

Topic 9: Heat Emitting Objects and Sources of Heat

Key Concept	Heat emitting objects and sources of heat
Learning Objective	
General Objectives	Be able to think and understand the function of the heat in our daily life.
Specific Objectives	Children are able (1) to know that the sun is a natural heat source and the heat energy obtained from it can be applied (2) to see practically that heat can change the forms and properties of the objects (3) to tell the heat emitting objects or heat sources around one's environment and the benefits obtained from them
Activities Involved	<ul style="list-style-type: none">- Going outside the classroom and cleaning- Whole class discussion- Observation of the pictures- Observation- Questioning
Teaching/Learning Materials	<ul style="list-style-type: none">- color picture charts, short candles, napkins, plastic bottle
Teaching Periods	3 periods (90 minutes)

Before Getting Started

Background Information for Teachers

This lesson is taught to make the first grade children know the heat emitting objects, the sources of heat and heat takes the important role in daily life. By teaching this lesson, it is to make the children know and tell that the sun is the natural source of heat during the day. They are taken to the place where the sun shines so that they are more understandable to the heat by feeling practically themselves and are able to know the consequences of the sun heat.

Giving activities at home makes the children observe around one's environment. Asking parents, grandfathers, grandmothers, uncles, aunts, brothers and sisters makes them know not only the heat emitting objects in their home but also others as well.

Picture cuttings from magazines and newspapers if told in the class will make other children know.

The teacher supplements to show the pictures cut from journals, magazines, and newspapers, of sophisticated utensils. And said that even though they are not used at one's home or one's region,

they are used in other regions so that children will know and see not only the heat emitting objects used in their region but also other heat emitting objects as well. By this means, children are made to take interest and keep up with the times.

As the children have known the heat-emitting objects, they are automatically made to know the non-heat emitting objects. It is to be noticed that the sources of heat are the heat-emitting objects. For example, let the children know clearly that recently cooked rice pot, recently cooked curry pot, kettle with boiling water are not heat-producing objects. It is to tell that heat-emitting objects are not to handle, as they are hot.

By teaching this lesson, children will get the advantage of distinguishing the heat-emitting objects and non-heat emitting objects and will be aware of their usefulness.

Lesson Planner

	<u>Period One</u>	<u>Period Two</u>	<u>Period Three</u>
Specific Objectives	Be able to know that the sun is a natural heat source and the heat energy obtained from it can be applied	Be able to see practically that heat can change the forms of objects	Be able to tell the heat emitting objects or heat sources around one's environment and the benefits obtained from them.
Introduction (Evocation)	Cleaning inside and outside classroom such as collecting garbage and rooting out grass	Teacher introduces that heat can change the forms of objects	Story telling
Development (Reflection)	<ul style="list-style-type: none"> - Washing dirty hands and wipe out the water with napkin. - Observation of picture, discussion and presentation 	<ul style="list-style-type: none"> - Pouring the boiling water into a plastic bottle - Lighting candles and observation on transformation 	<ul style="list-style-type: none"> - Think to reveal the heat emitting objects - Asking questions by showing pictures
Conclusion (Realization)	Heat obtained from the sun can be applied for daily life	Observation on the changes of plastic and candle	Acquiring the application of these objects and telling the benefits obtained from them
Assessment points	Questioning to know whether they can observe the main points of the pictures or not.	Observing whether they are able to participate happily or not while carrying out the activities	Observing whether they all take part in listening to story telling of teacher or not Observing they are able to tell the application of heat emitting objects and

			benefits or not.
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Teaching/Learning Procedure

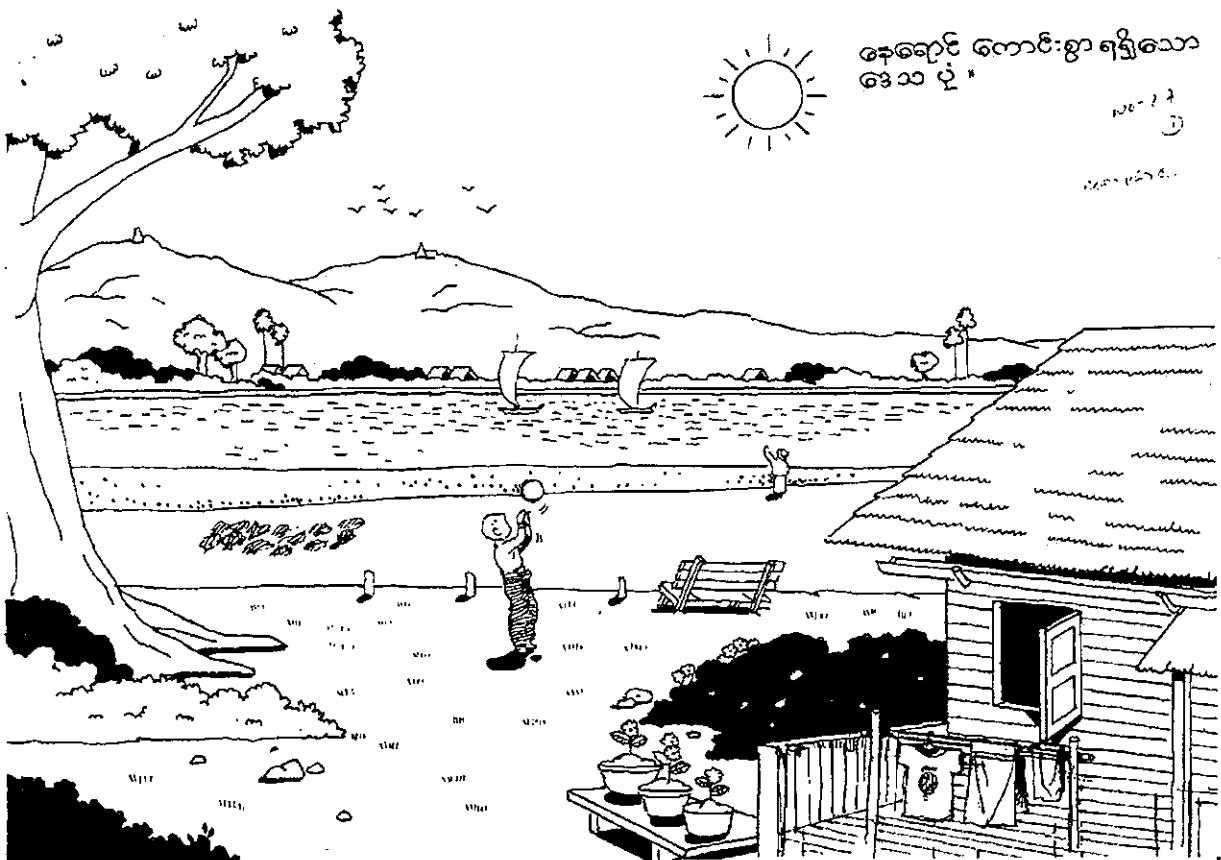
Period One

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>1. Teacher and children collect garbage in classroom and root out the grass in the school garden or in front of the school.</p> <p>2. Ask them what you will do to the dirty hands.</p>	8 min.		To get the knowledge that dirty hands have to be washed.
<p>3. Have them wipe out water on their hands with napkin after washing.</p> <p>4. Ask what you will do to make the wet napkin dry.</p> <p>5. Let the children put the napkin in the sun.</p> <p>6. Then, teacher shows the picture of Eskimos' region and the other depicting the sun, trees, flowering plants and birds in order to have the children compare them and tell the differences between them. (e.g. there is no tree in this picture and there are trees in the other; there are clothes being put to make dry in the sun in this picture and there is no clothes like that in the other picture etc.</p>	7 min.	<p>Napkins</p> <p>Two pictures</p>	<p>Teacher has to accept the answers of the children.</p> <p>Sun heat cannot be obtained sufficiently in very cold regions so that clothes are not put to make dry outside.</p>
<p>7. Ask the reason of why they are different from each other.</p> <p>8. Teacher takes the napkin they put in the sun and asks why the napkin has been dry.</p> <p>9. Have them think and tell the objects that have been dry due to the sun heat around the children. Tell the children that dried fish, salt, and wet clothes can be made dry by sun heat.</p>	15 min.		<p>Have the children express their opinion freely.</p> <p>Have the children notice that trees and flowering plants can grow due to the sun heat.</p> <p>Teacher leads in order to come out the correct answers by encouraging them with the words of 'It becomes close</p>

		<p>to be correct. Try to continue thinking' when the answer of the children is almost correct.</p>
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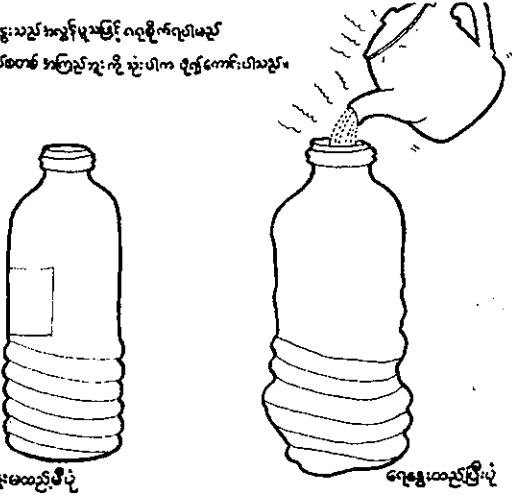


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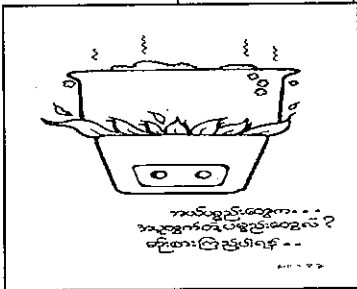
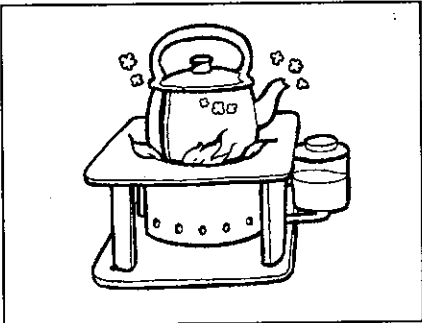
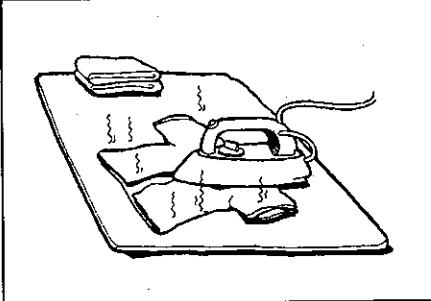
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Period Two

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>1. Introduce the lesson with the followings; “How to make the candle smaller without breaking it?” 2. Light the candle in the earthen cup on the table of each group.</p>	5 min.	Short candles for each group Earthen cup	Have them notice the size and shape of candles. While carrying out the experiment, cover around the candle with a paper box in order not to be harmful to the children.
<p>3. Put two plastic bottles of same size and shape on the table where children can see and pour boiling water into one bottle. Let the other bottle as it is. Then, ask what happened to the bottle and why.</p>	10 min.	Plastic bottle (two exactly the same bottles)	This experiment has to be carried out by the teacher.
<p>(အတိအလင်း) ။ ရေငွေ့သည် အပူရှိမှုနှင့် ဝေပူမှုကို ရရှိစေပါသည်။ ဟယ်ဖာဘစ် အကြည်ကို ကို သုံးပါက ဝေပူမှုကို ရရှိစေပါသည်။</p>  <p>ရေငွေ့မထည့်ဘဲပုံ ရေငွေ့ထည့်ပြီးပုံ</p>			
<p>4. Ask the children to blow out the candle flame lit before the 2nd experiment is carried out and ask the changes of candle. “What happened to the candle?” “Why?” After that, children will mould the semisolid wax obtained from the</p>	10 min.		Teacher has to take care of the children not to touch the melted wax as it is very hot.

candle.			
5. Changes of the bottle before and after the boiling water is poured Children will draw the figure of candle at the beginning of lighting and the figure of changes after lighting.	5 min.		Have the children notice that forms of objects are changed due to the heat.

Period Three

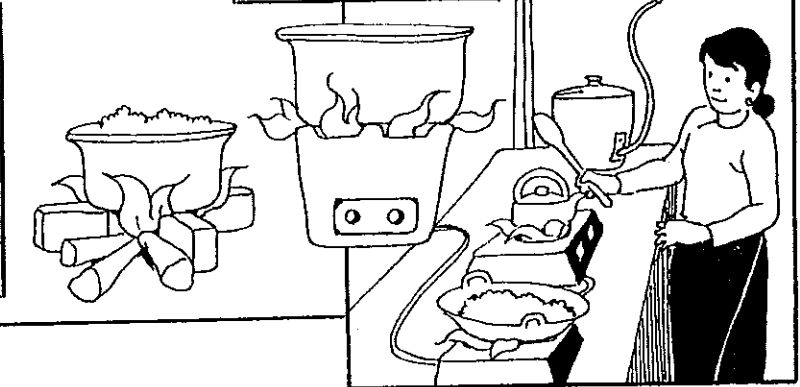
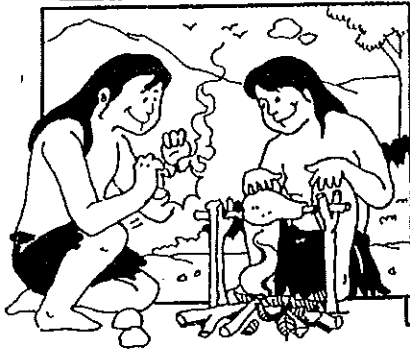
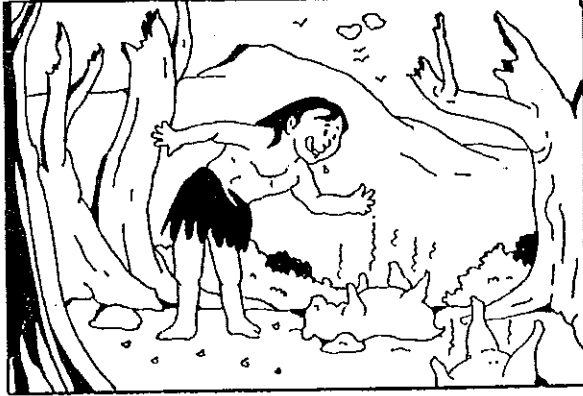
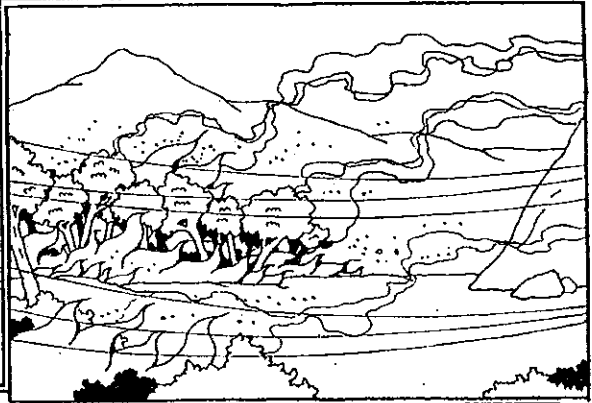
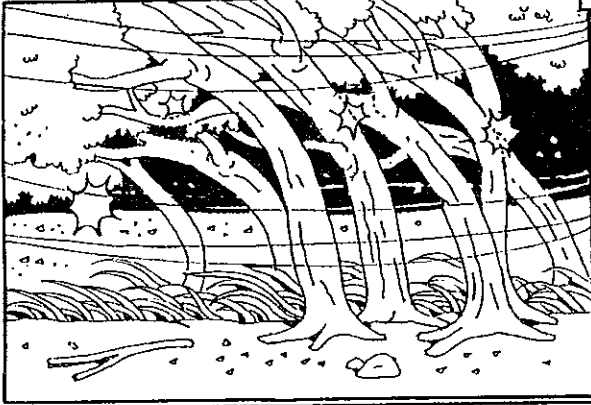
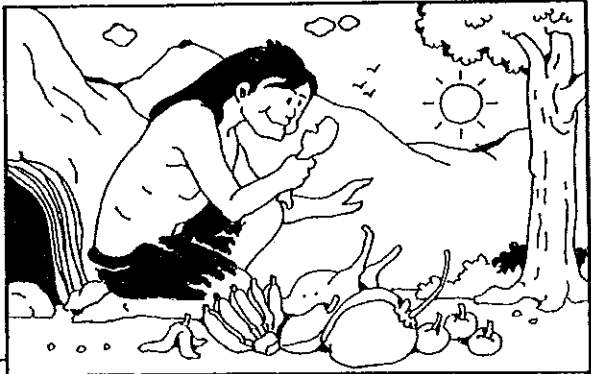
Learning Activities	Duration (Min.)	Teaching/Learning Materials	Points to be noticed
<p>1. Picture story telling</p> <p>(a) Tell the story of "Flavor originated from forest fire"</p> <p>(b) Ask questions when required in story telling e.g. Why does the forest fire break out? What is the cause of animals' death? etc.</p> <p>(c) How do you make meal at home now?</p>	5 min.	Picture story cards	- to make food become delicious -Have them know that it is not possible to eat food what one want to eat when lacking heat. (E.g. boiled water, soup, rice, curry etc.)
<p>2. By showing the pictures, ask the children what is heat-emitting object.</p>	10 min	<p>Picture of rice pot being cooked on the stove</p> <p>Picture of a kettle with boiling water on the stove.</p>	Have them know clearly that heat source is the stove but not rice pot. Have the children know that heat-emitting objects must not to be touched and they are harmful because they are hot.
			
