9. What will happen to the wet clothes after hanging them outside (under the heat of the sun) for 1 day?

UNIT 2: LIVING THINGS AND THEIR ENVIRONMENT

OVERVIEW

The world of living things is made up of humans, animals and plants. Living things are alike and different in many ways. You will learn in this unit that living things help or harm one another. Eyes, ears, nose, tongue and skin are the sense organs. Eyes for sight, ears for hearing, nose for smell, tongue for taste and skin for feeling.

Plants in the surroundings help make air fresh, clean and healthy. Plants are useful to humans. Plants have parts and have functions. Animals are found in different habitats. Some animals live on land, some in water, while others live both on land and water. Body parts of animals are adapted to their habitats. Some animals are useful to humans. They give food like meat and eggs. Some animals provide substances that are used in making medicine.

Healthy parents are more likely to have healthy children. A mother who becomes sick before the baby is born may pass the sickness to the unborn baby. This shows that heredity is one of the causes of poor health. Heredity means the passing of a certain characteristics from the parents to their children.

Chapter 1: Sense Organs

Lesson 1: The Eyes
Duration: 2 days

Background Information
Our eyes help us to see. It has different parts that work together so we can see things around us namely cornea, iris, pupil, lens, retina and optic nerve. Each has specific function.

We should take care of our eyes in many ways. Read and work under good light. When reading, raise your eyes from the page once in a while. Do not read in a moving car or vehicle. Do not rub your eyes with dirty fingers or dirty handkerchief. Wash the eyes by opening and closing them in the water. The use of sharp or pointed objects may harm the eyes. Be careful when using pair of scissors, knives, and sticks.

**Objectives**
At the end of each lesson, the pupils should be able to:
1. identify the parts of the eyes; and
2. identify proper ways of caring the eyes.

**Materials**
- a big poster of the parts of the eyes

**Procedure**

**A. Motivation / Presentation**
Let the pupils stand and get a partner and say:
- Look at the eyes of your partner. Draw the parts that you see.
  - Give the pupils 10 min to do it.
- Compare your drawing with your partner.
- What do you want to know about your eyes?

**B. Lesson Proper**
1. Let the pupils do Activity 1. Give them 10 minutes to do the activity.
2. Using the enlarged picture of the human eye posted on the board, ask the following questions:
   - Compare your labelled parts of the eyes which you did in the activity and the labelled parts in the enlarged picture. (The pupils are expected to have the same labelled parts which they did in the activity compared to the enlarged picture of the human eyes)
   - What are the parts of the eyes that we can see? (The parts of the eyes are the cornea, pupil and the iris.)
   - What are the inner parts of the eyes that you cannot see in a mirror? (Lens, retina, and optic nerve.)
   - What is the work of each part of the eye?
     - The cornea serves as the transparent covering of the eye.
     - The pupil serves as the opening where light enters.
✓ The lens focuses light and projects the image on the retina.
✓ The retina is where the image that is seen is focused.
✓ The optic nerve sends messages to the brain.

- How do we able to see objects? (We can see objects whenever there is light. Light is needed in order to see things. The light from a source falls into the object and then reflected to our eyes. Thus, we are able to see the object.)
- How would you feel if you have your poor eyesight? (I would feel difficulty in seeing all things around me)

3. Let the pupils do activity 2. Give them 5 minutes to do the activity.
4. After doing activity 2, ask the following questions:
   - Which pictures do not show proper ways of caring the eyes? (The pictures showing reading in a dark room and watching very near the television)
   - Why do we have to avoid these practices? (These practices can harm our eyes. Reading in the dark makes the eyes work harder and become tired.)
   - Which pictures show proper way of caring the eyes? (The pictures showing wearing sunglasses on a sunny day and using goggles when swimming.)
   - Why are these practices good to do? (Wearing sunglasses protects the eyes from too much light. Wearing goggles gives protection from particles in water that may cause irritation of our eyes.)
   - Why should we need to take care of our eyes? (Our eyes help us see things around us; it helps us to learn about the things around us. Our eyes need to be taken cared of to maintain good eyesight until old age.)
   - What are other ways of taking care of our eyes?
     ✓ Avoid placing pointed objects near the eyes.
     ✓ Read with sufficient light.
     ✓ Eat foods rich in vitamin A such as green and yellow vegetables.
     ✓ Do not read while riding in a moving vehicle.
     ✓ Rest your eyes after reading for a long period.
     ✓ Avoid rubbing the eyes. When dirt gets in or when it is itchy, use clean running water to rinse the eyes.
   - What should you do if you notice any problem with your eyes? (Consult a doctor who is an eye specialist, if you have problem with your eyes.)

Assessment

I. Match column A with column B. Write the letter before each number.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>___1. Cornea</td>
<td>a. Focuses light and projects the image on the retina</td>
</tr>
<tr>
<td>___2. Pupil</td>
<td>b. Sends messages to the brain</td>
</tr>
</tbody>
</table>
III. Put a [✓] on the box if it shows a proper way of caring the eyes and put a [x] if it is not.

☐ 1. Reading with sufficient light
☐ 2. Rubbing eyes with hands when itchy
☐ 3. Resting eyes after reading for a long period
☐ 4. Looking at the Sun directly
☐ 5. Consult a doctor when having eye problem

Assignment
1. Find out who wears eyeglasses in your family. Ask the reasons why they are using eyeglasses.
2. Is playing computer games for a long period good to your eyes? What should you do to take care of your eyes?

Lesson 2: The Ears
Duration: 3 days

Background Information
None

Objectives
At the end of each lesson, the pupils should be able to:
1. identify the parts of the ears and its function, and
2. identify proper ways of caring the ears

Materials
a big poster of the parts of the ears

Procedure
A. Review
   Ask:
- What sense organ would you use to see the parts of your ears?
- Would you be able to study the parts of the ears without your eyes? Why?

B. Motivation / Presentation
   Let the pupils stand, get a partner and say:
   - Look at the ears of your partner. Draw the parts that you see.
     Give the pupils 10 min to do it.
   - Compare your drawing with your partner.
   - What do you want to know about your ears?

C. Lesson Proper

1. Let the pupils do activity 3. Give them 10 minutes to do the activity.

2. Using the enlarged picture of the ears posted on the board, ask the following questions:
   - Were you able to name correctly the parts of the ear that you draw.
   - What are the parts of the ears that you see? (The part of the ear that I can see are the pinna, and the opening of the ear canal)
   - What are the parts of the ear that you cannot see? (The rest of the ear canal, ear drum, the three little bones- hammer, anvil and stirrup, cochlea, and auditory nerve.)
   - What is the work of each part of the ears?

3. Let the pupils do activity 4. Give them 10 minutes to do the activity.

4. Using the enlarge picture of the ear, let the pupils trace the path of sound as it enters the pinna.

5. Explain the path of sound from pinna to the brain. Ask the following questions:
   - Why do you think the pinna and the eardrum are shaped like a funnel? (The shape of the pinna helps in collecting the sound and focusing it towards the ear canal.)
   - What happens to the eardrum when sound reaches it? (The eardrum vibrates as sound hits it. From here the sound is amplified.)
   - What happens to the amplified sound from the eardrum? (The amplified sound pass through the three small bones - hammer, anvil and stirrup. The cochlea detects the vibration and sends the message to the brain through the auditory nerve.)
6. Let the pupils perform activity 5. Give them 10 minutes to do the activity.

7. Ask the pupils the following questions:
   - What are the proper ways of caring the ears which you marked check in your activity? (The proper ways are: using clean cloth in wiping the outer ear and having a doctor check the ears for any problem.)
   - Why are these ways good to do for our ears? (The ears should only be cleaned in the outside using a clean cloth. It is not proper to insert objects inside the ear to avoid damaging it. Whenever there is a problem about the ears, it is best to consult a doctor.)
   - What are ways that you should avoid? (Listening to loud music and inserting sharp objects in the ear.)
   - Why do you have to avoid doing these? (Sharp objects could hurt the ears especially the inner parts like the eardrum. Listening to very loud music may affect hearing.)
   - What other ways do you do to take good care of your ears?
     ✓ Never put anything inside the ear
     ✓ Avoid very noisy places
     ✓ Listen to not too loud radio or music, even when watching television
     ✓ Consult a doctor when there is a sudden loss of hearing.

Assessment

I. Match column A with column B. Write the letter before each number.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>____1.</td>
<td>Pinna</td>
</tr>
<tr>
<td>____2.</td>
<td>Ear canal</td>
</tr>
<tr>
<td>____3.</td>
<td>Eardrum</td>
</tr>
<tr>
<td>____4.</td>
<td>Cochlea</td>
</tr>
<tr>
<td>____5.</td>
<td>Auditory nerve</td>
</tr>
<tr>
<td></td>
<td>a. Transmit sounds to the auditory nerve</td>
</tr>
<tr>
<td></td>
<td>b. Sends message to the brain</td>
</tr>
<tr>
<td></td>
<td>c. Collects sounds</td>
</tr>
<tr>
<td></td>
<td>d. Where sound travels from pinna to the ear drum</td>
</tr>
<tr>
<td></td>
<td>e. Vibrates when sound hits it</td>
</tr>
</tbody>
</table>

II. Put a [✓] on the box if it shows a proper way of caring the ears and put a [x] if it is not.

☐ 1. Avoiding noisy places
2. Consulting a doctor when there is a problem about the ears and hearing
3. Cleaning the inside of the ears with cotton buds
4. Turning the volume high when listening to music
5. Using earmuffs when in a place with loud sounds.

Assignment
1. Why are the ears important?
2. What can happen if the sense of hearing is impaired?

Lesson 3: The Nose
Duration: 2 days

Objectives
At the end of each lesson, the pupils should be able to:
1. Identify the parts of the nose and its function; and
2. Identify proper ways of caring the nose.

Material
big Picture of a nose

Procedure
Review
Post the enlarge drawing of the ear.
Ask: Why are our ears important? Trace the path of sound as it enters the outer ear to the inner ear and then to the brain for interpretation.

Motivation/Presentation
Ask the following questions:
- How can you tell what your mother is cooking?
- What sense organ do you use in smelling?
- Can you tell the parts of your nose? What do you like to study about your nose?
(Post questions on the pocket chart.)

Lesson Proper
1. Let the pupils do activity 6. Give them 10 minutes to do the activity.
2. After doing activity 6, ask the following questions:
   - Look at the drawing of your classmates. Do you have the same drawing of the nose?
   - What are the parts of the nose that we can see? (The part of the nose that we see are the two holes of the nose called the nostrils.)
• What are the inside parts of the nose? (The nasal cavity and inside it are the nerve cells.)
• What is the function of each part of the nose?
  ✓ The nostrils receive the scents carried by air. Hairs are present on the nostrils which filter the air that gets through your nose.
  ✓ The nasal cavity secretes mucus which further cleans the air.
  ✓ The nerves in the nasal cavity send messages to the brain which interprets what we have smelled.
• What can happen if the sense of smelling is impaired? (You will not be able to smell the odor or scents of things.)

