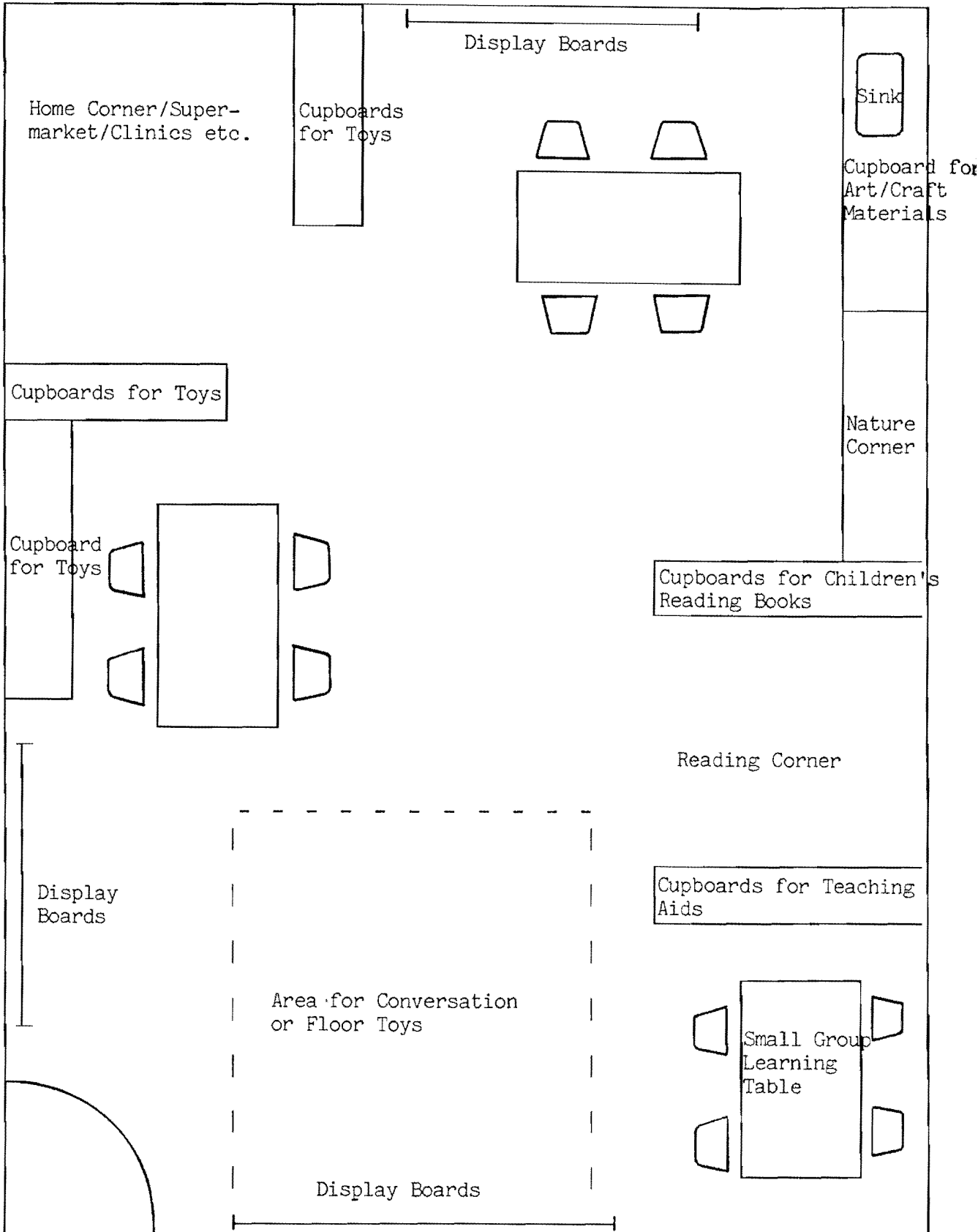
* The arrangement of the classroom layout plan should vary according to the resources of each individual classroom.

Classroom Layout Plan* - Sample 2



* The arrangement of the classroom layout plan should vary according to the resources of each individual classroom.

Classroom Layout Plan* - Sample 3



* The arrangement of the classroom layout plan should vary according to the resources of each individual classroom.

5.3 Grouping

5.3.1 The daily plan of learning activities should be flexibly arranged so as to use resources effectively. Activities serve to promote children's concentration and enable them to gain more personal experience in the learning process. The form of grouping, arrangements of group activities and the role of the teacher are briefly introduced below.

(a) Form of Grouping

Generally speaking, learning activities can be in the form of whole class learning, small group learning and individual learning. In arranging groups, the teacher should consider factors such as the needs of children and classroom management.

I. Whole class learning :

In presenting theme contents or conducting activities of music, story-telling, sharing experiences and nursery rhymes, the whole class grouping situation is more desirable. This will not only enhance the children's concentration, but also provide them with the opportunities to express their views and develop their language skills. Besides, this will stabilize the children's emotions and help them switch to other activities smoothly.

II. Small group learning :

The teacher may design a variety of learning activities and curricular according to the age, interest and ability of the children, and then split the class into small groups. In this situation, children are taught by turns and the teacher can observe children's progress and see to their individual needs. A close teacher-child relationship is expected. On the part of the children, actual participation in the activities may help them build up confidence, satisfy their curiosity and desire to learn and motivate them to learn by themselves.

III. Individual learning :

Individual learning should include activities planned before the lesson and incidental learning activities. When children are participating in free choice activities or small group learning, the teacher should pay constant attention to them, conduct incidental learning activities and provide individual guidance to children according to their interests.

(b) Arrangement of Activities

In conducting group activities, the teacher may divide the children into several small groups. While the majority of children will be allowed to learn on their own in good order, one group will be led to learn by the teacher. To begin with, the teacher may gather the children together and talk to them for a while or sing some nursery rhymes with them so as to keep them in a good mood before the activities are carried out. When

they have finished one activity, they should tidy up before starting another activity. The arrangements should be made appropriately in order to fully utilize space and resources to achieve the best teaching effects. Some suggestions regarding groupings, activity programmes and time allocation are listed below for reference :

I Groupings

Though the teacher is expected to follow some principles in grouping children, certain degree of flexibility should be allowed. e.g. :

1. In view of individual differences, children may be divided into 3 to 4 groups of different ability standards.
2. The number of children in a group should depend on the age of children and the content to be taught. For instance, there should be less children in a group of 3 year olds. If the content to be taught requires more time and individual practice, such as pouring water, fastening buttons and wiping table, it is advisable to teach the children individually or in groups of two.
3. Slow learning children should be given individual guidance.

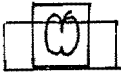



II. Activity Programme

The teacher should consider the abilities and needs of children before drawing up the activity programme. For instance, the group activities should be made simple and flexible in the case of nursery class children who have short attention span and cannot follow the established programme on their own. In this case, children should be left to choose their activities except for one compulsory activity specified by the teacher.

For children attending lower/upper kindergarten classes, different activities may be conducted according to the established programme because they have better concentration power. These activities can be scheduled in such a way that each group of children will participate in the individual activities in accordance with the programme.

To enable children to carry out the group activities in an orderly manner, the teacher should preferably divide the activities into "small group learning", "learning activities" and "free choice activities", which should be well coordinated, and picture cards may be used to familiarize children with the activity programme. e.g.

Activity Programme

Group				
Activity Programme				
1. Small group activity	1	4	3	2
2. Learning activity (1)	2	1	4	3
3. Learning activity (2)	3	2	1	4
4. Free choice activities	4	3	2	1

III Contents of activities

Small group learning - This includes learning of certain abstract concepts, such as mathematical and natural science concepts, and training that requires more practice like language proficiency, daily life skills, skills in art and craft as well as social skills.

Learning activities - They refer to those activities which can be independently carried out by children to reinforce their own knowledge and experience, such as activities in art and craft, mathematics and language. Children may be asked to complete a number of different activities in the time allocated to learning activities.

Free choice activities - Children are allowed to play games in the home corner, music corner, nature corner, toys corner or art and craft corner of their own choice, and are free to select different sorts of educational toys and teaching aids to play with.

This may also be the time for children to take refreshments. Alternatively, the whole class may be arranged to take refreshments together or in groups at other times.

IV Scheduling of activities

In general, the duration of group activities is 40 to 45 minutes. If the teacher has to arrange group activities for 4 groups of children daily, the time allocated for each activity should be about 10 to 15 minutes. While the teacher may control the time for small group learning, the duration of all other activities should be determined, in a flexible manner, in view of children's varying speed at work. In other words, if a child fails to complete a task within a specified time, he should not be ordered to stop or switch to another activity.

(c) Role of the teacher

A teacher should take note of the following points in conducting small group learning :

I Preparation

Choose suitable teaching materials and venue for teaching, and then plan the activities according to the teaching themes, fix up the classroom and divide the children into groups. Check whether each interest corner is adequately equipped and set the objectives of guidance.

II Conducting the activities

Let children reinforce their knowledge and experience through games before providing them with new information in good time. Notice the response of children, give them sufficient time to attempt and learn from experience, and guide them to meet their specific needs, i.e. giving them advice, encouragement and mediating their disputes.

III Record

Keep a record of the progress of all children, highlighting their peculiar behaviour, such as becoming withdrawn all of a sudden, aggressive behaviour or a regression in ability, for the purpose of follow-up guidance.

If a group of children is under the guidance of more than one teacher, there must be co-operation among the teachers in planning and designing the activity programme as well as proper allocation of their responsibilities to ensure consistency in the activities. Besides, they have to jointly review the activities and discuss how improvements can be made.

indoor and outdoor environment, and provide interest corners for children to explore individually or in small groups. Children are allowed to move freely in this setting, stay at one interest corner to play with their toys, or participate in creative activities or games together. This arrangement will be conducive to a child's social development. Meanwhile, the group activities, such as games and certain routine activities, will also help children learn to observe discipline and get along with others.

- (c) Motivate children to learn and give them opportunities to explore and experience :

Children have to learn through their sensory perception. To meet their unique requirements in learning, the activities should be scheduled in such a way that training in art and craft, music and daily life skills are incorporated as far as possible, so that children will get satisfaction and build up self-confidence through observations, trials and practices.

- (d) Activities should be based on the children's abilities and interests :

An ideal arrangement of activities for children is one that satisfies their interest and needs. Thus, in drawing up schedules, we have to be flexible in the allocation of time for various activities, taking the age, needs, interest and abilities of the children into consideration.

Younger children require more time to take food and wash their hands because their self-care ability is limited. Moreover, as they are weak in concentration, the duration of those activities which call for a high degree of concentration, such as listening to stories and music should be kept as short as possible. On the other hand, adequate supplies should be provided for small group learning and free activities, which should be varied in contents and the time spent on each item should not be too long.

5.4.2 In drawing up the time-table, the teacher must take note of the following points :

- (1) Children's washing time should be flexibly arranged, depending on the environment and conditions of the school.
- (2) For group activities, arrangements can be made for the children to complete 3 activities on the same day while small group learning can be conducted for one or two groups daily, with the result that everybody gets the chance to finish all the activities during the week.
- (3) Class learning and small group learning may be scheduled and conducted as integrated activities without rigidly fixing the duration of each session of activity every day.

Suggested Time-table for Half-day K/G

Time	Day of the Week	MON	TUES	WED	THUR	FRI	SAT
9:00 - 9:30 a.m.		Welcome/Whole-class Learning (cleanliness inspection, conversation : general knowledge, story, sharing of everyday experience)					
9:30 - 10:15 a.m.		Group activities					
							Small group learning/ interest activities (Art/ Craft activities, preparing snacks, Slide Show)
10:15 - 10:30 a.m.		Snack time					
10:30 - 11:45 a.m.		Physical Play Interest Activities/Art and Craft Activities Music Activities					
11:45 - 12:00 noon		Nursery rhyme/Finger play/Clearing up, getting ready to go home					

Suggested Time-table for Full-day K/G

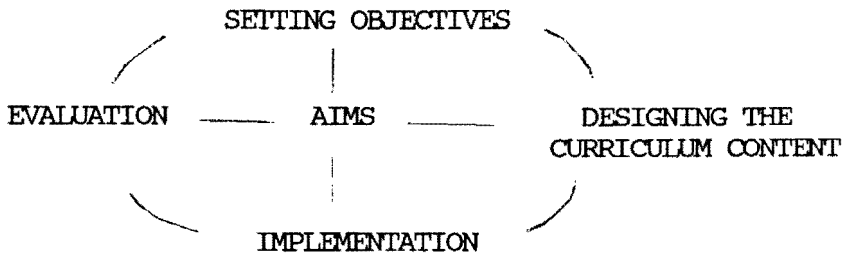
Day of the Week Time	MON	TUES	WED	THUR	FRI	SAT
9:00 - 9:30 a.m.	Welcome/Whole-class Learning (cleanliness inspection, conversation : general knowledge, story, sharing of everyday experience)					
9:30 - 10:15 a.m.	Group activities					Small group learning/ special activities e.g. outing, visit, games, birthday parties etc.
10:15 - 10:30 a.m.	Snack time					
10:30 - 12:00 noon	Physical Play Interest Activities Story/Nursery Rhymes Getting ready for lunch/to go home(on Sat)					
12:00 - 1:00 p.m.	Lunch (Including preparation and clearing up)					
1:00 - 3:00 p.m.	Afternoon nap					
3:00 - 3:30 p.m.	Interest Activities/Physical Play (interest activities include Art and Craft activities, preparing snacks, slide show, story, games, etc.)					
3:30 - 3:45 p.m.	Snack time					
3:45 - 4:15 p.m.	Music Activities					
4:15 - 4:30 p.m.	Clearing up, getting ready to go home					

The above examples are mainly used for illustration and should not be regarded as the only model. In allocating activity time, the kindergarten concerned must take into consideration its own environment and conditions, and revise the suggested time-tables above accordingly. The approximate time allocation for each activity is as follows:

Activities	Approximate Time Allocation	
	Full-day	Half-day
Welcome/Whole-class Learning (Cleanliness inspection, Conversation : general knowledge, story, sharing of everyday experience)	15-30 minutes	15-30 minutes
Group Activity	40-60 minutes	40-60 minutes
Physical Play	45-90 minutes (2 sessions)	30-45 minutes
Creative Activities (e.g. music, art and craft, etc.)	30-45 minutes	30 minutes
Meal (including clearing up, lunch time and snack time)	60 minutes	15-20 minutes
Afternoon nap	90-120 minutes	

5.5 Evaluation

5.5.1 The educational aims are achieved through a recurring process of setting objectives, designing curriculum, implementation and evaluation, as shown by the chart below:



5.5.2 The teacher will be able to know the appropriateness of the curriculum and the teaching method through evaluation. Moreover, she will also know about the progress that children have made and the difficulties that they faced in learning. She can thus help children overcome their weaknesses and give full play to their strengths according to the ability of individual children.

