MODULE 1:

WILD ANIMALS AND AN INTRO TO ECOSYSTEMS

Intermediate Phase

EEP!
ENVIRONMENTAL EDUCATION PROGRAMME

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MODULE 1 - INTERMEDIATE PHASE

THEME: Wild Animals and introduction Ecosystems.

For the Intermediate phase, lessons will include the basics as per Foundation Phase and then continue.

Key concepts & Objectives

- Understanding the difference between domestic and wild animals.
- Understanding the concept of an ecosystem.
- Understanding how animals, just like humans, need food, water and shelter. They need a 'habitat' (a space to live) where they can have babies and escape from danger.
- Understanding the concept of a food chain and how different animals eat different food (introducing the concept of herbivores, carnivores and omnivores).
- Introducing the concept of a protected area or game reserve, why we need them and the benefits of preserving these for local communities.
- Understanding that rivers are freshwater ecosystems that flow into the ocean. What happens at the top of this freshwater chain affects all animals (and humans) all the way through.
- Understanding that a healthy freshwater ecosystem is vital to humans because without fresh water, humans could not exist.
- Learners should be encouraged to visit a freshwater ecosystem and discover what creatures and plants live there (plants, insects, frogs, fish, birds.)
- Understanding why we have game reserves and why they should be protected.

MODULE 1, LESSON 1 (IP)

MOD 1. LESSON 1

Wild and tame animals.

OBJECTIVES/OUTCOMES

Learners will:

1. Distinguish between wild and tame animals.
2. Identify wild and tame animals.
3. Begin to understand the interdependence of humans and animals.
4. Understand the importance of caring for all living creatures.

MATERIALS

- Module 1, Activity 1 (IP).

PROCEDURE OF LESSON/ACTIVITY

1. Talk about pets learners may have at home, including dogs and cats. Emphasise that these animals have been domesticated over many hundreds of years and are found in or close to human environments. We need to feed and take care of our pets every day. Show pictures and allow learners to tell about their pet or farm experiences.

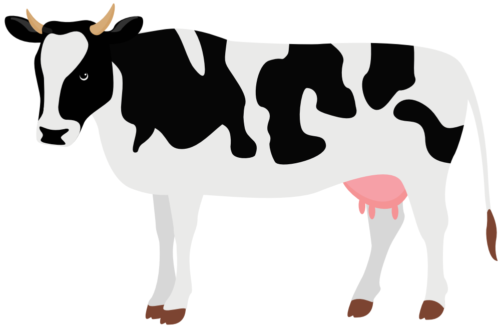
2. Discuss farm animals and the products we get from each (meat, milk, eggs, wool and leather).

3. Learners should understand that farm/domestic animals need to be looked after by humans. How do we do that? Discuss with the learners.

4. Discuss with learners that all animals (whether wild or domestic) have the same needs as humans:
    - They need food, water, shelter, and other animals like them.
    - They also feel pain, just like we do.

5. Discuss the concept of wild animals. These are animals that do not need humans to survive. They have all they need to survive in the wild. Ask the learners to name some wild animals.

6. Learners complete Module 1, Activity 1 (IP).



MODULE 1, ACTIVITY 1 (IP)

Draw a picture of:

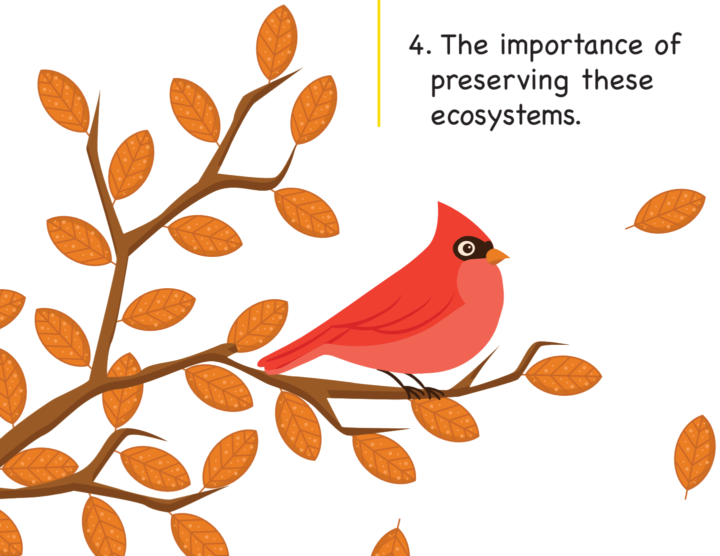
FARM ANIMALS

Draw a picture of:

WILD ANIMALS

MODULE 1, LESSON 2 (IP)

MOD 1. LESSON 2	OBJECTIVES/OUTCOMES	MATERIALS	PROCEDURE OF LESSON/ACTIVITY
Concept of an eco-system.	Learners will: 1. Understand the concept of ecosystems. 2. Understand the interdependence of the living things within an ecosystem. 3. Understand the diversity of living things that exist within each different ecosystem. 4. The importance of preserving these ecosystems.	• Module 1, Activity 2 (IP).	1. Explain to learners that the plants and animals found together in any particular place are called an ecosystem. These plants and animals depend on each other to survive. It is vital that there is a natural balance between these life-forms. Imagine that there were no bats, frogs or lizards; there would be too many mosquitoes. If there were no snakes, our towns might be overrun by rats and mice. Ask learners to suggest other similar scenarios. 2. The plants in the ecosystem are very important. Their roots hold the soil in place so that it is not carried away by rain water. Small animals such as rodents may live under the ground and earthworms in the soil help the plants to grow well. Birds spread seeds so that more plants grow. Bees pollinate flowers so that a new crop will grow in the next season. Grass, leaves and roots provide food for buck and elephants. Monkeys and baboons eat the fruits and nuts from trees. Trees provide shade and shelter for many life forms and birds build nests in the trees. 3. Each living thing has a vital role to play in the health of an ecosystem. Together with the non-living things such as sun, weather, soil, climate and atmosphere, the living things will thrive. Not only will the different ecosystems do well, but the whole of earth will be healthy and thriving. As humans, we need to ensure that our world is in a good shape for us to live in, and for future generations too. 4. Take the learners on a walk around the school grounds or surrounds. Find an eco-system. This could be a tree. Let the learners observe what's going on in the tree... the insects and the birds and have an interactive discussion.



MODULE 1, LESSON 3 (IP)

MOD 1. LESSON 3

Animal food classification.