3. Let the pupils do Activity 7. Give them 10 minutes to do the activity.
4. Ask the pupils the following questions:
• What are the proper ways of caring the nose which you marked check in your activity? (The proper ways are: covering the nose while passing by a dusty road and using a clean handkerchief or cloth in cleaning the nose)
• Why do you have to care for your nose?
• Which are NOT the proper ways to do in your nose? (Using sharp objects to clean the nose and blowing hard.)
• Why do you have to avoid doing these? (It can harm the nose.)
• What are other ways of taking care of your nose?
  ✓ Not inserting small objects inside the nose
  ✓ Seek doctors help when an object is inserted in the nose

Assessment

I. Match column A with column B. Write the letter before each number.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Nostrils</td>
<td>a. Carries the messages to the brain so the person will know what he smelled</td>
</tr>
<tr>
<td>2. Nasal cavity</td>
<td>b. Opening of the nose</td>
</tr>
<tr>
<td>3. Nerves</td>
<td>c. Secretes a sticky mucus which trap dust, dirt and germs carried by inhaled air</td>
</tr>
</tbody>
</table>

II. Put a [✓] on the box if it shows a proper way of caring the nose and put a [✗] if it is not.

☐ 1. Inserting small objects inside the nose
☐ 2. Consulting a doctor when there is discomfort with our nose
☐ 3. Cleaning the inside of the nose with sharp objects
☐ 4. Covering the nose when passing a dusty road
☐ 5. Blowing the nose hard when with colds
Assignment
Answer the questions below:
1. Why is the nose important?
2. What can happen if the sense of smell is impaired or does not function well?

Lesson 4: The Tongue

Duration: 3 days

Background Information
None

Objectives
At the end of each lesson, the pupils should be able to:
1. describe the uses of the tongue; and
2. identify the parts and function of the tongue.

Materials
big picture/ illustration of the tongue, flow chart of how the parts of the tongue function, real food samples (ex. kalamansi, salt)

Procedure
A. Review
What are the parts of a nose?

B. Motivation/ Presentation

Call a pupil. Blindfold him/her and let him/her taste the kalamansi juice. Let the pupil guess what the liquid is. (The class will tell whether the answer is correct)

Remove the blindfold as soon. Ask the pupil:
• How did you know that it was kalamansi juice? (It tastes sour.)
• What did you use to taste it? (My tongue.)

Ask the class:
Do you know how our tongue functions?

C. Lesson Proper

1. Tell the class to bring out their mirrors. Let them do activity 8 in their LM individually first. Remind them to be careful in using and handling a mirror.
2. After answering the activity, divide the class into groups. Let the class compare and discuss their answers. Tell them to report their answers to the class.
3. Ask 1-2 members of the group to report their work in class. Discuss the answers to the activity. (You may use a big picture / an enlarged illustration of the parts of a tongue.)
4. Lead the pupils in developing these concepts:
   - Tongue is the sense organ that helps us taste all things we place inside our mouth.
   - The tongue has taste buds and nerves.
5. Discuss thoroughly how the tongue functions as stated in the activity. (You may use the pupil’s enlarged flow chart.)
6. Let some pupils taste certain foods to demonstrate how the tongue functions.
7. Let the class check their answers to the activity.
8. Tell the class to do activity 9 in their LM. Check the answers to the activity. Let the pupils explain their answers.
9. Discuss with the class the following concepts:
   - Eating very hot food can scald the tongue.
   - It is proper to consult a doctor when the tongue has sores.
   - Use a tongue scraper to clean the tongue so as not to damage the taste buds.
   - Brushing teeth is important to avoid infection of the tongue and gums and prevent tooth decay.

**Assessment**
Ask:
1. What are the parts of a tongue and their functions?
2. What’s the importance of caring the tongue?

**Assignment**
The tongue needs to be cleaned from time to time. How do members of your family clean their tongue? Write their responses on your notebook.

**Lesson 5: The Skin**
Duration: 2 days

**Background Information**
None

**Objectives**
At the end of each lesson, the pupils should be able to:
1. describe the uses of the skin;
2. identify the parts and function of the skin; and
3. show proper ways of caring for the skin.

**Materials**
- big picture / Enlarged illustration of the parts of the skin, magnifying glass
Procedure

A. Review
What are the parts of the tongue?
How does the tongue work?

B. Motivation/Presentation
Place familiar objects with different shapes, textures and thickness inside the pouch.
Let some pupils identify these objects by a: touching using gloves and b: touching without using gloves.
Ask:
In which situation (a or b), can you easily identify the objects? Why?
What sense organ is involved in this activity?

C. Lesson Proper
1. Distribute magnifying glass to the class. Discuss briefly the proper use of a magnifying glass.
2. Tell the pupils to do activity 10 as a group.
3. Tell the class to choose a leader to discuss the parts and function of the skin found in the LM.
4. Check the answers to the activity.
5. Discuss the following concepts:
   - Using magnifying lens, we can see tiny hairs and openings on our skin.
   - The skin is the outer covering of our body.
   - The skin protects the body from losing too much water, injuries and infection.
   - The skin helps maintain body temperature.
   - The skin consists of two layers:
     - Epidermis: outer layer of the skin on the surface on which dead skin cells are found.
     - Dermis: inner layer of the skin which contains blood vessels, nerves, sweat glands and oil glands.
   - The sweat glands open to the surface of the skin through the pore.
   - The oil glands keep the hair and skin soft and moist.
   - The skin has nerve endings that sense touch, pain, pressure, and temperature.
   - The nerves send messages to the brain which interprets the message and we feel the objects.
6. Discuss also how the skin works.
7. Tell the pupils to do activity 11 in their LM individually.
8. Check and discuss the answers to the activity. Let the pupils explain their answers.
9. Tell the class:
   - It is good to take a bath everyday to avoid body odor.
   - Walking barefoot can harm the skin of your feet.
   - Wear clean clothes for personal hygiene.
- Drink plenty of water to make the skin fresher.

**Assessment**
- What are the parts and functions of the skin?
- How do we take care of the skin?

**Assignment**
- Name animals found in the community.
Chapter 2 : Animals

Overview

The pupils studied about their sense organs in Chapter 1 of Unit II. They described the parts and functions of the sense organs of the human body and they were encouraged to practice good health habits to take care of their eyes, ears, nose, tongue and skin. From a lesson on the human body, the pupils will now move to a lesson on the other living thing in their environment, the animals. In chapter 2, pupils will learn that they share many things in common with animals by describing animal body parts and their functions. The pupils will also be able to classify animals based on some observable characteristics like body covering, food they eat, how they move, and their habitat.

Furthermore, pupils should also be made to realize the importance of animals to humans by identifying their usefulness. However, they should also learn that there are also animals that could bring harm because they carry disease or they could inflict injuries. Finally, the pupils must be able to describe ways of proper handling of animals. This is important because it promotes animal welfare and prevention of injuries and fatal accidents.

Process skills involved in the activities include observing, communicating (writing), describing and classifying.

Lesson 1: Animals in the Environment
Duration: 1 day

Background Information

There are different kinds of animals. Different kinds of animals live in different places. Some animals live in land and some live in water and some live on both places. Animals such as chicken, goat, sheep, pig, and cow can be found in a farm. Animals like lion, tiger, elephant, and giraffe can live in the wild or in the zoo. Animals such as the different fishes, whale, and stingray live in bodies of water. Some of the animals (cat, dog, and rabbit) live in the house because they are pets.

Objective
At the end of the lesson, the pupils should be able to identify common animals found in the environment

Materials
Pictures of animals

Procedure
A. Review
Ask the pupils:
- Look around. What do you see? What sense organ do you use to see things around you?
- Listen. What do you hear? What sense organ do you use to hear?

B. Motivation/Presentation
1. Let the pupils sing the song “Old McDonald had a Farm.”

   Old McDonald had a Farm
   E – I – E – I – O
   And on his farm he had some chicks,
   E – I – E – I – O
   With a chick, chick here
   And a chick, chick there,
   here a chick, there a chick,
   Everywhere a chick, chick.
   Old MacDonald had a farm,
   E – I – E – I – O

   (Replace the animals with the following:)
   - Duck – quack, quack
   - Cat – meow, meow
   - Pig – oink, oink
   - Cow – moo, moo
   - Frog – ribbit, ribbit
   - Bird – chirp, chirp
   - Horse – neigh, neigh
   - Bee – bzzz, bzzz

2. Ask the pupils to recite the names of the animals mentioned in the song.
3. Explain to the pupils: Many kinds of animals live in the same environment with humans.

Lesson Proper
1. Let the pupils do Activity 1. Give them 10 minutes to answer the activity.
2. After 10 minutes, use pictures a – f of Activity 1 to identify the animals.
3. Post the pictures on the board one by one.
4. Ask one pupil to write below the picture the name of the animal.
5. Ask the class to describe the animal in the picture. The following questions may be asked to help the students in describing the animals.
   - Where can you find it?
   - Is it big? Is it small?
   - Can we keep it as a pet?
6. Post the pictures h – k of Activity 1 on the board.
7. Ask question in the activity sheet.
8. Write the pupils’ answers on the board.
9. The following questions may be asked to help the pupils in describing the animals they listed as answers to question g.
   • Where can you find it?
   • Is it big? Is it small?
   • Can we keep it as a pet?
10. Ask the class to give other examples of animals and where the animals can be found.
    Ask the class to give a generalization. Examples:
    • There are different kinds of animals.
    • Different kinds of animals live in different places.
    • Some animals can be kept as pets, some help us in the farm, some provide us with food, some animals are helpful to plants, while some are pests. Some animals can be dangerous to smaller animals, plants, and people.

Assessment
Complete the table by listing different kinds of animals found in different places.

<table>
<thead>
<tr>
<th>Animals found in the House</th>
<th>Animals found in the Farm</th>
<th>Animals found in the Zoo</th>
<th>Animals found in the River and Ocean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assignment
Each group will bring a picture of a frog, horse and bird for the next activity.

Lesson 2: Body Parts of Animal
Duration: 2 days

Background Information

There are different kinds of animals. They have body parts which they use for movement, eating, protection and adaptation to habitat. Some animals have similar body parts which can be used as bases for classifying them into groups.

Objectives
At the end of each lesson, the pupils should be able to:
1. identify the parts of some animals; and
2. group animals according to their body parts.
Materials
Large pictures of frog, horse, bird showing the body parts

Procedure
A. Review
Relate the lesson on animals in the environment to the lesson on body parts of an animal. Ask the students: What animals do you have at home? What animals do you find in your garden?

B. Motivation / Presentation
1. Write on the board the lyrics of the song “My Toes, My Knees.”
   My Toes, My Knees
   My toes, my knees, my shoulder, my head
   My toes, my knees, my shoulder, my head
   My toes, my knees, my shoulder, my head
   Let us clap our hands together.