			
			
3. Have the children think about the other heat emitting objects and teacher has to record them on the	10 min.		

blackboard. 4. Ask the children where they have ever seen the heat emitting objects they said. Ask the children how these objects are used. E.g. Iron- For what purpose is it used? Iron – to smooth clothes Stove - to cook meals			It is in order to make the children know how the heat emitting objects are useful and how they are used so that teacher has to asks by linking them.
5. Ask the benefits of using these materials. E.g. By using stove, rice, curry, soup can be cooked. Iron can make clothes smooth. Light can be obtained from lamp, electric bulb, and fluorescent lamp.	5 min.		Have the children know the benefits as a result of using these objects.

“Flavor originated from forest fire”

- (1) In the earlier times of the world, humans plucked fruits from the trees and ate them. Sometimes, they killed animals and ate raw meat.
- (2) One day, a storm blew and two branches of a tree rubbed each other so that fire broke out and the whole forest was burned.
- (3) Forest fire caused the deaths of plants and animals due to burn.
- (4) The odors of the burned leaves and meat of animals are so fragrant that humans were attracted and they probed them with fingers. At that time, it was so hot that they put their fingers into their mouths so as to know the taste is delicious.
- (5) Humans became realized that foods became delicious when cooking by heat.
- (6) In this way, humans became known that it is more delicious when foods are prepared by the use of heat.

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Reference

Heat is a very important and an essential thing for animals

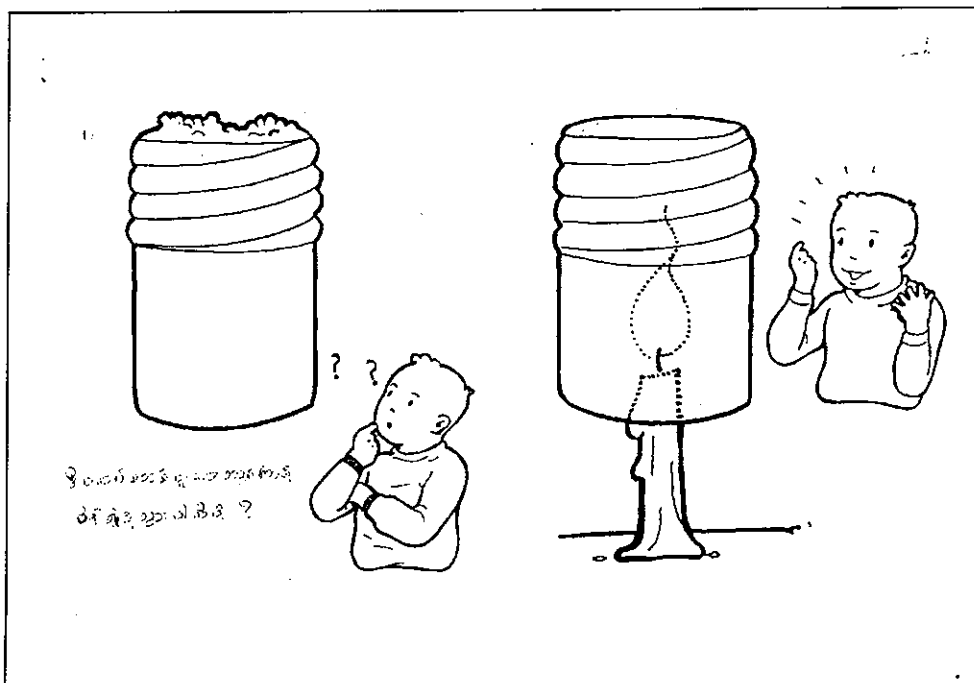
Man and animals such as mammals (rabbit, dog, cat, etc.) have body heat. Very high body heat as well as very low body heat can be fatal. In the same way, plants cannot grow either in horizontal regions where there is insufficient heat or in the desert where the heat is too high.

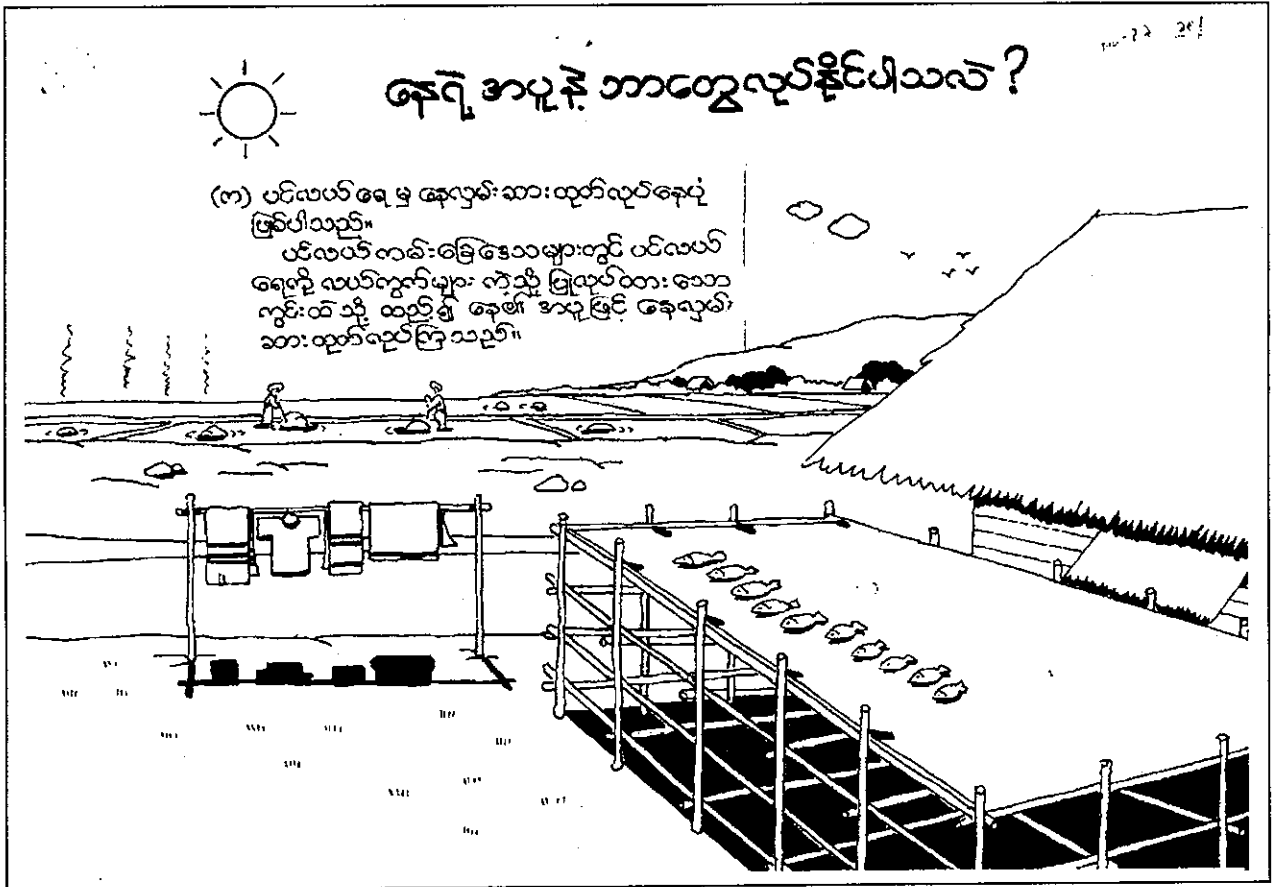
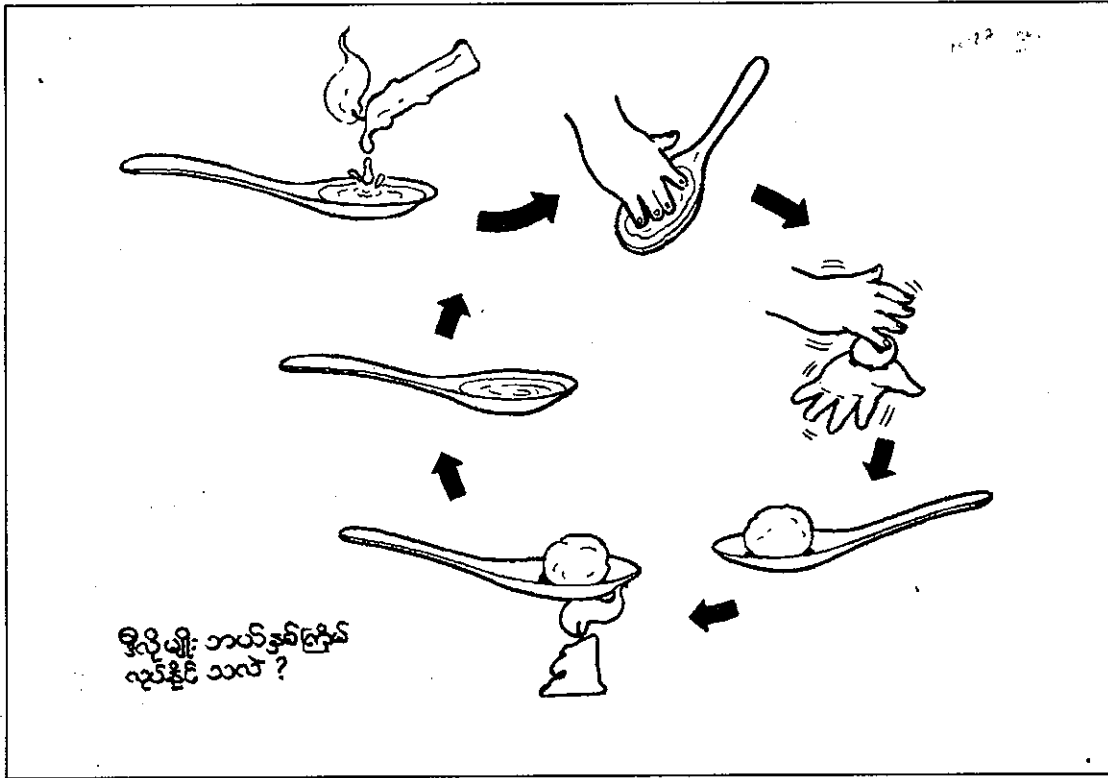
In very cold regions or countries, people create chimney or heater to get heat. Heat can change the forms of objects. Plastic commodities and metals can be transformed and produced in various shapes by heating them. Heat can make even very hard iron and steel transform.

When studying about heat one should know heat-emitting objects. People create heat emitting objects so as to cook their daily food such as electric stove, charcoal stove, firewood stove, inflammable rod-used stove, paddy husk stove, gas stove, etc. In the same way, household commodities such as bulbs, candles, lamps, hair dryer, oven, iron, etc are man-made heat emitted objects.

Natural heat emitting object is the sun. The heat from the sun can be used in our daily life. We can cook rice by using the heat energy from the sun. In advanced developed countries it is found that they can even produce solar car and solar roof by holding the heat energy from the sun with solar fibers and transforming into electric energy and light energy.

Thus heat is a very essential thing for all living things.





Topic 10: Voice and Types of Sound

Key Concept	There are different types of sound in the environment.
Learning Objectives General Objectives	To distinguish the voices of man and animals, the sound of wind, the sound of rain, the sound of thunder, and the sound of musical instruments heard in one s environment
Specific Objectives	Children are able (1) to distinguish the voices from other sounds heard in the environment (2) to differentiate the voices of various animals (3) to differentiate the sounds of wind, rain, thunder and lightning heard in one s environment (4) to distinguish the sounds of various musical instruments (5) to know and feel the various sounds from one s environment (6) to identify the voices of man and animals, the sound of nature and the sound of musical instruments
Activities Involved	<ul style="list-style-type: none">- group work- individual work- games- singing poems
Teaching/Learning Materials	<ul style="list-style-type: none">- color picture cards- various cups- various local materials- musical instruments
Teaching Periods	6 periods (180 minutes)

Before Getting Started

Background Information for Teachers

There are many sounds in our surroundings. Sound can be generally classified as natural sounds or man-made sounds. The sound uttered through the mouth of living creature is called "voice".

The sounds that are heard can be changed according to the location and time. For example, the sounds of animals while they are having fun, while eating, while in anger cannot be the same.

In the same way the children should know that the sounds heard in school, at home, during daytimes and nighttimes are different.

Lesson Planner

	<u>Period One</u>	<u>Period Two</u>	<u>Period Three</u>
Specific Objectives	Be able to distinguish the voices from the other sounds heard in the environment	Be able to differentiate the sounds of wind, rain, thunder and lightening heard in one s environment	Be able to differentiate the voices of various animals
Introduction (Evocation)	Have them retell after listening to the sounds inside the classroom and environment Have them recall the sounds they have ever heard.	Going to school garden and listening to the sounds emerge from movement of leaves of the trees due to blowing wind.	Imitation of the sounds of animals reared at home and familiar ones in one s environment.
Development (Reflection)	Imitation of sounds they have ever heard Comparing the sounds that emerge from putting bean, rice grain, sand, rice grain with husk into the bottle.	Asking by showing picture Individual doing	Questioning by showing the picture of animals they are not familiar to them Playing by grouping
Conclusion (Realization)	Whole class discussion	Recitation of poem	Recitation of poem
Assessment points	Asking questions regarding the practical activity	Observation of children if they are able to do the main points described on the chart	Observation of children if they participate in playing by grouping.

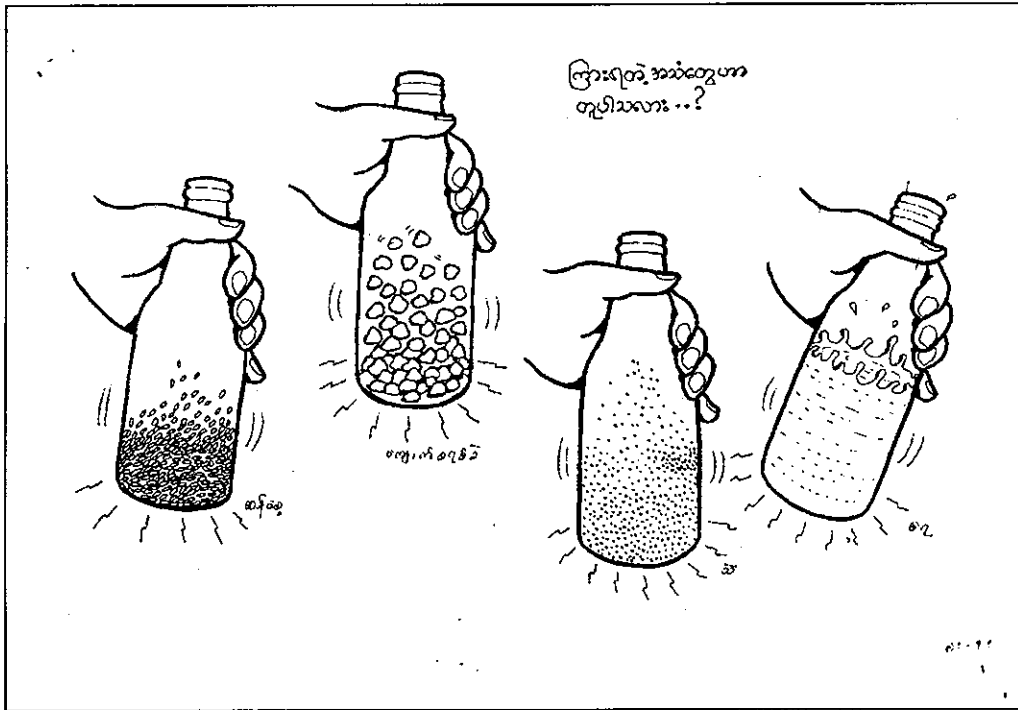
	<u>Period Four</u>	<u>Period Five</u>	<u>Period Six</u>
Specific Objectives	to distinguish the sounds of various musical instruments	to know and feel the various sounds from one s environment	to identify the voices of man and animals, the sound of nature and the sound of musical instruments
Introduction (Evocation)	Whole class discussion (Sounds of musical instruments produced in region, and the musical instruments they have ever heard)	Playing games practically by group Listening to the sounds by group	Whole class discussion on the lessons they have learnt
Development (Reflection)	Playing musical instrument by group One group play a musical instrument and the remaining groups have to answer what kind of instrument it is.	Differentiation of sounds produced by beating various kinds of cups. Playing the game Beating thigh and palm	Playing parcel games
Conclusion	Recitation of poem	Playing games	Singing rhymes

(Realization)			concerned with the sound they have learnt.
Assessment points	Asking about the sounds of musical instruments	Observation of the children whether they take part in activities happily or not.	Observation of the children whether they take part in recitation of poems happily or not.

Teaching/Learning Procedure

Period One

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
Teacher and students will make a very loud sound. Teacher will sing a song or recite a poem pleasantly. Teacher lets children listen to the sounds inside the classroom and in the environment.	5 min.		It will activate the knowledge known in KG.
Let the children retell the sounds they have heard. Then the teacher lets children speak to each other.	5 min.		Be able to distinguish the voices of man and other sounds. Teacher accepts any answer of children imagined in their mind.
Let the children think other sounds they have heard. Teacher notes down the children s answers on the blackboard.	5 min.		
Each group will be given an empty bottle, some sand, rice, and small stones. Ask each group to put those things inside the bottle and have them shake and let them listen to the sound produced.	5 min.	Empty plastic bottles	Any plastic bottles can be used.
Then the things are changed in turns among groups and made to listen.	5 min.		Children are instructed to close their eyes when they listen.