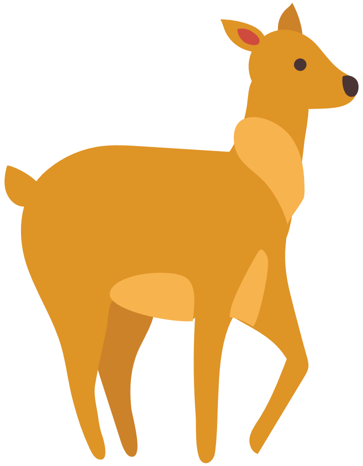
OBJECTIVES/OUTCOMES

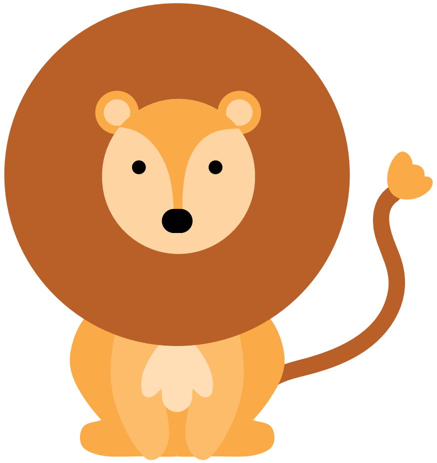
Learners will:

1. Understand the terminology used to classify animals according to what they eat.
2. Understand that animals eat what is available within their ecosystems.

MATERIALS

- Module 1, Activity 3 (IP).





PROCEDURE OF LESSON/ACTIVITY

1. Learners say what they like to eat. List these things on the board, in categories of fruits and vegetables, meat and fish. Talk about food choices. There may be vegetarians within the class, and this can be discussed briefly.

2. Animals also have specific foods that their bodies are designed to easily digest. Animals that eat plants of any type are called herbivores. These animals eat grasses, leaves, fruits, seeds, nuts and berries. These animals require healthy plants that keep on reproducing to have enough food to eat. Certain birds, caterpillars, buck, rabbits and monkeys are herbivores. Elephants and giraffes eat leaves, and buck graze on grass. These herbivores will become food for the carnivores and omnivores.

3. Some animals eat meat or fish, and are called carnivores. They do not eat any plant food. These animals have strong teeth or beaks for tearing and ripping meat apart. Lions, leopards, cheetahs and wild dogs hunt buck and other grazing animals.

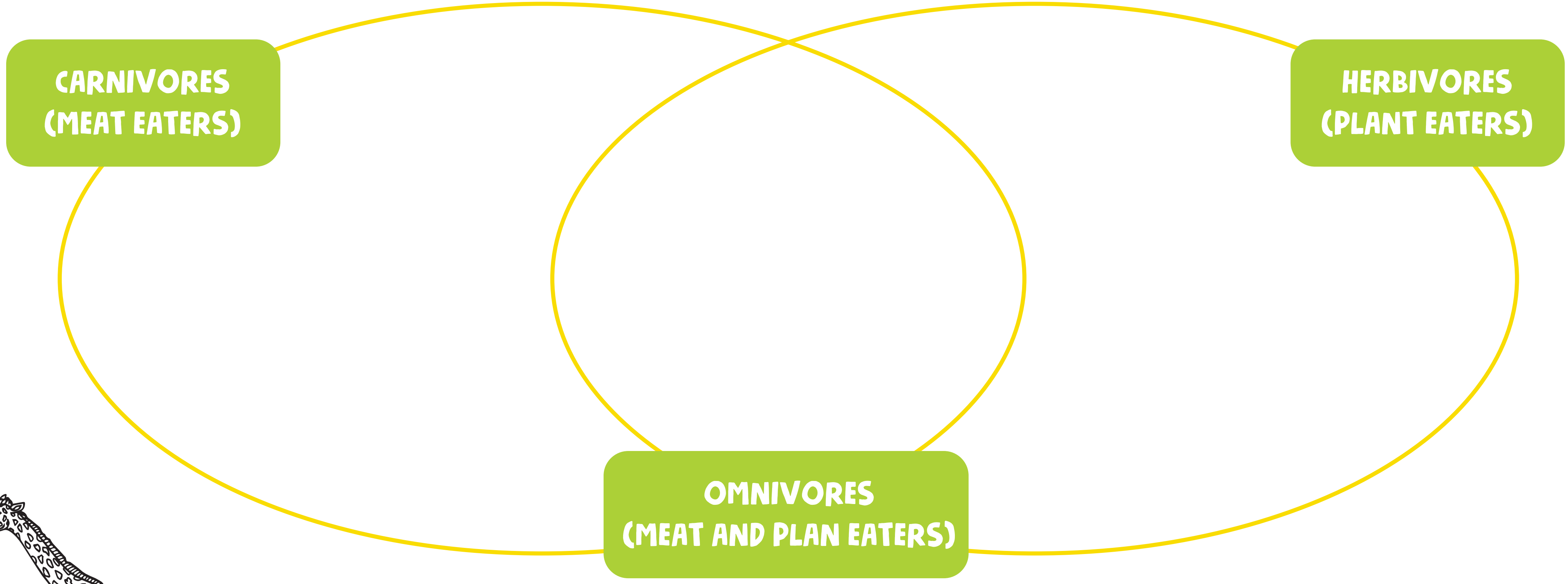
4. There is a third group of animals, known as omnivores. These animals will eat any kind of food, including plants and meat. Baboons are omnivores, and have large canine teeth for tearing meat, but also like to eat fruits. Most birds are omnivores. Some will pull worms from the ground but also love to eat fruits and berries. Reptiles such as turtles are omnivorous. Ants and many other little insects are also omnivorous, eating nectar from flowers, but also eating other insects.

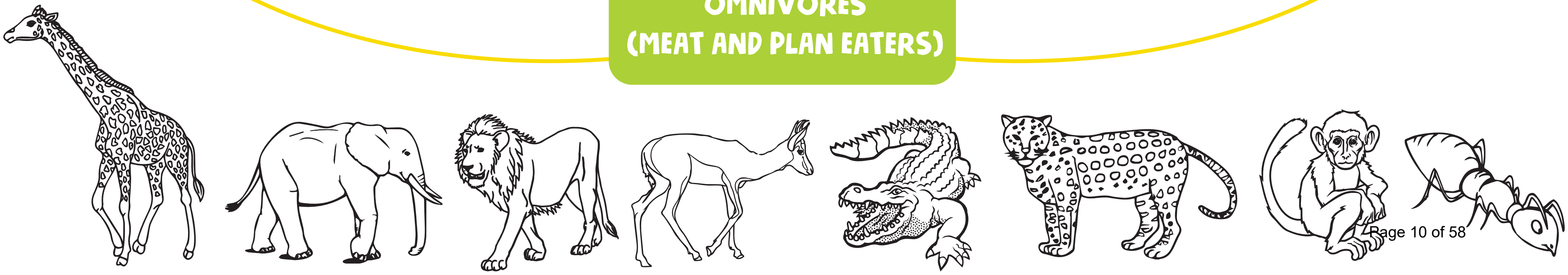
5. Ask the learners which of the three groups do you think they, as humans, belong to? Find out why they say so.

6. Learners complete Module 1, Activity 3 (IP).

MODULE 1, ACTIVITY 3 (IP)

Cut out the animals and stick them in their correct category.





MODULE 1, LESSON 4 (IP)

MOD 1. LESSON 4

Food Chains.