2. Let the pupils sing the song “My Toes, My Knees.”
3. Ask the pupils to read and encircle parts of your body mentioned in the song.
4. Ask the class the question:
   - If we have these body parts - toes, knees, shoulder and head, what about the animals, do they also have these parts? Can you name animals which have these body parts?

C. Lesson Proper
1. Let the pupils perform Activity 2 – Parts of an Animal.
2. After the pupils finished answering the activity, facilitate the processing of the activity.
3. Post on the board the large pictures of a frog, a horse and a bird. Ask the pupils to write on the board answers to the activity.
4. Ask question no. 4, “What body parts are common in a frog, a horse and a bird?”
5. After the pupils have answered, explain to the class that there are similarities and differences of body parts of many animals.
6. Ask the class to give a generalization. Generalization can be:
   - Animals have body parts which makes them similar or different from each other.

Assessment
(The pupils may be grouped together to answer the assessment.)

Complete the table below by listing animals described in each column. The pupils can write as many answers as possible.
Assignment

Group together animals that have the same body parts

<table>
<thead>
<tr>
<th>Animals with 2 legs and wings</th>
<th>Animals with 6 legs and wings</th>
<th>Animals with 4 legs and horns</th>
<th>Animals with gills and fins</th>
</tr>
</thead>
<tbody>
<tr>
<td>dove</td>
<td>dog</td>
<td>maya</td>
<td></td>
</tr>
<tr>
<td>bangus</td>
<td>bee</td>
<td>fly</td>
<td></td>
</tr>
<tr>
<td>cow</td>
<td>crocodile</td>
<td>eagle</td>
<td></td>
</tr>
<tr>
<td>goat</td>
<td>tilapia</td>
<td>spider</td>
<td></td>
</tr>
<tr>
<td>butterfly</td>
<td>carabao</td>
<td>turtle</td>
<td></td>
</tr>
</tbody>
</table>

Lesson 3: Classifying Animals according to Body Parts and their Uses
Duration: 2 days

Background Information

Different animals use different parts of their body for movement. Having different body parts make the animals move in different ways.

The horse and giraffe have long legs which they use for walking or running fast. Some have legs that are not very long but they can also walk or run very fast. The cheetah runs the fastest and the pronghorn follows in speed. Other animals like rabbits and kangaroos have bigger hind legs which aid in jumping.

The legs of carabaos, dogs, horses and cows make them walk, run, gallop, or jump. Birds have wings for flying. Birds have a pair of legs and feet with sharp claws for clinging to branches of trees. Fishes have fins and tail for swimming. The long and strong legs of frogs enable them to jump while the webbed feet of ducks help them swim.

Earthworms have pairs of bristles that help them crawl and cling to the walls of their burrows. Monkeys have long arms, legs, and tails that help them climb and swing from tree to tree. Millipedes and centipedes have many small legs to help them crawl. Crabs and lobsters use their legs in crawling and swimming.

Objectives
At the end of each lesson, the pupils should be able to:
1. describe how animals move; and
2. identify the body parts that enable animals to move;
Materials

picture/video of animals

Procedure

A. Review

Show a picture of an animal and ask the pupils to name its body parts.
Ask the questions “What are these body parts for?”

B. Motivation/Presentation

Guessing Game:
The class will play a guessing game. Tell the class the following instructions:

a. One pupil will pick a piece of paper with the name of an animal written on it.
b. The pupil should not tell the name of the animals instead he or she will act out how the animal moves.
c. The rest of the class will raise their hands and guess the name of the animal.
d. The first pupil to raise hand and guess the correct animal will earn a prize.
e. Each pupil shall have at least 5 animals to name correctly.

C. Lesson Proper

Day 1

1. Let the pupils do Activity 3. Give them 10 minutes to do the activity.
2. Write the names of the animals on the board following the format and sequence of questions 1 and 2 of Activity 3.
3. Ask one pupil to identify the movement of each animal in question 1.
4. Do these for animals a–j of question 1.
5. Ask one pupil to identify the body part/s used by the animal for movement in question 2.
6. Do these for animals a–j of question 2.
7. Discuss to the class that animals have body parts that help them move.
8. Ask them to relate the body parts of animals to their movement.

Questions for discussion:

- The frog has flexible or springy legs. What movement can it make? What are other animals that show this movement? Do these animals have the same kind of legs? (Animals with flexible or springy legs can jump.)
- Butterflies can fly. What enables them to fly? What other animals have these body parts and make them fly?
- What kind of movement can an animal without legs make? Example: snake
(Animals without legs like the snake can crawl with their body.)

- What kind of movement can animals with legs make?
  Examples: spider, bird, duck
  (Animals with legs can walk, run, and crawl with their body.)

9. Ask the class to give a generalization. Examples:
   - Animals have body parts that enable their movement.
   - Animals move in different ways.

Day 2

1. Let the pupils do Activity 4. Give them 10 minutes to do the activity.
2. Write the table on direction number 2.
3. Post the picture of each animal on the board.
4. Ask one student to write the name of the animal posted on the board on the correct column corresponding to the movement the animals make.
5. Let the pupils read the group of animals that walk or run, jump or hop, swim, fly, and crawl.
6. Discuss to the class that animals can be classified based on how they move.
7. Let the pupils make generalizations:
   - Animals can be grouped together based on their means of movement.

Assessment

Choose an animal without legs and an animal with legs. Observe the body parts that these animals use to move from one place to another. Draw the animals in your notebook. Show the part or parts that they use to move.

Assignment

Ask the pupils to draw their pets in their assignment notebooks. What is the food of your pet?

Lesson 4: Body Parts of animals for food getting and for eating
  Body Covering of Animals
  Habitat of different animals

Duration: 4 Days

Background Information

Animals have body parts for food getting. Frogs and lizards use their long tongues to catch insects for food. Cows, carabaos, and horses have big and flat teeth to chew grass. Tigers, cats, and dogs have long and sharp teeth to tear food apart. Some insects like bees have proboscis to suck nectar from flowers. Chimpanzees and monkeys use their hands in getting food. Ostrich and
chicken use their beaks and bills in getting food. Grasshoppers and spiders make use of their legs to get food.

Different animals eat different types of food. Some animals have teeth and some others do not. Some animals have different types of teeth for food-getting. Some animals have sharp teeth or incisors for gnawing like the rats, hamsters, and rabbits. These incisors grow continuously. They are worn down through constant gnawing. When gnawing is prevented, the incisors grow so long that the animals cannot eat and die of hunger.

The cats and dogs have smaller incisors but bigger canine teeth. These canine teeth are also called fangs. They use their fangs for tearing meat and their molars for chopping the meat into smaller portions so they would be small enough to swallow. The horses, sheep, and cows have more closely spaced and even-sized teeth. These work well in clipping off grasses and plant leaves.

Animals have body parts which they use to protect themselves from weather and their enemies. All animals have skin to protect their bodies from different kinds of weather.

Turtles, crabs, and lobsters have shells or carapace for protection from hard objects and attacks from enemies. Birds have feathers for protection from different weather conditions. Fish have scales to protect themselves. Insects have feelers or antennas that help them find their way. Cockroaches come out at night and use long feelers in the dark. Porcupines have spikes all over their body for protection against attackers. Some animals like polar bears have thick hair or fur for protection against cold weather. Cows, deer and carabaos have horns for protection against enemies. Some parts protect animals. The turtle hides inside its shell if it is in danger. The thick furs of polar bears protect it from the very cold climate in areas with snow.

The habitat is the specific environment or place where an animal lives. There are different kinds of habitats. There are animals that live on land like cows and dogs. There are animals that live in water. There are different kinds of fish. They have gills for breathing under water and fins for swimming. Some live underground like ants, worms, and moles. Others live in high places like birds. They have wings for flying.

There are those animals that can live on both land and water. These are the turtles, frogs, and crocodiles. Animals that live in the forest include lions, tigers, deer and large birds. There are animals that also live in the farm. These are the cows, carabaos, chickens, and goats. Some live in the house as pets. These are the dogs, cats, and rabbits.

Objectives
At the end of each lesson, the pupils should be able to:
1. Infer the body parts used by different animals for eating/getting food;
2. Describe the body covering of animals;
3. Group animals according to their body coverings; and
4. Classify animals according to their habitat/place where they live.

Materials
Live animals/pictures of animals    Pictures of mouth parts of animals

Procedure
A. Review
The teacher may ask the following guide questions to relate the lesson on body parts of animals to classifying animals based on body parts.

a. Given different animals, what are the body parts that enable them to move?

B. Motivation/Presentation
1. Activity: The pupils will select the object which does not belong to the group.

   Which object does not belong?
   a. ball, orange, string, egg
   b. apple, rambutan, strawberry, banana
   c. ballpen, paper, pencil, pentel pen

   (The pupils should select a. string, b. banana and a. paper as the objects that do not belong to the group.)

   2. Emphasize that there is always a basis in grouping things. Likewise, animals can be classified based on how they move, on what they eat, on their body covering, and on where they live.

C. Lesson Proper

Day 1-4
1. Let the pupils do Activity 5. Give them 10 minutes to do the activity.
2. Let the pupils do Activity 6. Give them 10 minutes to do the activity.
3. Post a chart similar to Table 1 (found in Activity 6) on the board.
4. Let the pupils complete the table by writing the food the animal eats, the body part used for food-getting and eating and classify the animal on whether it is a meat-eater, plant-eater, variety-eater, and scavenger.
5. Post pictures of each animal’s mouth parts on the board.
6. Let the pupils compare the mouth parts of the animal to the food they each animal eats.
7. Discuss to the class that animals can be classified based on what they eat.

Assessment
The pupils’ answers to the activity questions can serve as assessment. Rubrics must be crafted for the assessment.
Assignment
Tell the pupils to look for and bring colored photos or pictures of the animals listed in Activity 7 from magazines or books, or from the library. Remind the pupils not to tear or cut pages of magazines or books. Tell them to bring these photos/books containing the photos to class on the next day.

Lesson 5: Importance of Animals to Humans   Proper Ways of Handling Plants
Duration: 2 days

Background Information
Many animals are useful to human beings. There are animals that help us do work. Horses and carabaos are work animals. Some animals are sources of food like the meat of chickens, goats, pigs and cows. The skin of some animals are raw materials for bags, belts and clothing.

Earthworms loosen the soil as they move through it. Loose soil enables the roots to get enough air and water. Earthworms add their waste products in the soil making it fertile for healthier plant growth. The silkworm is an insect that makes beautiful silk threads. People weave these threads into cloth.

Animal have different eating practices. A ladybug eats small insects that harm plants. Insects are used as food by birds and other animals. Frogs eat insects. Some mammals eat insects, too. There are insects that eat other insects. Spiders eat grasshoppers that destroy crops. They also eat flies and mosquitoes.