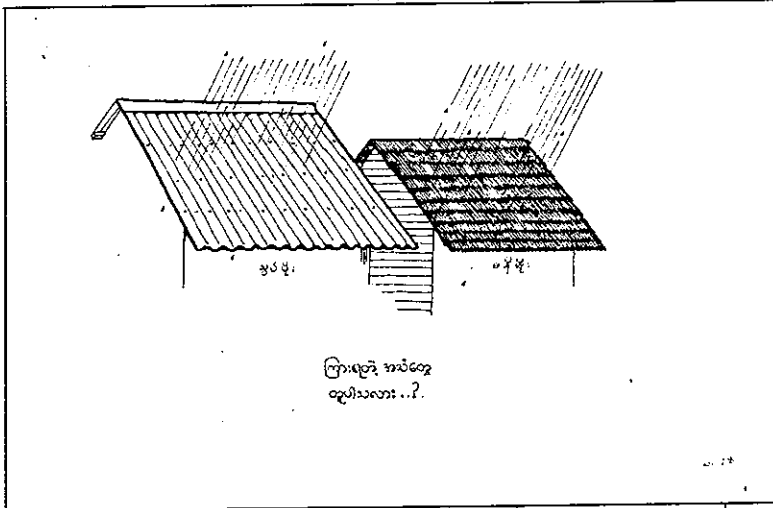
When the children have made with all the things ask if

- the sounds they heard are similar to one another.
- To what sound is the sound you heard around you is similar? e.g. similar to the sound of water flow; similar to the sound of thunder etc.
- the bottle containing which material gives a much louder sound
- which bottle gives a soft sound? Why?

5 min.

Period Two

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
Teacher takes children into the school garden and lets them gather under a tree. Teacher asks children, look up the large tree, what did you see, what is happening. Listen carefully, what sounds you hear.	10 min.		It intends to make children listen the natural sound personally.
Teacher will ask every child the type of house they live in. Then, what is the roof made up of?	5 min.		



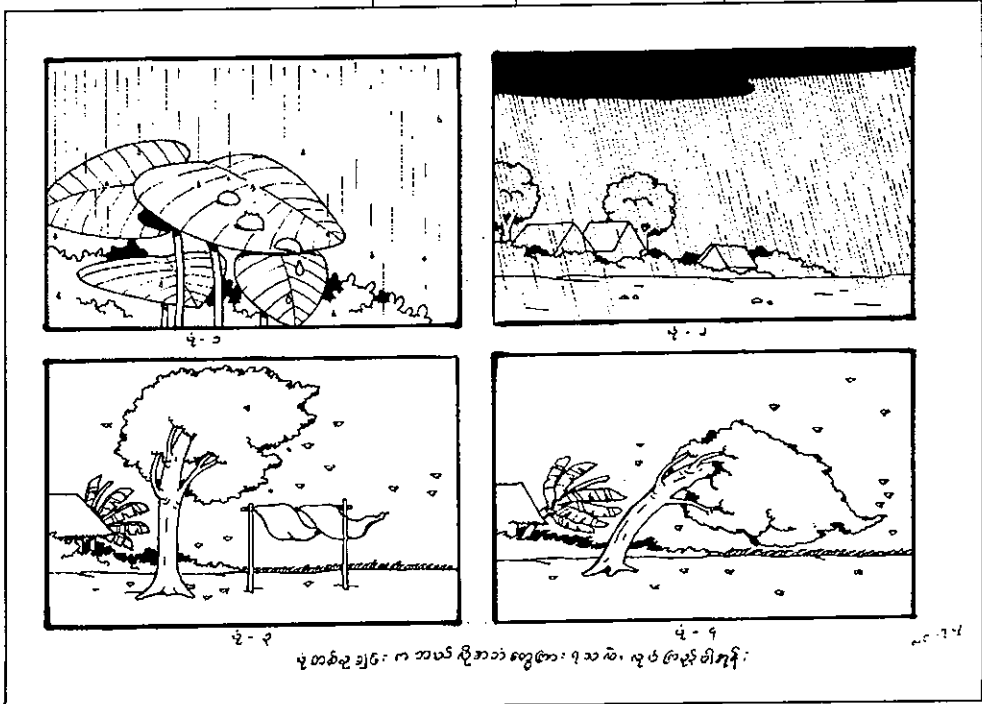
Have you ever seen raining?
 What is the sound when raindrops fall onto the roof of your house?
 What is the sound when it is drizzling?
 What is the sound when heavy rain falls?
 What are other sounds heard during rain?

Then the teacher asks children, who made those sounds. Have you ever heard other sounds that man does not make?
 Teacher shows the pictures of rain drops falling on leaf, heavy rain, thunder, water falling from a waterfall, trees moving in the wind, storm and children make sounds.

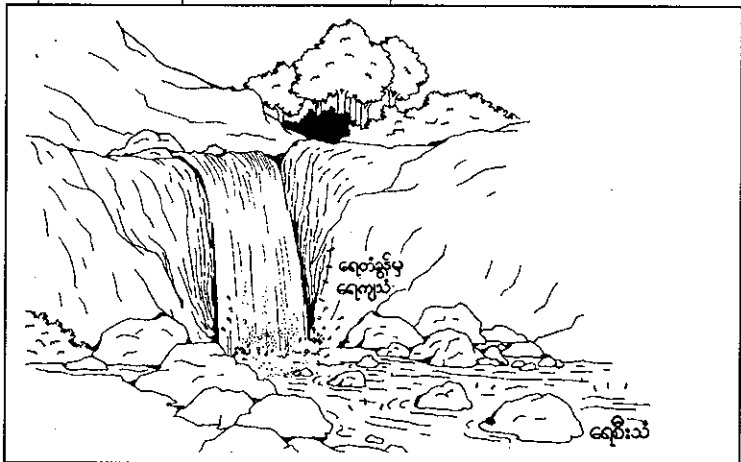
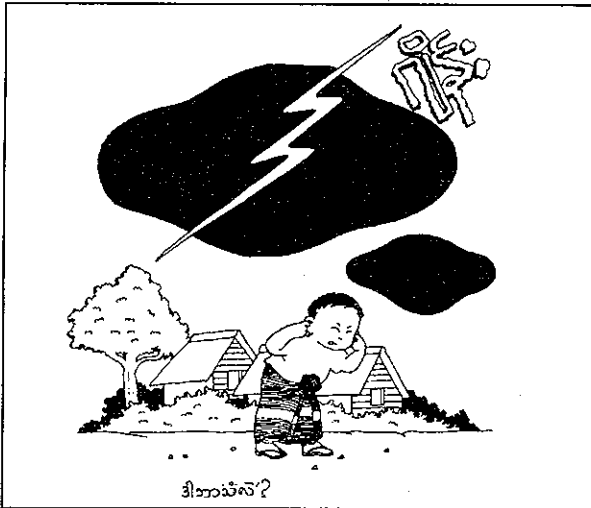
5 min.

Picture charts, the pictures cut from newspapers, journals and magazines.

Let the children know personally that man does not make those sounds and that they developed naturally.



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If the children who made are correct, the remaining children will encourage by clapping hands.

Children, who made to hear the sounds of clapping?

Then, what other sounds can you make? Make. After that, teacher and children recite the following poem.

1. If you re happy in your mind, clap your hands

If you re happy in your mind, (clap your hands)²

If you re happy in your mind, clap your hands heartily.

If you re happy in your mind, clap your hands heartily.

2. If you re happy in your mind strike the bench, (strike the bench)²

If you re happy in your mind, strike the bench heartily.

If you re happy in your mind, strike the bench heartily.

10 min.

If there is difficulty in collecting picture charts and picture cuttings, teacher tells the name to do and children make the sound.

It is for the children to be able to differentiate the natural sound from the man-made sound.

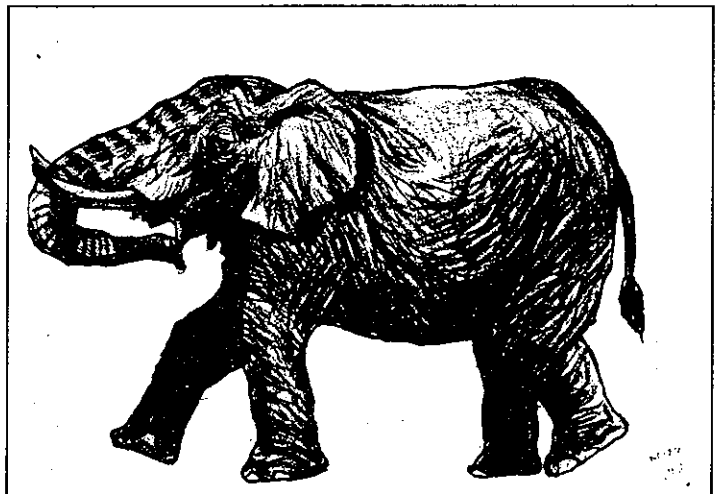
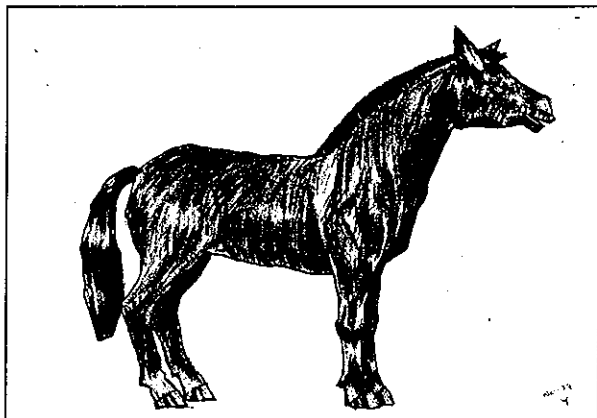
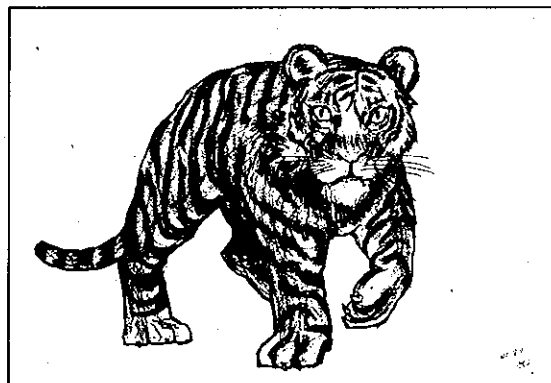
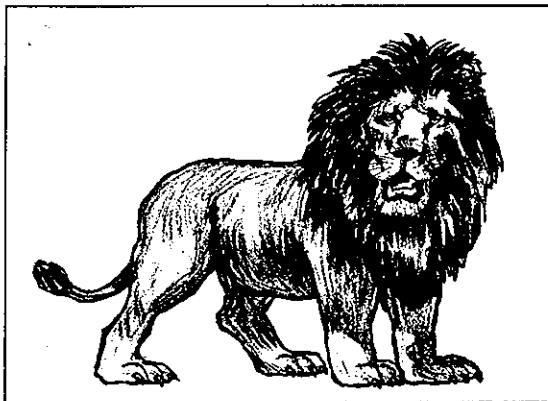
To let the children know man-made sound by doing freely.

<p>3. If you re happy in your mind, stamp your feet. If you re happy in your mind, (stamp your feet)² If you re happy in your mind stamp your feet heartily. If you re happy in your mind stamp your feet heartily.</p>			
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Period Three

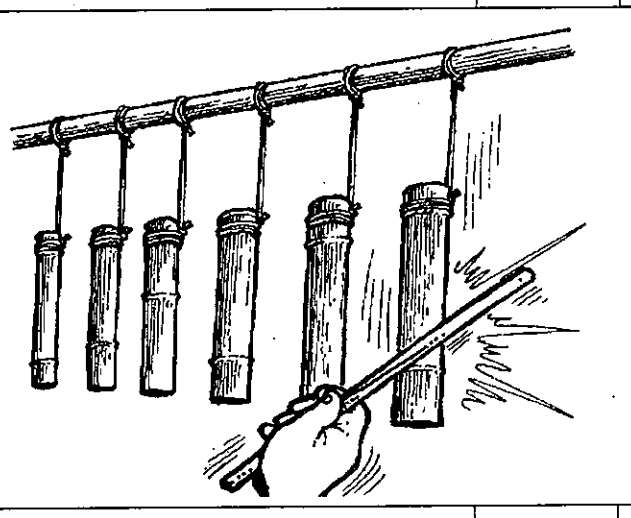
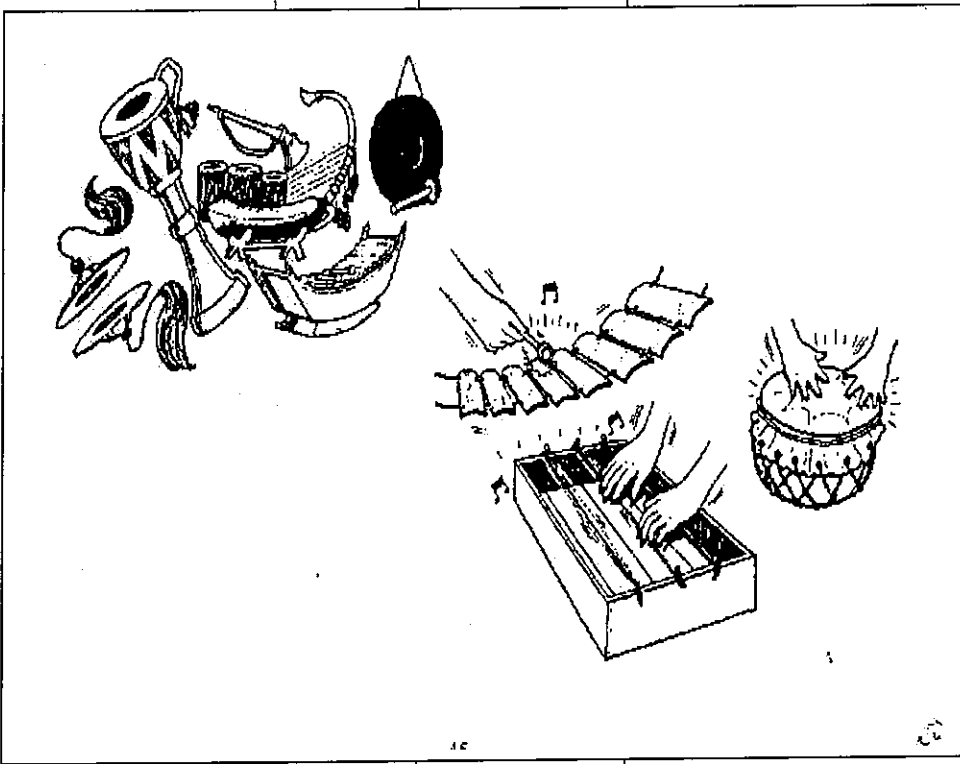
Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
Teacher and children introduce the lesson by discussing the previous lesson they have learnt.	5 min.		
Teacher asks children. Which creatures do you like? Why? What creatures do you rear at home? Ask one child the voice of animal reared at another child s home. How is the voice of that creature? With what sounds do the animals you rear shout? Have you ever seen other animals? Let them write the animals they have ever seen in the notebook. Where have you seen? How do these animals shout? Let each group tell.	5 min.	Picture of animals from newspaper cutting or drawing by oneself	Sparrow, pigeon, myna, crow, fowl, cat, rat, dog, buffalo, cattle, goat, horse, duck, pig are found in the children s environment so that they can make the voices if they are told the names. Time will be given to be able to discuss the voices according to group.
Teacher tells the name of animals found in children s environment and the children make the sounds.	5min.		Other animals that are not familiar with them should be asked to do by showing pictures.
A game has to be played as follows; Teacher gives each picture to groups and asks them to come out by group in front of the class and make the imitation of the sound and gesture of animal in the picture they got. The remaining groups have to tell the name of that animal. If it is correct, applause will be come out.	10 min.	Picture charts of animals.	By doing in groups will make the children get the spirit of doing collectively.
Then, the teacher and children recite happily the following poem. The crow (Ah) ³ The sparrow (Kyit) ³ The cat (Nyaung) ³	5 min.		Teacher lets the children enjoy reciting the poem together. Teacher will take care and see all children to

The rat (Kyui) ³ (Ah) ³ (Kyit) ³ (Nyaung) ³ (Kyui) ³			participate.
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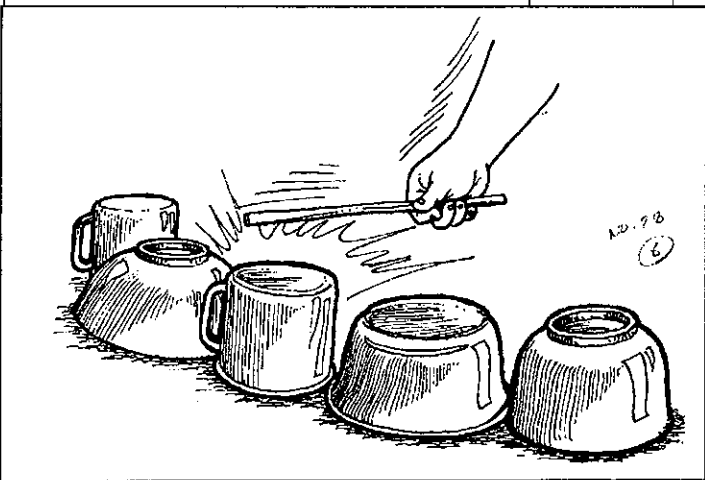
Period Four