OBJECTIVES/OUTCOMES

Learners will:

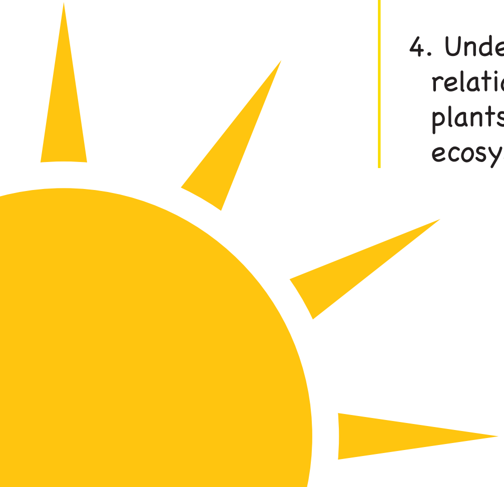
1. Understand that all living things need to feed to get energy to grow.
2. Understand that organisms get energy from eating other organisms.
3. Be able to compile a simple food chain and understand how this is repeated over and over in a never-ending cycle.
4. Understand the relationships between plants and animals in an ecosystem.

MATERIALS

- Module 1, Activity 4 (IP).

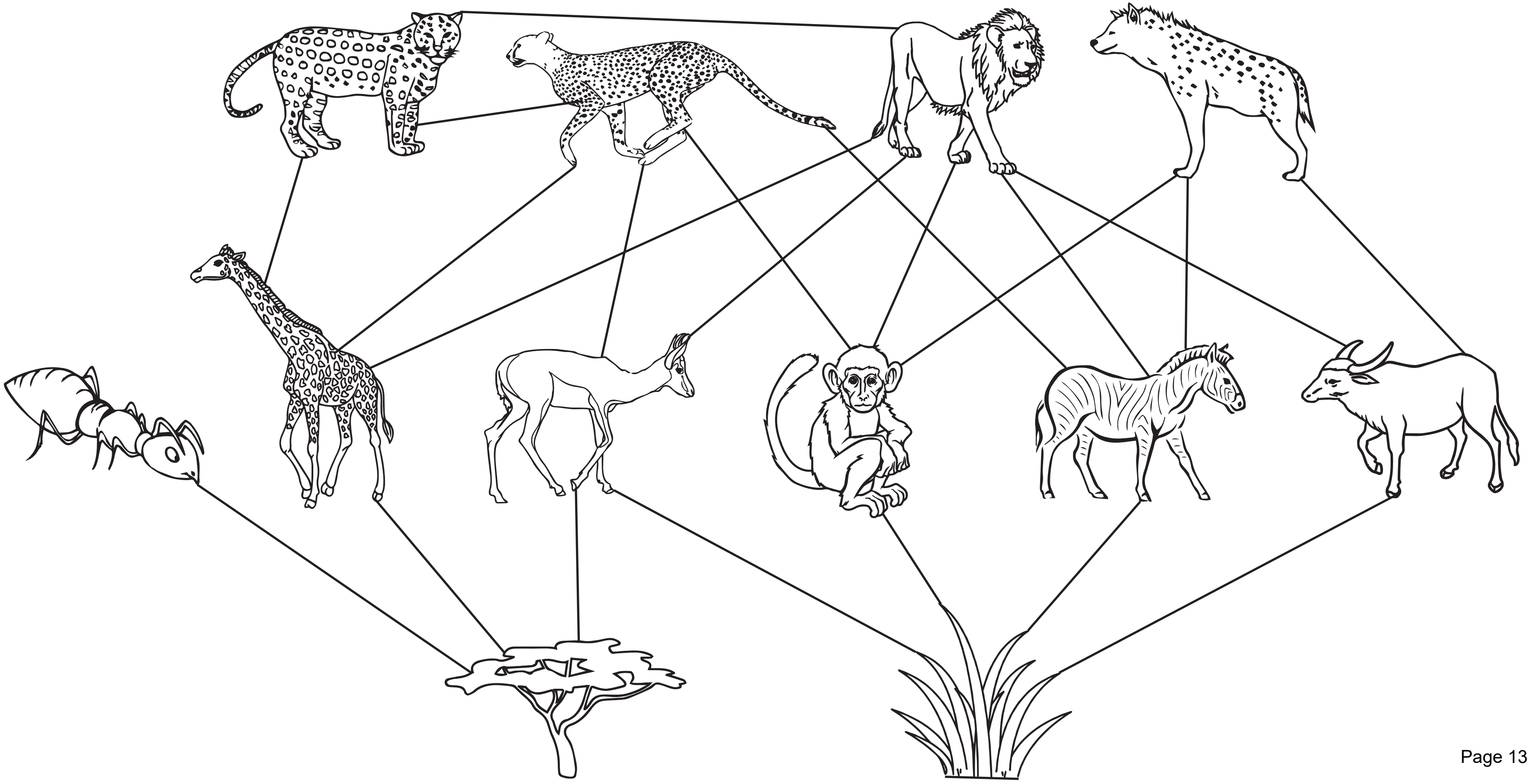
PROCEDURE OF LESSON/ACTIVITY

1. Learners should learn to classify the difference between plants and animals.
2. Discuss with learners what different animals eat. For example, a zebra eats grass, and a lion will eat a zebra.
3. Explain that there is a feeding relationship which is called a food chain.
4. Most of the food chains begin with the sun whose energy enables plants to make nutrients for its own growth, as well as for those animals that will eat the plants. Plants are the first link in the food chain, as they produce food and energy for other living things.
5. Consumers are the second link in the food chain. Consumers are animals, including humans, which feed on the plants.
6. Many large animals eat the leaves off trees, but so do small creatures such as beetles and caterpillars. While the insects are eating the leaves, birds may come and pick them off the leaves and eat them. Snakes and carnivrous birds can eat the small birds. Lions can hunt and eat the buck that are eating the grass or leaves, and so it goes on.
7. Allow the learners to complete their own food chain in Module 1, Activity 4 (IP).



MODULE 1, ACTIVITY 4 (IP)

Colour in this food chain. Add in your own special touches like more trees, grass, sun and clouds.



MODULE 1, LESSON 5 (IP)

MOD 1. LESSON 5

OBJECTIVES/OUTCOMES

Learners will:

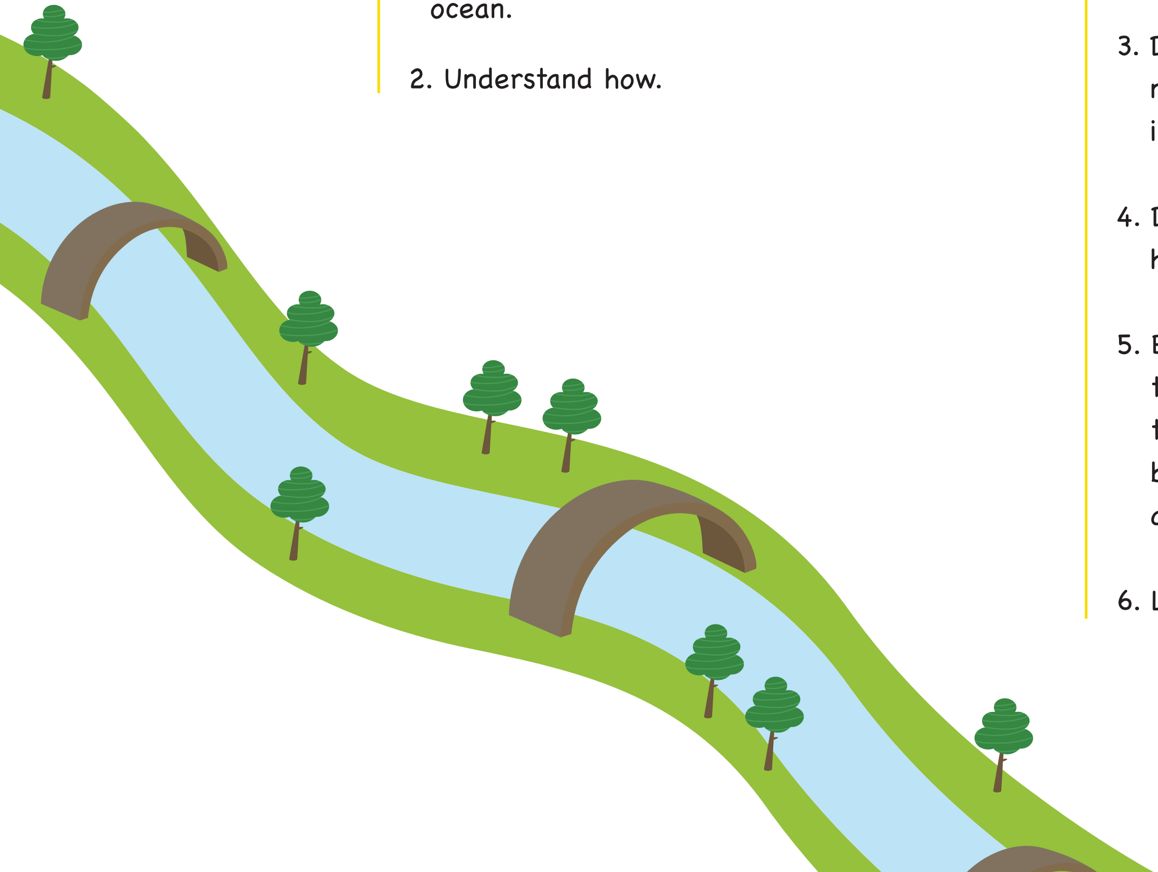
1. Begin to develop an understanding of rivers and their flow to the ocean.
2. Understand how.

MATERIALS

- Module 1, Activity 5 (IP).

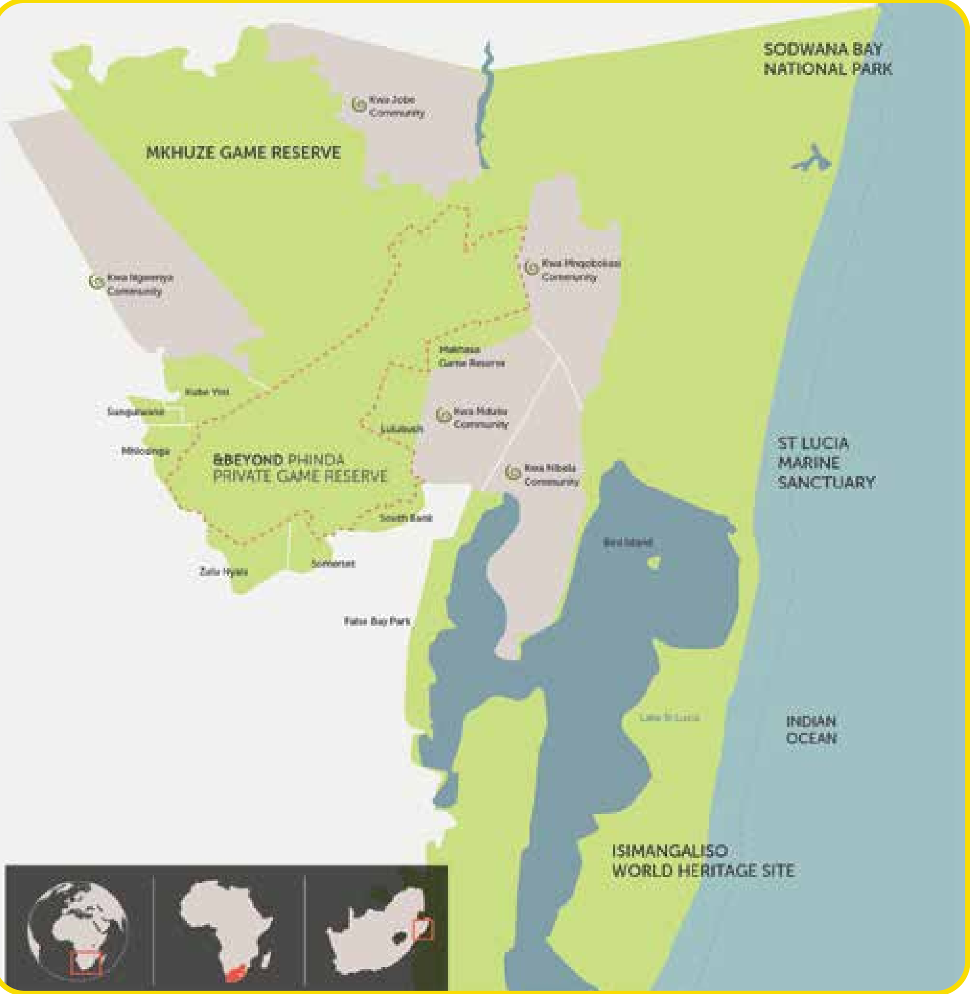
PROCEDURE OF LESSON/ACTIVITY

1. Show learners a map of the game reserves and rivers of northern KZN.
2. Look at the flow of the rivers into the lakes (Sibaya and St Lucia) and into the sea.
3. Discuss with the learners the animals that they think live in the rivers nearby where they live (fish, birds etc.) and some of the animals that live in the ocean that the rivers flow into (fish, dolphins, sharks etc.)
4. Discuss with the learners that what happens in one part of a river will have an effect all the way down to the ocean and beyond.
5. Ensure that the learners have an understanding that if the ecosystem at the top of the river is polluted, the pollution will flow all the way down to the ocean, affecting all the animals and ecosystems along the way. And because of this, human communities living alongside these rivers will be affected too.
6. Learners complete Module 1, Activity 5 (IP).



MODULE 1, ACTIVITY 5 (IP)

Draw a dot on the map to show where you live.



What would happen if all the fish in a river ecosystem had to die?

Write down 3 things that you can do to protect river ecosystems where you live?