5.5.3 There are various methods of evaluation, including test, examination, observation, recording and testing. Different evaluation methods can be used to achieve different evaluation objectives. All methods, however, have their own limitations, for instance, tests and cannot be used to evaluate children's behaviour and attitude. Also, there is a tendency to make a comparison among children which will create unnecessary pressure. For children at kindergarten level whose individual difference are generally more marked and obvious, testing is certainly inappropriate. It is more advisable for the teacher to make continuous observation in order to understand the development and learning progress of the children. To achieve objectivity, the teacher should design evaluation forms to facilitate the recording of progress made by individual children. The areas to be observed should include physical, intellectual, social and emotional development of the children. Apart from making written records, the teacher can also list the items of observation in the form of a table (see Appendix 4).

The main purpose of evaluation is to help the teacher to understand the development of individual children, and to revise teaching objectives accordingly. The information obtained from evaluation can also serve as reference for the arrangement of classroom layout, the preparation of teaching materials and the choice of teaching approaches.

CHAPTER 6 : CONCLUSION

6.1 Kindergarten education is a very important stage in one's life. To children of this age, the most important people are probably their parents and teachers. Kindergarten teachers are not only the children's teachers, but also their friends and target of imitation. Better results will be achieved if kindergarten teachers have an in-depth knowledge of the growth and needs of children, and are able to guide them patiently and systematically with love and care.

6.2 The purpose of this guide is to provide kindergarten teachers with some basic knowledge of the development and needs of children in various aspects, and to suggest suitable play and learning activities for kindergarten children. It is hoped that children will have an all-round development in moral, intellectual, physical, social and aesthetic aspects. Suggested activities related to these aspects are also included in this guide. Teachers should apply the important principles contained therein in devising teaching programmes and teaching plans in an appropriate and flexible way taking into consideration the school environment, condition and objective requirements. It is hoped that children will, in the process of systematic learning, have an all-round development, grow up healthily, develop a good character and become useful citizens.

	Kindergarten	Primary	Secondary	Sixth Form
<u>General Aims</u>	<p>The general aims of the kindergarten curriculum are both enabling and preparatory, bridging the gap between the family and an outside social group. The curriculum is aimed at enlarging children's view of the world from their family to that of their school. It should help to produce the well-balanced development of children in the moral, intellectual, physical, social and aesthetic spheres of life. Pedagogical programmes should foster in children a positive attitude towards those aspects of cognitive, emotional and kinaesthetic learning which are important to the success of their future education.</p>	<p>The general aims of the primary curriculum share, to some extent, the enabling and preparatory nature of the aims of the kindergarten curriculum. The primary curriculum mediates between kindergarten and secondary curricula. On the one hand, it encompasses and reinforces the same areas of development as in the kindergarten curriculum - intellectual, communicative, social and moral, personal and physical, and aesthetic. On the other hand, it enlarges the achievements of kindergarten tasks and furnishes children with the knowledge, skills and attitudes, in rudimentary form, required for approaching the tasks of the secondary curriculum satisfactorily. In particular, the primary curriculum should aim at enabling children to achieve their optimum levels of attainment against the targets to be set from time to time in specified curriculum areas.</p>	<p>The general aims of the secondary curriculum are to some extent influenced by the fact that it leads, for part of the student body, to immediate entry into society either after completion of secondary 3 or that of secondary 5. The preparatory nature for further education however, is present for those students who continue in the sixth form.</p> <p>The general aims of the secondary curriculum, therefore, are fourfold. First, the curriculum continues to promote students' all-round development in the intellectual, communicative, social and moral, personal and physical, and aesthetic spheres. Secondly, it provides a general and worthwhile education at the junior secondary level, in particular by enabling students to achieve optimum levels of attainment against targets to be set from time to time in specified curriculum areas. Thirdly, it prepares students for education beyond secondary 3 and secondary 5 as required. Fourthly, it prepares students for the world of work after completion of the junior secondary level and the senior secondary level education, and helps them to become well-balanced and responsible individuals capable of coping with the needs and demands of the community.</p>	<p>The general aims of the sixth form curriculum are to produce balanced, well-informed individuals who are proficient in both English and Chinese, and who are prepared for further education, work and adult life. The sixth form curriculum should be broadly-based to cater for a wide range of abilities so that all individuals can achieve their full potential.</p>
<u>Specific Aims</u> Intellectual	<ol style="list-style-type: none"> To encourage in children a positive attitude towards the acquisition of knowledge and understanding of their world. To assist children to develop concentration power, observational, analytical, reasoning and problem-solving skills. To lay the foundations of basic numeracy and literacy. 	<ol style="list-style-type: none"> To strengthen a reliance on independent enquiry and use of analytical thinking. To introduce children to the factual information, basic concepts and thought-patterns of the various disciplines and to familiarize them with their use in the world around them. 	<ol style="list-style-type: none"> To develop in students the ability to think conceptually; to apply principles of logic; to be creative; and to make decisions based on reasons. To provide students with the main mathematical, scientific, technical and commercial knowledge and skills needed for functioning in a highly technological society. To help students develop the habit of independently acquiring the on-going knowledge and skills that they may require to meet the social, informational and technical transformations of a fast-changing community. 	<ol style="list-style-type: none"> To deepen students' grasp of the concepts, paradigms and modes of expression of particular disciplines; to encourage them to assume increasing responsibility for independent and continuous learning, and to develop the skills necessary for identifying and exploiting available resources and retrieving necessary information. To help students to develop their creative, critical and analytical thinking and their ability to make rational and independent decisions. To encourage students to utilise their knowledge, reasoning powers and problem-solving skills for work and study processes.

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	Kindergarten	Primary	Secondary	Sixth Form
Communicative	<p>4. To broaden and refine children's innate and family-learned verbal and non-verbal interpersonal proficiency.</p> <p>5. To support and facilitate children's efforts to identify and express their thoughts and emotions linguistically.</p>	<p>3. To promote children's efforts to improve intelligible and socially acceptable interaction with those around them through a variety of media.</p> <p>4. To acquaint children with the oral and graphic formalities of Chinese and English and to train them in their use.</p>	<p>4. To foster students' ability to communicate effectively in both Chinese and English in relation to the integrating and instrumental roles that each language plays in the Hong Kong community.</p>	<p>10. To help students to develop their ability to communicate effectively in oral and written Chinese and English in relation to the different roles that each language plays in the Hong Kong community.</p> <p>11. To develop students' ability to make effective use of non-linguistic forms of information transfer and information technology.</p>
Social and Moral	<p>6. To assist children to attain a socially acceptable balance between personal interests and those of their community.</p> <p>7. To develop in children a sense of responsibility, and a positive attitude towards both work and people.</p>	<p>5. To help children begin to develop a personal sense of social and moral values and to become aware of their roles in the family.</p> <p>6. To impart to children knowledge and understanding of the culture, traditions and way of life of their own community and those of other communities with a view to developing respect for them in children.</p>	<p>5. To support students in identifying and cultivating personal ethical values and in applying these values to contemporary social issues.</p> <p>6. To train students in the habit of acquiring information and understanding about matters of concern for Hong Kong, China and the world and in making personal contributions towards the resolution of these places within the limitations of their circumstances.</p> <p>7. To make students aware of the noteworthy aspects of Chinese culture, to strengthen their esteem for it and to help them develop a positive attitude towards other peoples, cultures, values and ways of life.</p> <p>8. To help students appreciate the cultural richness of Hong Kong's international life and to help them acquire the habit of adapting it for their personal development.</p>	<p>4. To encourage students to develop an understanding of and concern for their community, an appreciation of their cultural heritage, an understanding of the relationship of Hong Kong to other countries and cultures and the interdependent nature of the modern world.</p> <p>5. To encourage students to develop social skills, leadership qualities, and a sense of responsibility for and commitment to the community.</p> <p>6. To help students develop a sense of moral and social values, including respect for other people and in particular, their views and beliefs.</p>
Personal and Physical	<p>8. To foster in children the ability to look after themselves.</p> <p>9. To help children to acquire the skill of giving expression to their feelings, both positive and negative.</p> <p>10. To make children perceive the importance of self-control in operating happily in the kindergarten environment and to train them in this habit.</p> <p>11. To nurture in children a sense of self-esteem, confidence and achievement.</p> <p>12. To further children's dexterity in gross and fine motor skills.</p>	<p>7. To provide children with sufficient information to enable them to cope with the physical and emotional changes that occur during their development from childhood to adolescence.</p> <p>8. To assist children to attain a feeling of self-security, establish a healthy and stable way of life and positive attitude towards learning and life.</p> <p>9. To encourage children to develop their physical and social skills and to guide them to make good use of their leisure and attain a well-rounded life.</p> <p>10. To inform children about their own and other cultures and to stimulate their interest in them.</p>	<p>9. To promote students' mental and physical health with good balance; to develop cultural and recreational interests and to guide them in making good use of their leisure.</p> <p>10. To help students to learn about themselves, to develop a positive, realistic self-image and an appreciation for their roles in the family and the community.</p>	<p>7. To promote students' mental and physical health and to encourage their worthy use of leisure.</p> <p>8. To prepare students for adulthood and for their roles and responsibilities within the family and society in a period of rapid change.</p>
Aesthetic	<p>13. To stimulate children's imaginative powers and to help them cultivate the ability to appreciate beauty in its various forms.</p>	<p>11. To bring examples of various forms of art to the attention of children and to train them in producing objects of their own creation in order to cultivate in them aesthetic norms and to inspire their aesthetic imagination.</p>	<p>11. To help students to identify their areas of cultural interest and expertise, and to encourage them to develop their imagination and creativity.</p>	<p>9. To nurture students' creativity and to promote their aesthetic development.</p>

APPENDIX 2 SUGGESTED ACTIVITIES

(The [x] indicates the class level for which the activity is suitable. However, the teacher should adjust the degree of difficulty of the activities to suit children in different levels. N stands for Nursery Class, L stands for Lower Kindergarten Class and U stands for Upper Kindergarten Class.)

I. Social Experience

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Seasonal Greeting	x			Make greeting cards for friends and relatives on special occasions/festivals.	Paper and necessary materials	
Learn about the community		x		Observe and learn about the facilities, environment and people in the neighbourhood, e.g. the policeman, shop owners caretakers etc. carry out extended activities, e.g. simple statistics, visits and drawings based on experience etc.		
Learn about people of different walks of life			x	Arrange visits to people of different walks of life e.g. doctor, fireman, policeman, driver, etc. in order to know about their work.		
Concern for other people			x	(i) Organize "Charity Month" and encourage children to take action to help others both at home and in school		
	x			(ii) Donate toys, clothes, books etc. to the needy (such as orphans, Vietnamese refugee children).		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Learn about the different modes of transportation	x			Discuss with children about the different modes of transportation by which they come to school.		
		x		Teachers may use pictures/slides to introduce the common modes of transportation (new activity). The teacher can ask children to collect pictures or models of common modes of transportation and then organize activities or games accordingly.	Pictures/ slides	
			x	Conduct "Road safety" games to let children learn the safety rules and manners to be observed on vehicles and ships.	Vehicles, road-signs Zebra-crossing, traffic lights	
Festivals	x			Decorate the classroom to co-incide with the celebrations of festivals and guide children to observe the changes in the classroom. Then use objects or activities to bring out the characteristics of the festivals, e.g. display of peach blossoms and spring couplets for decoration during Chinese New Year, and Christmas trees during Christmas.	relevant materials	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
	x			Show slide or video on previous festival celebrations to start off discussion and sharing of experience.	Slide projector, video cassette recorder and TV set	
	x			Appreciate the festival decorations in schools and in the streets. Then organize extended activities, e.g. art and craft activities or conversation practice	Art/Craft materials	
		x		Ask children to make small decorations out of various art materials to decorate the classroom for a coming festival.		
		x		Encourage children to share the joy of the festival with others through activities, e.g. ask children to sing carols to other classes at Christmas or talk about their experiences or incidents.		
	x			Hold Christmas party.		
	x			Play 'Dragon Dance' and 'Lion Dance'.	The necessary costume and masks.	
			x	Discuss with children the various ways of using the "Red Packet" money.		
	x			Role play visits from friends and relatives in the Chinese New Year and show children proper manner in receiving them.		
Shopping games	x			Set up a play shop and devise shopping games for children.	Feigned coins and goods	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Role Play	x			(i) Place clothes of various kinds and sizes in the home corner and let children have role play freely.		
		x		(ii) Use situational role play to guide children in solving problems.		
Visits			x	Arrange children to visit libraries, the Road Safety Town, the Hong Kong Railway Museum, supermarkets and, farms etc., and organize suitable extended activities.		Please read the points to be observed in making arrangements
News sharing			x	Encourage children to do press-cuttings, watch news programmes on television and share their feelings about some current news with others.		
Discussing TV Programmes			x	Take a familiar TV programme and discuss with children on aspects such as the story outline, the behaviours of the characters etc.	TV set video cassette recorder and relevant video-cassette tapes	

II. Physical Play


The sample activities listed below are for teachers' reference only. Teachers should use their discretion to devise suitable activities to meet the objectives of each period. Teachers should also note that : if children are required to press their hands on the ground in the course of an activity, safety mats should be placed on the ground beforehand.

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Picking up bean bags	x			Spread a number of bean bags on the table or on the floor and let children pick them up one by one and place them in a plastic container until the music stops.	Bean bags, plastic containers, music tapes or a musical instrument	Individual
		x		Throw a bean bag to the front and then crawl forward on both hands to get it back while the feet stand apart without moving.	Bean bags, Safety mats	
Throwing bean bags		x		Throw bean bags as high as possible and pick them up from the floor. Repeat.	Bean bags	Individual
Casting bean bags/paper balls	x			(1) Cast bean bags as far as possible to the front, to the back or sideways.	Bean bags/paper balls	
	x			(2) Draw a circle on the floor and ask children to cast bean bags into the circle.		
			x	(3) Hang an open umbrella up side down and ask children to stand at a distance and cast bean bags into it.	Umbrella	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Throwing bean bags in pairs			x	Ask children to stand facing each other in pairs and throw bean bags to one another.	Bean bags	
Throwing and catching bean bags			x	Throw the bean bags up in the air and catch them back. Repeat. (Children may clap their hands once before catching the bags)	Different ways of throwing may be used, e.g. throw with one hand or both hands.	
Passing bean bags over heads and between legs in pairs		x		Children stand back to back in pairs and pass bean bags to each other over their heads and between their legs.	Bean bags	
Rolling balls	x			(1) Children sit facing each other in pairs and their soles touching. Ask them to roll a ball to each other.	Leather balls	In pairs
	x			(2) Roll a small ball to the front, chase after it and get it back. Repeat.	Balls	May let children roll a ball to each other
			x	(3) Ask children to roll a ball along a straight line until it reaches the end.	Balls	Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Bouncing balls			x	Bounce a small ball with both hands.	Small balls	larger balls should be used for children at lower kindergarten level
Dribbling		x		Sit on the ground and place a ball in front, dribbling lightly on the ball.	elastic or softballs	Individual
Throwing balls			x	Throw and catch balls with both hands.	Small balls	
Cat walk			x	Crawl along a straight line on all fours.	A rope can be used instead of a line drawn on the floor	
Caterpillar walk			x	Lie prostrate on a safety mat, and press against the mat with both hands to support body weight. Hold the hands still and move the feet towards the hands, then hold the feet still and move the hands forwards until they can go on further.	Safety mat	
The Little painter	x			Ask children to follow the teacher's instruction to draw a large picture with either the right hand or the left hand.		Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Passing through rattan hoops (colour bands)	x			Place rattan hoops on the floor. Ask children to walk or jump into a hoop when the signal is heard, pass the hoop over the head and the body and then place the hoops on the floor.	Rattan hoops or colour bands	The way of jumping into the rattan hoop may change, e.g. jump with one foot.
Rolling rattan hoops			x	Ask each child to roll a rattan hoop with his hand and run with it.	Rattan hoops	Individual
Sliding on a bench		x		Lie prostrate on a bench and pull the body forward with both hands.	Long bench	Make sure that the bench has a smooth surface