Some animals can be harmful to people. They can be carriers of diseases, sources of infection, allergy, and injury. Harmful organisms can be transferred from animals to people. These organisms can cause death. These are: rabies from dogs; bubonic plague from rats; anthrax and mad cow disease from cattle; malaria, dengue, and yellow fever from mosquitoes; gastroenteritis or diarrhea from flies; and the deadly ebola virus from monkeys.

Cats, dogs, and rabbits can also cause allergic reactions in people because of their fleas, ticks, mites, and fur. Bee sting can cause allergy. Some animals such as cats and birds can also cause injury. If you do not know how to handle them, cats put out their claws and scratch and bite. Birds will claw and peck you. They can tear your flesh with their sharp beaks or bills and claws.

Insects grow and multiply very fast. Although most insects are small, they can do a lot of harm. Flies carry germs that cause diseases. Diarrhea and cholera are diseases caused by germs carried by flies. Mosquitoes also carry germs that cause malaria, dengue fever and H-fever. Cockroaches leave a bad odor on food they crawl on. They also leave germs on the food. These insects harm people because of the diseases they cause.
Some insects need to be controlled. The following are ways of controlling them.

1. Destroy mosquitoes and flies while they are not yet in the adult stage. This can be done by destroying their breeding places.
2. Cockroaches breed in dark, damp places. Always keep the corners and cabinets in the kitchen clean.
3. Insecticides may be used to destroy insects.
4. Keep your home and surroundings clean. There will be no breeding places for insects that cause harm when surroundings are kept clean and sanitary.

Objectives
At the end of each lesson, the pupils should be able to:

1. explain why animals are important to people;
2. group animals according to what they give to people;
3. identify harmful animals and their effects on people; and
4. cite proper ways of handling animals.

Materials
pictures of animals newspaper/magazine clippings on animal-borne diseases.

Procedure
A. Motivation/Presentation
Read a story about an animal that helps people.

B. Lesson Proper
Day 1
1. Let the pupils do Activity 9. Give them 30 minutes to do the activity.
2. Post the table of Activity 9 on the board.
3. Discuss the activity. Ask one pupil to write the name of the animal on the correct column corresponding to the use of the animal to humans. Some animals may be written under more than one column.
4. Ask one pupil to read the group of animals that are sources of food items.
5. Ask one pupil to read the group of animals that are sources of fur and skin for bags, shoes and others.
6. Ask one pupil to read the group of animals that are used for tilling the field and carrying loads.
7. Ask other pupils to answer questions a and b of Activity 9.
8. Discuss to the class that many animals are useful to human beings. Show pictures.
   - There are animals that help humans do the work in the farm and fields. Horses and carabaos are referred to as work animals because they help people do heavy work.
   - There are also animals that carry load and are used as means for transportation.
Some animals are sources of food like chicken, pigs, cows, and goats. Some animals are sources of food products like eggs, milk, and honey. The skin of some animals is also used for clothing.

9. Ask the pupils to give a generalization.
   - Many animals are useful to humans.

Day 2
1. Group the pupils. Make sure each group has a newspaper or magazine clipping reviewed and summarized.
2. Let the group do Activity 10. Give them 15 minutes to do the activity.
3. Post a chart similar to Activity 10 on the board.
4. Ask each group to write their answers on the board.
5. Ask other pupils to complete the paragraph in step 2.
7. Ask the pupils to give a generalization:
   - Some animals can be harmful to people.
   - Some animals can be carriers of diseases, sources of infection, allergy, and injury.

Assessment
The groups’ output can serve as assessment.

Assignment
Tell the pupils to bring a picture or drawing of their pet or favourite animal. They may add a short description of the animal.

Chapter 3 : Plants

Overview
In chapter 1, pupils learned about the different sense organs of a human body. In chapter 2, they learned the different parts and functions of animals as well as the importance of animals to humans. In this chapter, they will learn about the different parts and functions of plants as well as their importance to humans. It will also make the students realize and appreciate the contribution of plants in making the surroundings green and beautiful.

In this chapter, pupils will learn to observe the plants around them. Describing, comparing, identifying and communicating through writing, drawing, and speaking are the science process skills that will be developed through the activities.

Since the activities presented here involved a lot of plant observation, schools are encouraged to have a garden even a small one. Precautions must also be emphasized in observing and handling plants. It is best that as teachers, you should be familiar with the plants in the school garden.
Lesson 1: Naming Plants and their Parts  
Duration: 2 days  

Background Information  

The external parts of the different plants are roots, stem, leaves, flower, and fruits. The root is the plant part that grows downward into the ground. The stem is the plant part where leaves and flower grows from. It is usually found above the ground, but it can also be found below the ground, or both. The leaf is the plant part that grows from the stem. It is usually flat and green, but could also have other shapes and colors. The flower is the most easily seen plant part because of its color. It is also the part that develops into a fruit.

Objectives  
At the end of each lesson, the pupils should be able to:  
1. name plants around; and  
2. identify the parts of a plant.

Materials  
pictures of animals, pictures of different gardens

Procedure  
A. Review  
Show some pictures of animals and let them name it.  
Ask: Are animals important to us? Why?

B. Motivation/Presentation  
(“Garden Show”) Show pictures of different gardens in school (if the pupils cannot go to the garden).  
Questions:  
• What is in the picture? (Garden)  
• What can we see in the garden? (Plants, animals, other things)  
• What are some of the plants that grow in our school? (Answers will depend on what plants are present in school.)  
• What are some of the plants that grow in your home? (Answers will vary.)

Day 1  

C. Lesson Proper  
1. Refer to LM’s Activity 1.  
2. Let the pupils do Activity 1 Part A.  
3. Let the pupils check their work in Part A. (Refer to answers to questions in the activity.)
4. Discuss the different plant parts.
   - The root is the plant part that grows downward into the ground.
   - The stem is the plant part where leaves and flower grows from. It is usually found above the ground, but it can also be found below the ground, or both.
   - The leaf is the plant part that grows from the stem. It is usually flat and green, but could also have other shapes and colors.
   - The flower is the most easily seen plant part because of its color. It is also the part that develops into a fruit. Not all plants bear flowers and fruits.

5. Tell the pupils that they will find out if the plants in the garden have the same parts as that of the tomato plant by doing Part B of Activity 1.

6. Instruct the pupils to do Part B. The pupils will observe the plants in the school garden. Remind them of the things they should do while doing the activity.

7. After the pupils finish Part B, tell them that the class will discuss the activity on the following day.

**Day 2**

1. Go over the activity that the pupils did previously. Ask them the parts of the tomato plant.

2. Post on the board a table similar to Table 1 in Activity 1.

3. Call 10 pupils and tell them to write the name of one plant that they observed. Make sure there is no repetition on the kind of plant. Then, tell the pupils to put a check in the appropriate column on the plant parts that their plant has based on their observations.

4. Point out to the pupils that some of the plants they have observed may not have flowers at the time of observation, but are actually flower-bearing plants. It just so happened that when they observed the plant, the flowers have yet to develop because it is not the right time or season for flowering. Tell them also that that it is the same case for fruits: that there is a particular time or season when fruits develop from the plant’s flowers. Or, that in some plants, the flowers and fruits are too small or not easily seen.

5. Lead students to generate the ideas that:
   - Plants have different parts: root, stem, leaf, flower, and fruit.
   - Some plant parts are not easily observed either because they are hidden or they are too small.
   - Some plants might appear to have no fruit or flower because the plant is too young or it is not yet the plant’s flowering or fruiting season at the time the observation was made

6. Give the assessment then checked.

7. Give the assignment.

**Assessment**
Label the parts of the plants.

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Assignment

Draw your favourite plant and label its parts.

Lesson 2: Same plant part, different plant

Duration: 3 Days

Background Information

The external parts of the different plants are roots, stem, leaves, flower, and fruits. The root is the plant part that grows downward into the ground. The stem is the plant part where leaves and flower grows from. It is usually found above the ground, but it can also be found below the ground, or both. The leaf is the plant part that grows from the stem. It is usually flat and green, but could also have other shapes and colors. The flower is the most easily seen plant part because of its color. It is also the part that develops into a fruit.
Stems

Stems may be found above the ground, below the ground, or both above and below the ground. Stems may grow straight up, trail along the ground, climb fences and trees, or stay underground.

Trees grow up straight and have a main stem called trunk. Shrubs plants are smaller than trees, have woody stems, but have multiple woody stems coming from the same point instead of having a trunk. Shrubs also grow straight up. Examples of shrubs are roses and santan plants.

There are plants with soft stems that can grow straight up. Plants with soft stems are called herbs. Examples of herbs are kangkong, basil, and corn. They do not grow as tall as trees.

There are also plants with soft stems but cannot grow straight up. Instead these plants creep on the ground or climb a fence or other plants. These plants are called vines. Examples of plants that creep on the ground or climb a fence are squash, camote, ampalaya and upo.
**Leaves**

The leaves of plants differ in shape, size, color and edges. Some leaves are round, oblong, or heart-shaped. There are leaves that are big such as the anahaw and banana leaves. There are leaves that are small such as the carabao grass or bermuda grass. Leaves also have different colors, but the most common is green. There are plants with red, yellow, or violet leaves. Mayana is an example of a plant that can have red, yellow, violet, and green leaves depending on the variety. The edges of leaves also vary from plant to plant. The leaf edge can be smooth or toothed (serrated).

**Flowers**

Flowers are usually the most beautiful part of the plant. There are flowers with bright colors such as sunflower and gumamela. There are flowers with dull colors such as the flowers of grasses. There are flowers that smell nice while some have unpleasant smell. There are flowers that grow singly such as gumamela and daisy. There are flowers that grow in cluster/group such as santan, frangipani, and milfiores. Depending on when you observed the plant and how young the plant is, you may or may not observe flowers or fruits.

**Fruits**

The flower is the part of the plant that develops into a fruit. Some fruits are big such as jackfruit, watermelon, and durian; while some are small like the aratiles, duhat and kalamansi. Some fruits grow singly while others grow in cluster or group like lanzones, and buko. Depending on your observations the plant and how young the plant is, you may or may not observe flowers or fruits.

**Objectives**

At the end of each lesson, the pupils should be able to:

1. compare the plant parts of different plant; and
2. describe similarities and differences in plants based on observable characteristics of their plant parts.

**Materials**

copy of the poem "Trees"

**Procedure**

A. Review

Ask 2-3 pupils to present their assignment.

B. Motivation/Presentation

Read the poem:

**Trees**

I may be rough, you may be smooth
I may be tall, you may be small
I may be soft, you may be hard,
I may be green, you may be different
Trees they call us
In many ways, we are the same
In many ways, we are different

By: Leni S. Solutan

Questions
1. What is the poem all about? (Trees)
2. What does the poem tell us about trees? (Every tree is different.)