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
Teacher asks children, have you ever seen a ceremonial round of visits with the young who will be the novice. What did you see in the ceremonial round of visits with the novice to be? What did you hear? What is beaten for the sounds you hear? Do you have a band troupe at school? Have you ever seen them play? Have you ever heard the sounds of other musical instruments?	5 min.		These questions make children know the sounds of musical instrument produced from the music troupe (Ohzi, Dhobat troupe).
Teacher plays xylophone, flute, drum, and cymbal. Each group will be given each item.	5 min.	Cymbal, flute, drum, xylophone,	To ask the sound of each musical instrument. In case of having no

<p>Then each group will make the sounds with the item they get.</p>		<p>various shapes of cut bamboo.</p>	<p>musical instruments, it can be done with any material which can produce some sound in one s environment.</p>
			
			
<p>Let each group change the items and make sounds</p>	<p>5 min.</p>		
<p>Each children group plays the musical instrument they have without having seen by others and let other groups answer what instrument it was.</p>	<p>5 min.</p>		<p>If the children do not know teacher can ask with leading questions</p> <p>Musical instruments of the region can also be used.</p>
<p>The following poem will be recited. All friends to be happy</p>	<p>10 min.</p>		<p>Teacher recites it with gesture.</p>

<p>Sing in unison by forming group The melody of a song is sweet Beat and blow quick (Ta tee, tee, ta bay bay, ta chan chan)³ The sound of cymbal, oboe and drum. [(Drum)² the sound of beating drum]³ (Bon)⁷ [(Tee)² the sound of blowing oboe] (Tee)⁷ [(Chan)² the sound of beating cymbal] ³ (Chan)⁷ [(Balin)² the sound of playing banjo]³ (Balin)⁷ [(Naung)² the sound of beating the gong]³ (Naung)⁷ [(Hin)² the sound of playing violin]³ (Hin)⁷</p>				
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Period Five

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Teacher will give children plastic cup, enamel cup, aluminum cup, steel cup and glass etc. First let the children beat each cup and let them study the sound produced from each cup.</p>	10 min.	Plastic cup, enamel cup, aluminum cup, steel cup and glass.	<p>In place of these cups various products of the region can be used.</p> <p>The main concept is to make children know the sounds produced from beating materials are different.</p>
			
<p>Then a group beats a cup and the remaining group has to answer which cup is beaten by not looking at it. The groups do it in turns and answer</p>	10 min.		<p>This game makes children know practically the sounds produced from beating different parts of the body are different.</p>

<p>in turns.</p> <p>Teacher lets two children sitting face to face and plays the following game happily.</p> <p>Step 1. Beat the thigh twice</p> <p>2. Clap the hands once.</p> <p>3. Strike the right hands and clap the hands once.</p> <p>4. Strike the left hands and clap the hands once.</p> <p>5. Strike the pair of palms</p> <p>After that redo from step 1 to 5 two or three times.</p>	10 min.		
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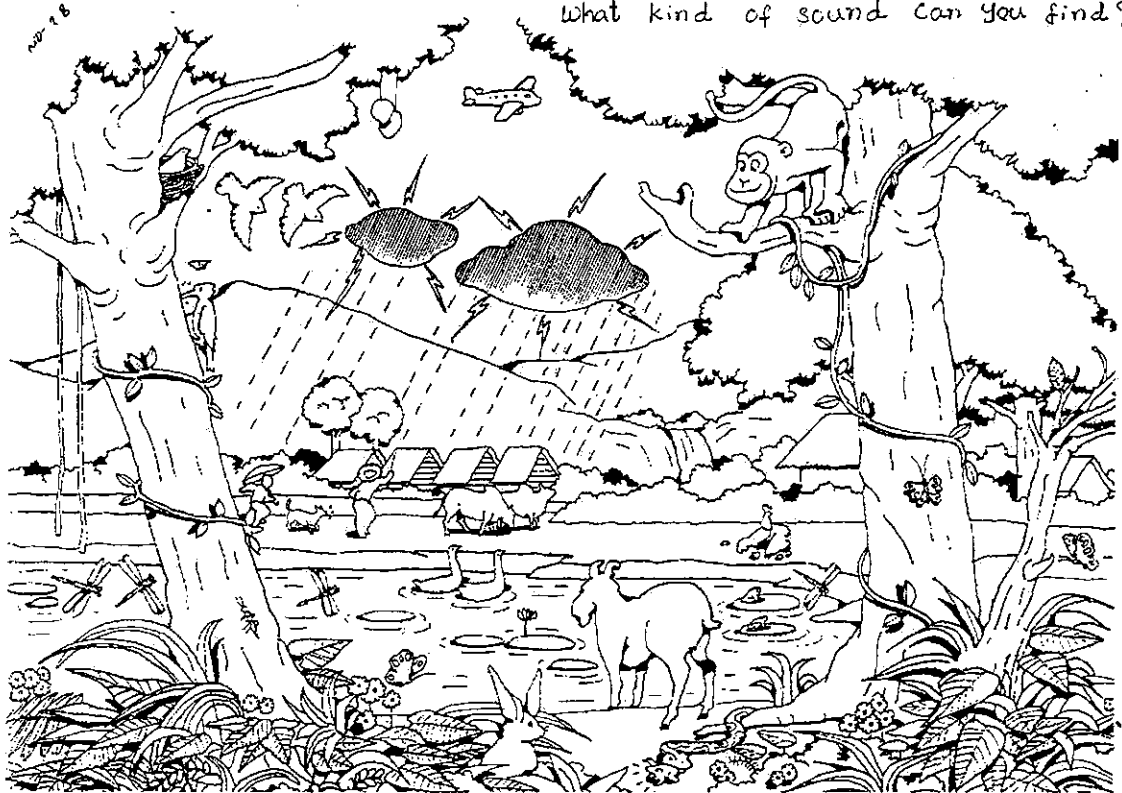
Period Six

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
Teacher and children discuss again the lessons taught.	5 min.		
Teacher and children will play the parcel game. Teacher writes on pieces of paper the natural sounds, the sounds of musical instrument, the sound of animals and puts them inside a paper box. This paper box will be handed over from one child to another. While handing over, children will recite the poems in relation with the sound taught. At the time when the poem ends, the child who is holding the paper box picks up a piece of paper inside the box and makes the sound written on that piece of paper.	25 min.		<p>The lessons learnt by children have already been evaluated by this game method.</p> <p>This game can be played by sitting in a circle inside the classroom or under a tree.</p>

Assessment

1. We can enjoy music by using musical instruments.
Let's make musical instruments that can produce nice sound by using any material by yourself.
2. Can you tell what sound it is only by listening to it?
Let's listen to various kinds of sound in the school, park.....
What is the sound and where it is from?

What kind of sound can you find?



The children can prepare a blank chart of the following and fill it in as they find different sounds. The following chart is an example.

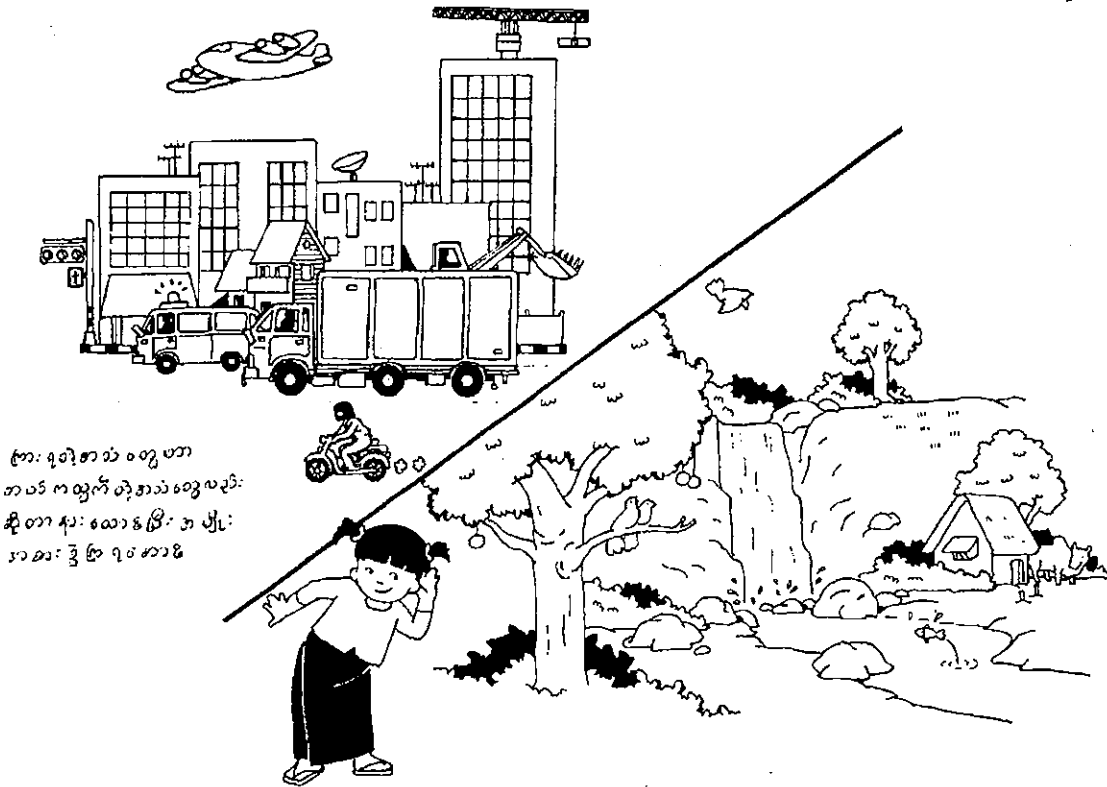
Types of sound	Place	Sounds heard	Name of things
Animal sound ----- -----			
Musical sound			
Natural sound			

EXAMPLE CHART

Type of sound	Place	Sounds heard	Name of things
Animal Sounds ----- -----	<i>Park</i>	<i>Kyi Kyi</i>	<i>Bird</i>
Musical Sound	<i>Road</i>	<i>Pon Pon</i>	<i>Drum</i>
Natural Sound	<i>Park</i>	<i>Wall Wall</i>	<i>Water fall</i>

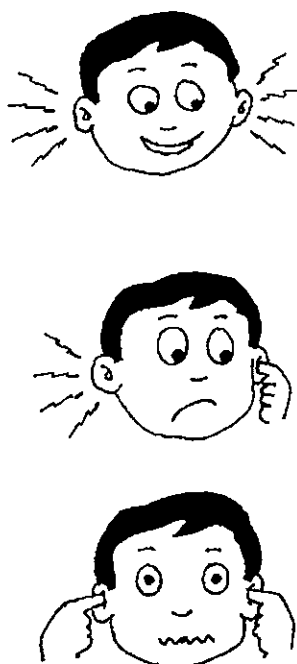
3. You can hear the sound when the vibration of sound reaches the ears. Various sound from our environment is transmitted to the ears through the air.

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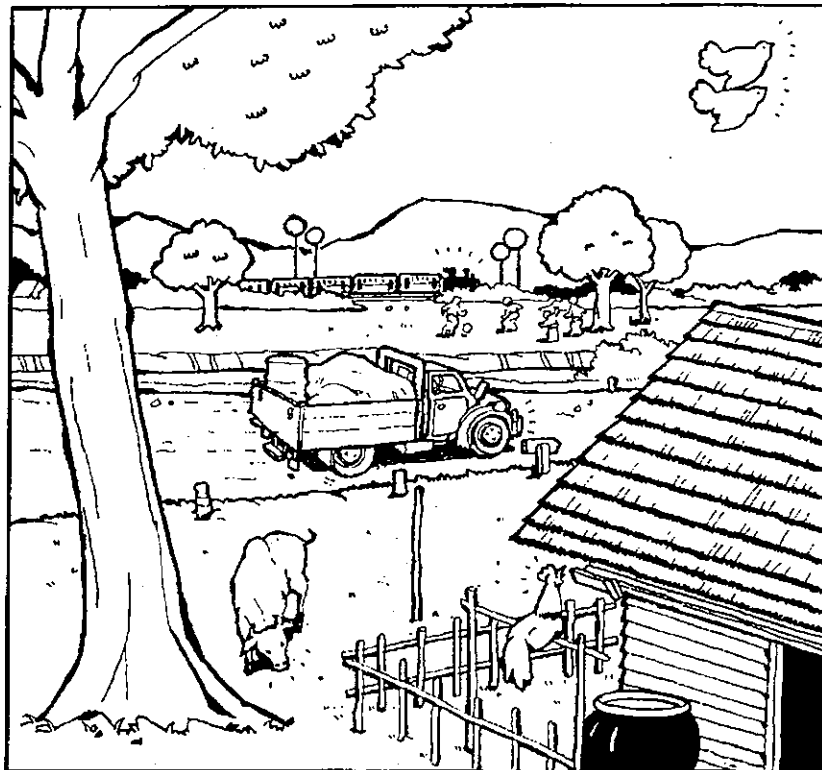


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3-23 2012



What will he happened if he closed his ear?



Voice and Types of sound in our environment.

Reference

Furthermore, when listening to the sounds in ones environment with one ear closed, both ears closed or just as normal, children can experiment that the volume of sound (high/low) is different and this knowledge can help and sympathize those who have hearing difficulties or deaf.

It is necessary for the children to be able to classify the sounds by listening. Only then they will know the sounds that are dangerous for them. They should know that automobile horns, bicycle bells, etc are sounds to caution them of the danger.

Therefore, it is necessary for the children to ponder and classify regarding the various sounds in their environment. Only when, they will identify what kind of sound is warning for danger. They should know that sounds of car horn and bicycle bell are warning sound for danger.

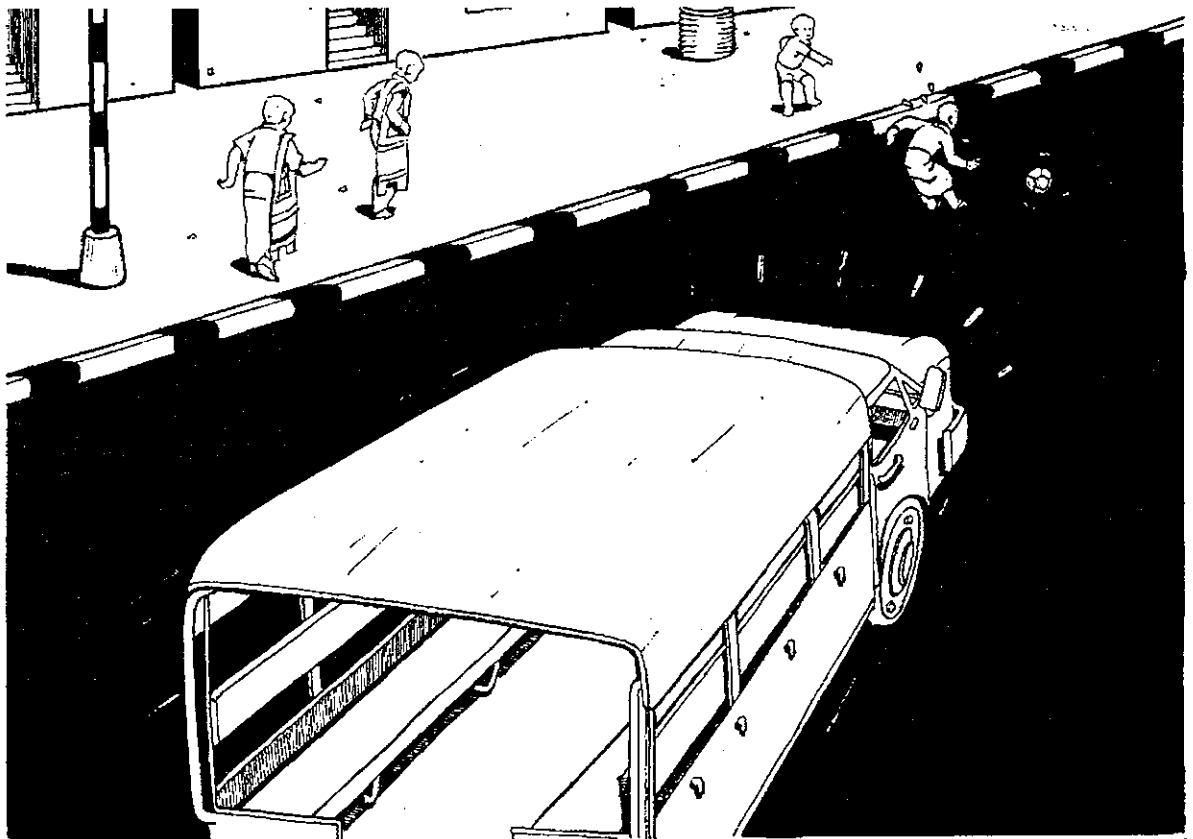
Therefore, it is necessary for the children to be able to think about and classify the various sounds in the environment.

It is to communicate one another with voice in the environment. It is difficult to communicate among man, among animals and between man and animals without producing voice.

Month-old infants who cannot speak express their hunger, happiness, anger and dissatisfaction with various voices.

Animals' make different voices when they get angry, when they fight each other, when they are quarrelsome, when they are hungry and when they are happy.