Activities	N	L	U	Procedures	Equipment	REMARKS
Wringing towel		x		Two children stand facing each other with both hands holding one end of a rope or colour band, then rotate.	Colour band or or rope.	
Imitating spider		x		Bend forward with both feet apart and hands pressing on the floor. Move from side to side, forwards and backwards.	Safety mat	
Removing blocks	x			Divide children into groups of three. A plastic hoop is placed in front of each child. 3 blocks are placed in child A's hoop. Child A is asked to carry the blocks one by one to child B's hoop. Child B will then carry the blocks to child C's hoop.	Plastic hoops, bricks	Three in a group. Position of players can be : (1) o o o o (2) o o There should be considerable space between the children
Picking fruits	x			Let children follow the beats of music or a drum and raise their right hands as if picking some fruits. Repeat with their left hands or both hands. Children should be encouraged to stretch their hands up high.	Piano, cassette tape, drum	Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Screw and unscrew bottle caps/ open and close lids of boxes	x			Have plastic bottles or boxes of different sizes ready and ask children to screw and unscrew the caps or open and close the lids at will.	Plastic bottles or boxes	Individual
Open door-locks		x		Prepare toy locks of different shapes and sizes and ask children to match the right keys to open the locks.	Toy keys and locks	Individual
Crumble paper balls	x			Use pieces of magazine paper and ask children to crumble them into balls of different sizes.	Scrap paper	Individual
Catching or hitting soap bubbles	x			The teacher blows out soap bubbles and let children catch or hit the ones beside them.	Soap bubbles	Should be conducted outdoors and in small groups.
Clapping hands	x			The teacher beats on a two-tone woodblock and asks children to imitate the beat by clapping their hands once and then clapping with partner with both hands.	Two-tone woodblock	In pairs
Percussion	x			Ask children to squat on the floor, then knock/hit on the floor or their laps lightly with both fists following the beats of music.	Piano or perucssion instruments	Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Spinning plastic quoits		x		Put a plastic quoit round the wrist and spin it freely.	Plastic quoits	Individual
Swaying motion	x			Sway a hand (or both hands) forwards and backwards.		Individual
Circling motion	x			Raise a hand (both hands) and swing forward (backward) in a circling motion.		Individual
Rolling hoops			x	Use a hand to roll the hoop forward.	Plastic hoops or wheels	Individual
Filling water	x			Ask children to fill containers of different sizes with water.	Water trough, containers	Individual
Free movement	x			Let children sit on chairs with their feet above the floor, and swing them.		Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Walking along a straight line	x			Draw several straight lines on the floor and ask children to walk forward (backward) along the line.	Chalk	Individual
Crossing over obstacles	x			Lay blocks or plastic bricks of various sizes on the floor and ask children to cross over the 'obstacles' one by one.	Plastic bricks blocks, cardboard paper, triangular stand	Individual
Crossing a river		x		Lay a row of plastic blocks on the floor assuming that they are the rocks in a river. (The distance between blocks should be within the reach of the children). Ask children to step on the blocks and walk from one bank of the river to the other.	Large plastic	Individual
Crossing a bridge		x		Ask children to walk from one end of the balance beam to the other.	Balance beam	Individual
Going up and down steps	x			Form two or three steps by using large blocks and ask the children to walk up and down the steps freely.	Plastic blocks/ blocks	Individual Pay heed that the blocks are safely and securely placed


Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Walk-stop	x			Ask children to move freely in the room and stop immediately at the signal made with a hand drum.	Hand drum	Individual
Penguin walk	x			Draw two parallel lines on the floor about 15 cm apart. Let children walk outside along the lines like penguins.		Individual
Changing direction		x		Ask children move freely in the room and change direction when the hand drum signal is heard.	Hand drum	Individual
Following instructions		x		Let children move to the music. When the music stops, they have to follow the instructions given by the teacher to move forward, backward etc.	Music tapes	Individual
Traffic lights	x			Children walk or stop according to the traffic signal given by the teacher.	Red and green signals	
Colour corners	x			Place different colour bean bags at the corners or along the sides of the room. Ask children to wear a colour band each. When the music stops, the children should run to the corner, the colour of which corresponds to their bands.	Colour bean bags, colour bands	Small groups
Jumping up with both feet		x		Jump high up on both feet.		Individual


Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Jumping with both feet		x		(1) Place some plastic hoops on the floor and let children jump in and out with both feet.	Plastic hoops	Individual
		x		(2) Place hoops in a row and let children jump from one hoop to another.		
		x		(3) Place a long rope on the floor and ask children to jump/hop from one side to the other until they reach the end of the rope.	Long rope	Individual
Rabbit leap	x			Let children play rabbits and wear colour cards of different geometrical shapes. At the signal given by the teacher, the children will run or leap towards the cartoon boxes, the colour of which corresponds to the cards that they are wearing, and see who reaches the goal first.	Colour cards of different geometrical signs and colour cartoon boxes	Small groups
Stand-hop		x		Ask children to stand on one foot, then hop.		Individual
Long jump		x		Draw a line on the floor and ask children to stand on one side of the line and jump across. The teacher may increase the distance for jumping according to the children's ability.		Individual
Kicking balls		x		Kick a ball forward.	Plastic ball	Individual


Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Duckling walk	x			Ask children to put the palms together in front of their mouths and walk in a squatting manner, opening and closing palms as they walk along.		Individual
Drawing shapes		x		Draw different shapes with different parts of the feet.		Individual
Kicking small ball			x	Kick a small ball forward with different parts of the feet, pick up the ball. Repeat.	Small balls	Individual
Kicking ball in pairs			x	Two children kick a ball to each other. At the beginning, they could stop the ball with their hands and then kick it to their partner. Later, they can try to stop the ball with their feet.	Small balls	In pairs
Hopping			x	Hop forward with a small plastic ball (or a sponge ball) placed between knees.	Small plastic ball	Individual
Picking bean bags	x			Place a bean bag on the floor and jump over it, then pick it up from between the legs.	Bean bags	Individual
Obstacle walk	x			Spread some bean bags on the floor and ask children to walk around freely without stepping on the bean bags.	Bean bags	Individual
Balancing bean bags on the instep		x		Put a bean bag on the instep of one foot and move around without dropping it. Repeat with the other instep.	Bean bags	Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Balancing bean bags			x	Ask children to squat, put a bean bag on his head and try to stand without hands touching the floor.	Bean bags	Individual
Walking in a circle		x		Keep the knees straight and bend down until the hands touch the floor. Rotate round the hands.		Individual
Walking on a rope		x		Lay a rope on the floor and walk on it tip-toed.	Rope	Individual
Cycling	x			Ask children to lie on their back with feet up high and swirl in a cycling motion.		Individual
Jumping	x			Jumping with both feet.	various small equipment, e.g. plastic hoop and rope etc.	
		x		Jumping with one foot.	various small equipment, e.g. plastic hoop and rope etc.	
			x	Jumping up with one foot and land on the floor with both feet.		
			x	Jumping with both feet and land on one foot.		
		x		Jumping up with one foot and land on with the other.		
Running	x			Ask children to run freely and stop immediately when they hear the signal. (The teacher may ask the children to change to another mode of walking, e.g. walking in big steps or walking sideways)		Individual

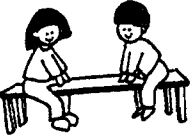

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Star jump			x	Jump up with both hands and feet stretching straight.		Individual
Drawing in the air			x	Ask children to lie on their backs and lift up one foot and draw.		Individual. May use different parts of the body.
Combination of numbers		x		Let children run freely. When they hear the teacher calls out a number, they are to form a group with the same number of children.	Number cards	The number should not be too large. The activity may involve the whole class.
Body	x			Ask children to kneel on the floor with their palms and knees touching the floor and to snake their bodies with full strength until the bean bags which are placed on their backs fall off.	Bean bags	Individual


Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Propping colour bands		x		Ask children to lie on their backs, grip a colour band with both hands and lift it up. Then lift up both feet and prop up the colour band with the soles with full strength.	Colour bands	Individual
Stoop jumping			x	Ask children to do press up, jump backwards until the legs stretch straight, then jump forward to the original position.	Safety mat	
Plastic hoop			x	Put the plastic hoop around the waist, and twist the hips to make the hoop spin.	Plastic hoop	Individual
Crab walk			x	With their back facing the ground, ask children to push both hands on the floor and walk sideways.	Safety mat	Individual
Seesaw		x		Children in pairs hold hands and take turns to stand and squat in a seesaw movement.		In pairs
Rolling	x			Ask children to lie down on a safety mat and roll from one side to the other.	Safety mat	Individual
Stretching limbs	x			Ask children to lie down on a safety mat and curl up their bodies as much as possible, and then stretch their limbs as far as possible.	Safety mat	Individual
Rocking chair			x	Let children lie down on a mat with their feet crossed. Hold their knees tightly with both hands, then rock forward and backward.	Safety mat	Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
The seed is growing up	x			Ask children to curl up on the safety mat and then slowly stretch straight, stand up and lift up both hands.	Safety mat	Individual
Falling leaves	x			Let children lie on a mat with their hands on both sides of their bodies, and roll from side to side.	Safety mat	Individual
Crawling snail		x		Ask children to stoop down and kneel inside the 'snail mat' and crawl forward.	'Snail mat'	
Sawing trees	x			Children in pairs sit on a mat facing each other and holding hands and have pushing and pulling movements.	Safety mat	In pairs
Transporting fruits		x		Ask children to walk through some obstacles with a ball in their hands to the other side.		Individual
Picking up bean bags		x		Place a bean bag on the head, stand with both feet apart and then bend the body backward until the bean bag falls onto the floor. Bend the body forward and pick up the bean bag from between the legs.	Bean bag	Individual
Spinning rattan hoop			x	Two children each holding a rattan hoop stand about 5 metres apart. Each child will then spin his own rattan hoop and then run to his partner's place and pick up his partner's rattan hoop before it drops on the floor.	Rattan hoops	In pairs

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Revolving ball			x	Hold a ball with both hands, legs apart, and revolve the ball around the legs as if writing the number '8'.	Small balls	Individual
Curling legs up backward			x	Ask children to lie down and stretch both legs straight and up over their heads to touch the ground.	Safety mat	
Moving in big circles			x	Stand with legs apart, bend the body forward and move the body in a circular movement.		Individual
Walking like a dwarf			x	Stretch both hands forward, bend down, grip the corresponding ankles and walk step by step.		Individual
Tunnel crossing	x			Divide children into small groups and ask children to line up with legs apart. The first child in the line will pass the ball to the second child through the legs who will pass the ball to the one behind in the same way until the ball reaches the last child. The group will then pass the ball through the 'tunnel' back to the front.	Plastic balls	Small groups

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Gymnastics		x		Both hands and feet practise an 'open and close' movement. (In rhythm)		Small groups
	x			Stand with both legs apart and grip a colour band (about 30 cm long) with both hands. Raise the hands up and move sideways and bend the body accordingly.	Colour bands	Individual
Target aiming		x		Select a target. Ask children to stamp to the music. When the music stops, the children have to point to the target with their fingers, elbows, toes or knees.	Target object	Individual
Passing through hoops	x			Ask children to pass the plastic hoop from head to toe and let it fall on the floor. Repeat.	Plastic hoops	Individual
Passing through hoops		x		Ask children to find out ways of moving their bodies through the plastic hoops.	Plastic hoops	Individual
Wearing colour bands	x			Ask children to wear a colour band each in any way they choose and then take it off.	Colour bands	Individual
Crawling	x			Ask children to crawl on all fours.	Safety mat	Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Crawling	x			Tie ropes across the room at different heights and ask children to crawl under them without touching the ropes.	Ropes	Individual
Happy wriggling	x			Let children wriggle freely to the rhythm of music.		Individual
Jigsaw puzzle		x		Ask a child to stand/sit on the floor or lie down. Let other children join in with different postures to form a jigsaw pattern.		Small groups
Sit and move forward	x			Let children sit astride at one end of a bench and hold the bench with both hands. Try to move forward while sitting.	Bench	Individual or carry out as shown in the diagram below
						
Changing actions	x			Let children move to the rhythm made by an instrument and change the movement at the change of another musical instrument e.g. moving shoulders or twisting the body.	Two musical instruments	Individual
Catching fish	x			Let some children hold hands to form a net and some children pretend to be fish swimming in and out of the net. When the music stops, the children who form the 'net' will put their hands down to prevent the 'fish' from escaping. Those that are trapped are the 'fish' that are caught. The game can continue with the fish forming the net.	Music tape	Small groups
						

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Moving the 'Big eggs'	x			Let each child carry a paper plate with a sponge ball the plate and walk round the room without dropping the ball.	Paper plates and sponge ball	Individual
The sea, the land and the sky	x			Place some large blocks on the floor and ask children to move to the music. When the music stops, a picture is shown and the children have to perform actions appropriate to the environment (the sea, the land or the sky). For example, in response to a picture of the sea, the children swim; to that of the sky, they step on the blocks; and to that of the land, they walk, run or jump.	Large blocks, pictures of the sea, the land and the sky	Small groups
Rolling empty cans		x		Let each child roll an empty can or plastic bottle from one side of the room to the other.	Cans or plastic bottles	Individual (Safety must be heeded)
Camel walk	x			Ask each child to put a bean bag on his back and walk like a camel with a hump. Children should avoid dropping the bean bags.	Bean bag	Individual 
Crab walk	x			Ask children to walk sideways with hands crossed in front.		Individual

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Statues		x		Children move freely to the music. When the music stops, they have to stay at a fixed posture.		Individual
Falling leaves	x			Ask children to flutter their hands high up in the air to the music. When the music stops, they have to relax and drop on the floor.		Individual
The giant and the dwarf		x		The teacher should have an adult dress and a baby dress ready. When the teacher shows the adult dress, the children have to jump high up and stretch their limbs as if they are 'giants'. When the teacher shows the baby dress, the children have to curl up and pretend to be 'dwarfs'.	Adult and baby clothes	Whole class
Treasure hunt			x	Place some plastic food under a parachute. Ask a group of children to form a circle round the parachute and lift it up. Other children will go into the circle and hunt for the plastic food.	Parachute, plastic food	Small groups