MODULE 1, LESSON 6 (IP)

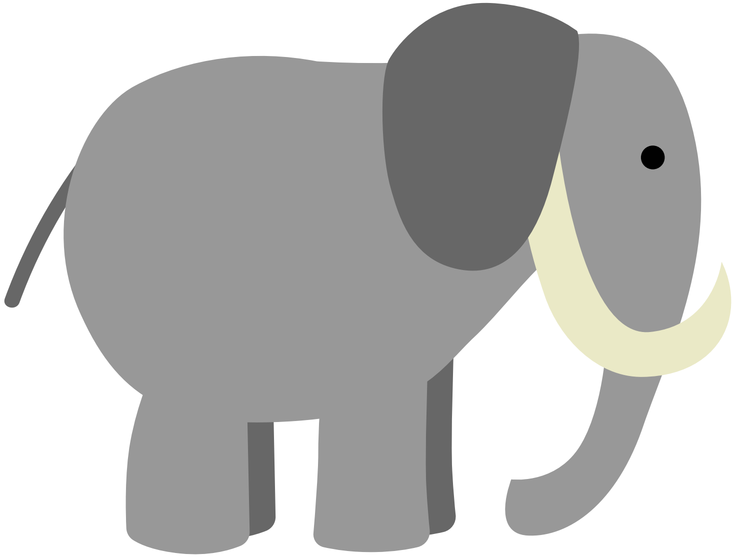
MOD 1. LESSON 6

Game Reserves.

OBJECTIVES/OUTCOMES

Learners will:

1. Understand the difference between animals kept in a reserve, or in the wild.
2. Understand the need for fencing off reserves for the benefit of both the animals and the humans.



MATERIALS

- Module 1, Activity 6 (IP).

PROCEDURE OF LESSON/ACTIVITY

1. In South Africa, many of our game reserves are fenced off. Discuss with the learners why they think this is. Be sure to mention the following:

- Wild animals can be dangerous, both to farm animals and humans.
- Humans can harm wild animals, for example, poaching.
- Humans can harm the natural environment. For example, if we chop down all the trees in the reserve, the animals will have nothing to eat.
- Our farm animals can spread diseases to wild animals, and wild animals can spread diseases to our farm and domestic animals.

2. Discuss with the learners some of the benefits to keeping wild animals in their natural habitats and protecting their environment. Be sure to mention the following:

- Africa is beautiful and our game reserves bring thousands of tourists from other countries who want to see our animals.
- This creates jobs for people in local communities. If there are no wild animals to see, no tourists will come.

Learners complete Module 1, Activity 6 (IP).

MODULE 1, ACTIVITY 6 (IP)

Trace your hand in this space. On each finger, write what you can do to help protect our wild spaces.

MODULE 2:

NATURE'S RECYCLERS

Intermediate Phase

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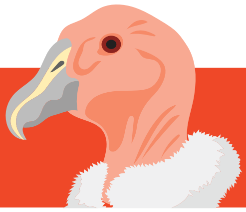
MODULE 2 - INTERMEDIATE PHASE



THEME: NATURE'S RECYCLERS

Educators should re-iterate the basic concepts from Foundation Phase for this theme.
Foundation Phase themes are expanded in this module, but the key concepts remain the same.

ADDITIONAL NOTES:

This theme is all about the fact that in nature, absolutely nothing goes to waste.

VULTURES

Vultures are one of nature's super cleaners!

These amazing birds have incredible adaptations that make them perfectly designed for this dirty job!

Vultures are true scavengers, meaning that they don't hunt for their food – they simply wait around until the predators (like lions, cheetahs or leopards) have finished with their meal and then they tuck in!

- Vultures can see 8 times better than humans.
- Vultures have few feathers on their heads, unlike other birds. This is so they can get down-and-dirty and right into the carcass without needing to clean them.
- Their beaks are also specially designed so they can get right into the crevasses of a carcass.
- Rotting flesh would kill most animals – but NOT vultures.
- They've got special acid in their stomachs that can break down bacteria and parasites.
- Vultures keep diseases out of the environment. They stop diseases from spreading to other animals... and humans.

THREATS TO VULTURES:

Vultures are becoming endangered.

- Poisoning by poaching. When poachers kill animals like rhinos or elephants, they poison the carcass so that the vultures can't alert rangers and police. (vultures circling overhead are the first sign that an animal is dead in the bush).
- Hundreds of vultures can be killed at once because of this.
- Their habitat is being destroyed. As farmland and factories get built, there is less and less space for vultures.
- Power lines. Vultures get caught up in power lines and are electrocuted.

WHY CAN WE NOT LIVE WITHOUT VULTURES?

If we lose vultures, we run a serious risk of spreading disease.
We need to protect vultures.

MODULE 2, LESSON 1 (IP)

MOD 2. LESSON 1

Investigating our rubbish.

OBJECTIVES/OUTCOMES

Learners will:

1. Know how to keep their environment clean, and thus healthier.
2. Understand that diseases develop and spread in unclean environments.
3. Understand that we should consider alternative uses for our waste before throwing it away.