Therefore different voices have different meanings and the meaning differs according to voice.

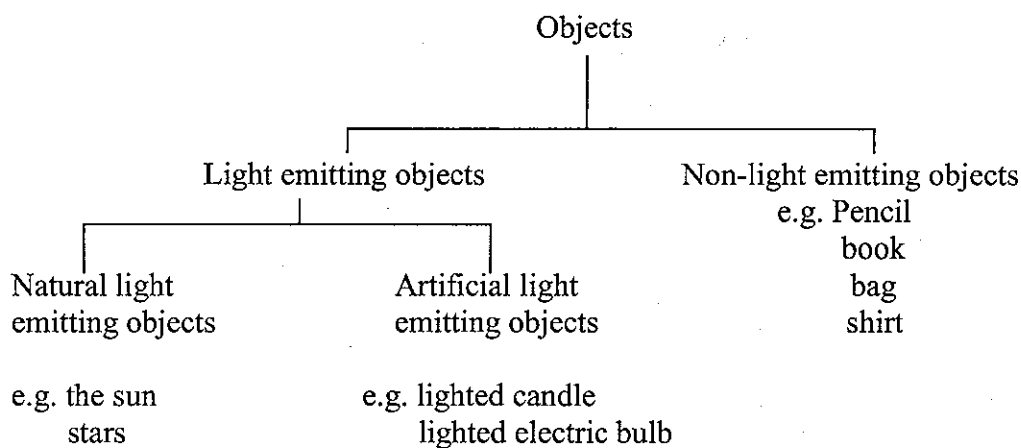


Topic 11: Light Emitting Objects and Sources of Light

Key Concept	Differentiating and remembering the objects that emit light in one's surrounding.
Learning Objectives	
General Objectives	To be able to differentiate the light emitting objects
Specific Objectives	Children are able (1) to investigate the light source (2) to describe non-light emitting objects (3) to differentiate between the natural light emitting objects and other light emitting objects
Activities Involved	<ul style="list-style-type: none">- Observation- Experiment- Group work- Playing
Teaching/Learning Materials	<ul style="list-style-type: none">- glass plate, candle, lighter, various plain mirrors- pictures of the Sun, the moon, and stars etc.
Teaching Periods	6 periods (180 min.)

Before Getting Started

Background Information for Teachers	<p>Light is a kind of energy. It can be divided into two types: natural light source and artificial light source. The sun and stars are natural light emitting sources. Teacher should know that the moon has no light of its own. The light from the moon is only the brightness due to the reflection from its surface as the light of the sun falls on the moon. Fireflies found in dark at night produce light naturally. Some sea fishes grouping in the sea and some fishes reared at home as pets naturally produce light in the dark at night.</p> <p>Light is essential for the livings. It is not possible for the livings (animal and tree) to survive without light. The plant that does not get adequate light cannot grow well like the plant that gets light adequately. As human, it is not possible to carry out any kind of work. For examples, workers cannot work. Similarly, students cannot study school lessons. Human development will stop without any light.</p>
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Lesson Planner

	<u>Period One</u>	<u>Period Two</u>	<u>Period Three</u>
Specific Objectives	to investigate the light source		
Introduction (Evocation)	Observation of pictures	Asking if it is possible to see the shape of the sun clearly or not	Ask the children to describe the objects that they have been let to observe at home
Development (Reflection)	Observation on the light emitting objects during daytime and nighttime	Looking at the sun through smoked glass practically	Teacher lights the candle and oil lamp. Drawing pictures
Conclusion (Realization)	Making them know the natural light emitting objects	Making them know the shape of the sun clearly	Making them know the artificial light emitting objects
Assessment points	Observation on the children whether they can observe the illustration chart or not	Observation on the children whether they themselves participate in practical doing or not	Observation on the self-participation of the children

	<u>Period Four</u>	<u>Period Five</u>	<u>Period Six</u>
Specific Objectives	to investigate the light source	to describe non-light emitting objects	to differentiate between the natural light emitting objects and other light emitting objects
Introduction (Evocation)	Asking questions	Asking questions about objects that cannot emit light	Discussing the previous lessons with questions again
Development	Playing with the	Observing by	Playing with picture

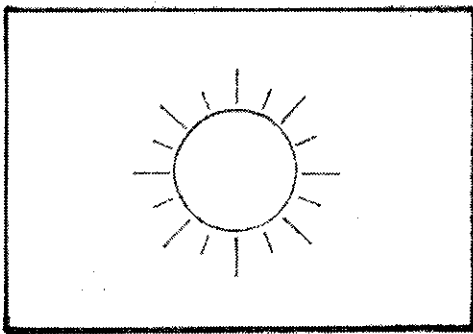
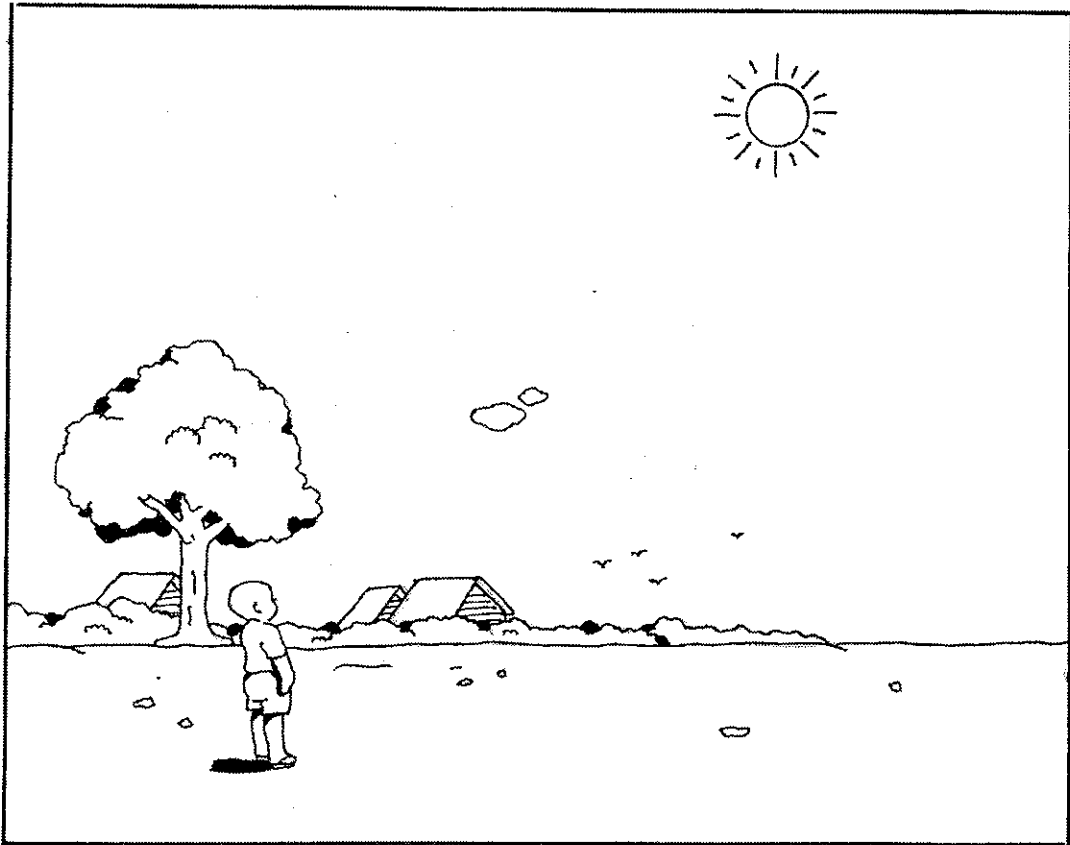
(Reflection)	picture cards of natural and artificial light emitting objects	putting light emitting objects and non-light emitting objects in a paper box	cards
Conclusion (Realization)	Making them investigate the light emitting objects	Things that cannot be seen in the dark are called non-light emitting objects	Differentiation among - natural light emitting objects - artificial light emitting objects - non-light emitting objects
Assessment points	Observation on the children whether they participate while playing or not	Asking questions Observation on the children while carrying out practical doing	Asking questions Observation on the children whether they participate or not while playing with picture cards

Teaching/Learning Procedure

Period One

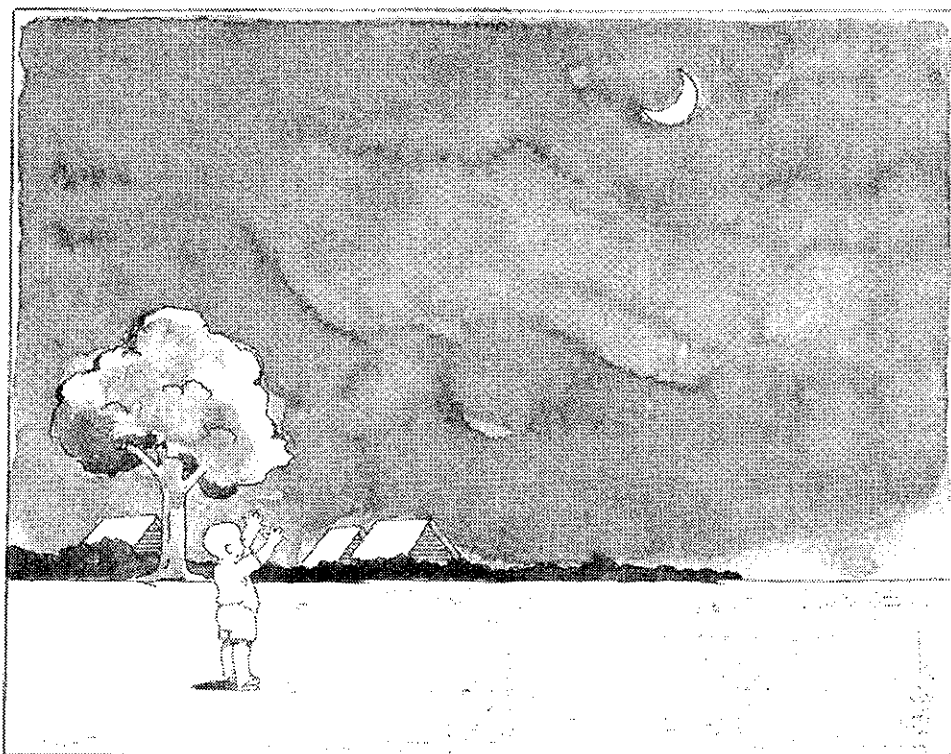
Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Whole class discussion Recall the prior knowledge learned in KG on differentiation of light and dark with the following questions. - “Why do you see the things at daytime?” - “Why don’t you see the things at night?” - “What will you do to light the dark room at night?” “Let’s study the light emitting objects.”</p>	5 min.		In order to recall the prior knowledge gained in KG
<p>Organize the children groups containing five or eight children in one group. Distribute one illustration chart to each group and have them observe the illustration chart carefully by group. Ask them to tell their findings group by group. Teacher asks questions as follows:</p>	10 min.	Illustration charts indicating the sun, the moon and stars	

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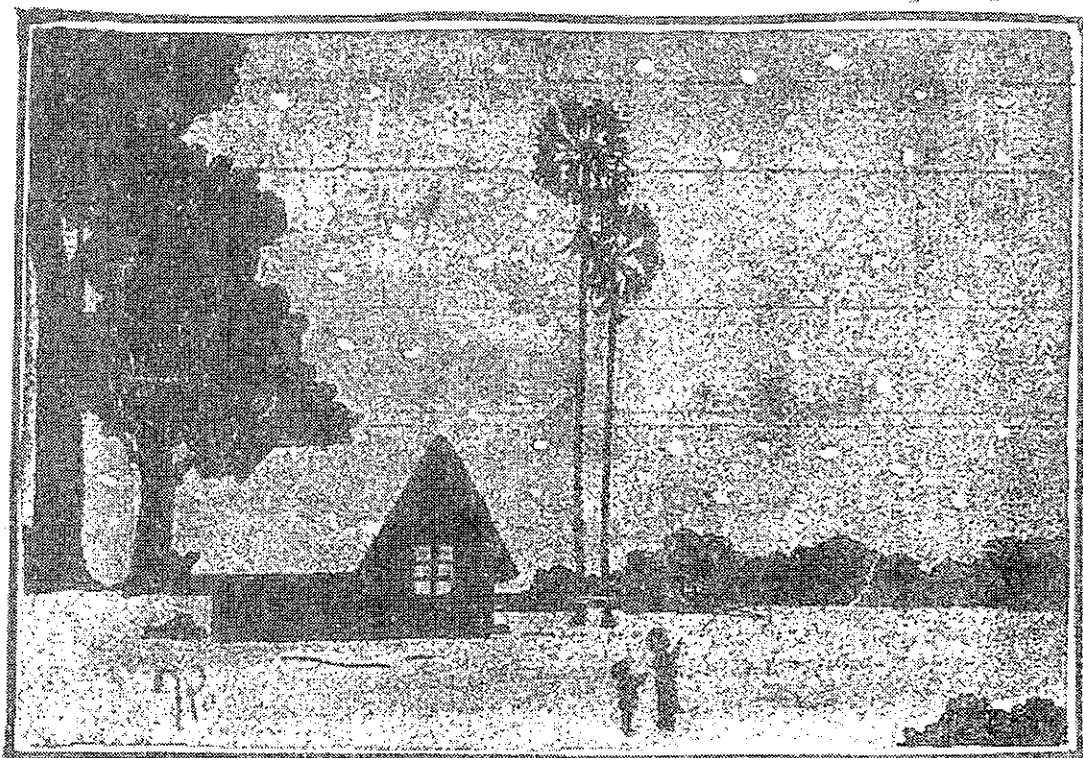


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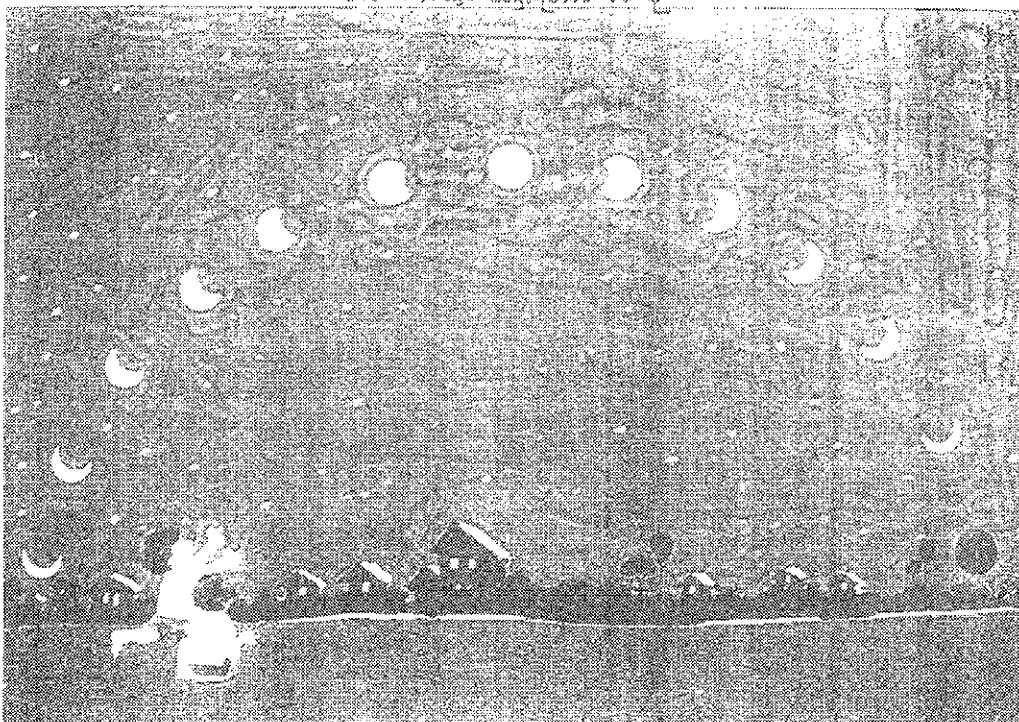
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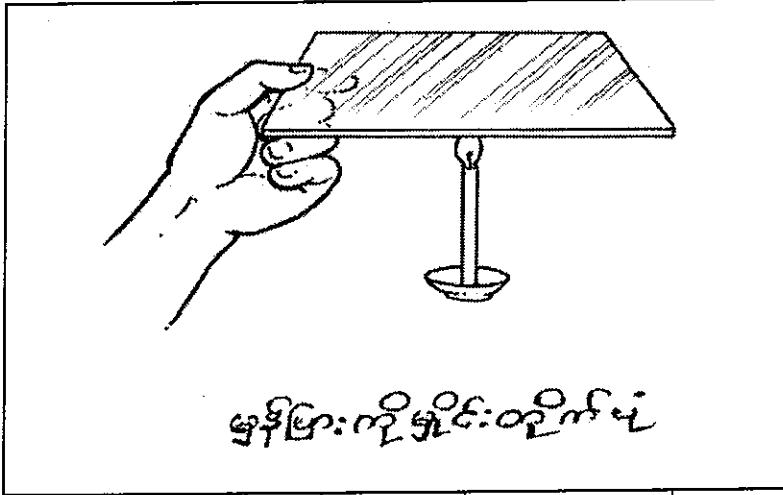
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<ul style="list-style-type: none"> - "What light-emitting object is brighter?" - "At what time of a day is the sunlight brightest?" - "Is the shape of the moon you seen during one month?" - "At which size of the moon is the moonlight brightest?" <p>After telling their findings by one group, let this group raise the illustration chart they got in order to make the whole class see obviously. Discuss with the whole class to verify that the discussing points presented by this group are in line with the points included in the illustration chart.</p>			
<p>After telling their findings by all groups, teacher asks the following questions.</p> <ul style="list-style-type: none"> - "From where is light obtained during daytime?" - "From where is light obtained during nighttime?" - "Who light the sun and stars?" - "Is there anything else that produces light naturally?" - "What are they?" 	15 min.		<p>They will find out the natural light emitting objects. Tell the children that the sun and stars are natural light emitting objects. They also have to know that there are natural light emitting animals. e.g. Firefly, light producing fish</p>