III. Language Activities

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Listening	x			Ask children to close their eyes and listen to the sounds in the environment.		Listen for a short duration
	x			With the help of percussion instruments, ask children to distinguish the volume of sounds by making gestures. For example, in response to a loud drum beat children will make a large movement and vice versa.	Percussion instruments	
	x			Both the teacher and children hold the same type of percussion instrument in their hands. When the teacher taps three times, the children will do the same. The teacher may turn away from the children and ask them to listen to the sounds she makes and copy.	Percussion instruments	
			x	Shake plastic bottles containing different substances (such as sand, dried peas, etc.) and ask children to distinguish the qualities of different sounds.	Plastic bottles, sand, beans, stone etc.	
	x			The teacher, as a leader, gives verbal instructions to children who will perform actions such as 'sit down', 'stand up', 'bend forward', 'jump', 'touch your head', 'pat your leg', 'walk to the door' etc.		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Listening		x		The teacher gives instruction and children repeat the instruction.		
		x		Voice guessing games : (i) Invite a child to cover his eyes with a handkerchief, then request another child to speak. Ask the first child to guess who is speaking.		
		x		(ii) Record a child's voice with a tape recorder, then play it and invite the children to guess whose voice it is.	Tape recorder	
		x		(iii) Use real objects to produce or tape recorder to play the sounds of different things e.g. bell ring, sound produced by knocking a board and by percussion instruments, air blown into glass bottles, car horns, sounds of animals, etc. and ask children to distinguish the different sounds and the objects.		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Listening		x		<p>The game of "passing message" :</p> <p>Form two groups of children (four to six children each) and then the teacher whispers to the first child of each group the name of an object e.g. an apple or a simple phrase. The 'message' will be passed on from one child to the one next in the line until the last one, who will check the message with the teacher and see if it is correct.</p>		<p>Under normal circumstances, the message would be distorted as it passes along. However, this will only add fun to the game. More complicated messages can be used if children's ability is high.</p>
	x			<p>Story-telling by using sequential pictures :</p> <p>The teacher tells a story using three to four sequential pictures and then invite children to arrange the pictures in the right order.</p>	Sequential pictures of a story	
		x		<p>Use a tape recorder and play sounds of different lengths and tones to children. After that, ask them to imitate and distinguish the sounds.</p>		
			x	<p>Simple listening and speaking games, e.g. "The wind blows",</p>		
			x	<p>"Continuing phrases" ... Mother goes to market to buy an apple, (a water melon ...) gradually adding the items purchased.</p>		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Speaking	x			Imitation of sounds : Imitate sounds of wind, rain and animals.		
	x			Children's activities can be the subject of conversation. Show them photographs taken during school activities to lead them to speak. Questions such as "What were you playing?", 'What were you looking at?' 'Who were beside you?' etc. can be asked.	Camera, film.	
		x		Story telling by using sequential pictures : prepare a few sets of sequential pictures. Each set should comprise three to four pictures and tell a complete story. The teacher tells the story once, then asks children to repeat it in the correct sequence. The teacher may also give them some hints and ask questions in order to stimulate their imagination.	Sequential pictures of a story	
	x			Conversation using picture cards : The teacher prepares picture cards of various objects such as table, chair, piano, lamp, fan, flower, grass, tree etc. The teacher may ask questions like (a) What is it? (b) What is it for?	Picture cards	
	x			Sharing of experiences : Allocate time for sharing of experiences each day and ask children to introduce things they bring to school or to describe their own drawings.		Can be conducted during group activity time

Speaking

x

Telling of one's feelings : Design some interesting games for children and guide them to describe what they discover or how they feel.

Stimulate imaginative conversation :
Guide children to play imaginary games and lead them to talk, e.g.

x

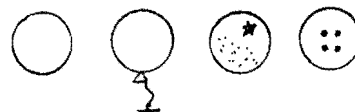
(i) "Imagine you are flying in an aeroplane up the sky, what will you see?"

x

'Imagine you are going out to sea on a ship or travelling to the countryside on a train ...?'

x

(ii) Sketch some shapes and ask children to suggest variations, e.g.



x

Role-playing in the Home Corner :
Let children role play family members so that they will have the opportunity to talk in their adopted roles.

Children should be encouraged to speak out

Suggested Activities	N	L	U	Procedures	Equipment	Remarks	
Speaking	x			Chats/casual talks : Topics which arouse children's interest and provide opportunities for discussion may be included. They could be on news, weather, interesting events, books, TV programmes, daily experiences, visits, things they see during travel, etc.			
			x	Plan/discussion : Make use of an actual outing opportunity or imagine the school is planning a visit/outing (to the countryside, the Botanical Garden or the Ocean Park), and let children participate in planning, e.g. How to get there? What to bring? What to wear? What to see when they arrive? What to do? When to set out? When to come back?			
				x	Description of pictures : Select pictures of appropriate sizes with interesting contents, distinctive outlines and explicit theme to induce children to describe the pictures in details using complete sentences.	Pictures	
				x	Games : (i) Make movements in response to sounds : Drive a car and make the sound of horns; Fly an aeroplane and make the noise of the engine; Walk like a duck and imitate the duck's quack. (ii) Role play.		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Pre-reading activities	x			Encourage children to look at objects from different angles. For example, from one angle an ice-cream cone appears to be round. Whereas from another, it seems long and pointed.		
	x			Observe the growth of plants like green peas, broad beans, spring onion bulbs, etc.	Green peas, broad beans, spring onion bulbs, etc.	
	x			Guide children to observe the environment, e.g. What is the colour of the teacher's dress? What can be seen in the garden today?		
	x			Play lottos and dominoes.	Dominoes	Contents could match teaching themes
	x			Sorting and matching of various objects according to colours or other attributes.	Different objects	
	x			Match shapes with their shadows.		
	x			Seriation of objects according to their shapes or colours, or putting sequential pictures in series.		
		x	Puzzles or maze.			

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Pre-reading activities	x			Ask a child to stand in the front and ask the other children about the colour of his clothes, his hair-style, etc.		
	x			Ask children to collect pictures and bring them to school to be compiled into pictures/story books.		
	x			Guide children to examine tiny objects with magnifying glasses.	Magnifying glasses	
			x	Use a telescope to see places at a distance and ask children to describe what they see.	Telescope	
	x			Look through a kaleidoscope and watch how the patterns change.	Kaleidoscope	
	x			Look for differences in objects of the same kind, e.g. shells, leaves, etc.		
	x			Place several objects on the table. Let children have a look at them and name them. Use a 'magic cloth' to cover the objects and remove one of them. Then ask children to find out which object is missing.		The number of objects should be limited to four
	x			Simple jigsaw puzzles.	Jigsaw puzzles	
x			Matching : e.g. match identical pictures to form pairs.			

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Pre-reading activities		x		Sorting and classification : e.g. Sorting pictures of different kinds of people, male and female, old and young, etc.		
			x	Finding missing parts : e.g. Find a leg for a boy with only one leg or eyes for a face without.		
			x	Sequential picture cards e.g. Seriate sequential pictures showing procedures such as dressing, washing face, and going to school.		
Recognizing Words		x		The teacher can use different materials such as sand, cotton, tissue paper to form words on cards and help children to recognise the words.		
			x	Games : e.g. Matching pictures with word cards, treasure hunt, dominoes, fishing, riddles, etc.		

iv. Writing

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Pre-writing	x			Collect different - sized bottles with caps. After removing caps from bottles, ask children to screw them on tightly.	Bottles with caps	The bottle mouths should not be too wide, otherwise children cannot manage to screw on the caps
	x			Cut pieces of colour cloth into various shapes. Sew buttons and zippers on the front and the back of the cloth respectively and encourage children to fasten and unfasten them.	Pieces of cloth, zippers, buttons	
	x			Ask children to lock up padlocks of various sizes and then unlock them with keys.	Padlocks with keys	
	x			Put different-sized beans (e.g. broad beans, ginkgo seeds) or other similar objects into a large box. Ask children to transfer the beans by hand or by spoon into another box.	Large boxes, spoons, dried beans or similar objects	
	x			Start the music and invite children to peg clothes-pegs to the hangers. When music stops, ask children to count the number of pegs they have managed.	Tape recorder, clothes-pegs, hangers	

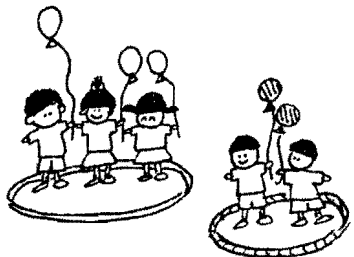
Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Pre-writing	x			Threading beads or straws : Cut drinking straws into 1 cm sections. Tie a bead or a drinking straw section at one end of the string before threading straws.	Wooden beads, drinking straws, string	
	x			Teachers should, if possible, play with children and show them the different techniques of shaping dough or plasticine, e.g. pinching, kneading, moulding, pressing, imprinting, etc.	Play dough or plasticine	(1) Each child should be given a lump of large dough. (2) It is not necessary to set a standard for the end products
	x			Draw some lines on a piece of paper and ask children to tear along the lines. The paper strips torn can be made into paper rings to form paper chains for decoration of the classroom.	Paper	
	x			Ask two children to stand facing each other. Let them take turns in rolling and catching plastic hoops.	Plastic hoops	

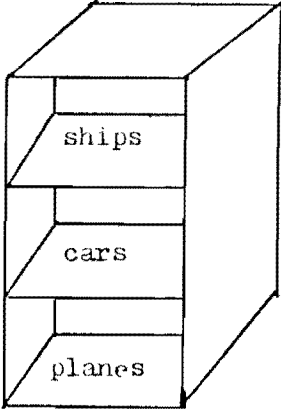
Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Pre-writing	x			Sand play : - Make prints on the sand with different kinds of moulds. - Separate fine and coarse sand with a sieve. - Draw pictures on sand with fingers. - Pile up different shapes with sand.	Sand play toys	
	x			Water play : - Put a piece of dry sponge into water and see what happens to it after it gets wet. Squeeze out the water and repeat the game. - Use different containers for water play.	Water play toys	
	x			Games with toys such as : - blocks/plastic pieces/tangram/piling, fitting and inlaying pictures. - hammering board, slotting board, threading board, bead threading, marble shooting, ball bouncing, finger puppet, glove puppet. - operational toys : cash register, piano, typewriter.		
			x	Organizational activities : - identifying the leader, listening to commands, rolling/bowling balls, throwing balls, plastic rings and bean bags, etc.		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Pre-writing	x			Art and craft activities : - Tearing up pieces of paper and paper strips, tearing up paper according to different patterns. - Bending brass wires, drinking straws, toothpicks. - Make collage at children's own will or according to some pictures. - Draw pictures, finger painting, water colour painting.		
	x			Let children print their palms and feet.		
	x			Linking game : - Trace the route of going to school or back home as well as a maze such as a little dog finding a bone, etc.		

IV. Early Mathematical Experience

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Sorting	x			Grouping 2 or 3 different types of articles.		Children are not required to give the names of the groups.
	x			The teacher may display a variety of edible and inedible items for children to sort.		- The grouping of different container lids. - The grouping of various kinds of nuts.
	x			Place different articles inside a number of hoops and ask children to look for specific items. e.g. One child to find out all the pens; another to pick up all the books or, the teacher ask children to pick up articles that they choose.	Hoops	
			x	Seperate fine sand from coarse sand with a sieve.	A sieve, sand	
	x			Ask children to put back the toys to their original places after playing.	Toys	

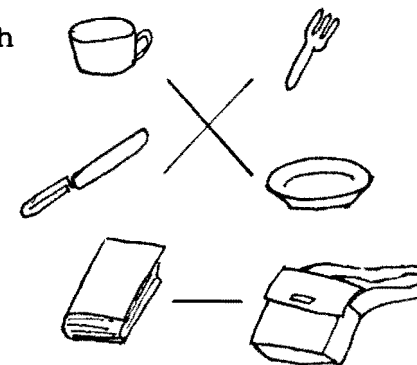
Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Sorting		x		Collect articles such as stones, coins, pencils, plastic cups, features, woollen hats or gloves and differentiate between hard objects and soft objects.	Hard and soft objects	
	x			Make colour cards of different shapes and sizes and ask children to sort them according to their sizes, colours or shapes.	Colour cards of different shapes	
	x			Sort clothes according to their sizes and kinds, e.g. skirts, trousers, long/short sleeved clothing, etc.	All sorts of clothing	
	x			Collect different kinds of buttons and let children group them by their holes, colours or sizes.	Different kinds of buttons	
	x			'The Wind Blows' : Example : Distribute certain articles to children. e.g. balloons of different colours and ask them to stand inside a big circle. The teacher/leader will then give an order such as 'The strong wind blows away the red balloons'. On hearing this, those holding red balloons have to leave the circle or enter another red circle.		The orders given should be within the children's ability of understanding
	x			Place some metallic and non-metallic articles in a box. Let children use a piece of magnet to play with them freely and distinguish the ones attracted by the magnet from the others. Ask them to put the two kinds of articles into separate boxes.	Magnet	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Sorting	x			Ask children to bring their toy cars, ships and aeroplanes to school and place them on the appropriate shelves as prepared by the teacher.		Parents are requested to put their children's names on the toys.
	x			Ask children to bring pictures of cars, ships and aeroplanes, etc. to school for compiling story books and for sorting activities.		
		x		Put pictures or models of furniture in the appropriate places on a floor-plan or a model of a house.	Models, pictures	
		x		Sort models or pictures of animals according to animals in the air, in the sea and on the land.	Models, pictures	

Matching

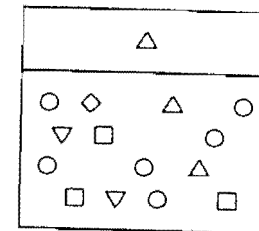
x

Ask children to match articles that have relation with each other.



x

Put a circle round articles of the same kind.



x

Ask children to match articles that have relation with each other but of different quantities so as to lead them to the concepts of 'more than' and 'fewer than'.

Cup/saucer, knife/fork, bottle/lid, etc.

x

Put four chairs in a circle. Four children will be asked to sit on the chairs. Then provide four chairs for five children or five chairs for four children. In each case help children to see whether the number of chairs is sufficient, insufficient or more than enough.

Chairs

x

Ask a child to put one piece of biscuit on each of the saucer at snack time and see if there are enough biscuits for distribution.

Biscuits, saucers

Matching

x

Collect plastic bottles of different shapes and sizes. Allow children to practise screwing on and off the caps.

Bottles

Boxes with lids could be used instead.

x

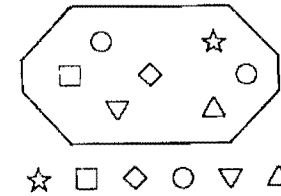
The teacher prepares a big box and a small one and asks children to pack the toys - big toys go into the big box and small toys go into the small box.

A big box, a small box, toys

Two toys of the same kind but varied in size should be provided.

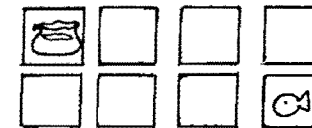
x

Put toys through holes of the same shape.



x

Draw on cards several pictures that match, e.g. a puppy, a kennel, a gold fish, an aquarium ... Put the cards face down on a table. Encourage children to choose 2 of the cards to see if they match. If the 2 cards matched, they could be taken away.



Four pairs are enough

x

Prepare 2 identical sets of articles. Put one set on the table and the other set into a treasure box. Ask the children to take out an article from the box which should be identical to the one chosen by the teacher.

A treasure box, various articles in pairs

Articles chosen must be significantly different.