C. Lesson Proper
“Nature Hopping”

Day 1 (Gathering of Data)
1. Divide the class into groups.
2. Refer to LM’s Activity 2. Each group will observe two plants. They will compare the stems, leaves and flower (if any) of the two plants.
3. Bring the class to the school garden. Remind them to be careful in handling the plants while observing its plant parts. Make sure that each group observes two different plants.
4. Tell the class that the discussion of the activity will be done on the following day.

Day 2 (Reporting)
5. Call the reporter of each group to present their observations on their two chosen plants. Give him/her 2-3 minutes to do so.
6. After all groups have presented, tell the class to look at the answers/work of other groups. Then ask the following questions:
   • Which plants have stems that grow straight up?
   • Which plants have stems that trail along the ground?
   • Which plants have stems that climb fences or other plants?
   • Which plants have soft stems?
   • Which plants have hard stems?
   • What are different shapes of leaves that the class observed with their plants?
   • What are the different colors of leaves that the class observed with their plants?
   • Which plants have flowers?
   • Which plants have flowers?
   • For those plants with flowers, were the flowers in cluster/group or were they single?
7. Lead pupils to generate the ideas that the two plants they observed may both have stems, but differ in thickness, appearance, color, and texture; both may have leaves, but differ in size, shape, and color; and both may have flowers, but their flowers differ in color, arrangement, number of petals, and how they grow.
Day 3 (Assessment Day)
8. Discuss about the different kinds of roots of plants. Refer to the background information. Show real examples to the class if they are available or you may also draw.
9. Ask the class why it is more difficult to transfer plants with taproots than plants with fibrous roots.
10. Give the assessment and check.

Assessment
(The group's output can serve as assessment.)

Assignment
Read about the different functions of the different plant parts.

Lesson 3: Functions of the different Parts of the Plant
Duration: 1 day

Background Information
The roots of the plants are usually under the ground to keep the plant firmly in place. It absorbs water and minerals needed by the plant. The stem supports the plants and holds the leaves. It carries water and minerals to other parts of the plants. It also carries food from the leaves to other parts of the plant. The leaves make food for the plants. The flower develops into a fruit. The fruit contains seeds that can grow into new plants.

Objective
At the end of the lesson, the pupils should be able to infer the function of each plant part.

Materials
wilted cut flower or stem in jar with water plant parts and functions written on separate strips of paper.

Procedure
A. Review
   Show a plant.
   Ask the pupils to name the different parts of the plant.

B. Motivation
   Show a setup of a wilted, cut flower or stem in jar with water.
   Questions:
   • What do you notice about the cut flower/stem? (It looks dead/ wilted. Its leaves/flowers are sagging/ dropping.)
• Why do you think the flower/stem looks that way? (It doesn’t have roots. It is dehydrated/It is not getting enough water.)
• Plants need water. There is water inside the jar but still the plant died. What plant part is missing? (Roots)
• Why is this plant part important? (Roots are important because they absorb water and nutrients from the soil.)

C. Lesson Proper
1. Let the pupils work in small groups composed of 5-6 members.
2. Distribute Activity 3. Read through the activity sheet with the class and clarify procedures as needed.
3. Give the groups 5-7 minutes to do Activity 3.
4. Discuss the activity. Let the pupils check their answers (tell them to exchange papers with their seatmate).
5. Discuss the function of each part of the plant.
   • The roots of the plants are usually under the ground to keep the plant firmly in place.
   • The roots absorb water and minerals needed by the plant.
   • The stem supports the plants and holds the leaves.
   • The stem carries water and minerals to other parts of the plants.
   • The stem also carries food from the leaves to other parts of the plant.
   • The leaves make food for the plants.
   • The flower develops into a fruit.
   • The fruit contains seeds that can grow into new plants.
6. Give the assessment and check the answers with the class.
7. Give the assignment.

Assessment
Charade Game:
• Make enough copies of pairs of a plant part and its function for the whole class.
• Distribute strips of paper to each pupil. Written on the strips of papers are the parts and function of the different parts of plants.

Example:

| ROOTS          | Absorb water and minerals from the soil |

• The pupils will find their partner but they will neither say anything on what is written on the paper nor show the paper to others. They have to act out what is written on their strips of paper. When they think they found their match, they have to go at once to the teacher and hand their strips of papers to see if they made a correct pairing. The first pair of pupils who presents a correct pair of plant part and function wins the game.
Assignment
Bring to class an example of an object made from plants.

Lesson 4: Uses of Plants
Duration: 1 day

Background Information

Some plants are used as food:

<table>
<thead>
<tr>
<th>Name of Plant</th>
<th>Plant Part that can be Eaten</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ampalaya</td>
<td>stems, leaves, fruits</td>
</tr>
<tr>
<td>2. star apple</td>
<td>fruit</td>
</tr>
<tr>
<td>3. malunggay</td>
<td>leaves, fruits</td>
</tr>
<tr>
<td>4. camote</td>
<td>stems, leaves, roots</td>
</tr>
<tr>
<td>5. monggo</td>
<td>fruit (seeds)</td>
</tr>
</tbody>
</table>

Some plants are used as medicines:

<table>
<thead>
<tr>
<th>Name of Plant</th>
<th>Plant Part that are Used as Medicine</th>
<th>Used to cure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. sambong</td>
<td>Leaves</td>
<td>kidney trouble</td>
</tr>
<tr>
<td>2. oregano</td>
<td>Leaves, roots, flower</td>
<td>scabies (skin disease)</td>
</tr>
<tr>
<td>3. gumamela</td>
<td>leaves, stems/twigs</td>
<td>boil, wound</td>
</tr>
<tr>
<td>4. guava</td>
<td>leaves, stems/twigs</td>
<td>wound</td>
</tr>
<tr>
<td>5. ipili-pil</td>
<td>Leaves</td>
<td>deworming</td>
</tr>
</tbody>
</table>

Objectives
At the end of each lesson, the pupils should be able to:
1. Identify things that come from or are made of plants; and
2. Identify different uses of plants

- Food
- building construction materials
- medicine
- fuel
- decorative purposes
- furniture

Materials
Video of different plants

Procedure
A. Review
Ask the students to give the functions of the different parts of plants.

B. Motivation
Let the students name plants found in the school garden that are useful, and let them describe why it is useful.

C. Lesson Proper
1. Let the pupils work in small groups composed of 5-6 members.
2. Distribute Activity 4. Read through the activity sheet with the class and clarify procedures as needed.
3. Give the groups 5-7 minutes to do Activity 4.
4. Discuss the activity using the questions in activity sheet as guide. Let the pupils check their answers.
5. Discuss the uses of plants and the plant parts. Show pictures or video clips if available. Refer to background information for other examples.
   - Some plants are used as food. Examples: eggplant, okra, pechay
   - Some plants are used to make building materials. Examples: coconut, narra, molave.
   - Some plants are uses as fuel. Examples: ipil-ipil, coconut
   - Some plants are used in making medicines. Examples: Lagundi, sambong, banaba
   - Some plants are used for decoration. Examples: rose, daisy, fortune plant
   - Some plants like cotton and piña (pineapple plant) are used as a clothing material.
6. Give the assessment and check the answers with the class.

Assessment
Give one example of a plant for each purpose. Tell them that they are not allowed to cite plants that were discussed or used in the activity.
   a. Used as food: ______________
   b. Used as a building material: ______________
   c. Used as fuel: ______________
   d. Used as medicine: ______________
   e. Used as decoration: ______________

Assignment
Give Activity 5 as an assignment.

Lesson 5: Harmful Plants
Duration: 1 day

Background Information
None

Objective
At the end of each lesson, the pupils should be able to:
1. identify plants that are harmful; and
2. infer that some plants can be both harmful and useful.

**Materials**

potted rose plant

**Procedure**

A. Review

Let the students cite the different uses of plants.

B. Motivation

1. Show to the class a potted rose plant.
2. Ask the following questions:
   a. What are the uses of a rose plant? (Decoration)
   b. Can this plant be harmful? (Yes)
   c. In what way can this plant cause us harm? (The thorn can hurt us if we are not careful in touching it.)
   d. How should we handle plants like this? (Use garden gloves)

C. Lesson Proper

1. Ask the students to bring out their answered Activity 5.
2. Let the pupils work in groups. Each group will make a summary of their accomplished activity in a manila paper.
3. Give the group 2-3 minutes I presenting their work.
4. Discuss Activity 5. Point out to the class that though plants are very useful, they should be handled well because some of them are poisonous.
5. The pupils accomplished activity can serve as assessment.
6. Give the assignment.

**Assessment**

(The pupil’s answered activity can serve as assessment.)

**Assignment**

Interview your parents or grandparents on how they take care of plants.

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**Lesson 6: Proper Ways of Caring Plants**

Duration: 1 day

**Background Information**

None

**Objectives**

At the end of the lesson, the pupils should be able to:

1. infer how to care plants; and
2. describe ways of caring for and properly handling plants.
**Materials**
- picture of a plant with wilted leaves

**Procedure**

A. Review
Ask the pupils to give an example of plants that are harmful to people.

B. Motivation
1. Show to the class a picture of a plant with wilted leaves.
2. Ask the following questions:
   - What can you see in the picture? (A dying plant)
   - Why do you think the plant is dying? (It has not been watered.)
   - What is needed by this plant in order to live? (Water)
   - Plants provide people with lots of things. What should we do so that these plants stay alive and healthy? (We must take care of these plants.)

C. Lesson Proper
1. Let the pupils do Activity 6 individually first.
2. Divide the class into smaller groups composed of 5-6 members. Tell them to share their answers to the activity with the group. Give them 6 minutes to do this.
3. Discuss Activity 6.
   - For questions a and b, the pupils should be able to tell that the girl is breaking the branch of a plant for no reason, thus, it is not a good thing to do to plants. However, tell the class that sometimes plants are trimmed for decoration purposes or for the plants to grow well.
   - For questions c and d, the pupils should be able to tell that the two boys are placing a fence around the plant. This is a good thing to do to plants because it serves as protection especially if the plant is still small.
   - For questions e and f, the pupils should be able to tell that the girl is removing weeds around the plant. This is a good thing to do to plants because the weeds compete with the plants in terms of the nutrients of the soil.
   - For questions g and h, the pupils should be able to tell that the boy is stepping on the plants for no reason, thus, it is not a good thing to do to plants.
   - For questions i and j, the pupils should be able to tell that the two boys are placing fertilizer around the plant. This is a good thing to do because it helps the plant to grow well. The fertilizer provides the nutrients needed by plants to grow well.
4. Ask the pupils to give other ways of caring for plants.
5. Give the assessment and check it with the class.
Assessment
A potted plant was left inside your classroom for 3 days. The leaves of the plants are turning yellow and some are dropping. What should be done to the plant?

Assignment
Plant flower in the flower pot and take good care of it. Be able to discuss ways to take care of it in the class.