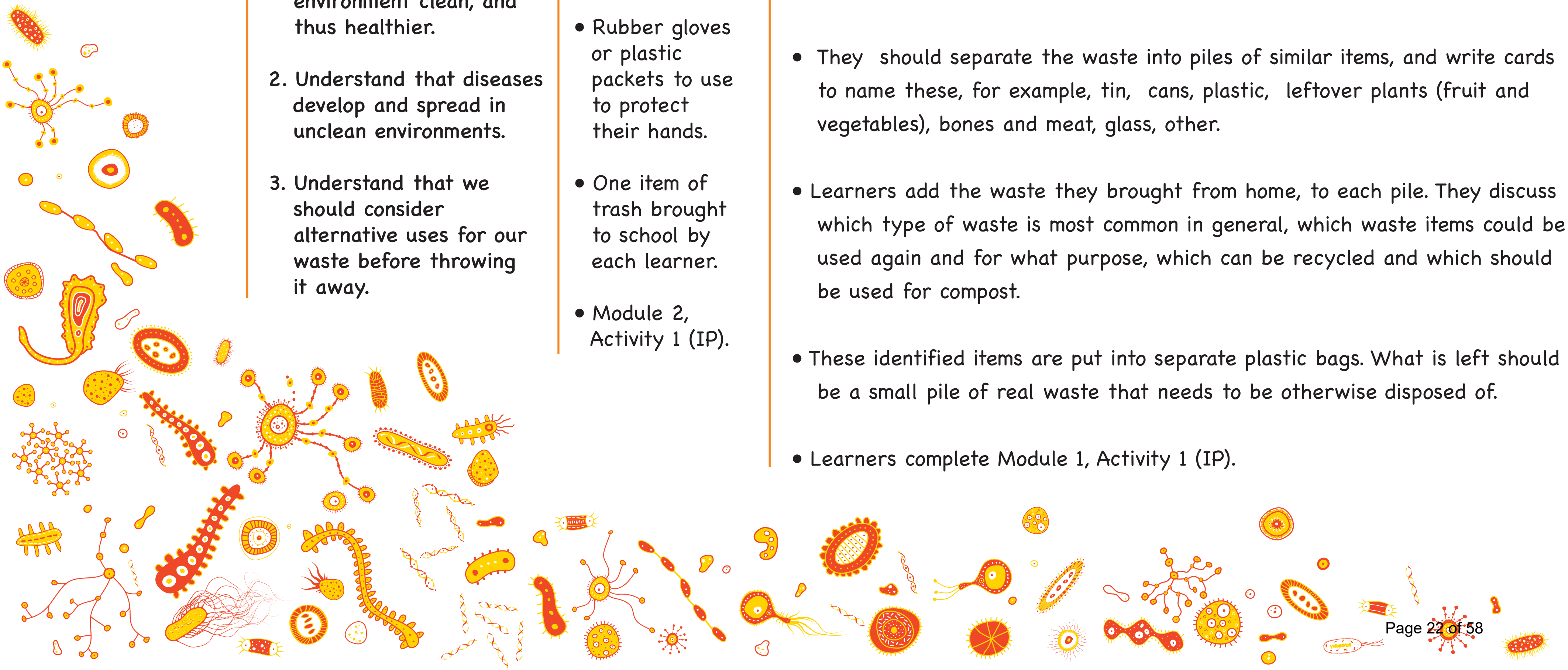
MATERIALS

- A bin of trash collected by teacher.
- Rubber gloves or plastic packets to use to protect their hands.
- One item of trash brought to school by each learner.
- Module 2, Activity 1 (IP).

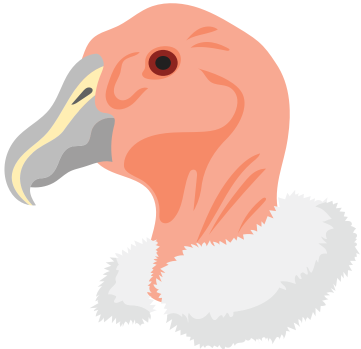
PROCEDURE OF LESSON/ACTIVITY

Educator to empty out a bag of rubbish onto a large plastic bag that has been cut open. Learners should talk about the various things in the pile, noting what each is made of.

- They should separate the waste into piles of similar items, and write cards to name these, for example, tin, cans, plastic, leftover plants (fruit and vegetables), bones and meat, glass, other.
- Learners add the waste they brought from home, to each pile. They discuss which type of waste is most common in general, which waste items could be used again and for what purpose, which can be recycled and which should be used for compost.
- These identified items are put into separate plastic bags. What is left should be a small pile of real waste that needs to be otherwise disposed of.
- Learners complete Module 1, Activity 1 (IP).

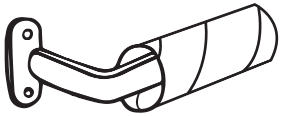


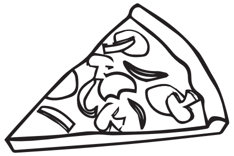
MODULE 2, ACTIVITY 1 (IP)



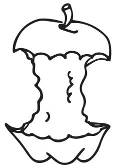
Here are items of "rubbish" that were thrown away by humans.

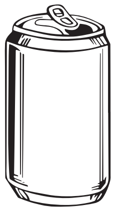
Ring in red any rubbish that could hurt an animal.
Ring in blue all those things that we can recycle or use again.
Ring in green all the things we could use to make compost.





MILK CARTON





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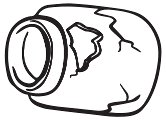
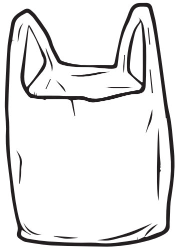
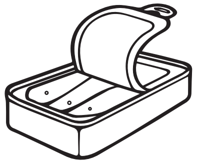
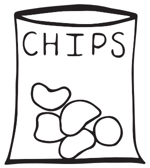
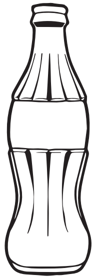




CHICKEN BONES

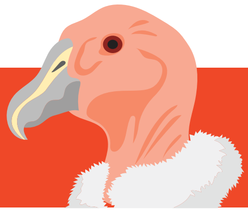






OLD BATTERIES

CRUMPLED PAPER



FLIES & MAGGOTS:

- Flies are not one of human's favourite creatures.
- They feed off rotting flesh and their offspring, which are called maggots, are not the most attractive 'worms' on earth.
- They spread and carry disease – which is why it is important not to leave food out, especially during the summer months.

BUT…

- In the wild, flies and maggots play a vital role: they help get rid of dead carcasses (like when a lion has finished feeding on a buffalo or zebra).

FLY LIFE CYCLE:

- Flies can smell a fresh carcass from kilometres away. The scent isn't strong enough for humans to detect, but flies have extra-sensitive hairs on their antennae which pick up the smell.
- Flies don't have teeth, so they can't chew whole food. To get around this problem they have a special organ on their faces which is almost like a straw (in English it's called a proboscis).
- There are chemicals in this organ that the fly vomits onto the flesh. These chemicals dissolve the flesh so that the fly can suck up the liquid.
- After feeding, flies lay their eggs – up to 500 at a time!
- The eggs hatch after about 8-24 hours…. But the babies don't look like flies at all…. They are squirming worms called maggots.
- Maggots feed all day and all night on the flesh.
- They will do this until they get to a stage where they need to pupate.
- During the weeks that follow, the maggot undergoes a huge transformation inside the pupa. When they're ready they hatch from the pupa as fully grown flies.
- And the cycle begins again.

SUMMARY:

- While flies are pests to humans, they perform a vital function in the wild.
- Imagine there were no flies or maggots in the wild.
- They perform a vital function in breaking down dead matter.
- And they do it fast.

MODULE 2, LESSON 2 (IP)

MOD 2. LESSON 2

Planting waste.

OBJECTIVES/OUTCOMES

Learners will:

1. Understand that certain materials decompose rapidly while others do not.
2. Begin to understand the dangers that waste in the environment poses to animals and humans, if not handled correctly.
3. Understand how compost is formed and why it nourishes plants so well.

MATERIALS

- General waste of all types collected by teacher.
  Include:
  Sheet of newspaper,
  Coin,
  Wooden peg,
  Sweet wrapper,
  Chicken bone,
  Slice of bread,
  Plastic tub,
  Half a fruit,
  Vegetable peels, tin,
  Cardboard box,
  Fresh egg.
- Learners to be asked to bring used 2-litre cool drink bottles to the classroom to grow a plant
- Module 2, Activity 2 (IP).

PROCEDURE OF LESSON/ACTIVITY

1. Learners are shown the named objects. They say what they think will happen to each if it was buried in sand for a month or so. Lay out the objects and photograph them for later comparison.

2. Learners bury the items separately in the soil.

3. Learners pour the water over the soils. This is placed in a sunny area and left undisturbed for one month or more. It could be watered about once per week in very hot weather.

4. After a month, the box and its contents are emptied and spread onto a large plastic bag that has been cut open. Learners examine each item carefully, noting what has happened to each buried item.