Suggested Activities

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Procedures

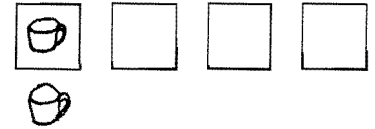
Equipment

Remarks

Matching

x

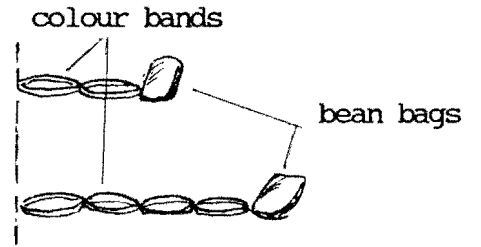
Find out an object that matches with the one shown on the picture.



Comparing

x

Ask children to stand on a line and throw bean bags to the front. The distances thrown are measured with colour bands so that children can see who throws the farthest.



x

Let children distinguish how sound varies in loudness, rhythm and pitch on percussion instruments and use body movement to illustrate differences perceived.

Percussion instruments

x

Put things of different weights in a child's hand and ask him to tell which one is heavier or lighter.

Light and heavy objects

The weights must be distinguishably different

x

Put light objects in a big box and vice versa - to help children judge by their feeling rather than by the appearance of the boxes.


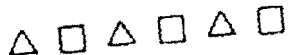
A big box, a small box, light objects, heavy objects

x

Compare the lengths of pairs of objects, e.g. pens, rulers, combs, etc.

Pens, rulers, combs

Objects must be in pairs

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
	x			Fill hot water in a cup and cold water in another. Let children touch the cups and feel the difference in temperature.	Cups, hot water, cold water	Do not use boiling water
	x			Place two objects of the same kind together to compare their sizes. Children are required to point out the larger one or to separate the objects into two groups according to their size.		Objects such as leaves, boxes, plastic bottles, fruits ... etc. could be used
		x		Measure the height of children with paper strips. Stick the paper strips onto the walls to compare their heights.	Paper strips	Small group activity
Ordering	x			The teacher may describe a situation and ask children to make sequential arrangement, e.g. 'David and Jane were planting flowers in the garden. David loved red flowers but Jane loved yellow ones. They were planting a red flower/a yellow flower/a red flower/a yellow flower/a red flower ...'		Limit to 2 colours/shapes
	x			Arrange blocks in a pattern and ask children to follow.		Limit to 2 colours/shapes

Suggested
Activities

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Procedures

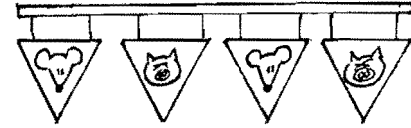
Equipment

Remarks

Ordering

x

Print the faces of some animals on flags and ask children to put them in order. Then affix the flags on a string for decorating the classroom.



Limit to 2 colours/shapes

x

Ask children to thread wooden beads according to a colour pattern.

Wooden beads, thread

Limit to 2 colours

x

Arrange children in pairs. Let them use a different colour each to print their palms on a piece of paper alternately.

Paints, large pieces of paper

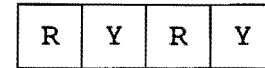
x

To reinforce children's concept of ordering by using stories such as "The three bears and the three beds".

Pictures

x

Ask children to arrange plastic cubes in order according to a sequential pattern of colours.



Limit to 2 colours



x

Collect various kinds of objects e.g. branches, pencils, drinking straws etc. and ask children to arrange them in order according to their lengths.

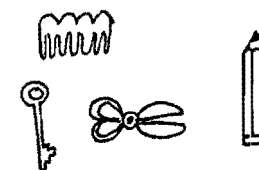
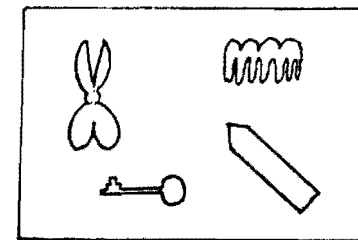
Sets of cups, blocks, etc. can also be used

The number of objects chosen should be limited to 3

Shapes

x

Matching articles with their outlines:
Draw the outlines of articles such as a pencil, a ruler, a pair of scissors, a comb, a key or a large piece of paper and ask children to match the articles to their outlines.



For upper kindergarten class objects which look more similar to each other can be used

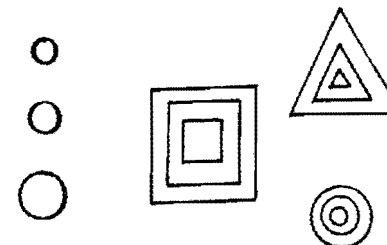
x

Help children to identify different shapes with the use of real objects. e.g. coins, balls, hoops (shapes of a circle); blocks, sails (shapes of a triangle); doors, beds, newspapers, television sets etc. (shapes of a rectangle)

x

Make different combination of shapes by using building blocks.

Blocks



x

Put cards of same shapes but different sizes and place one on top of the other (e.g. make cards of triangles, squares etc.)

Limit to 3 different sizes for each shape

x

Free play with cards of shapes.

x

Draw a shape on a piece of card. Cover half of the shape and let children guess what the shape is.



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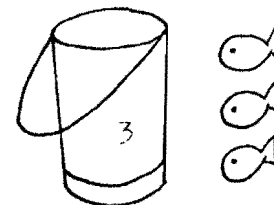
Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Spatial concepts	x			Game : Here comes the wolf. Several hoops are placed on the floor as folds. The sheep can walk around freely when no wolf is in sight. When the wolf appears, the sheep must go into the folds, or they will be caught.	Hoops	
	x			Collect some big cartons for children to crawl through.	Big cartons	
	x			Put small boxes into big ones.	Boxes of different sizes	
	x			Fill a basin with marbles or other similar objects. Let children spoon them out one by one and place them in an empty basin so as to help children understand the concepts of 'full' and 'empty'.	Basins, marbles or other similar objects	
	x			Put objects on or under the table.		
	x			Take a balance beam as a bridge. Let children walk on or crawl underneath it.	A balance beam	
			x	Let children play on a seesaw so as to introduce to them the concept of 'the heavier object will go down, whereas the lighter one will go up'.		
			x	Introduce the concepts of 'in front of' and 'behind' to children when they are lining up.		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Spatial Concept	x			Obstacle game. Ask children to jump over the blocks, crawl under a long bench, go through a hoop ...		
	x			Use stories to illustrate the concept of 'up and down', 'high and low', 'in and out' e.g. i. A fox on the hill discovered a fat piggy below. ii. The fox approached the piggy and the piggy climbed up a tree. The fox stood under the tree to think of a way to catch the piggy. iii. The piggy was so scared that it fell from the tree and hit the fox to unconsciousness. The teacher may stick a tree on the flannel board and ask children to put the piggy and the fox up and below the tree as the story goes.	A flannel board, cards	
	x			Children holding bean bags form a circle. A box is placed at the centre. Let children throw the bean bags into the box. Ask them to see if there are bean bags outside the box.	A large paper box, bean bags	
Counting	x			Pick up bean bags of a colour specified by the teacher within a given time and count the total number of bean bags picked.	Bean bags	The number of bean bags should not go beyond children's counting ability

Counting

x

Matching numerals with quantity :
e.g. Put 3 paper fish into the bucket marked 3.



x

Make numeral cut-outs with sand paper. Stick the cut-outs onto a card board. Let children touch and feel the shapes of the cut-outs in order to recognize the numerals.

Sand paper,
card board

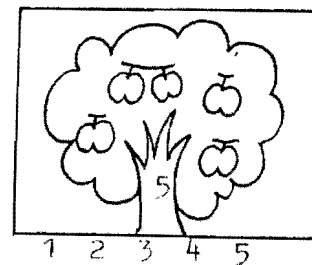
x

Ask children to put the exact number of straws into a bottle according to the numeral marked on it.

Bottles, drinking
straws

x

Mark a numeral on the tree trunk and ask children to stick the exact number of apples on the part where the leaves are, or put a few apples on the tree first and ask children to put the numeral on the trunk afterwards.



x

Count the number of a particular object in the classroom, e.g. doors, windows, lights, blackboards, display boards.

x

With picture cards or animals kept in the school, teach children to count the number of legs each animal has.

Picture cards

x

Place a numeral on a card shirt and let children put on the same number of buttons.



Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Counting	x			Dominoes : numerals and quantity.		
	x			The leader of the group, whether the teacher or a child, names a numeral or shows a numeral card so that the children can form into small groups accordingly, e.g. if the numeral "3" is named, the children have to form into groups of 3.	Numeral cards, music tapes	
	x			Print a numeral on a small card or a piece of drawing paper and ask children to draw or print the same number of objects on it.	Numeral cards, drawing paper	
	x			Tie a numeral card at one end of a piece of string and ask children to thread the same number of beads through the piece of string.	Beads, string, numeral cards	
	x			Put objects in a line and ask children to count them from left to right.	Various objects	
	x			Ask children to bring photographs of their families back to school and count the number of people in their families.	Photographs	
	x			Prepare some small objects (e.g. clips, stones, rubber bands, buttons, etc.) and container with partitions. Place a numeral card in each partition and ask children to put in objects accordingly.	Small objects	
	x			Place the same quantity of objects in different patterns.	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px; text-align: center;">* * * *</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">* * * *</div> <div style="border: 1px solid black; padding: 5px; text-align: center;">****</div> </div>	

Suggested
Activities

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Procedures

Equipment

Remarks

Combination
of numbers

x

Put a total of not more than 5 plastic cubes into two baskets. Put all the plastic cubes into a third basket and count the number of plastic cubes.

Plastic cubes,
baskets

x

Divide objects into two portions at random.
e.g. A total of 5 buttons can be divided into groups of 3 and 2 or 4 and 1.

Objects such
as buttons

x

Throw a certain number of paper balls into two paper boxes. Count the number of paper balls in each box, and the total number of paper balls in the 2 boxes.

Paper balls, paper
boxes

x

Little birds fly home :
Let a few children play birds. When the teacher says, "Little birds fly home", the children should 'fly' to two rubber hoops. Count the number of children in each hoop as well as the total number of children.

Large rubber hoops

x

Wooden beads threading
e.g. Thread 4 red wooden beads and 3 green ones.
Then count the total number of beads.

Wooden beads

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
The concepts of addition and subtraction		x		Introduce the concepts of addition and subtraction through story-telling. e.g. A rabbit was pulling carrots from two fields. See how many carrots have been pulled out altogether. There are five bananas in the basket. A monkey has eaten three of them. How many bananas are left?	Real objects, models, pictures	
		x		There are four cookies on a plate. A child eats two of them. How many cookies are left?		
		x		Ask five children to play passengers on a bus. When the bus arrives at a station, three children get off. How many children are there on the bus now?		
				x	Ask children to draw out a numeral card, then print the same number of stamps on the drawing paper. Draw another card and also print the number of stamps as told. Then count the total number of stamps printed.	Drawing paper, numeral cards, rubber stamps
Measurement			x	Measure the length of a table with different objects, e.g. place the soft drink boxes along the table and count the number of boxes used.	A table, soft drink boxes, pencils	
			x	Use a small plastic bottle (or cup) to fill a bucket with sand (or water), then record the number of bottles of sand/water used.	Small plastic bottles/cups, a bucket, sand/water	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Measurement		x		Put two different kinds of objects on each side of a beam balance until it balances, e.g. put a stone on one side and some ginkgo seeds on the other until the two sides balance.	Stones, ginkgo seeds, shells, toys, etc.	
			x	Fill the surface of a table, floor, block, etc. with square cardboards of the same size, then count the number of cardboards used.	Cardboards	
		x		Prepare card paper strips of different lengths. Ask each child to take one and place it on the object with the same length, e.g. chairs, schoolbags, books, shoes, etc.	Strips of card paper	
Time	x			Tear off a sheet from the calendar everyday or make daily record of the weather.	Calendar, weather chart	
		x		After completing an activity in the school, ask children to choose a card showing the next activity.	Activity cards	
		x		Ask children to tell the time shown in pictures, e.g. morning, afternoon, night.	Pictures	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Time	x			Make use of occasions or ceremonies to introduce the concept of time to the children. e.g. Birthday party (that means one year older) Tomorrow is Mid-Autumn Festival ...		
Coins			x	Introduce the use of coins to children through imaginative play such as shopping or paying fare on a public vehicle.	Articles needed for the game	
			x	Write on a number of cards different amount of money. Ask children to draw out a card and find out coins of the same amount. e.g. If the card written "\$1" is drawn out, the child should find a one dollar coin.	Feigned coins	

V. Experience in Natural Science

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Observing natural phenomena		x		The teacher can make use of the school setting and draw children's attention to natural phenomena. For example : (a) Take children outdoors at various time of the day to watch the shadows, clouds, scenery after raining, etc.		
	x			(b) Let children look through the windows and observe changes in weather conditions such as fine, cloudy or rainy weather.		
	x			(c) When children are playing outdoors, the teacher can lead them to observe sudden changes of natural phenomena such as the gathering of dark clouds or the appearance of rainbows.		
	x			Watch the natural environment through some colour cellophane.	Cellophane	
	x			Games on stepping on other children's shadows.		
	x			Collect leaves, flowers, grass, etc. for observation activities.		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
	x			Encourage children to bring flowers to school for appreciation.	Vases, flowers	
	x			Let children smell the odour of leaves, flowers and grass.		Beware of plants which cause allergy.
	x			Help children to identify the sound of wind, rain-drops and birds.		Incidental teaching
	x			Feel the various shapes and textures of different types of stones.	Stones of various textures	shapes and
Early scientific concepts: dry and wet	x			Put dry and wet sand in two different basins. Let children see and feel the difference.	Basins, dry sand, wet sand	
	x			Fill two funnels with dry and wet sand separately. Ask children to find out which type of sand flows out faster.	Dry sand, wet sand, funnels	
	x			Let children print wet palms on paper and ask them to note how the prints look different when the paper is dry.	White newsprint, water	
Cold and hot	x			Ask children to talk about their feelings when putting their hands in containers holding water of different temperatures (cold, lukewarm, warm).	Water of different temperatures	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Float and sink		x		Put different objects into water. Observe how they float or sink and make records accordingly.	Plastic objects, wood, metals, stones, cloth, pumice-stone, polystyrene, leaves, etc.	
Water	x			Let children move their hands in water freely and feel the current they produced.	Water trough	
	x			Ask children to fill and empty containers of different sizes and shapes, so as to feel their weights, capacity and flow.	Containers of different sizes and shapes	
			x	Let children observe the surfaces of glasses that hold ice-water and drinking water. Ask them to make comparisons.	Transparent glasses	
	x			Ask children to watch the process of change when a popsicle melts.	Popsicles	
	x			Collect rain water with different types of containers. Let children listen to the sounds of rain falling on different containers.	Basins of various materials	
Water changes in form			x	Pour water into ice racks of various shapes. Take them out from the refrigerator the next day to observe the change (the shape of water in solid form varies with the shape of containers.)	Water ice racks of various shapes	
			x	Heat ice cubes or put them under the sun to observe how they change.	Ice cubes	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Waterproof experiment			x	Place water drops on different fabrics and see if they are waterproof.	Pipette and different fabrics such as cotton, nylon or PVC sheet	
Planting	x			Grow small plants or seeds in the classroom or the school garden.	Flower pots, seeds, small watering-can, soil.	
Collecting fallen leaves		x		Put the leaves collected by children in the nature corner. Let children observe the changes taken place after a period of time.	Leaves	
		x		Ask children to collect some leaves for the purpose of observation and comparison.	Leaves	
Wind	x			Bring the children outdoors and let them observe how the leaves, hanging clothes or flags sway in the wind. The teacher can also prepare a paper windmill and let children see how it revolves.	Thin rope, clothing, flags, paper windmill, paper stripes	The activity should be conducted on a windy day or a fan could be used instead
The wind and air		x		Hold a blown up balloon near the surface of a basin of water. Release the air slowly and ripples will be formed.	A basin of water balloon	
	x			Move a blown up balloon near the face of a child and release the air slowly. Let the child feel the flow of air.	Balloon	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Mirror game	x			Let children look at their own reflections in mirrors.	Mirrors	
		x		Draw only one side of a figure and make it form a symmetrical one by using a mirror.		
		x		Join two or three mirrors together with scotch-tape and make them stand. Place an object in front and see how the reflection changes with different angles.		
		x		Centre a mirror vertically on a colourful picture and fix an angle. Move round the centre slowly to one side and see how the patterns change. It has the same effect as a kaleidoscope.	Colourful patterns/ illustrations in magazines	
Magic paper		x		Place a piece of cellophane on the palm and see what happens. (The piece of cellophane will curl up).	Cellophane	
The use of fire		x		At birthday parties, the teacher can lead children to understand that candle lights can give light and heat.	Cigarette lighter, matches, candles	Safety precautions must be taken

VI. Creative Activities

a. Picture - making

Children should be allowed to explore with different art materials so as to foster their skill and interest in creativity.