Lesson 6: Characteristics of Living Things and Non-Living Things
Duration: 2 days

Background Information
All living things possess the following characteristics: move, breathe or respire, need food or energy, grow or develop, and reproduce. Like people and animals, plants also move such as the movement of the leaves toward sunlight to capture energy and movement of the roots toward the soil to absorb water and minerals. Respiration is the process of breathing of all living things. Plants breathe on their leaves through the process of food making called photosynthesis. Living organisms reproduce. Reproduction is the process of producing another organism of the same kind.

Objectives
At the end of each lesson, the pupils should be able to:
1. identify characteristics of living and nonliving things;
2. identify the difference between living and nonliving things; and
3. classify things into living and non living.

Materials
Manila paper, pentel pen, pictures of living and non-living things

Procedure
Day 1
A. Motivation/ Presentation
Let the learners read the poem.

Things Around Us
Look up, look up
What are above?
Sun, moon, stars and clouds.
Look down, look down
What have you found?
Rocks, soil, creatures, small and round
Look around, look around
What do you see?
Plants and animals
Objects made for you and me.

by: Jennifer M. Rojo

Ask: What is the poem all about?
What are the things around us?
Do you know which are living things?

B. Lesson Proper
1. Tell the pupils to do Activity 1 in LM.
2. Then, divide the class into groups.
3. Let the group write on the manila paper their answers in step 3 of the activity.
4. After 5 - 7 minutes, tell them to submit their answers in the Manila paper.
5. Check the answers of the pupils to step 1-2 of the activity. Tell them to exchange their answers written in the Manila paper.

Day 2
6. Tell the pupils to post their group work.
7. Let them do the reporting by line-ups (all members of the group will line up and each will tell the answer.)
8. Discuss the following characteristics of living things based on the first activity.
• Living things grow.
• Living things reproduce. (Explain to the pupils what is meant by reproduction)
• Living things move by itself. (Emphasize to the pupils that not all moving objects are living things like cars and robots)
• Living things breathe. (Teacher should explain lightly how plants breathe.
• Living things need food.
9. Discuss also the answers of the pupils in group work.
10. Refer to the background information for discussion.
11. Tell that living things may be grouped into people, plants and animals.
12. Lead the pupils in comparing living and nonliving things to see their differences.
13. Let the pupils give other examples of living things based on their characteristics.
14. Give the assessment

Assessment

Pupils may play “Pinoy Henyo”. The game is played by putting the words written on a strip of paper on the pupil’s forehead. The pupils will guess the word by asking questions that could help her/him guess the word. The class
can only respond with “oo (yes)”, “hindi (no)” and “pwede (maybe)”. The words to be guessed are either living or nonliving things.

**Assignment**
Have the picture below photocopy and let the learners answer this in a group of 5.

<table>
<thead>
<tr>
<th>Objects</th>
<th>Characteristics of living things</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Does it grow?</td>
</tr>
<tr>
<td>Rocks</td>
<td>NO</td>
</tr>
<tr>
<td>Rocks</td>
<td>YES</td>
</tr>
<tr>
<td>Rocks</td>
<td>YES</td>
</tr>
<tr>
<td>Rocks</td>
<td>NO</td>
</tr>
<tr>
<td>Rocks</td>
<td>YES</td>
</tr>
<tr>
<td>Rocks</td>
<td>NO</td>
</tr>
<tr>
<td>Rocks</td>
<td>YES</td>
</tr>
<tr>
<td>Rocks</td>
<td>NO</td>
</tr>
<tr>
<td>Rocks</td>
<td>YES</td>
</tr>
</tbody>
</table>
Chapter 4: Heredity: Inheritance and Variation

Overview

In chapters 1, 2 and 3 of Unit 2 pupils learned about the parts and functions of humans, animals and plants. In chapter 4, they learned that humans, animals, and plants are living things. They also learned about some of the characteristics of living things that differentiate them from nonliving things.

In the previous chapter, pupils learned about the similarities among humans, plants, and animals. Their understanding of similarities and differences will prepare them in understanding one characteristic of living things that differentiates them from nonliving things and that is: Living things can reproduce.

Living things around us reproduce. Through reproduction, living things make copies of themselves so that their kind continues to live on earth. When living things reproduce, certain characteristics of parents are transferred or passed on to their offspring or children.

It is important to develop in this chapter, skills in identifying, drawing, inferring, observing, naming, comparing, listing, asking (or interviewing) and communicating (reporting or telling,) alongside development of appreciation of similarities and differences, individual uniqueness and appreciation of the importance of parents, family and reproduction itself.

Lesson 1: Animals Reproduction and Heredity
Duration: 2 days

Background Information
Animals are living things. Living things can reproduce. Animals can reproduce creating offspring of their own kind. Animal offspring shares similar observable physical characteristics or traits with their parents such as the color, texture and length of the hair strands; shape of the face; eye shape, nose, and length and size of ears.

Objectives
At the end of each lesson, the pupils should be able to:
1. infer that animals produce animals of the same kind; and
2. infer that some physical traits are common or shared within the same group of animals.

Materials
enlarged pictures of the animals in Activities 1 and 2, a series of pictures of a growing family of animals (video clip if available)

Procedure
A. Review
Teacher: “What was our lesson about the other day?”

B. Motivation/Presentation
- Post a series of pictures of a growing family of animals. (A video clip can also be used.)
- Ask the class: What does the picture show?/What was shown in the video? (Answers will vary.)
- Call 2-3 pupils to answer the question.

C. Lesson Proper

Day 1
1. Let the pupils work individually.
2. Distribute the activity sheet. Give the pupils 5 minutes to answer the activity.
3. While the pupils are doing the activity, post enlarged pictures of the animals on the board.
4. After 5 minutes, tell the pupils to form small groups composed of 5-6 members.
5. Give the groups 7-8 minutes to share and discuss their answers with the group. Tell them to answer this question: “How did you know which adult animal and baby animal go together?”
6. After doing the activity, tell the groups to choose a reporter who will share the group’s answers to the activity and the question on how they knew which animals match.
7. After the reporting, discuss the activity. Refer to the pupils work during the class discussion. Here are some questions you can ask:
• How did you know which adult animal and baby animal go
together?
• What characteristic is similar between the parent animal and the
baby animal?
8. Discuss one animal at a time. Ask: Can an animal like chicken have a
baby fish? Why do you say so?
9. The important concepts to be develop in this discussion are:
• Animals can have baby animals.
• An animal can only produce an animal of their own kind.
• Baby animals share similar observable physical characteristics or traits
with their parents such as the color, texture and length of the hair
strands; shape of the face; eye shape, nose, and length and size of
ears.

Day 2
10. Ask the class about what they learned from the previous activity as
review.
11. Tell them that today they will learn about observable physical traits shared
by animals of the same kind.
12. Divide the class into groups composed of 5-6 members. Distribute Activity
2, ½ Manila paper (per group), and pens/crayons (for writing). Read
through the procedure and clarify steps as needed.
13. Give the groups 5-7 minutes to do the activity. Tell them to write their
group answers on a ½ Manila paper
14. The important concepts to be developed in this discussion are:
• Some observable physical traits are shared by animals of the same
kind e.g., presence of fur, body shape, shapes of legs, etc.
• While there are similar physical traits in animals of the same kind (e.g.,
dogs), the traits still differ because they come from different breed.

Assessment
The work of the groups in Activities 1 and 2 can serve as formative assessment
for the lesson.

Assignment (group assignment)
Tell the class to work in groups and do Part A of Activity 3 (including the planting
of mongo seeds). Tell them to bring their small container with seeds to school on
the following day.

Lesson 2: Human Reproduction and Heredity
Duration: 2 days

Background Information
Reproduction is a process common to all living things. It is one of the various characteristics that distinguish a living thing from non-living thing. Reproduction is focused on two essential concepts: that living things reproduce their own kind and it is important for passing on of traits from parents to offspring, properly termed as inheritance.

The lessons on reproduction begin with animals (Lesson 1), plants (Lesson 2), and humans (Lesson 3). This is to mitigate the sensitivity of discussing human reproduction and heredity.

The type of reproduction, sexual and asexual, is not yet introduced in Grade 3. However, as a backgrounder: reproduction is sexual, when it involves the sperm from male and the ovum or egg cell from female, and asexual if it involves inheritance coming from a single parent. Sexual reproduction involves a chance combination of both parents' traits, resulting in the variation and diversity within the same kind of living things. This explains why, even in human families, children share similar physical traits with their biological parents. This also explains why people share similar characteristics within the same tribe or ethnicity i.e., Filipinos have similar physical features; Asians have similar physical features.

On the other hand, asexual reproduction results in formation of living things which are exactly identical with the parent living thing, since the new organism is grown from one and the same parent. When questions about sexual or asexual reproduction arise at this stage, pupils' question may be entertained, but they should be informed that such will be discussed in the succeeding years of their science learning.

Care has to be taken in the discussion of the family. Society is faced with different family structures at present which defines family in a different way as before. Exposing a learner, who is nurtured within a family of single parent, adoption or any other contexts, into humiliation must be avoided. It is highly suggested that parents are to be informed beforehand of the lesson and its possible impact on the learner so that proper actions may be done to protect the learner from any form of embarrassment in the treatment of the subject.

**Objectives**
At the end of each lesson, the pupils should be able to:
1. infer that humans can only have human babies; and
2. infer that some physical traits are common or shared among a certain group of people (i.e., class, family, ethnic group).

**Materials**
- enough cut-outs of a happy face (represent a child)
- enlarged picture showing children of different ethnicity
Procedure
A. Review
Ask the following questions to the class:
- Can anyone tell us what the lesson was yesterday? (We learned that baby plants come from parent plants. So plants also reproduce. Plants can grow from seeds, or other parts of the parent plants like roots, stems or leaves.
- Can you name some examples? (Answers will vary)

B. Motivation/Presentation
1. Ask the class:
   - Where do human babies come from?
   - Can a dog give birth to a human child? Why do you say so?
   - Can humans give birth to a chick or kitten? Why do you say so?
2. Tell the class that similar to animals, humans can only produce human babies. Tell the class that in Activity 5, they will find out about physical traits they share with their family and classmates.

C. Lesson Proper
Day 1
1. Let the pupils do Activity 5 individually first (Steps 1 and 2). Give them 5-7 minutes to finish these steps.
2. Divide the class into groups composed of 5-6 members. Tell them to answer Step 3 of Activity 5.
3. Give the pupils five (5) minutes to come up with their group tally.
4. While the pupils are doing the activity, label the board so that you and the class can make a class pictograph of the different traits listed in Step 3 of Activity 5.
   Note: Use the happy face cut-out to represent 1 pupil. Make enough cut-outs for the class (about 150 pcs.)
5. After the groups are done, start discussing Steps 1 and 2 of Activity 5. Point out to the pupils that we get some traits from our parents. Some of these traits are the colour of our eyes, the shape of our eye, the color of our hair, the type of our hair as curly or straight, the shape of our lips, the shape of our face, the shape of our nose, the size and shape of our ears, and the color of our skin.
   Then say:
   We inherit some traits from our father, some from our mother and some are from both our mother and father. Some traits may not
be observed from our parents but these may come from our grandparents.