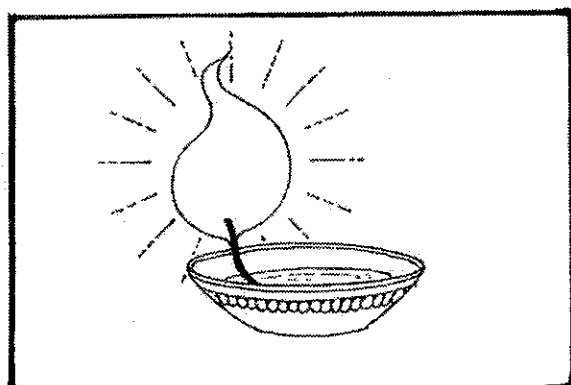
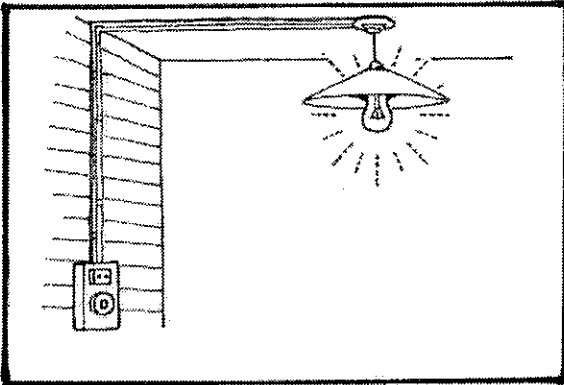
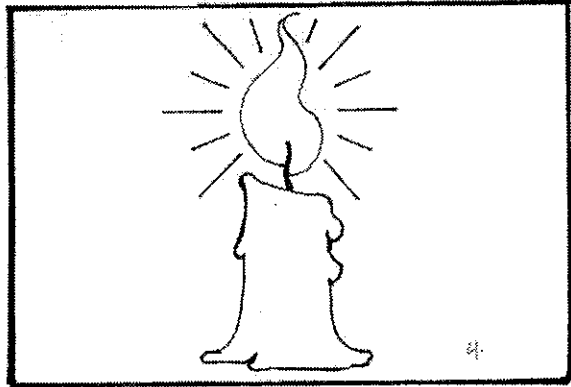
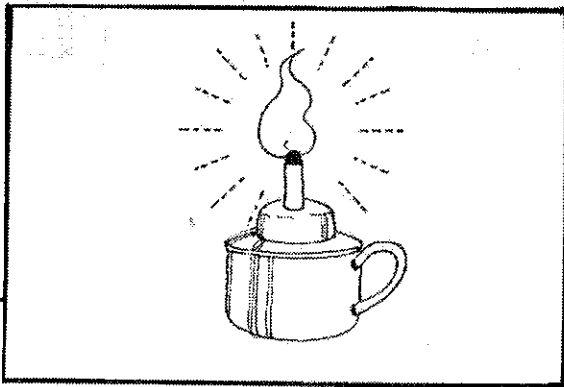
Period Two

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Lesson starts by asking questions in order to recall the prior lesson.</p> <ul style="list-style-type: none"> - “Describe the name of natural light emitting objects.” - “Have you ever seen the sun and the moon?” - “Have you ever seen the shape of the sun?” - “What shape is it?” - “How do you look at it?” - “With what do you look at it?” - “If that so, do you want to see the shape of the sun in the sky?” <p>OK. Let’s go and see the shape of the sun.</p> <p>Children are taken outside classroom.</p>	5 min.	smoked glasses, candle	Teacher has to smoke a glass plate in advance. Teacher shows the children how to smoke a glass plate practically.
			
<p>First, teacher demonstrates how to look at the sun with smoked glass plate practically.</p> <p>Then, have the children do practically by themselves.</p>	15 min.		Children will see the shape of the sun clearly.
<p>Take the children back into the classroom. Ask them to draw the shape of the sun they have seen. Let them tell the shape of the sun. Ask the children to observe the light emitting objects at home and in the</p>	10 min.		Teacher manage to let every child participate

environment besides the sun and the moon and stars.

Period Three

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Whole class discussion</p> <p>- "Did you observe the light emitting objects used at your home and in the environment?"</p> <p>Have them tell each other the names of objects they observed and note down.</p> <p>Have the groups present one after one. Teacher writes down them on the blackboard.</p> <p>- "You have already known the objects used to get light when it becomes dark at night. What has to be done in order to make light come out from these objects?"</p>	10 min.	different soils that children have brought	<p>They will be able to find out the light emitting objects we use.</p> <p>e.g. Light the candle Switch on in case of electric bulbs and fluorescent lamp</p>



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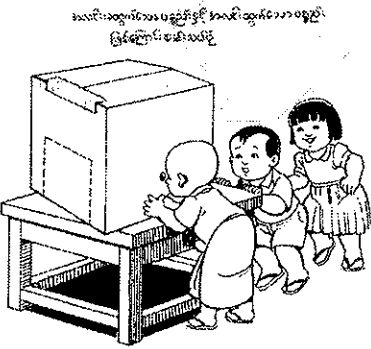
<p>Asking question on how the light comes from these objects, carry out the practical doing.</p> <p>By showing two candles, ask, - “Are the light coming out from those candles?” - “What do you do to the candles to get light from it?”</p> <p>Teacher demonstrates practically. Let the children observe the two types of candle by group. Have them tell their findings. Write the answers of the children on the blackboard.</p> <p>- “What has to be done in order to make the light come out from an electric bulb used at home?”</p> <p>Distribute the torch without battery to the children and let them make light come out; let them tell their findings.</p> <p>Then distribute batteries and let them carry out practical doing; have them tell their findings.</p> <p>Teacher tells that the objects, which can emit light by means of electricity can give light only when electricity is available.</p> <p>By showing the oil lamp filled with oil, teacher asks children how should it be done to get light. Teacher demonstrates practically. Ask, - "It is possible to get light if there is no wick in the oil lamp?" - “Who have to make the light come out from the objects you are using?”</p>	<p>10 min.</p>	<p>candle, oil lamp, torch, battery, candles with wick and those without wick</p>	<p>They will know practically that human beings have to make to get light from the light emitting objects they are using by themselves.</p> <p>Ask the questions until they give the answer "light cannot come out from the candle without wick".</p>
<p>Light can come out only when man do something so that these objects are called man- made light emitting objects.</p> <p>Have the children draw the pictures of man-made light emitting objects Teacher will keep the pictures drawn by the children.</p>	<p>10 min.</p>		<p>Make the children happy. It helps children to be able to draw pictures.</p>

Period Four

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Teacher introduces the lesson by asking the following questions in order to recall their memory on previous lesson.</p> <p>Describe the natural light emitting objects</p> <p>Describe the man-made light emitting objects.</p>	5 min.		
<p>Let's play with picture cards</p> <p>Teacher distributes the picture cards to the children and tells to observe the picture they got.</p> <p>Teacher writes the following headings on large sheets of paper and sticks them in front of the class and behind the class.</p> <p>“Natural light emitting objects”</p> <p>“Artificial light emitting objects”</p>	5 min.	illustration charts of light emitting objects	Children will investigate the light producing objects
<p>Ask the children to stand under the respective headings, holding the picture chart they got obviously.</p> <p>Ask them to check if they are at the right place or not.</p>	10 min.		Teacher leads reading the headings written on the sheet.
<p>If the places are right, let them tell:</p> <p>(1) the name of thing</p> <p>(2) the thing indicated in the picture they got is man-made light emitting object or natural light emitting object.</p>	10 min.		E.g. If one gets the picture of candle, he/she has to say it is a candle and it is a man-made light emitting object.

Period Five

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Teacher asks the following questions.</p> <p>“Do you see the thing I am holding?”</p> <p>“Is it possible to see this pencil, pencil box, and book in the dark?” “Why?”</p> <p>Let's carry out practical doing in order to verify if your answers are correct or not.</p>	10 min.		Teacher asks the same question by substituting book, pencil box and bag instead of the pencil.

 <p>After that, ask each the group of children to look at the pencil put in the box dark inside through the hole on the cover by turns. Let them note down their findings.</p> <p>Then, remove the pencil and put the torch into the box after switching on the light. Ask the children to look through the hole again and let them record their findings.</p>	10 min.	Pencil, paper box, torch, book, pencil box, bag	Teacher puts book, pencil box, and bag etc. into the box in turn.
<p>After that, ask the children to discuss the following questions by group.</p> <p>Why cannot the pencil be seen? Why do you see the light torch?</p> <p>Have them present the results from their discussion by group.</p>			Teacher has to ask the questions until the answer of “the light torch is emitting light that’s why we can see it” comes out.
<p>Teacher tells that; light torch is a light-emitting object so that it can be seen in the dark; book, pencil box and bag are non-light emitting objects so as not to see them in the dark.</p> <p>- “If that so, tell the other non-light emitting objects.”</p> <p>Teacher has to write down on the blackboard.</p> <p>Explain that any kind of thing that cannot be seen in the dark is called non-light emitting object.</p>	10 min.		

Period Six (Assessment)

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed						
<p>Introduce the lessons by discussing with whole class in order to recall the previous lessons learned in the prior lesson. Through showing the picture obviously to see by the whole class, ask them the following question. “Tell the light-emitting object.”</p>	10 min.	Picture charts used in the previous periods and those drawn by the children							
<p>“Let’s play with the cards now.” Teacher explains how to play. Teacher puts the picture charts in front of the class. Ask the children to choose the picture and stick in the table drawn by the teacher.</p> <table border="1" data-bbox="201 913 695 1137"> <thead> <tr> <th data-bbox="201 913 365 1025">Natural light emitting objects</th> <th data-bbox="365 913 529 1025">Artificial light emitting objects</th> <th data-bbox="529 913 695 1025">Non-light emitting objects</th> </tr> </thead> <tbody> <tr> <td data-bbox="201 1025 365 1137"></td> <td data-bbox="365 1025 529 1137"></td> <td data-bbox="529 1025 695 1137"></td> </tr> </tbody> </table> <p>Ask each child from each group to come out in front of the class. Then, let him/her choose the picture that the teacher tells and stick in the table. e.g. If the teacher tells, “non-light emitting object”, the child will choose the picture of book or pencil etc. If the teacher tells, “natural light emitting object”, the child has to choose the picture of the sun or star. After sticking, all will clap their hands. Teacher will praise or will encourage and correct. You have already known the various light-emitting objects. There are differences between natural light emitting objects and man-made light emitting objects. The sunlight, the natural light, has important energy for the survival of plant, man and animal. For example, plants can</p>	Natural light emitting objects	Artificial light emitting objects	Non-light emitting objects				20 min.		Children will be able to differentiate between light emitting object and non-light emitting objects.
Natural light emitting objects	Artificial light emitting objects	Non-light emitting objects							

make its own food with the help of sunlight by means of photosynthesis. The man-made light emitting objects cannot provide the energy like that.			
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Reference

When objects become very hot, light comes out. When an electric current flows into the tungsten wire inside an electric bulb, the wire becomes hot and red at first and then, it becomes hotter so that light comes out. That is how an electric bulb lights.

Light can penetrate glass and glassware. Light travels straight and cannot pass through some objects on its way so that shadow formation occurs. The objects that light cannot pass through are stones, wood, brick wall, book etc.

Light is required in order to be free from danger in the dark places or in the dark. Light emitting objects are used to be free from danger in the dark cave or big hole. What is done to be free from danger in case of lacking light emitting objects in the dark places or the places where impediment or snake or scorpion etc. exists?
[Clear the way by swinging a long stick. Make a loud sound if there is no stick. E.g. Step on strongly]

The light energy obtained from the sun can transform into electric energy. Electric energy is very useful for humans.

The heat energy the sun provides is very useful for humans' work. E.g. salt production by using the sun heat, dried fish production, drying clothes etc.

When the sunlight is focused on only one place, the heat energy can be united so as to make fire.

Method

A black circle is made on a sheet of paper by using black paint. By putting a magnifying glass above the paper under the sunlight, focus the rays of sunlight on the black circle. After a while, smoke comes out and the paper is ignited.

The reason of painting the paper with black color is due to the properties of black color to absorb heat.

Caution

Do not look at the sun with concave lens because heat energy can focus on eyes so as to injure the eyes.

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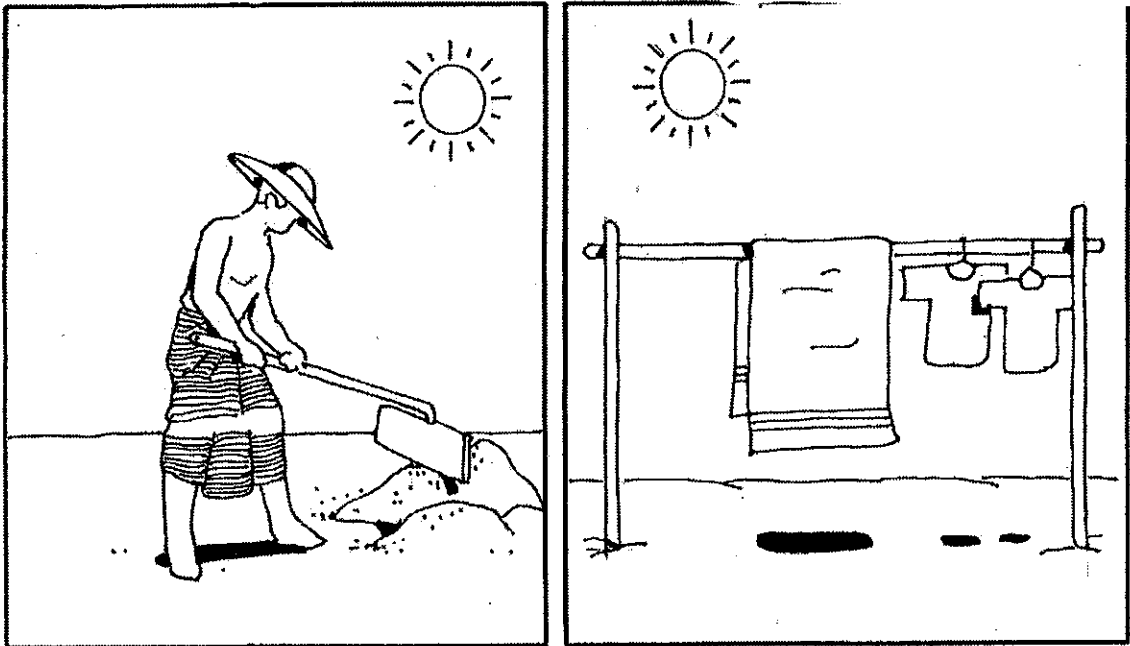
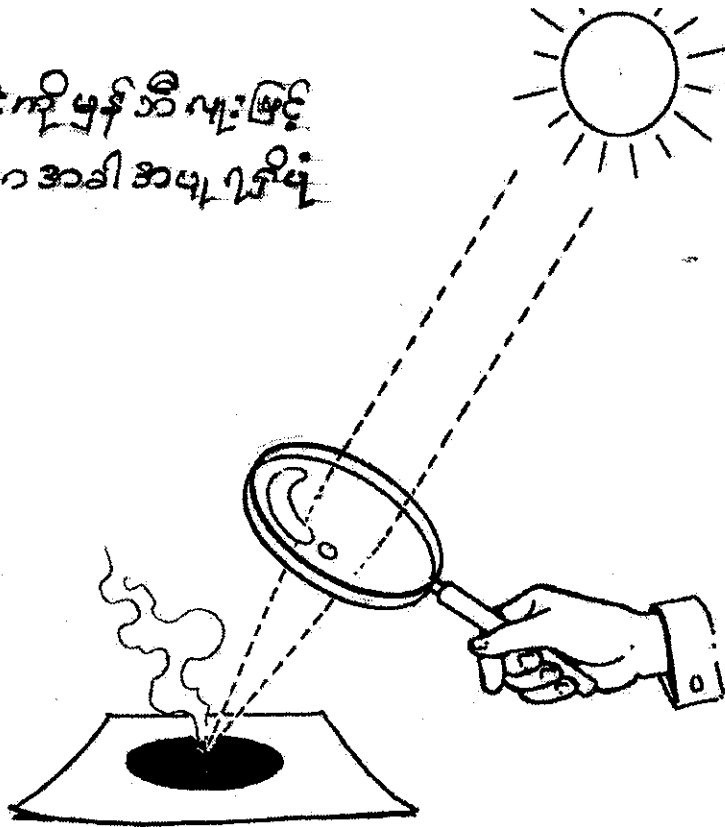


Fig 9

Topic 12: Magnet

Key Concept

Magnets attract the iron objects.