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Stamping	x			Ask children to dip an object or a rubber stamp in water paint and stamp it freely to form patterns on the paper.	Match boxes, leaves and rubber stamps. Printing -pad : sponge soaked in water paint	Children may also make their own hand-prints or foot-prints
Water-resist painting	x			Ask children to make firm marks on paper with wax crayons, brush on a layer of thin water paint to get a water resist effect.	Wax crayons water paint	As an alternative, patterns made from magazines can be pasted on the paper
Folded patterns	x			Ask children to sprinkle drops of water paint on the paper. Fold the paper and press to make symmetrical patterns.	Water paint	
Joining dots	x			Ask children to make dots freely on paper and join them with wax crayons of different colours.	Wax crayons	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Crayon rubbings	x			Ask children to rub a crayon gently on paper placed over objects of different texture, or rough surfaces until the pattern shows.	Wood, mat, coins, leaves, bark, etc. wax crayons	Help children fix the paper on objects
Blow-out patterns			x	Leave a few drops of water paint on the paper and ask children to blow out patterns.	Water paint	The water paint can be sprayed onto paper
Marble patterns	x			Sprinkle some drops of oil paint on water and stir the water until marble-like patterns appear. Let children place a piece of paper on the water and put up to dry.	Oil paint of various colours	
Finger painting	x			i. Add paint and a small amount of water to the finger paint and spread it evenly over a smooth surface. Let children experiment freely in the paint with fingers.	Finger paint can be bought or made from starch, boiling water and paint (powder or liquid)	Avoid using commercial paste as it usually contains preservatives that may be harmful to children's fingers.
		x		ii. Spread the finger paint evenly on a smooth surface and let children draw on it with their fingers or with a popsicle stick. Press a piece of paper gently on the picture and put up to dry.	Popsicle stick	
Sponge painting		x		Wet a sponge and apply water paint to one side. Let children stamp patterns or draw lines with the sponge on a piece of paper.	Water paint, sponge, brushes, etc.	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Blur patterns	x			Ask children to wet a piece of paper with brushes or a sponge. Then sprinkle drops of water paint on the paper. Let children observe how blur patterns are formed and what changes take place when one colour mixes with another.	Water paint of various colours Sponge, brushes etc.	
Scratch patterns		x		Water paint : Ask children to sprinkle some drops of water paint on a piece of paper. Scratch with some tooth-liked objects in all directions to form starry patterns.	Water paint paste, tooth-liked objects such as combs, plastic forks	
			x	Paste : Add colour to paste and spread it on a piece of bright colour magazine paper. Ask children to scratch on the paper with plastic forks or other tooth-liked objects to form patterns.		Dark colour paste should be used
Leaf prints	x			Ask children to apply colour to leaves with clear veins and make leaf prints on a piece of paper.	Water paint, leaves of different shapes	
			x	Cut out coloured leaf prints and form beautiful patterns with them.		
String patterns			x	Ask children to fold a piece of paper into halves and unfold it. Dip some pieces of cotton threads into various colours and place them on one side of the paper at random. Make sure that the ends of threads remain outside the folded paper. Press the paper with one hand and pull out the threads with the other. Unfold the paper and symmetrical patterns could be seen.	Water paint Cotton threads	
			x	Observe the patterns. Add details to the patterns formed.		Crayons

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Collages		x		Ask children to use paper materials of various sizes and shapes to form different patterns.	Coloured paper, tissue paper, monthly calendar, wrapping paper, paste	
Collages of torn paper	x			Ask children to draw an outline figure first. Then tear paper into irregular bits for pasting onto the figure.	Wrapping paper, monthly calendar newsprint, paste	If children are unable to draw outline figures themselves, the teacher can print an outline on their paper
		x		Ask children to tear out a piece of wrapping paper and paste it on a larger piece of paper. Form a beautiful picture by adding in details with paper bits.		
		x		Ask children to tear newspaper into irregular strips and paste them on a colour paper.		
Wiping patterns			x	Ask children to place a card-board cut-out on a piece of paper and use an oil pastel to draw round its edges. Fix the position of the cut-out with one hand and hold a crumple of tissue paper in the other and wipe the colour onto the paper. Repeat with a number of cut-outs and a beautiful pattern will be formed.	Card-board cut-outs such as flowers, leaves or animals. Oil pastels, tissue paper	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Rolling marble patterns		x		Dip marbles or pebbles in water paint of various colours. Ask children to lay a piece of paper in a small tray and put a marble on it. Hold the tray and tilt it slightly to make the marble roll from one side to another so as to form lines and patterns. Repeat with other colours.	Water paint, marbles or pebbles A pair of tongs (for picking up marbles), A small tray or a shallow box	

b. Creative activities with junk materials

There is no limit to what children may find interest in or store as treasure. They may give great value to trivial, insignificant objects which the adult may call 'junk', such as a shell, a pebble, a small box or an empty can. The teacher can easily make use of children's interest to develop their creativity by devising some creative games or art and craft activities with the use of different kinds of materials. The teacher's concern is to ensure fun and learning experiences during the activities, not to insist on tidiness or an end product that meets the adult standard.

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Paper games	x			Ask children to crumple up a piece of paper into a ball. Throw and roll it in games.	Newspaper	
		x		Comparing length : Ask children to think of ways to tear paper into longer strips.		
			x	Baseball game : Ask children to roll up a piece of newspaper and use it as a bat in a baseball game.		

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Paper, work		x		Ask children to make simple puppets with paper bags.	Newspaper, magazine paper, wrapping paper, paper bags	Let children create or design freely.
			x	Tearing and pasting : Ask children to tear paper into strips or pieces of different shapes to explore the possibilities of material. These strips or pieces may be pasted into a picture or onto a hat made from cardboard.		
	x			Give children some basic paper shapes such as squares or rectangles. Let them fold the paper in halves, fourths, or tear off one or two corners to make new shapes. They can use the new shapes to form pictures.		
			x	Ask children to cut a piece of wrapping paper or colour paper into the shape of clothes.		
Toys	x			Ask children to make toys, ornaments or models (e.g. cars, houses, people) from empty card-board boxes, toilet paper rolls, scraps of cloth, etc.		Shielded wires should be used if wiring is required.
Collages	x			Use different kinds of materials and paste them up to form a picture.		

c. Clay, plasticine and play dough

Let children beat, pound, knead, roll and press the material to their hearts' content. The free experimenting alone satisfies their desire to create and helps development of various skills. Although occasionally the teacher may suggest an object to be moulded in relation to a teaching theme, the activity should be spontaneous and creative, without any emphasis on the end product.

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Plasticine balls	x			Ask children to roll the material into round balls and let them roll down a slope, e.g. a tilted plank, and see whose ball roll the farthest.	plasticine	
Plasticine			x	Ask children to press the material either with their palms or with a rolling pin. Form the shape of a face and then add the eyes, ears, mouth and nose.	Rolling pin, pencils, plasticine	
		x		Ask children to roll the material into a long roll and form a face outline on card-board. Add the eyes, ears, mouth and nose and press gently. Masks of animals can be made in the same way.		
Different containers		x		Ask children to roll the material into balls and press down the centre. Containers such as cups, pen-cases or saucers can thus be formed.	Plasticine	
Free moulding	x			Ask children to mould the material into shapes of cakes, animals, etc.	Moulds	
	x			Pound the material onto the table or beat it with a wooden hammer.	Wooden hammer	

d. Sand Play

The fine particles of sand give abundant sensorial stimulation and help to enhance children's imaginative and creative abilities. Sand play promotes conceptual perceptions such as early mathematical and scientific concepts and children can also learn relevant vocabulary at the same time. The teacher can let children play freely in the sand pit or at a sand trough. She should stay near, observe and provide guidance when learning opportunities arise.

Sand can be classified as dry sand and wet sand, each with its own characteristics. Dry sand flows better but is easily blown up by wind. Wet sand sticks together and is not easily blown up. There is some difference between the activities conducted in either kind of sand.

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Playing with dry sand : Sensory games	x			(i) Ask a few children to bury their hands in the sand and try to catch the others' hands. The one being caught has to open his hands and let the other child tickle on them. This game is very relaxing and helps to extend physical contact.		
		x		(ii) Treasure hunt - Bury some small items such as balls, dolls, small bottles or cans in the sand and ask children to find them. As an alternative, a child could be invited to bury the objects for the others to dig out.	Balls, blocks, small bottles etc.	Safety precaution must be taken. Objects with sharp points should be avoided. Children should be restrained from throwing sand to one another.
			x	(iii) Filling in sand - Ask children to form filters with one of their hands and place them at the mouth of some bottles of the same size. Pick up some sand with the other hand and let the sand flow down the bottles through the 'filters'. See which child fills up his bottle first.	Bottles, sand	

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Sand paintings	x			(i) Ask children to smooth the sand. Then draw on it with their hands or with a stick.	Sand, a small stick	Safety measures must be taken.
			x	(ii) Add colour to the sand and let it dry. Put the sand in plastic bags and make a hole at the bottom of each bag. Spread some glue on a piece of paper or a board and ask children to squeeze out the sand on the glue. Let children explore controlling the direction and flow of the sand and make a picture.	Plastic bags, glue, paper	
Playing with wet sand : moulding games			x	Ask children to mould sand into different shapes and designs. As an alternative, put the same amount of sand into different containers, invert to empty and see the differences.	Sand	
Free moulding	x			Ask children to build castles, hills, plateaus, roads; dig valleys or drains; form animals and people etc. Objects collected or toys could also be used for designing and decorating purposes.		

e. Blocks

Young children like playing with blocks. Through building with blocks of various sizes, shapes and structure, their thinking, imaginative and creative abilities are fostered.

Suggested Activities	N	L	U	Procedures	Equipment	Remarks
Building	x			Let children build with blocks freely.	Blocks	
Design with blocks		x		Let children design parks, transportation facilities, houses, zoos, farms etc. and then add toy models or pictures.	Toy cars, furniture or models or pictures of animals	The activity can be related to the teaching theme.

APPENDIX 3 'SPIRAL APPROACH' TEACHING PLANS

I. Sample 1

Topic : Plants

Nursery Class : Look at the flowers

Objectives :

1. To get to know flowers and trees.
2. To cultivate an interest in plants.
3. To form the attitude of caring for flowers and trees.
4. To acquire the skill of sorting.
5. To cultivate creative ability.
6. To practise swaying the body and stretching the limbs.
7. To adapt to the routine in school.
8. To cultivate the power of concentration.

Lower Kindergarten Class : In the garden

Objectives :

1. To get to know common plants.
2. To know the relationship between plants and our daily life.
3. To get to know the relationship between small insects and plants.
4. To learn to plant seeds.
5. To cultivate the attitude of caring for plants.
6. To learn to express oneself in different ways.
7. To develop the co-ordinating ability of different parts of the body.

Upper Kindergarten Class : The little gardener

Objectives :

1. To get to know how a plant grows and what it needs.
2. To learn the different parts of a plant.
3. To understand the relationship between plants and man.
4. To get to understand the relationship between plants and animals.
5. To get to know simple planting methods.
6. To get to know the importance of environmental protection and extend one's knowledge and appreciation on the natural environment.
7. To enjoy doing creative work.
8. To enhance agility in movement.
9. To try solving problems on one's own.

Means and content of learning :

1. Learn the characteristics of flowers and trees through observation, experiences and from audio-visual materials.
 2. Get acquainted with relevant expressions and vocabulary and learn their usage through language activities.
 3. Cultivate learning skills through sorting and sensory activities.
 4. Learn to take care of flowers and trees through watering plants, visiting flower shows, etc.
 5. Learn to adapt to a routine through the daily programme.
 6. Foster abilities in creativity and co-ordination of different parts of the body through art and craft activities, music and movement and physical play.
 7. Cultivate concentration power through observation, sensory activities, etc.
1. Learn more about the characteristics of plants and their growth through activities such as collecting samples, planting, observation, comparison or discussion.
 2. Promote language ability in expressions and vocabulary and learn the relationship between number and quantity through integrated learning activities.
 3. Cultivate an interest in early science through simple experiments and recording.
 4. Learn the relationship between plants and our daily life through experiences.
 5. Learn to appreciate our environment and use different means to express oneself through art and craft activities, music and movement and daily experiences.
 6. Enhance the skill in crawling, turning, stretching, throwing and casting through physical play.
1. Learn the growth and appearance of plants through activities such as outdoor visits, planting, observation, drawing, collecting samples or comparison.
 2. Learn and use relevant expressions, vocabulary and sentences and acquire simple computation concepts.
 3. Acquire knowledge on the value of plants and the inter-dependence between our society and nature through daily experience and activities, from which the role of the individual is also learnt.
 4. Try to solve problems on one's own.
 5. Enhance the ability in expression and creativity through activities such as art and craft, music and movement or discussion.
 6. Promote agility and the skill in pushing, pulling, twisting, balancing, throwing and catching through physical play.

Plants (Nursery Class) : Look at the flowers

(a) Fostering social and moral development

- i. Learn to love flowers and plants as well as not to pick the flowers or step on the grass in the park through simulation games, stories and pictures.
- ii. Take care of the potted plants in the nature corner.
- iii. Bring one's favourite kind of vegetable or fruit to school and share it with others.
- iv. Bring flowers and potted plants to school for display and appreciation.

(b) Physical Play

- i. Falling leaves.
- ii. The tree is swaying.
- iii. The seed is growing up (stretching of the limbs).

(c) Language activities

- i. Sort out three types of flowers and put them in three different vases.
- ii. Put flowers and leaves or picture cards into trays marked with 'flowers' and 'leaves' respectively.
- iii. Describe pictures such as :

What can you find in the garden?

What is the colour of the blossoms?