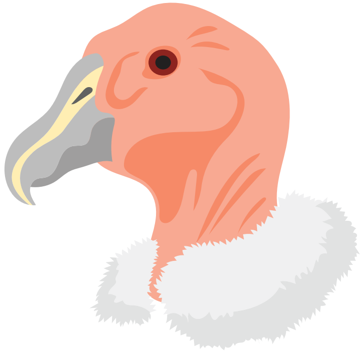
5. These are again photographed for comparison and referring to, over the weeks.

6. Explain that the waste that has been broken down has become part of the soil – which will make great "food" for plants.

7. Plant some seeds in the soil (in cut-off 2-litre cool-drink bottles – more recycling!) and watch them grow. Bean seeds are great for this.

8. Module 2 Activity 2 (IP).

MODULE 2, ACTIVITY 2 (IP)

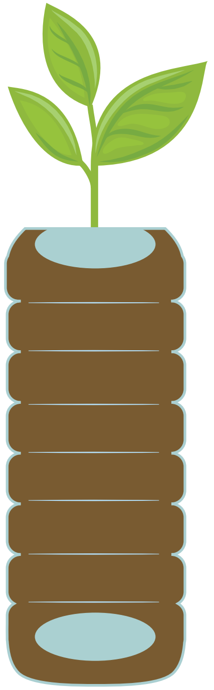


Draw pictures of what the things that we "planted"in the pot of soil look like.

After one month, draw what these things look like now.

MODULE 2, LESSON 3 (IP)

MOD 2. LESSON 3	OBJECTIVES/OUTCOMES	MATERIALS	PROCEDURE OF LESSON/ACTIVITY
Sorting waste.	Learners will: 1. Become aware of waste that is created in their homes. 2. Become aware of wastage in their homes and find ways to use less. 3. Become aware of recycling certain items. 4. Use their imaginations to create something from scrap materials.	• A few items from home kitchen's bin: Empty tins, jelly packets, biscuit and sweet wrappers, toilet roll inners, vegetable peels... • Each learner to bring and empty plastic water or milk bottle with lids, or toilet roll inners. • Scraps from home such as odd buttons, small bits of ribbon fabric, lace, wool. • Scissors, glue, permanent markers or thick paint. • Module 2, Activity 3 (IP).	1. Learners examine the items brought by the teacher and suggest uses for each reusable item. They sort into Reuse, reduce, recycle and compost. 2. Learners sort the list of waste on the worksheet by listing the items under the appropriate headings. Some may fit under more than one heading. 3. Module 2, Activity 3 (IP). 4. Learners are given the challenge to use the milk or water bottles and lids to create a fun piggy bank. Teacher (or parents) should cut a slit along the side for inserting the coins. The toilet roll inners can be used to create an imaginative head or animal.



MODULE 2, LESSON 4 (IP)

MOD 2. LESSON 4

Lifecycle of a fly

REFER TO FLY FACTS ON PAGE 1

OBJECTIVES/OUTCOMES

Learners will

1. Understand that flies have a positive purpose in nature.
2. Understand why food needs to be covered to prevent flies from contaminating it.
3. Understand the need to keep themselves and the environment clean so that flies do not breed there.
4. Understand that in nature, flies fulfil an important role.
5. Understand the life cycle of a fly, and know how it breeds and spreads germs so fast.

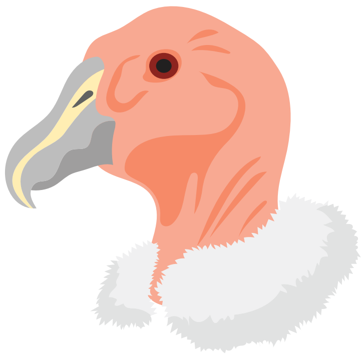
MATERIALS

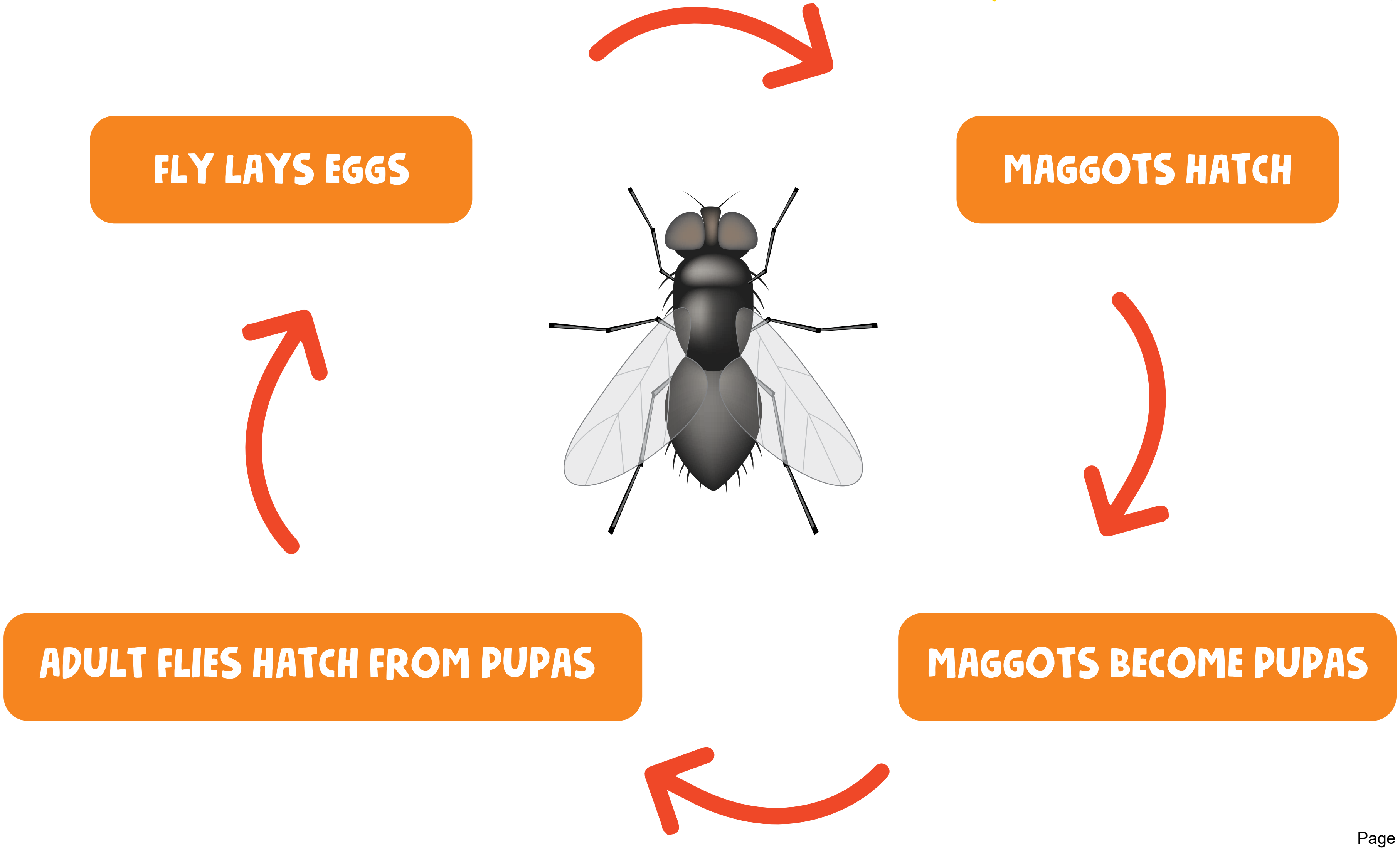
- If possible, dead fly/flies and a magnifying glass.
- A slice of bread with jam, crumbs of biscuit, left over tea in a cup.
- A picture to show the lifecycle of the fly.
- Module 2, Activity 4 (IP).