Learning Objectives General Objectives

Be able to know the kinds of magnets and the attracting and repelling property of magnets

Specific Objectives

Children are able

- (1) to know that magnets attract the objects made of irons
- (2) to differentiate the objects in daily life if they are those which magnets attract or those which magnets do not attract
- (3) to play with magnets happily

Activities Involved

- story telling
- observation
- playing fishing
- reciting the poem of little butterfly
- playing the game of 'Wandering little butterfly'
- attracting and repelling with magnets
- practical doing and group discussion

Teaching/Learning Materials

- magnets
- pictures of fish to be attached to small magnet
- fishing rod
- paper

Teaching Periods

3 periods (90 minutes)

Before Getting Started

Background Information for Teachers

There are many shapes of magnets such as horseshoe magnet, bar magnet, block magnet, disc magnet, square magnet, etc. A magnet has two poles, South Pole and North Pole like the earth. When the like poles of two magnets repel each other and unlike poles attract each other. People must know the south and north poles in order to find the directions. In case of impossibility to see the sun, the moon and stars, people can find the directions with the help of magnet. When they travel by sea, they can use the magnet to search for directions. Magnets are applied in making appliances or commodities for human use. e.g. Pencil box, motor, etc. We can magnetize an iron by rubbing several times with a magnet in one direction. It can be found that the magnetized iron can attract nails, rivets and clips. There are natural pieces of iron in natural surroundings such as water, earth, mountain

and forest. We can search for these pieces of iron by means of magnet.

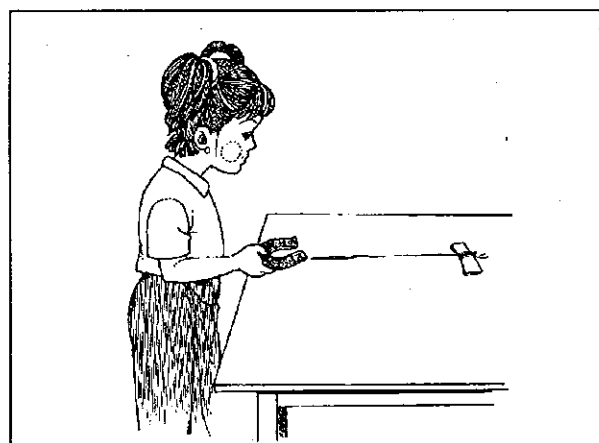
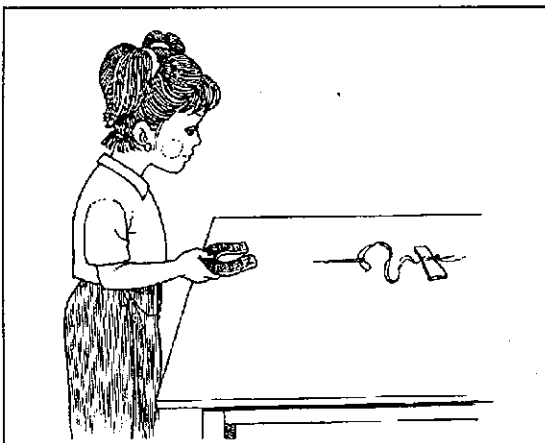
Lesson Planner

	<u>Period One</u>	<u>Period Two</u>	<u>Period Three</u>
Specific Objectives	Be able to know that magnets attract the objects made of irons	Be able to know that magnets attract the objects made of irons	Be able to differentiate the objects in daily life if they are those magnets attract or those magnets do not attract
Introduction (Evocation)	Story telling	Discussion on the previous lesson	Practical doing of wandering butterfly
Development (Reflection)	Observation and playing with magnet	Playing fishing	Playing with a magnet
Conclusion (Realization)	Making to understand that magnets attract the objects made of iron	Making to know that magnets can attract iron materials	Making to know that like poles of magnets attract each other and unlike poles of magnets can repel each other
Assessment points	Question and answer	Question and answer Observing the children in practical doing	Question and answer Observing the children in practical doing

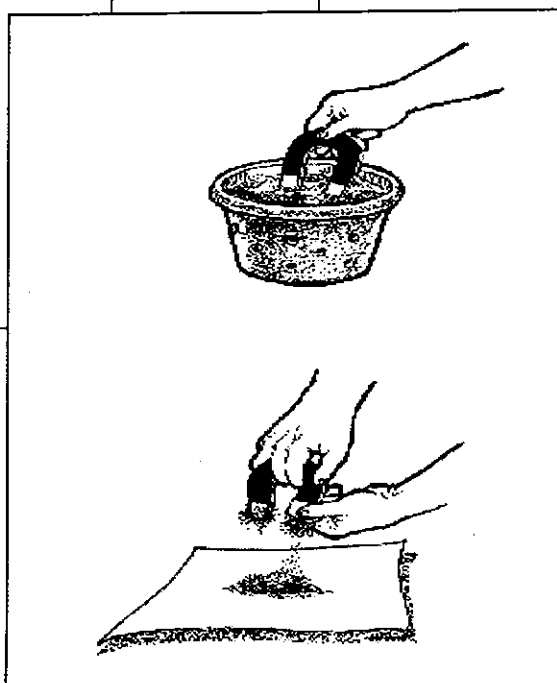
Teaching/Learning Procedure

Period One

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
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<p>Story telling Teacher tells the story of “The loss of a pin”.</p>	<p>5 min.</p>		
<p><i>Once upon a time, there was a girl named Ma Ni who was studying in the Grade One like you. One day, her little gown was torn accidentally while playing at school. When she got home, her mother asked her to buy a needle to stitch her gown at the shop in the street. The needle in the Ma Ni's hand fell onto the ground on the way when going back home. Ma Ni was looking for the needle.</i></p>			
<p>“Would Ma Ni find the needle? “OK, let’s give help to Ma Ni to look for her needle.” “How will you look for it?” Let’s talk about it.</p>			
<p>Observation (1) The teacher goes outside the class together with children. (2) The teacher stirred the sand and earth with a magnet. Let the children see the iron dusts sticking to the magnet. (3) Remove the sticking iron dusts from the magnet onto the paper. (4) Let the children do practically like above procedure. (5) When arriving back to the classroom, put the iron dusts onto the paper and make them move by means of the magnet under the paper. The teacher shows practically that the iron dusts on the paper are moving along the directions of moving magnet. (6) Let the children do themselves practically. (7) Tell that the iron materials are made iron dusts. And explain that pieces of iron can be found naturally in any kind of earth and sand.</p>	<p>25 min.</p>	<p>any kind of magnet, a sheet of paper</p>	<p>Teacher has to manage in order for all children to be able to participate in practical doing.</p>



Period Two

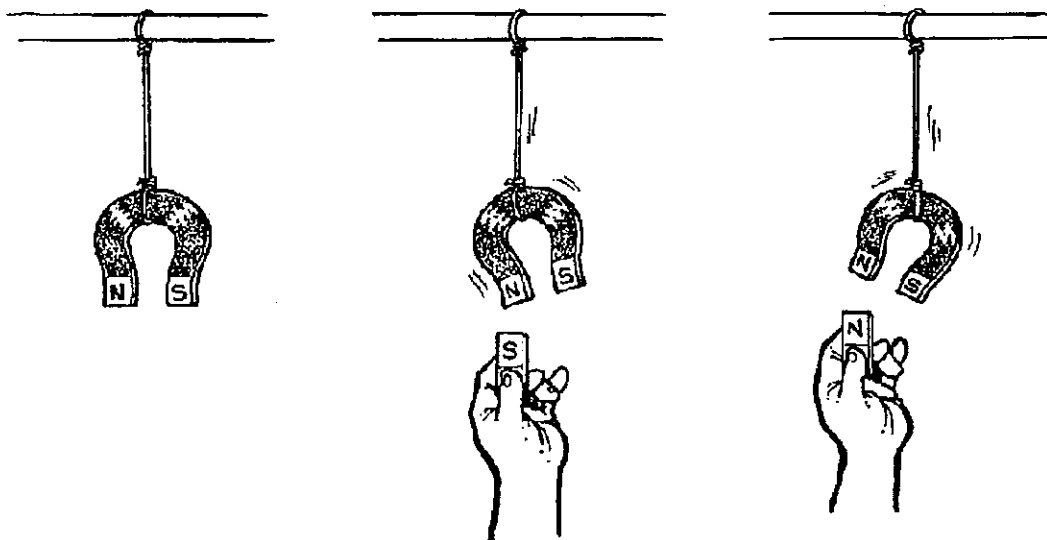
Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Story telling</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p><i>Once upon a time, various kinds of animals lived together in a forest. A talkative fish also lived together with them. The fish usually told lies and made mischief between each other among the animals in order to create quarrels so that animals got angry at each other and had quarrel with each other.</i></p> <p><i>One day, the other animals assembled in a mass and discussed to catch the fish.</i></p> </div> <p>To day I ll stop hear. I ll continue reading story on how they caught the fish. Now, let s try to catch fishes.</p>	5 min.		<p>Read out the story closely related with the lesson about five minutes before teaching daily. It is possible to carry out story reading for five minutes or stopping story reading at the interesting point and continuing next day.</p>
<p>Playing fishing game</p> <p>1) The teacher makes a figure of aquarium with a chalk on the table in the middle of the class.</p> <p>2) Put the paper toy fish, paper toy fish covered with a piece of plastic, paper toy fish covered with a piece of cloth and paper fish to which a piece of iron is attached in the aquarium and mix them altogether.</p> <p>3) Play the fishing game by fixing the magnet to the fishing rod.</p> <p>4) And then let them play fishing in groups.</p>	15 min.	<p>paper toy fish, paper toy fish covered with plastic, paper toy fish covered with cloth paper toy fish to which a piece of iron is attached</p>	<p>Teacher has to motivate all children to be able to participate.</p>
<p>5) Ask them, " Why some fishes do not stick to the fishing rod with magnet?"</p> <p>6) The teacher shows the children magnets in various shapes.</p>	5 min.	<p>various shapes of magnets</p>	<p>If the children cannot find out the answer, let them do again and again in order to know by themselves.</p>
<p>Teacher asks the following questions.</p> <p>(1) Why do some fishes stick to the magnets?</p> <p>(2) Why does the magnet attract the pin?</p> <p>(3) Tell the shapes of the magnets that you have ever seen.</p>	5 min.		<p>Give the children time to think.</p>



Period Three

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Playing the game of "Wandering little golden butterfly"</p> <p>(1) Make the little paper butterflies clipped with iron clips.</p> <p>(2) Put a little butterfly on the card paper on which the pictures of flower have been drawn.</p> <p>(3) Move a strong magnet around beneath the card paper on which the little butterfly is put.</p> <p>(4) The little butterfly will be wandering around.</p> <p>Why is the little butterfly wandering around?</p> <p>Lead the children to do practically.</p>	10 min.	<p>paper butterflies</p> <p>iron clip</p> <p>paper card</p> <p>magnet</p>	

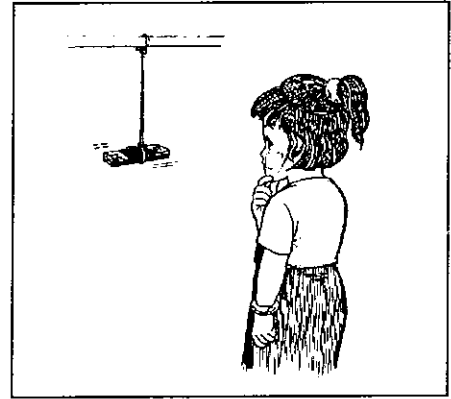
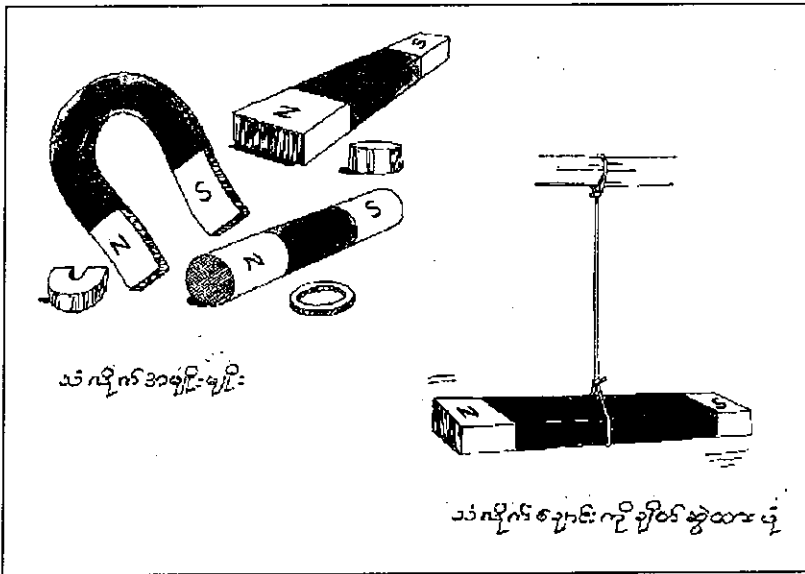
<p>Attracting and repelling with magnet</p> <p>(a) The teacher explains that the poles of two magnets attract each other sometimes, however, they repel each other sometimes.</p> <p>(b) The teacher carries out practical doing in order to show attraction and repulsion of two magnets.</p> <p>(c) Give the magnets to the children and make them carry out practical doing within the group.</p>	10 min.	two magnets	It is unnecessary to make them know that like poles repel each other and that unlike poles attract each other. It is only to make get the knowledge of attracting and repelling.
<p>Practical doing and group discussion</p> <p>(1) The teacher distributes the magnets to the children and asks the questions as follows: "Which objects in the class does the magnet attract?" And also ask the children to do practically by themselves.</p> <p>(2) The teacher records the objects the children groups told on the blackboard.</p>	7 min.		
<p>(1) Tell the three kinds of objects that magnets attract.</p> <p>(2) Tell the three kinds of objects that magnets do not attract.</p>	3 min.		Let the children answer only after the practical doing by themselves.



Assessment

- (1) Let children describe what magnet does.
- (2) Observe children how they participate in practicing to use magnets.

Reference



Topic 13: Advantages and Dangers of Electrical Appliances

Key Concept	Electricity has danger and advantages for man
Learning Objectives	
General Objectives	To know the advantages of electrical appliances
Specific Objectives	Children are able (1) to tell the names of electrical appliances and describe their usages (2) to tell the advantages obtained from using electrical appliances (3) to tell the dangers of electricity.
Activities Involved	<ul style="list-style-type: none"> - story telling - observation - discussion with the whole class - have the children play jigsaw and tell the name of appliance and its usage according to groups - selecting pictures and match - assessment
Teaching/Learning Materials	<ul style="list-style-type: none"> - picture charts of iron, TV, fan - bulb, fluorescent light, refrigerator - radio, cassette, computer, hair dryer and some realia.
Teaching Periods	4 periods (120 minutes)

Before Getting Started

Background Information for Teachers	<p>Teacher must know the names of various electrical appliances. e.g. fan, , rice cooker, hair dryer, TV, Video, computer, radio etc.</p> <p>In using electrical appliances, it has to be known that materials such as wire, plug etc. are used. It also has to be known the manipulation of electrical appliances. Application of each electrical appliance, its advantages and hazards has to be known. It can get electric shock when holding an iron or stove with a wet hand.</p> <p>Parts of materials, which contains in an electrical appliance have to be known as well.</p>
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Lesson Planner

	<u>Period One</u>	<u>Period Two</u>	<u>Period Three</u>	<u>Period Four</u>
Specific Objectives	To know the electrical appliances	To know the usage of electrical appliances	To know the advantages obtained from using electrical appliances	To know the dangers encountered in using electrical appliances
Introduction (Evocation)	Discussion with the whole class Have them tell the electrical appliances contained in the light emitting objects lesson taught previously	Discussion with the whole class Let the children tell the name and usage of electrical appliances they have observed at home and in the environment	Have the children tell by showing pictures Children groups are given picture charts and the cards on which usefulness and advantages are written.	Teacher tells by showing pictures - to put the plug of an iron with a torn wire into the socket. - finger is inserted into the electric socket. - step into a pool where a wire is fallen.
Development (Reflection)	1. Teacher supplements 2. Observation	1. Jigsaw playing	1. Have them match pictures	1. Asking by showing practically
Conclusion (Realization)	1. Children will be made known the name of electrical appliance, which they have not known yet. 2. Children will be made to observe personally	1. The remaining children will be made known what one knows 2. Children will be made known the usefulness of appliances.	1. Children will be made known the name, usefulness and advantages of appliances.	1. Children will be made known the danger of electricity.
Assessment	1. Tell (3) electrical appliances that you know 2. What do you like best in the electrical appliances? Tell why you like it.			1. Asking questions related with the danger of electricity.

Teaching/Learning Procedure

Period One

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed

<p>Whole class discussion It is to tell the electrical appliances included in the previous lesson on light emitting materials. Teacher records the names of appliances told by each student on the blackboard.</p> <p>Supplement Teacher has to supplement the names of electrical appliances that children have not known yet.</p> <p>Observation Children are asked to observe the electrical appliances used at home and in their environment familiar with them.</p>	5 min.	picture cuttings from magazines, etc.	Let children tell the names of appliances by themselves. Have the children know the names of those, which they do not know. If the children have not seen some electric appliances, the teacher explains as she/he shows the picture cuttings. It is to make the children be able to observe by themselves.
	10 min.		
	10 min.		
	5 min.		