What are the children doing in the garden?
- iv. Nursery rhymes.

(d) Early mathematical experience

- i. Sort leaves and flowers according to their colours and shapes.
- ii. Compare the size of leaves or flowers.
- iii. Count the number of leaves or flowers on a plant and match the correct numeral card to each of them.
- iv. Match leaves or flowers to pictures or photos.
- v. Add colour paper butterfly on flowers of the same colour.

(e) Experience in natural science

- i. Differentiate between flowers and leaves and take notice of their shape, colour, size, scent, etc through observation on common plants.
- ii. Water flowres in turn.
- iii. Games :
 - Distinguish leaves which are rough and smooth.
 - Distinguish real flowers from artificial ones (e.g. plastic flowers, silk flowers)

(f) Cultivation of aesthetic ability

- i. Stamping - Dip different objects in water paint and stamp on the paper. Add branches and leaves with a crayon.
- ii. Place a paper on leaves and rub gently on paper with a crayon.
- iii. Flowers made with egg cartons -
Roll bits of crepe paper into small grains and stick them on egg cartons which are cut into individual compartments. Add on stems and leaves.
- iv. Music and movement
 - Smell the fragrance of flowers :
Take a deep breath when the piano or the cymbals is/are heard.
Exhale when the sound stops.

- The flower opens :

Sit in a circle with other children on the floor and sway to the music. The teacher will play either a piece of music representing 'the flowers are open' or one representing 'the flowers fade'. Look up and stretch the hands upwards when the former is heard and drop the hands and curl up the legs whilst the latter is played.

- Flowers greeted by bees and butterflies

The class is divided into two groups. One group plays flowers while the other plays bees or butterflies. As the music starts, the butterflies fly among the flowers, collect nectar, greet the flowers or dance with them.

Plants (Lower Kindergarten Class) : In the garden

(a) Fostering social and moral development

- i. Learn how plants can improve the environment through stories, pictures and real objects so as to develop the basic concepts on environmental protection.
- ii. Bring small potted plants to school. Take care of them and use them to decorate the classroom.

(b) Physical Play

- i. Crawling snail.
- ii. Caterpillar walk.
- iii. Pulling up the carrot.
- iv. Picking fruits.
- v. Throwing bean bags.

(c) Language activities :

- i. Learn the names of some plants which are used as food through real objects or pictures.
- ii. Learn how plants grow through pictures or stories.
- iii. Learn related vocabulary such as rice, flower, fruit or plants with real objects or pictures or through domino games.
- iv. Put pictures showing the growth of seeds and vegetables in order and tell a story on the growth of a seed.
- v. Discussion based on picture showing a garden, e.g.

What kind of plants are found in the garden? What are the insects doing among the flowers?

What do bees do with the nectar collected? Do you know how honey tastes?

- vi. Make sentences on the picture verbally.
- vii. Nursery rhymes.

(d) Early mathematics experience

- i. Sort picture cards of trees, flowers and grass according to colour or type.
- ii. Count the number of cards or objects and match numeral cards to each group.
- iii. After sorting, compare two types of objects with one to one correspondence method and find out which is more and which is less.
- iv. Compare the height of trees, flowers, leaves and grass and put them in order.

(e) Experience in natural science

- i. Make observation on plants in the Botanical Garden or the school garden. Take notice of their appearance and compare their shape, colour, height, size, fragrance, etc.
- ii. Observe activities of small insects in the garden (bees, butterflies, caterpillars, beetles, etc.)
- iii. Collect fallen leaves.
- iv. Grow seeds.
- v. Learn the relationship between plants and man :
 - find out and name objects in the classroom that were made from plants, e.g. dry flowers, mat, wooden table, wooden door, etc.

(f) Cultivation of aesthetic abilities.

- i. Leaf prints.
- ii. Use leaves and flower petals to form patterns and paste them on paper.
- iii. Cut out leaves and flowers on colour paper or tissue paper and form patterns with them.
- iv. Finger prints - Dip a finger in water paints and make prints on a piece of paper to form 'petals'. Add stems and leaves with a crayon.
- v. Pith flower - paste pith flower on a piece of paper. Cut out stems and leaves with colour paper. Draw or paste on bees and butterflies if desired.
- vi. Flower show - Decorate the display board with paper flowers and design a beautiful garden.
- vii. Music and movement
 - Conduct music activities on related themes with the whole class or in small groups.
 - Play bees and butterflies according to music.

(a) Fostering social and moral development

- i. Learn the importance of plants through watching video, listening to stories, reading posters or news cut outs and learn how to take care of plants.
- ii. Help to take care of the plants in the school garden or the neighbourhood.
- iii. Respond to campaigns such as paper recycling or re-using paper bags.

(b) Physical Play

- i. Sawing trees.
- ii. Transporting fruits.
- iii. Passing on a ball.
- iv. Rolling hoops.
- v. Spinning hoops.
- vi. Balancing bean bags.

(c) Language activities

- i. Report the growth of the seeds in full sentences, e.g. 'A shoot is grown', or 'The leaves grow bigger'.
- ii. Collect pictures of trees and plants in magazines, newspaper or monthly calendars and paste them on card-boards. Write relevant words, phrases or sentences as captions.
- iii. Observe and describe the picture cards showing the different activities of men and animals in environments with or without trees.
- iv. Nursery rhymes.
- v. Draw pictures on the content of the nursery rhymes and write sentences below. Post them on the display boards in the classrooms.

(d) Early mathematical experience

- i. Sort out pictures or real objects.
 - Put ingredients for vegetable soup into the pan, and ingredients for salad into the salad bowl.
 - Sort out all the seeds of fruits collected.
- ii. Matching : Use pictures cards and match seeds to the fruits.
- iii. Comparing :

Compare the weight of fruits with a scale and put them in order. Compare the size of different kinds of fruit or fruits of the same kind and put them in order.
- iv. Count the number of leaves or flowers collected and match the appropriate numeral card to each group.
- v. Count the number of petals and match the appropriate numeral card.
- vi. Use the objects collected for games of simple computation.

(e) Experience in natural science

- i. Learn the names of different parts of a plant (e.g. root, stem, leaves, flowers, fruits) with real objects or from pictures and learn that some plants are edible.
- ii. Observe different parts of a plant in detail.
- iii. Collect leaves, flowers, grass, fir cones, etc. in the school garden or in the countryside.
- iv. Observe and make records on how seeds grow and discuss conditions under which plants will grow.
- v. Feed silkworms with mulberry leaves. Observe and make a record of their life history.

(f) Cultivation of aesthetic ability

- i. Symmetrical picture :
Design patterns of flowers and butterflies.
- ii. Wiping patterns.
- iii. Collage with leaves.
- iv. Making paper flowers :
Use all kinds of paper, to make flowers and open a small flower shop.
- v. Printing with vegetables :

Add details to the prints made.
Craft vegetables into different animals or patterns and print with them.
- vi. Music and movement : Imitate planting and picking fruits to the music.

II. Sample 2

Topic : Food

Nursery Class : The food I like

Objectives :

1. To get to know common kinds of food.
2. To learn that there are different taste and softness for food.
3. To learn that all animals need food.
4. To cultivate good eating habits.
5. To acquire the skill in sorting.
6. To enhance the ability to balance oneself and to manipulate small physical play equipment.
7. To enhance the sense of touch.

Lower Kindergarten Class : Let's go shopping in the supermarket

Objectives :

1. To get to know common kinds of food and related vocabulary.
2. To learn the simple classification of types of food.
3. To learn the basic shapes.
4. To get to know the common kinds of food found in supermarkets.
5. To cultivate willingness to share.
6. To enhance the ability to balance oneself and to co-ordinate the hands and feet.
7. To appreciate cross-sections of vegetables and fruits.

Upper Kindergarten Class : The food I eat

Objectives :

1. To learn the source of different kinds of food
2. To learn where different kinds of food are sold.
3. To learn to bake small cakes.
4. To enhance the ability to express verbally.
5. To enhance the observation ability.
6. To extend the concepts in weight.
7. To cultivate the good habit of not wasting food.
8. To cultivate co-operativeness.
9. To foster ability in reaction.

Means and content of learning :

- | | | |
|--|---|--|
| 1. Learn the names of some common kinds of food with pictures or real objects. | 1. Use picture cards, word cards or food models for matching words with objects. | 1. Learn and practise writing simple words related to food. |
| 2. Try and differentiate sweet and sour tastes, softness and hardness. | 2. Use picture cards, real objects or food models for identification of vegetables, fruits and meat and for classification. | 2. Visits :
i. Learn where different kinds of food are sold and the source of food through visits to markets, fast food shops and bakeries.

ii. Try to give verbal reports after the visits. |
| 3. Observe small animals eating and learn that all animals need food. | 3. Visit a supermarket and learn the common types of food that are sold there. | 3. Learn to use a balance and compare the weight of food. |
| 4. Learn the hygiene of eating through stories or conversation. | 4. Experience the joy of sharing through having food together. | 4. Learn table manner and cultivate the habit of not wasting food through taking part in birthday parties and having buffets. |
| 5. Sorting objects according to their size, colour or shape. | 5. Practise jumping with both feet and different skills of walking through physical play. | 5. Enhance the ability to express oneself, develop creativity and cultivate co-operativeness through taking part in a co-operative drawing. |
| 6. Practise bending and stretching and rolling small equipment in physical play. | 6. Use vegetable prints to create patterns. | 6. Learn the rules of chasing games and the skills in dodging through physical play. |
| 7. Enhance the sense of touch through experiencing different material in art and craft activities. | 7. Learn the shapes of circle, square, rectangle and triangle. | |

- (a) Fostering social and moral development

Understand, through simulation games, having snacks, stories and pictures, :

- i. Hygiene on eating

- Wash the hands before taking food and brush the teeth after meals.

- ii. Table manner

Understand order of eating and manner :

- Do not scramble for food. Should greet other before start eating and not to disturb others while eating. One should not speak with mouth full.

- iii. Learn the skill of taking care of oneself (e.g. pouring water distributing dishes, clearing table, etc.)

- (c) Language activities

i. Learn common kinds of food (e.g. milk, egg, bread, apples, bananas, etc).

ii. Learn that there are different kinds of food for breakfast, lunch and dinner.

iii. Bring one's favourite food to school and introduce it to and share with other children

vi Game : Put some food, e.g. egg, apple, into a bag and let children touch them and describe their shape and texture etc.

- (d) Early mathematical concept

i. Identify the colour of different kinds of food (e.g. red, yellow, green, etc).

ii. Sort the common fruits according to size or colour.

iii. Find the real objects in the basket to match with photos or pictures.

iv. Draw or collect pictures of food for sorting activities.

v. Match pictures of food to the place where they are sold.

(e) Experience in natural science

- i. Taste different kinds of food and compare whether they are soft or hard (e.g. apples, bananas, etc.)
- ii. Make fruit juice.
- iii. Observe and feed small animals :
 ~1
Understand that animals need food.

(f) Cultivation of aesthetic abilities

- i. Vegetable prints.
- ii. Draw freely on one's favourite food.
- iii. Mould one's favourite food with plasticine, play dough or paper clay.
- iv. Put different kinds of bean into containers of various materials (junk materials can be used) and shake. Try to differentiate all kinds of sound.
- v. Appreciate pictures on food.

Food (Lower Kindergarten Class) : Let's go shopping at the supermarket.

(a) Fostering social and moral development

- i. Play shops.
- ii. Experience the joy of sharing food through having meals together.
- iii. Get to know about the importance of balanced diet through stories and conversation.
- iv. Make and taste simple snack.
- v. Visit supermarkets.

(b) Physical Play

- i. Pretend to be animals living on land (by walking on tiptoes) or animals living in water (by crawling or squatting down and walk) when different signals made by the tambourine are heard.
- ii. Rabbits looking for carrots.
- iii. Treasure hunt.

(c) Language activity

- i. Learn the common kinds of food and related vocabulary, e.g. vegetables (Chinese cabbage, tomato, winter melon, etc.); fruits (pears, pineapples, pomelos, etc.); meat (pork, beef, chicken, fish, etc.)
- ii. Talk about the experience of visiting a supermarket.
- iii. Match picture cards with word cards.
- iv. Role play the characters in a story, simulation game.
- v. Riddles.
Guess the name of food. First describe the characteristics of the food, e.g. a kind of fruit, yellow in colour with sour taste.

(d) Early mathematical experience

- i. The teacher can introduce some basic shapes such as circle, square, rectangle with different face of cartons.
- ii. Get to know about money (coins, notes and their use).
- iii. Draw one's favourite food. The work of the whole class can be used for drawing up a comparison table (can be integrated with art and craft activities).
- iv. Match cut-outs on food to their shadows.
- v. Counting activity
Match an appropriate number of picture cards on food to a given numeral.

(e) Experience in natural science

- i. Activities of making toast, orange juice etc.
- ii. Divide a pudding or other food stuff into two portions. Put one into the refrigerator and heat the other. Try and compare the taste.

(f) Cultivation of aesthetic abilities

- i. The family of milk cartons: Collect milk cartons of various size and make them into different characters.
- ii. Use various materials (such as tinfoil, sponge or assorted colour paper) to make one's favourite food.
- iii. Co-operative drawing (fruit basket - ask children to draw the kind of fruit they like and design a fruit basket.)
- iv. Vegetable prints.
- v. Learn songs related to the theme together with appropriate motions.

(a) Fostering social and moral development

- i. Understand that taking regular meals and avoiding excessive snack are important to health.
- ii. Learn table manners through taking part in birthday parties and having buffets.
- iii. Cultivate the habit of not wasting food.

(b) Physical Play

- i. Crab walk.
- ii. Catching fish.
- iii. Pulling out carrots.

(c) Language activities

- i. Get to know about the source of some common kinds of food (e.g. domestic animals and fowls are reared by some farmers while vegetables and fruits are grown by other farmers. Fish are caught by fishermen and so on.)
- ii. Learn to recognize and write simple words that are related to food.
- iii. Visits :
Report verbally on visits.
- iv. Discuss on the nutritive value of different kinds of food.
- v. Learn more about food, including fresh and processed food such as canned food or cheese.
- vi. Seriate picture cards showing the source of food.
- vii. Collect pictures from magazines and compile a book on food.
- viii. Introduce any new kind of food that one has tried recently.

(d) Early mathematical experience

- i. Compare the weight of food with marked differences and acquire the concept of weight.
- ii. Compare the weights of 4 to 5 kinds of food with a balance and make a record. Seriate according to weight.
- iii. Get to know about different kinds of coins (excluding money exchange).
- iv. Put two baskets of fruits on a tray and see how many are there altogether.

(e) Experience in natural science

- i. Visit farms, markets, fast food shop, bakeries, etc.
- ii. Plant vegetables and fruits (e.g. spring onion, tomato, pepper, strawberry, etc.), and record the growth of individual plants.
- iii. Follow the instructions or activity cards to bake cakes and cookies.
- iv. Small group activities. Every child to bring one kind of uncooked food to school and introduce it to other children. With the help of the teacher, cook some food with a rice cooker and share it with others.
- v. Observe and use pictures to keep a record of how a piece of bread gets mouldy and get to know about hygiene in eating.