6. Now, ask one pupil from each group to share their group data for Step 3, and to place the corresponding smiley face on the board.

7. After all the groups have shared and posted smiley faces on the pictograph on the board, ask the following questions:
   - What physical trait has the most number of smileys? (Answer will depend on the actual data.)
   - What physical trait has the least number of smileys? (Answer will depend on the actual data.)
   - Which physical trait is shared by most (if not all) pupils in your class? (Answer will depend on the actual data.)
   - What does this tell us about ourselves and our classmates physical traits? (Answers will vary but highlight this idea if it comes out: we share similarities and differences in physical traits/features because we are all human beings.)

8. The important concepts to be developed in the discussion are:
   - There are physical traits that we inherit from our birth parents.
   - Some physical traits are shared within a family or within the same ethnic group (color of eyes, kinds of hair, color of skin, shape of nose, eyes, mouth).

Day 2

9. Let the pupils work individually on Activity 6. Give them 5 minutes to do the activity.

10. Divide the class into groups composed of 5-6 members. Give them 3-4 minutes to share and discuss their answers to the activity.

11. During the class discussion, use the questions in the activity as jump-off points. Ask follow-up questions as needed.

12. The important concepts to be developed in the discussion are:
   - Some physical traits are shared within a family or within the same ethnic group.
   - General physical features/traits are shared by humans/people regardless of ethnicity such as: general body parts (e.g., head and body, shape of arms and legs, etc.).

Assessment

The answers to questions in Activities 5 and 6 can serve as formative assessment.

Assignment

Bring a family picture and be able to tell your physical characteristics with your parent.

Lesson 2: Plants Reproduction and Heredity
Duration: 2 days

Background Information

Many plants grow from seeds but they can also grow from other plants parts like the stem, leaf, and root. Plants like strawberry and spider plant produce new plant through its horizontal above-ground stem. Aloe plant can grow new plant by placing a cut leaf on top of soil and kept moist for a few days.

Objectives
At the end of each lesson, the pupils should be able to:
1. infer that plants produce plants of the same kind; and
2. infer that some physical traits are common or shared within the same group of plants.

Materials
enlarged picture of a tomato plant and a mature mongo bean plant, real tomato fruit; Activity 4 - enlarged picture of katakataka and agave plant

Procedure
A. Review
Ask the class: “What did you learn from our previous lesson?”
(Animals give birth to baby animals of their own kind.)
(There are similar and different physical traits in animals belonging to the same kind.)

B. Motivation/Presentation
1. Post an enlarged picture/drawing of a tomato plant.
2. Call pupils to label all the plant part of the tomato plant on the board.
3. Ask the class: “What part of the tomato plant develops into a fruit?”
   (flower)
4. Show a tomato fruit to the class before cutting it open. Then, ask the following:
   3. What do you see inside the fruit? (Flesh, pulp, seeds)
   4. What would happen if we plant the tomato seed in the ground? (It would grow into a new tomato plant.)

C. Lesson Proper

Day 1
1. Tell the pupils to bring out their materials (by group).
2. Let the pupils continue Part B of Activity 3. Give the groups 5 minutes to do Part B. Tell them to make an enlarged version of their drawings in Boxes A, B, and C on a ½ sheet of Manila paper.
3. Tell the groups to post their drawings on the board. Tell the groups choose a reporter. Give each reporter 2-3 minutes to present their work.
4. Refer to the group outputs (drawing) during the discussion.

5. Show a picture/drawing of a mature mongo plant. Then ask:
   - Does the parent plant look like its young?
   - Can a tomato plant grow from a mongo seed? Explain your answer.

6. The important concepts to be developed in the discussion are:
   - Plants can have young plants.
   - A young plant can grow from seeds.
   - Plants can only reproduce plants of their own kind.

**Day 2**

7. Let the pupils work individually for Activity 4. Distribute the activity sheet.

8. Give the class seven (7) minutes to do the activity.

9. Post the enlarged picture of the katakataka plant on the board. Ask the questions in the activity sheet for the discussion.

10. Post the enlarged picture of the agave plant on the board.

11. Ask the questions in the activity sheet for the discussion.

12. The important concept to be developed in the discussion is:
   - Many plants grow from seeds but they can also grow from other plants parts like the stem, leaf, and root.

**Assessment**

Note to the teacher: You can choose 5 different plants that are commonly found in your community to indigenize the assessment activity.

How do these plants produce plants of their own kind? Write your answers in the table.

<table>
<thead>
<tr>
<th>Parent plant</th>
<th>Plant part where it grows from (seed, stem, leaf, roots)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mango</td>
<td></td>
</tr>
<tr>
<td>2. Corn</td>
<td></td>
</tr>
<tr>
<td>3. Rice</td>
<td></td>
</tr>
<tr>
<td>4. Kangkong</td>
<td></td>
</tr>
<tr>
<td>5. Ginger</td>
<td></td>
</tr>
</tbody>
</table>

**Scoring Guide:**

<table>
<thead>
<tr>
<th>Point/s</th>
<th>Criteria</th>
<th>Sample answers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>stem</td>
<td>Ginger – root</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td>---------------</td>
</tr>
<tr>
<td>Partially correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Gives 4 correct answers</td>
<td>✓ Mango – seed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Corn – seed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Rice – seed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Kangkong –stem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Ginger - root</td>
</tr>
<tr>
<td>3</td>
<td>Gives 3 correct answers</td>
<td>× Mango – root</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Corn – stem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Rice – seed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Kangkong –stem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Ginger - root</td>
</tr>
<tr>
<td>2</td>
<td>Gives 2 correct answers</td>
<td>× Mango – leaf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Corn – leaf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Rice – stem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Kangkong –stem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Ginger - root</td>
</tr>
<tr>
<td>1</td>
<td>Gives 1 correct answer</td>
<td>× Mango – leaf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Corn – leaf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Rice – stem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Kangkong –stem</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Ginger - root</td>
</tr>
<tr>
<td>0</td>
<td>Incorrect answers</td>
<td>× Mango – flower</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Corn – leaf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Rice – seed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Kangkong – leaf</td>
</tr>
<tr>
<td></td>
<td></td>
<td>× Ginger - leaf</td>
</tr>
<tr>
<td></td>
<td>No answer</td>
<td></td>
</tr>
</tbody>
</table>

**Assignment**

Have the pupils copy this letter for their parents and tell them to have their parents sign it. Tell them also to fill in the missing information. Alternatively, you can have the letter photocopied and distributed to each pupil of the class.
We are about to start our lesson on human reproduction and heredity in class, and there are topics that your child, [name of pupil], find hard to understand especially if/when the family is put in focus. Observable physical traits like eye color, hair texture, body shape, height, and skin color would also be tackled in the lesson.

Kindly guide your child with the assignments to be given to help handle sensitive topics. Rest assured that I will treat the subject carefully so as not to cause any awkwardness or discomfort to your child during the lesson’s duration. Thank you very much.

Tell the pupils to bring a picture of their family for the next lesson.

CHAPTER 5: Ecosystem

Overview

The pupils studied about heredity in Chapter 5 of Unit II. They learned that through reproduction, characteristics are passed on from parents to children in humans, from parent-animal to offspring and from parent-plant to offspring. Several characteristics were identified to pass on from parents to offspring in humans, animals and plants. In this lesson, the pupils concluded that like begets like, human beings produce human beings, animals produce animals and plants produces similar plants.

In chapter 6, pupils will realize that humans, plants and animals have common basic needs such as air, food, water, and shelter. They will also become fully aware that living things depend on the environment to meet their basic needs and they will recognize that there is a need to protect and conserve the environment.

Process skills involved in the activities include comparing and explaining.

Lesson 1. The Basic Needs of Humans, Animals and Plants
Duration: 1 day

Background Information
Plants and animals have the same needs as humans. All living things need food, water and air. Plants need “food”, the minerals and nutrients from the soil, energy from the sun and water. They also need the carbon dioxide from plants. Humans and animals need enough nutritious food, clean water to drink, comfortable and safe home, and unpolluted air to breathe.

Note:
1. Breathing in plants can be explained as the exchange of gases. The plants give off oxygen and absorb carbon dioxide from animals and humans. Eating in plants can be explained as the absorption of minerals and nutrients from the soil and energy from the sun. Drinking in plants can be explained as the absorption of water from the soil and movement as the reaction of the plants to gravity, sunlight and wind.

2.
   a. Activities common to humans, animals and plants include breathing, eating, drinking, movement and living in a habitat.
   b. Humans, animals and plants breathe the same air. The air they breathe is from the environment.
   c. Humans, animals and plants do not eat the same food but they get the food from one source, the environment.
   d. Humans, animals and plants drink the same water but not from the same source. The water they drink is from the environment.
   e. Humans, animals and plants do not live in the same habitat. All of these habitats are found in the environment.

Objectives
At the end of each lesson, the pupils should be able to:
   1. identify the basic needs of humans, animals and plants; and
   2. compare the similarities and differences in the basic needs of humans, animals and plants.

Materials
picture of the basic needs of human. Animals and plants

Procedure
A. Review
   The teacher can relate the lesson on heredity to the lesson on ecosystem.
   Sample questions the teacher can ask the students:
      a. What characteristics do children get from their parents?
      b. Can human parents produce children that are not humans?
      c. Can animals produce children that are humans?
      d. Can plants produce animals or humans?

B. Motivation / Presentation
The teacher can ask the students to determine the message about the environment by solving the puzzle.

Guess the Secret Message

Michelle was given a piece of paper containing a secret message by a stranger. Unfortunately, before she is able to read the message, the paper was torn into six pieces and blown by the wind.

Can you help Michelle determine the secret message? Here are the six pieces of paper.

avse eth tnenivnrom vase rou trefuu

Secret Message: Save the environment, save our future.

C. Lesson Proper

2. Let the pupils do Activity 1. Give them 15 minutes to answer the activity.
3. Write the table on direction 1 on the board.
4. After 15 minutes, ask the pupils to complete the table on the board.
5. The teacher may elaborate on the answers of the pupils.
6. Ask other pupils to answer question a of direction 2.
7. The teacher may elaborate on the answers of the pupils.
8. Ask other pupils to answer question b of direction 2.
9. The teacher may elaborate on the answers of the pupils.
10. Ask other pupils to answer question c of direction 2.
11. The teacher may elaborate on the answers of the pupils.
12. Ask other pupils to answer question d of direction 2.
13. The teacher may elaborate on the answers of the pupils.
14. Ask other pupils to answer question e of direction 2.
15. The teacher may elaborate on the answers of the pupils.
16. Come up with the following conclusions:
   - Humans, animals and plants have basic needs such as air, food, water and shelter.