Period Two

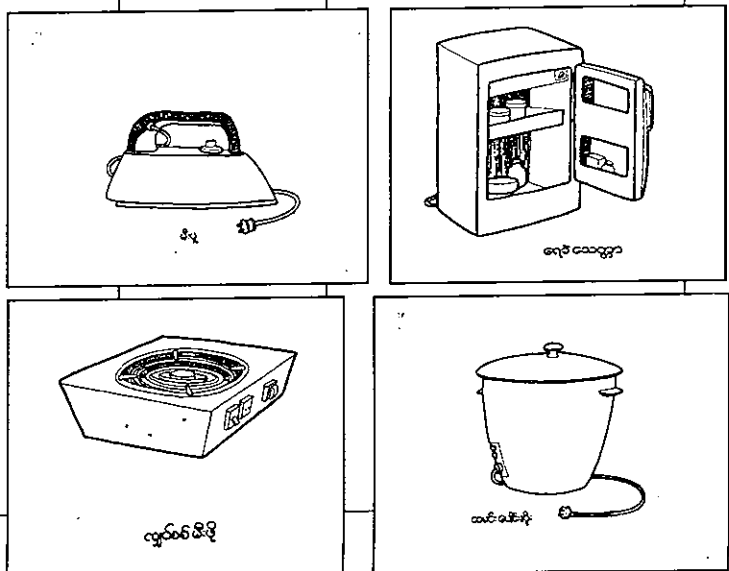
Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Whole class discussion Ask the children tell the names and usefulness of electrical appliances that children have observed.</p> <p>Jigsaw puzzle By organizing groups, give the children and ask the children to compete connecting picture cuttings and tell the name of picture they connected. Have the children tell the utilizations of appliances they connected by group. - How is it utilized? For what is it utilized? - How is it useful? Teacher asks the above questions and explains. Ask the children to change cards each other, connect and tell like above after thinking.</p>	5 min. 15 min.	jigsaw puzzle	

<p>Teacher shows a torch and asks the name of object and its usefulness. After that ask, “What will you do if you want to light this torch?” “What will happen if there are no batteries inside?” Ask how the batteries are placed. Practical will be performed on how batteries are put into a torch and light it.</p>	10 min.		It is possible to ask each children group to bring a torch and battery.
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Period Three

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Matching pictures Divide the children into groups and distribute the picture charts by group. The cards on which electrical appliances have been drawn are given to group (1) Those on which utilization of electrical appliances have been written are given to group (2). Those on which advantages obtained have been described are given to group (3).</p> <p>One child from group (1) holding a card of picture stands in front of the class. Ask the children to hold the cards matched with the picture held by this child and come out and stand beside him.</p> <p>After matching, let them tell by showing the cards. For example:</p>	<p>5 min.</p> <p>5 min.</p> <p>20 min.</p>		<p>Have the children know the usefulness and advantage of each appliance.</p> <p>Have the children know the name, usefulness and advantages of each appliance.</p>

Rice Cooker	Used in cooking rice	Rice can be easily cooked
Electric Iron	Used to iron clothes	Clothes flatten

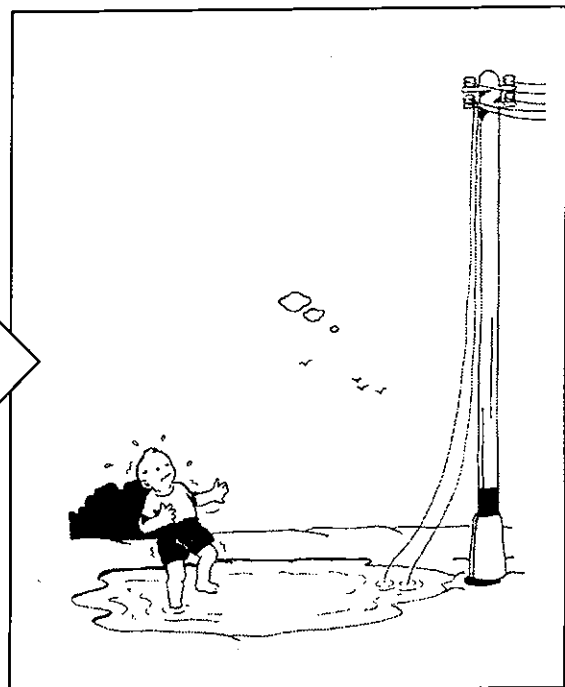
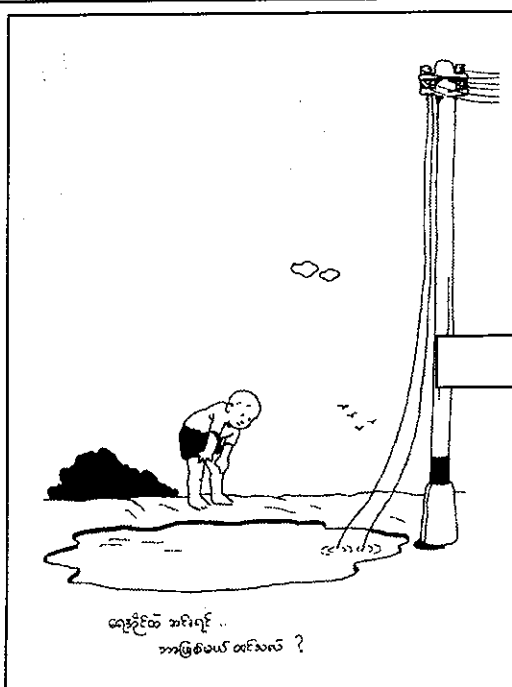
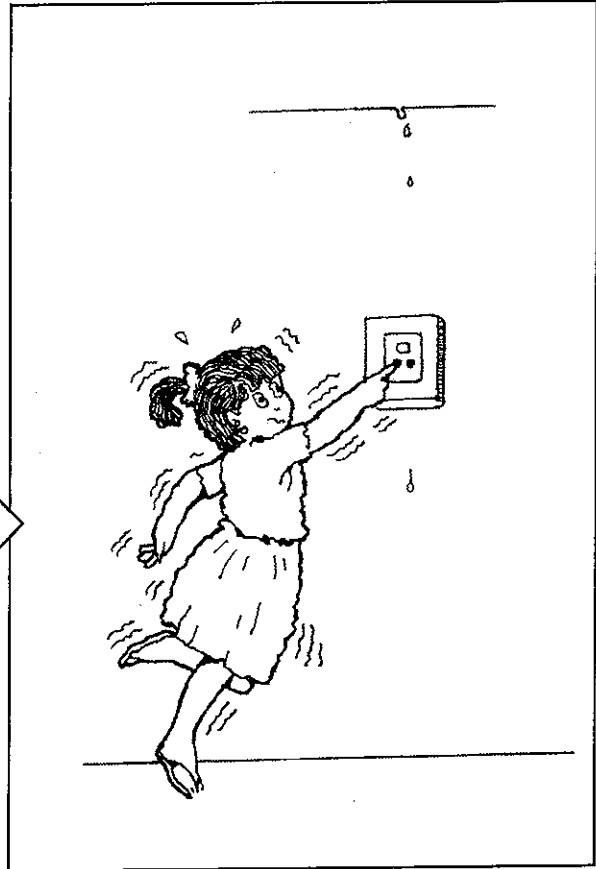
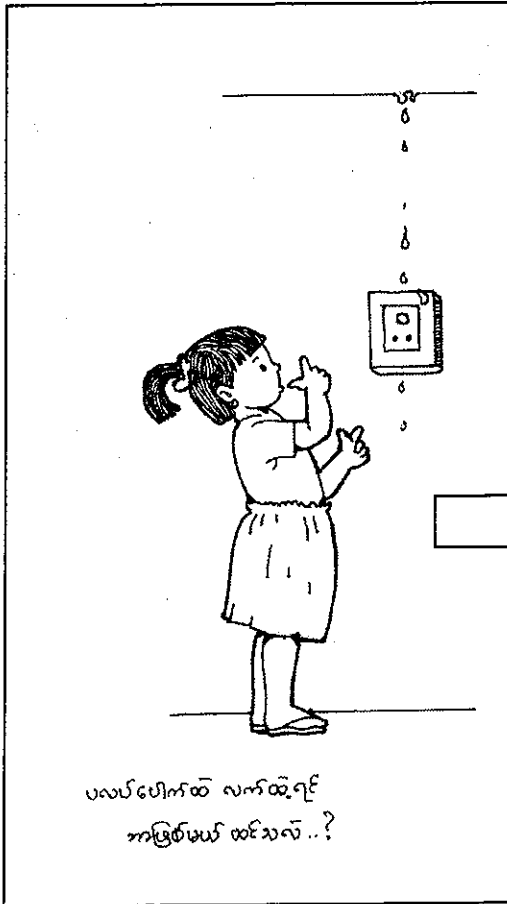


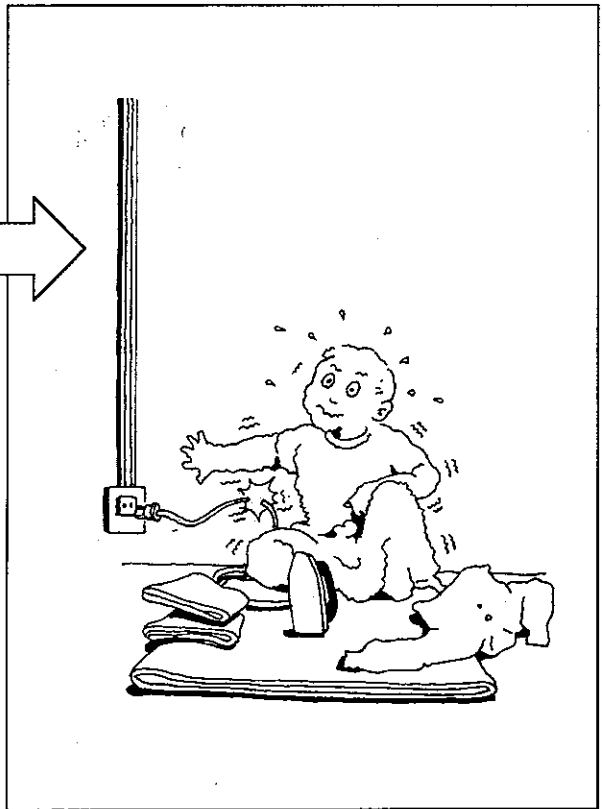
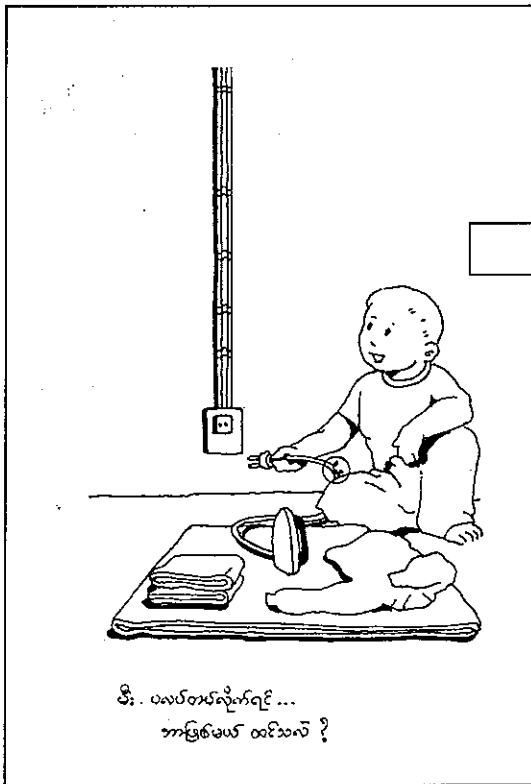
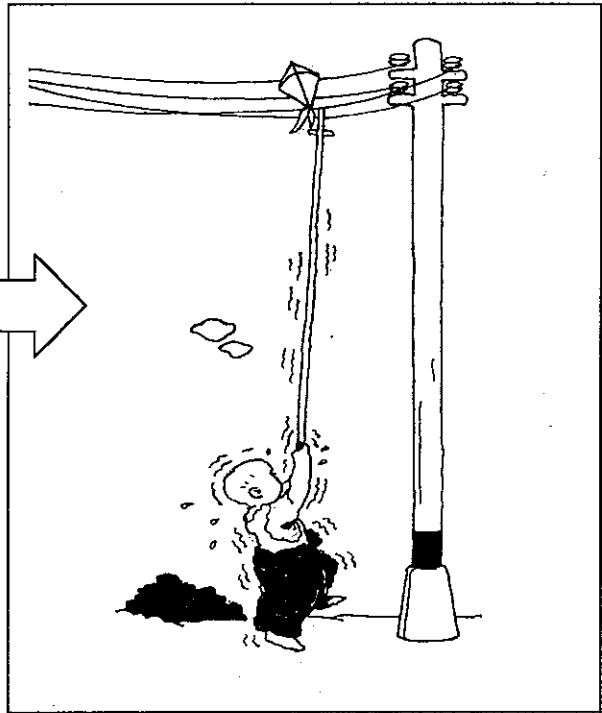
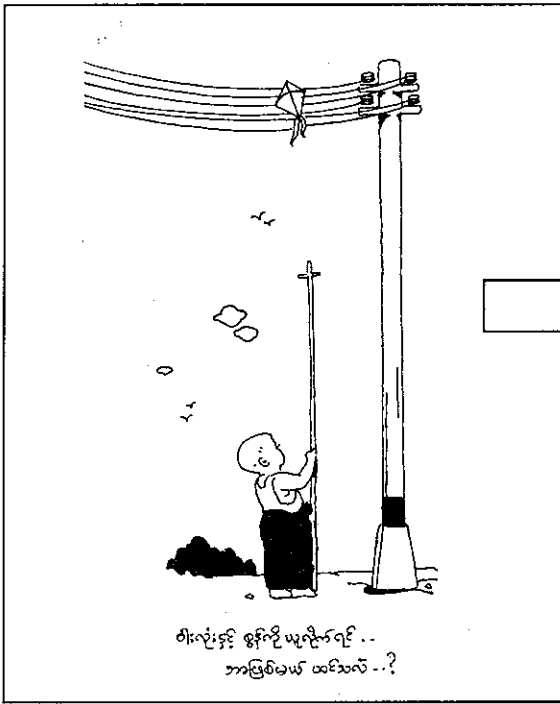
Period Four

Learning Activities	Duration (Min.)	Teaching/ Learning Materials	Points to be noticed
<p>Teacher discusses by showing pictures</p> <p>(1) The picture in which before the plug of an iron with a torn wire is put into the socket. Question: what will happen if the plug is put into the socket?</p> <p>(2) The picture in which the child is looking at the kite tangled at the lamppost by holding a bamboo pole. Question: what will happen if the kite is taken by a bamboo pole?</p> <p>(3) The picture in which a child is looking at the wire dropped into a pool. Question: what will happen when you get into the pool?</p> <p>(4) The picture in which a child is looking at the electric socket. Question: what will happen if you put a finger into the socket?</p> <p>Teacher will show the pictures for correct answers of (1) (2) (3) (4) and compare them with the children's answers. Teacher tells the danger that occurs from electricity and supplements not to do and use like that.</p> <p>Children will be asked to tell the dangers from electricity they have ever seen and heard.</p>	15 min.	Pictures	<p>Let the children think themselves.</p> <p>Let the children think themselves.</p> <p>Let the children think and answer themselves. Teacher will record the children's answers on the blackboard without saying if it is right or wrong.</p> <p>It is to make children know the danger of electricity.</p>
<p>Telling by showing practically</p> <p>Teacher shows children good conditioned switch and broken switch, good conditioned plug and broken plug, good conditioned wire and damaged wire with torn cover, used bulbs and fluorescent lamps.</p> <p>Teacher explains about the hazards by showing the places of electrical danger.</p> <p>Teacher tells children it is very dangerous to take the kite tangled at the top of lamppost or electric power lines by climbing it or by using wet</p>	15 min.		<p>Teacher has to collect in advance and ask the children to bring beforehand.</p> <p>Children will be made known about the hazard of electricity.</p>

bamboo or wooden stick or iron rod.
 Ask them if it should be done or not like that.
 Ask the children to hold those materials and observe by themselves.
 Teacher will show how to handle the materials regarding electricity without danger.

Children should be given the knowledge to avoid the pool where electric cord is cut off and drop and inform adults.





Assessment

1. Is it apt to use if the wires are torn? Tell what you should do.
2. Tell; is it suitable to put a finger into the electric socket? What do you think will happen if you put a finger into the socket?
3. Tell three kinds of electrical appliances.
4. Which one do you like best among these electrical appliances? Why?

Reference

Electricity is included as a very important sector in the present times. Household works can be done quickly and with ease by using electricity. Nowadays, in some countries it can travel fast to very far regions in a short time by using electric trains and cars. Using electricity makes living standard high and time saving. Electricity is important in the development of a country.

In high buildings, lifts and escalators are used with the help of electricity. As man deserves the advantages of electricity, the disadvantages of electricity have also been known. Though every country deserves the advantages of electricity, the disadvantages of electricity are also deserved at the same time.

Hazards can occur if the useful electricity is used carelessly.

Example: not change the torn wires.

taking the kites and lanterns tangled at the lamppost
children holding the switch with wet hands. It should teach children to be able to use systematically the electrical appliances according to age. Even though the wire is torn electrical shock does not occur if it is not touched. However, it has to be known that the torn wire is dangerous.

It should tell children by showing objects that the switches and sockets when broken are not used.