(f) Cultivation of aesthetic ability

- i. Draw some parts of a food shop each and put up all the pieces of work as a mural.
- ii. Grow small potted plants in the nature corner.
- iii. Use different percussion instruments to represent different kinds of food. Play together in harmony as an orchestra.
- iv. Use different materials for making food models.
- v. Take the names of food and sing them out in rhythm.

III. Sample 3
Topic : Shops

Nursery Class : The small toy shop

Objectives :

1. To develop the ability in verbal expression.
2. To develop eye-hand co-ordination.
3. To form the habit of restoring toys to their original place after playing.
4. To cultivate the attitude to love and take good care of toys.
5. To develop creativity.
6. To learn sorting, matching and simple counting.
7. To learn throwing and casting skills.
8. To sharpen the senses and power of observation.

Lower kindergarten class : Mummy bought me some new clothes

Objectives :

1. To learn common types of clothing and their use.
2. To get to know different kinds of clothing material.
3. To strengthen the concept of sorting.
4. To have better understanding and appreciation of colour.
5. To cultivate the habit of keeping clothes clean and tidy.
6. To learn to tidy up one's belongings.
7. To practise balancing skills and to respond to instructions.

Upper kindergarten class : A department store

Objectives :

1. To develop the ability of verbal expression.
2. To cultivate observation skill.
3. To be willing to observed the rules while shopping.
4. To share the joy of group creative work.
5. To learn ways of measuring.
6. To learn basic concept of time.
7. To use different parts of the body. To take part in activities.
8. To cultivate problem-solving skill.

Means and content of learning :

1. Learn to express verbally through simple conversation, describing pictures, etc.
 2. Enhance eye-hand co-ordination through threading beads and tearing paper.
 3. Learn to love and take good care of toys and learn the procedures of taking out and putting them away through stories and conversation.
 4. Develop creativity through art, craft and music activities.
 5. Sort toys according to colour or type.
 6. Learn matching and counting with objects or picture cards.
 7. Try throwing bean bags in physical play.
 8. Sharpen the senses through activities such as identifying objects through touch.
1. Learn that different clothing is required for different weather and occasions.
 2. Discriminate the texture, absorbency and translucence of a few kinds of materials.
 3. Foster the understanding of the concepts of length, size and oldness through sorting and comparing.
 4. Learn the variation of colours and shades.
 5. Learn to tidy up and keep a clean and tidy appearance.
 6. Learn the manner of getting along with people through role play.
 7. Practise walking skills and run, skip and squat according to instruction in physical play.
1. Develop verbal expression through activities such as narrating an experience, making sentences verbally or imitating reporting on TV.
 2. Cultivate observation skill through activities such as distinguishing signs, observing electric appliances, or visiting department stores.
 3. Learn through discussion that one must take safety precaution and not to touch goods on display.
 4. Develop creativity through activities such as dances and projects.
 5. Use objects for measuring activities.
 6. Understand basic concept of time with the use of watches and clocks.
 7. Develop skills in body movement and bouncing balls through physical play.
 8. Experiment with different kinds of paper and develop problem-solving skills.

Shops (Nursery Class) : The small toy shop

(a) Fostering social and moral development

- i. Bring a toy to school each. Group the toys together and experience the joy of sharing while playing.
- ii. Simulation game :
Set up a toy shop.
- iii. Through stories, pictures or conversation and experience of playing toys, learn to
 - enjoy playing with others together;
 - share the toys with others and know how to take turns;
 - restore the toys to their original places after playing; and
 - love and take care of toys.

(b) Physical Play

- i. Sway the body freely.
- ii. Throwing bean bages.
- iii. Crumpling and throwing paper balls.

(c) Language activities

- i. Bring one of the favourite toys to school and introduce to other children the name of the toy and how it is handled.
- ii. Use muppets to conduct simple conversation. Learn "May I play with you?", "Thank you" and "Good-bye".
- iii. Talk about the procedures of taking out and putting away toys from a series of pictures.
- iv. Distinguish pictures of toys from those of home appliance.
- v. Threading beads and tearing paper activities.

(d) Early Mathematical experience

- i. Compare the size of toys.
- ii. Sort toys according to colour.
- iii. Set up a toy shop and sort different kinds of toys.
- iv. Count toys of the same kind.
- v. Match picture cards to the toys.

(e) Experience in natural science

- i. From a box with three to four distinct objects, identify a particular one through the sense of touch.
- ii. Switch on and off a toy run by electricity and observe it in motion or being static.
- iii. Blow up a balloon and then release. Watch how it gets bigger and smaller.
- iv. Playing toys with sand and water.

(f) Cultivation of aesthetic ability

- i. Toy prints.
- ii. Make puppets with cartons.
- iii. Dance to the music and stay still as a doll in a music box when the music stops.
- iv. Display constructional toys and appreciate them with one another.

Shops (Lower Kindergarten Class) : Mummy bought me some new clothes.

- (a) Fostering social and moral development
- i. Visit shopping malls and children's wear shops (inside or just window shopping).
- ii. Set up a boutique and let children put on any clothes and have role play.
- iii. Learn the shopping manner.
- iv. Pay attention to one's appearance.
- v. Learn to handle the clothes, shoes and socks that have been taken off.

- (b) Physical play
- i. The wind blows :
The teacher should group children according to the characteristics of clothes and give orders such as 'I would buy skirts/shoes etc.'
- ii. The giants and the dwarfs.
- iii. Buying clothes :
Walk along a crooked line. Follow the teacher's order and pick up picture cards along the way.
- iv. Go shopping :
Put bean bags on the head and listen to instructions to make the right response.

- (c) Language activities :
- i. Learn the names of some common clothing, their use and recognize related words such as woollen clothes, sports wear, trousers, hats or shoes.
- ii. Observe what other children wear such as the colour or the style and make simple verbal reports.
- iii. Discuss the relationship between clothes and weather.
- iv. Match picture cards of clothing to relevant word cards.
- v. Threading holes and moulding plasticine activities.

(d) Early mathematical experience

- i. Compare the length, size, oldness, etc of clothes.
- ii. Set up a boutique and do sorting on pictures or real clothes.
- iii. Put a certain number of buttons in different pattern and count.
- iv. Count the number of clothes or pictures.
- v. Use (three to four) objects for ordering activities.
- vi. Domino game.
- vii. Getting to know about money.

(e) Experience in natural science

- i. The teacher should prepare two identical sets of clothes of different materials. One set should be put on the table for children to touch and distinguish while the other set would be put inside a magic box. Let children follow instructions and identify the material.
- ii. The teacher should prepare different pieces of cloth such as cotton, towel cloth, waterproof silk, wool or PVC sheet and cut them into the same size. Test their degree of water absorption. When the experiment is completed, discuss on which material is best for raincoat.
- iii. Observe cloths of different degrees of transparence.

(f) Cultivation of aesthetic ability

- i. Cut out heads of paper figures and design paper clothes.
- ii. Make small ornaments with plasticine and play dough.
- iii. Pretend to be fashion models. Walk to the music and pose when the music stops.
- iv. Colour day :

The teacher assigns a red day, a yellow day, etc. and let children wear clothes or shoes of that colour to school and appreciate one another.

Shops (Upper Kindergarten Class) : A department store

(a) Fostering social and moral development

- i. Learn the rules to be observed while shopping :
 - Do not touch goods on display casually.
 - Take safety precaution.
 - Note the appropriate manner at shopping.
- ii. Visit department stores.
- iii. Bring different items of goods back to school and set up a 'department store'.
- iv. Visit department stores.

(b) Physical play

- i. Drawing in the air.
- ii. Bouncing balls.
- iii. The rocking chair.
- iv. Jumping activities.
- v. Play bouncing balls :
Children bounce to a certain direction as instructed.

(c) Language activities :

- i. Describe an experience of shopping in a department store and talk about the department store one likes best.
- ii. Distinguish the signs of different departments inside a department store.
- iii. Imitate advertisements on TV and introduce commercial items to others.
- iv. Making sentences verbally :
e.g. I brought a _____ at the _____. _____ go to the department store to buy _____.
- v. Recognition of words :
clothes, books, electric appliances, etc.
- vi. Learn to write simple characters related to the theme.

(d) Early mathematical experience

- i. Use objects as measuring instruments.
- ii. Print modes, real object patterns or stick on patterns according to a given number.
- iii. Put three or four objects in order.
- iv. Get to know more about money through games on buying and selling.
- v. Learn addition and subtraction through games.
- vi. Use bottles or boxes of commercial goods for measurement of sand and water.
- vii. Sort things according to one's wish and explain the attribute chosen for the sorting.
- viii. Learn the basic concepts of time with the use of clocks and watches.

(e) Experience in natural science.

- i. Fold paper fans and compare the function and power of paper fans and electric fans.
- ii. Observe common kinds of electric appliances and take note of their functions.
- iii. In association with vii under cultivation of aesthetic ability, use different kinds of paper and try to make the cards stand.

(f) Cultivation of aesthetic ability

- i. Design wrapping paper - use objects for stamping?
- ii. Make collage with commercial signs.
- iii. Creative activity with 3-dimensional materials :
Create freely with used wrappings.
- iv. Pictures of stories based on experience.
- v. Match dance with a piece of music to express the following :
 - window shopping
 - shopping
 - appreciate the items bought.

APPENDIX 4 EVALUATION FORMS

I. Sample of Records on children's development and academic achievements .
(Select appropriate evaluation items according to the age of the child)

Name : _____

Date of birth : _____

Sex : _____

Period of recording/observation :
_____ to _____

A. Intellectual Aspects :	1	2	3	4	5	6	Conclusion/ Remarks
Understands instructions and content of conversation in general							
Is able to follow instructions							
Is able to listen patiently while others are talking							
Is able to use single words or phrases							
Is able to give simple responses							
Is able to express his needs and ideas							
Is able to report daily experiences							
Is able to repeat part of a story systematically							
Is able to lead and continue with a conversation							
Is able to make accurate pronunciation							
Is able to differentiate between similar and different objects/shapes/signs							
Is able to recognize simple shapes							
Is able to recognize words							

A. Intellectual Aspects :	1	2	3	4	5	6	Conclusion/ Remarks
Is able to draw circles							
Is able to draw straight lines							
Is able to draw slanting lines							
Is able to draw simple pictures							
Is able to grip the pencil correctly							
Is able to write in correct sequence of strokes							
Knows the names of parts of the body							
Knows the family members							
Knows the names of daily objects and food							
Is able to differentiate some basic colours							
Is able to observe and study the objects in the various interest corners							
Is eager to participate in new events							
Knows one to one correspondence							
Knows sorting and matching							
Knows the number quantity and sequence of numbers numbers within _____							
Is able to do simple computation for the numbers _____ to _____							
Knows basic concepts such as big and small much and little long and short tall and short heavy and light thick and thin fat and thin fast and slow (or others)							

B. Social and Moral Aspects :	1	2	3	4	5	6	Conclusion/ Remarks
Is able to quene up orderly							
Is able to walk lightly							
Is able to speak softly in class							
Is able to tidy up after work							
Is able to place objects to their original position after use							
Is able to place a chair to its original position when he leaves the seat							
Takes good care of toys and public property							
Is able to take an active part in activities							
Is able to follow the rules of games							
Is able to work independently							
Shows good manner							
Is receptive to teacher's advice							
Takes care of other children							
Is willing to help others							
Is willing to share with others							
Washes and wipes the hands after going to toilet and before eating							
Is able to clean running nose							
Is able to tidy up his clothes							
Knows how to throw litter into litter-bin							
Maintains a balanced diet							
Takes food on his own							
Does not disturb others during afternoon nap							

C. Emotional Development :	1	2	3	4	5	6	Conclusion/ Remarks
Is able to express his feelings : anger, happiness, likes							
Is able to control his emotion							
D. Physical Aspects :							
Is able to mount or descend a flight of stairs with alternate foot							
Finds no difficulty in running to the front and stop abruptly							
Is able to run and pass three obstacles							
Is able to hop for three steps or more							
Knows how to throw and catch							
Is able to stand on one foot for more than five seconds							
Is able to walk on the balance beam for five steps							
E. Aesthetic Aspects							
Is able to sing correctly							
Is able to sing softly							
Is able to move to the rhythm of music							
Is able to distinguish rhythmic qualities of sounds (e.g. fast and slow, strong and weak)							
Is able to distinguish melodic qualities (e.g. high and low)							
Is able to distinguish volume of sound (e.g. strong and weak)							
Takes active participation in music and movement activities							
Likes to use many colours							
Would try to use different materials in art and craft activities							
Is able to draw boldly							
Is able to express himself through an art or craft work							

Method of recording :

The teacher can choose a week in any month between October and December or March to June to do observation on a child for six consecutive sessions and keep records. The following symbols could be used for recording :

	Unable to perform
	Able to perform
	Performing well
	Regression detected

To attain objectivity and accuracy of the recording, standards can be set as follows :

- Not even once - unable to perform
- 1 - 2 times - occasionally
- 3 - 4 times - frequently
- 5 - 6 times - always

Columns 1 to 6 indicate the session of observation, that is, no matter when the observation starts, the recorder should enter the child's performance under column 1 if it is the first session and under column 2 if it is the second and so on. A conclusion should be drawn up after all the six sessions.

II. Sample of individual records in small group learning

Small group learning
Individual Record

Scope of learning : Early Mathematics : Quantity

Name : _____

Date of birth : _____

Sex : _____

Group : _____

Teacher : _____

Revision	New topic	Date	Objective			Remarks
			1. Can count and tell the number of objects shown to him	2. Can get the same number of objects as the number given	3. Can group objects in different ways according to a given number	

Note :

The following should be entered in the column under remarks :

1. Particular behaviour of the child such as emotional outburst.
2. Evaluate and revise the teaching methods used on that day.

Small group learning
Individual Record

Scope of learning : Early Mathematics : Shapes

Name : _____

Date of birth : _____

Sex : _____

Group : _____

Teacher : _____

Revision	New topic	Date	Objective				Remarks
			1.Can distinguish identical shapes and match one to the other	2.Can distinguish and name shapes	3.Can match shapes to objects	4.Can distinguish and name solid bodies	

Note :

The following should be entered in the column under remarks :

1. Particulars behaviour of the child such as emotional outbursts.
2. Evaluate and revise the teaching method used on that day.

Small group learning
Individual Record

Scope of learning : Early Mathematics : Ordering

Name : _____

Date of birth : _____

Sex : _____

Group : _____

Teacher : _____

Revision	New topic	Date	Objective			Remarks
			1. Can follow a set pattern	2. Can continue with a set pattern	3.*Can arrange objects according to their order / size /colour etc.	

Note : * Delete whichever is inappropriate

The following should be entered in the column under remarks :

1. Particular behaviour of the child such as emotional outbursts
2. Evaluate and revise the teaching method used on that day.

Small group learning
Individual Record

Scope of learning : Language

Name : _____

Date of birth : _____

Sex : _____

Group : _____

Teacher : _____

Revision	New topic	Date	Objective				Remarks
			1. Can identify a particular word among a group of words	2. Can read out the word without help from the teacher	3. Can form phrases with the word	4. Can use the word in a verbal sentence	

Note : The following should be entered in the column under remarks :

1. Particular behaviour of the child such as emotional outbursts
2. Evaluate and revise the teaching method used on that day.