Assessment

1. What are the basic needs of human beings?
2. What are the basic needs of animals?
3. What are the basic needs of plants?
4. Do humans, animals and plants have the same basic needs?

Assignment
The students may bring colored construction paper for the next activity.

Lesson 2. Things We Need from the Environment
Duration: 2 days

Background Information

The environment consists of living and non-living things. Living things that live in the environment are the humans, plants and animals. They depend on both living and non-living things in the environment for their basic needs. Any activity, whether natural or man-made that changes the conditions of living and non-living things in the environment significantly affects living things.

Objectives
At the end of each lesson, the pupils should be able to:
1. identify the needs of living things that are provided by the environment; and
2. explain how living things depend on the environment to meet their basic needs.

Materials
- sun headband, headband pattern of sun
- headband pattern of rain
- headband pattern of rice plant
- headband pattern of caterpillar
- headband pattern of bird, headband pattern of chicken

Procedure
A. Review
The teacher can relate the lesson on the basic needs of humans, animals and plants to the lesson on things we need from the environment. Sample questions the teacher can ask the students:
1. What are the basic needs of humans, plants and animals?
2. Where do we get the air, food and water we need?

B. Motivation / Presentation
My Favorite Food
The teacher can ask a few students to share to class their favorite food. The teacher will write on the board the examples given by the students. She will then ask “Where do you think your favorite food comes from?” This is to emphasize that the things we need are obtained from the environment.

Sample Flow of Conversation:
Teacher: What is your favorite food?
C. Lesson Proper

Day 1
1. Lead the pupils in doing Activity 2. Preparation and conduct of the activity could take the whole period.
2. Care should be observed in the use of cutting materials like scissors.

Day 2
1. Review what the pupils did in Activity 2. The following guide questions may be asked.
   - What living things were involved in the activity?
   - What non-living things were involved in the activity?
   - What is the role of the sun?
   - What is the role of rain?
   - Who ate the rice plants?
   - Who ate the caterpillars?
   - Who ate the birds?
   - Who ate the chicken?
2. Ask the pupils to answer question 7 of Activity 2.
3. The teacher may elaborate on the answers given by the pupils.
4. Ask the pupils to answer question 8 of Activity 2.
5. The teacher may elaborate on the answers given by the pupils.
6. Ask the pupils to answer question 9 of Activity 2.
7. The teacher may elaborate on the answers given by the pupils.
8. Ask the pupils to answer question 10 of Activity 2.
9. The teacher may elaborate on the answers given by the pupils.
10. Ask the pupils to answer question 11 of Activity 2.
11. The teacher may elaborate on the answers given by the pupils.
12. Come up with the following conclusions.
• Living things depend on the environment for their basic needs such as air, water, food, and shelter.
• Human beings depend on plants and animals for their supply of food, on the environment for clean air, clean water and shelter. Plants depend on the environment for their supply of sunlight and water, minerals and nutrients from the soil. Animals depend on plants and other animals for food, on the environment for clean air, clean water and shelter.

Assessment

Identify the letter of correct answer.

1. Why is water important?
   a. It is a resource that cannot be replenished.
   b. It has many uses.
   c. It is found in many places.
   d. It is part of the earth.

2. Why is the sun important?
   a. It provides light.
   b. It provides heat.
   c. It provides energy.
   d. all of the above

3. Why are plants important?
   a. They serve as food to animals.
   b. They produce oxygen.
   c. They prevent soil erosion.
   d. all of the above.

Assignment

The students may bring drawings or pictures of a beautiful things found in the environment

Lesson 3. Conservation and Protection of the Environment

Duration: 2 days

Background Information

The earth is one of the planets in the solar system. It is the planet we call home. It is the only planet that has the environment that can support life. If we do not take care of the environment in our planet, we have no other planet to go to. If humans continue to do the activities that harm the environment, it will result to a lot of problems like polluted air, polluted soil, and polluted water. Also,
it could worsen the effects of natural calamities like typhoons. Mountain without forest cover because of massive cutting of trees will result to deadly landslides and floods. These do not only lead to damage to property but result in the loss of human lives as well.

1. What are the things that humans do that harm animals and plants?

Humans cut trees indiscriminately. This destroy the homes of a lot of animals that live in trees. They also capture animals in the wild and keep in them in cages as pets. Humans let dirty water from their houses and factories to flow into rivers and lakes. Humans also throw their garbage anywhere like in rivers that could pollute the water and kill fishes and other aquatic animals. Humans also do let the dirty exhaust from their vehicles to pollute the air.

2. What will happen if we continue to cut a lot of trees?

The continuous cutting of trees will result to the displacement of animals living in these trees. It could also result to the disappearance of a lot of animal and plant species that depend on trees. Moreover, the absence of trees in mountainous areas results to landslides and floods because of the absence of the roots of trees that absorbs water and help in maintaining the solidity of the soil.

3. What will happen if we will not take care of the air we breathe?

The breathing of polluted air could result to diseases in humans like asthma, allergy and other diseases of the lungs.

Objective
At the end of the lesson, the pupils should be able to explain why there is a need to protect and conserve the environment.

Materials
large pictures of Philippine plants and animals, Large pictures of human activities that harm the environment, Large drawing of the illustration in the activity.

Procedure
A. Review

The teacher can relate the lesson on the things living things need from the environment

Sample questions the teacher can ask the students:
  a. What are the things we need from the environment?
  b. What will happen to living things if the environment can no longer provide our needs?
B. Motivation / Presentation

The Treasures of the Philippines

The teacher can show to class pictures of Philippine animals and plants. An example that can be used is the Philippine eagle. A short description and explanation on how the population of eagles deteriorated because of massive deforestation and how their existence is still threatened because of their disappearing habitat can be provided to students. The teacher needs to emphasize that there are things that humans do that harm the environment. In the same manner, humans can also do a lot of things to protect and conserve the environment.

C. Lesson Proper

**Day 1**

1. Let the pupils do Activity 3. Give them 15 minutes to do the activity.
2. After 15 minutes, lead the pupils in answering the questions.
3. Ask pupils to answer question a of number 2.
4. The teacher may elaborate on the answers given by the pupils.
5. Ask pupils to answer question b of number 2.
6. The teacher may elaborate on the answers given by the pupils.
7. Ask pupils to answer question c of number 2.
8. The teacher may elaborate on the answers given by the pupils.
9. Ask pupils to answer question d of number 2.
10. The teacher may elaborate on the answers given by the pupils.
11. Ask pupils to answer question e of number 2.
12. The teacher may elaborate on the answers given by the pupils.
13. Come up with the following conclusions:
   - There is a need to protect and conserve the environment.
   - Humans perform activities that harm the environment.
   - Humans can do a lot of things that can protect and conserve the environment.

**Day 2**

1. Review what the pupils did in Activity 3. The following guide questions may be asked.
   - What activities do humans do that harm the environment?
   - What activities can humans do to conserve and protect the environment?
2. Group the students into six teams. Let them bring out the drawing materials they brought to class.
3. Each team will write three promises, things that they will do to protect and conserve the environment.
4. Let them decorate their outputs with their colouring materials.

5. After the pupils are finished with their outputs. Let the teams present their promises in front of the class, with each member of the group reciting the promise and giving short explanation.

6. Come up with the following conclusions.
   - There is a need to protect and conserve the environment.
   - Humans perform activities that harm the environment.
   - Humans can do a lot of things that can protect and conserve the environment.

**Assessment**

Sample rubric for evaluating the pupils’ outputs

<table>
<thead>
<tr>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>The pupils demonstrate full understanding of the topic.</td>
</tr>
<tr>
<td>4</td>
<td>The pupils demonstrate good understanding of the topic.</td>
</tr>
<tr>
<td>3</td>
<td>The pupils demonstrate good understanding of parts of the topic.</td>
</tr>
<tr>
<td>2</td>
<td>The pupils does not seem to understand the topic at all</td>
</tr>
</tbody>
</table>

You may add neatness, legibility and attractiveness to the criteria for evaluation.

**Assignment**

The students may write their own slogans or draw a poster on environmental conservation and protection.

**Unit Test**

*(Sample Only)*

<table>
<thead>
<tr>
<th>Sense Organs</th>
<th>How to take care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes</td>
<td>• Wearing sunglasses on a sunny day</td>
</tr>
<tr>
<td></td>
<td>• Using goggles when swimming</td>
</tr>
<tr>
<td>Ears</td>
<td>• Using clean cloth in wiping the outer ear</td>
</tr>
<tr>
<td></td>
<td>• Wear earmuffs</td>
</tr>
<tr>
<td>Nose</td>
<td>• Covering the nose while passing a dusty road</td>
</tr>
<tr>
<td></td>
<td>• Using a clean cloth in cleaning the nose</td>
</tr>
<tr>
<td>Tongue</td>
<td>• Using a tongue scraper to clean the tongue</td>
</tr>
<tr>
<td></td>
<td>• Brushing teeth</td>
</tr>
<tr>
<td>Skin</td>
<td>• Taking a bath everyday</td>
</tr>
<tr>
<td></td>
<td>• Wearing clean clothes</td>
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<tr>
<td></td>
<td>• Drinking plenty of water</td>
</tr>
</tbody>
</table>
# Uses of Coconut Plant

<table>
<thead>
<tr>
<th>Plant</th>
<th>Plant Part</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coconut</td>
<td>midrib of leaves</td>
<td>To make into a broom</td>
</tr>
<tr>
<td></td>
<td>Trunk</td>
<td>For construction</td>
</tr>
<tr>
<td></td>
<td>coconut shell</td>
<td>As firewood</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Decoration</td>
</tr>
<tr>
<td></td>
<td>coconut oil</td>
<td>Medicine, cooking oil</td>
</tr>
<tr>
<td></td>
<td>coconut meat and water</td>
<td>Food</td>
</tr>
</tbody>
</table>

1. 😊  2. 😞  3. 😊  4. 😊  5. 😞

**Write yes Living thing and no if Non Living thing**

<p>| | | | | |</p>
<table>
<thead>
<tr>
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<tbody>
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<td><img src="image25.png" alt="Image" /></td>
</tr>
</tbody>
</table>
Study the picture below. Write down the do’s and dont’s in conserving and protecting of our mother earth.

UNIT 3: Force, Motion, and Energy

Overview

In the first quarter, pupils learned that there are different materials around them. These materials can be solid, liquid, or gas. In the second quarter, the pupils learned about people, animals and plants. In this quarter, they will learn that materials such as magnets, water, and moving air can make objects move. People, animals, and plants can also make an object move.

Chapter 1: Moving Objects

There are different ways in which we describe ways of moving objects. Some ways to make objects move can be by pushing, pulling, throwing, kicking, tossing, blowing, and dropping them. However, if you look closely at the different