PROCEDURE OF LESSON/ACTIVITY

1. The bread and jam, biscuit crumbs and tea in a cup are left outside the classroom for a while to attract flies. (Maybe ants too).
2. Learners examine the flies. Take note of the body parts, especially the mandibles or mouth parts. It is an insect and has 6 legs.
3. Check to see if flies have found the food outside of the classroom. Explain that they leave germs on the food that they eat, as they "spit" these onto the food. They also pick up germs on their hairy legs and take this to our food or even to sit on dirty hands.
4. Humans do not like this, but in nature they have a real purpose. After an animal has been hunted and killed, or dies, flies feed on the scraps of a carcass, They lay their eggs in this flesh where it soon becomes a maggot that will eat the meat. This will become a pupa from which an adult fly again emerges. Instead of rotten meat all over nature, the flies and maggots consume it, thus preventing diseases from developing and spreading.
5. Draw the pictures to complete the lifecycle of the fly, on Module 2, Activity 4 (IP).

MODULE 2, ACTIVITY 4 (IP)





FLY LAYS EGGS

MAGGOTS HATCH

MAGGOTS BECOME PUPAS

ADULT FLIES HATCH FROM PUPAS

MODULE 2, LESSON 5 (IP)

MOD 2. LESSON 5

Vultures: part of nature's clean-up crew.

REFER TO VULTURE FACTS ON PAGE 2

OBJECTIVES/OUTCOMES

Learners will:

1. Understand the role of vultures within a natural environment.
2. Understand that vultures are a vital part of the food chain.
3. Understand that vultures help prevent diseases as they clean up carcases before these can rot and become diseased.
4. Understand the value of vultures in nature and why we need to conserve them

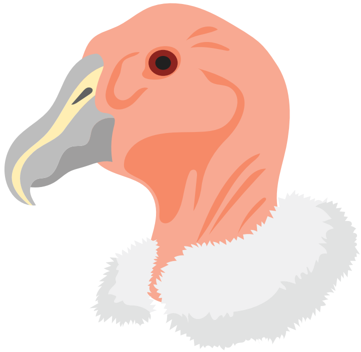
MATERIALS

- Pictures of vultures that show clearly the beaks and talons, the sparsely feathered necks and keen eyes.
- Pictures of vultures at a carcass.
- Module 2, Activity 5 (IP).

PROCEDURE OF LESSON/ACTIVITY

1. Show and discuss the pictures of the vultures. Discuss their physical attributes such as claws and beaks for tearing meat, long necks with few feathers to enable them to get their heads into the inside of a carcass.
2. They have extremely acidic stomachs that can cope with carcasses that are infected with dreadful diseases such as anthrax, rabies, cholera and botulinum toxin, which would kill other animals that ate this. No other animal is able to do this.
3. Thus vultures prevent these diseases from spreading to humans. We need vultures in nature, to keep the environments healthy and clean.
4. Vultures are becoming endangered due to: Human invasion of their territory and flying into power lines.
5. When poachers kill animals like rhinos or elephants, they poison the carcass so that the vultures can't alert rangers and police. (vultures circling overhead are the first sign that an animal is dead in the bush). Hundreds of vultures can be killed at once because of this.
6. Re-iterate to learners that without vultures, we have a serious problem and we need to conserve these very special birds.
7. Learners draw pictures to show the dangers posed to vultures due to human interference in their environments.
8. Module 2, Activity 5 (IP).

MODULE 2, ACTIVITY 5 (IP)



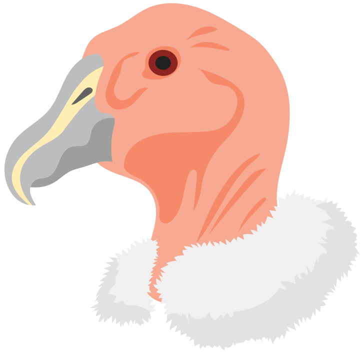
If there are no vultures in the world, we run the risk of developing diseases that affect humans. Vultures are becoming endagered. Draw these threats to them below.

Vultures are electrocuted when they fly into power lines.	Pochers poison carcasses so that vultures wont alert police and rangers.	Cities and factories are being built in vulture territory.

MODULE 2, LESSON 6 (IP)

MOD 2. LESSON 6	OBJECTIVES/OUTCOMES	MATERIALS	PROCEDURE OF LESSON/ACTIVITY
Recycling things at school.	Learners will: 1. Understand the need to cut down on waste. 2. Understand that they should save on electricity by not leaving lights on unnecessarily. 3. Buy only what is needed, so that food is not allowed to rot and get thrown away. 4. Understand the need to recycle many non-consumable items. 5. Begin to understand the huge impact that a properly run recycling program can have on their environment. keep discarded paper separate for easy recycling.	• Discussion around the waste bins in the school. • Pictures of recycling bins with labels. • Module 2, Activity 6 (IP)	1. Briefly discuss the wastage in the school and classroom bins again. Remind learners about the waste from kitchens that was examined. 2. Discuss the lesson there separating waste was dealt with, and revise the categories of reuse, recycle, reduce and compost. 3. Discuss how the school could earn some money by starting collections of paper, glass, plastic bottles, cans and tins. Compost can be made for the school gardens (vegetable or other). 4. Recycling is a long term project and this will require much discussion before large scale implementation at school. There are many instances that can assist in this regard. In the meantime, encourage the beginnings of recycling by getting the learners to deposit their school waste in bins labelled for each type of waste. 5. Learners complete Module 2, Activity 6 (IP). This will imprint the beginnings of such a project in their minds and should be referred to often over the year.

MODULE 2, ACTIVITY 6 (IP)



Draw an example of each type of rubbish in the boxes below.

COMPOST	TINS	PLASTIC

MODULE 3:

ANIMAL HOMES

Intermediate Phase

MODULE 3 - INTERMEDIATE PHASE

THEME: ANIMAL HOMES.

For the intermediate phase, educators should do a re-cap on the Foundation Phase information. Learners should then do case studies on various animal shelters in more detail.

RECAP ON FOUNDATION PHASE INFORMATION:

- There are animals that make their homes.
- There are animals that find their homes.
- There are animals that carry their homes.
- There are animals that roam around, searching for food and don't have a specific place where they live.
- Animals that make their homes in water.

Educators should discuss with the learners why they think animals need homes too. Make sure the following is mentioned:

- Different animals have different needs, so their choice of 'home' is varied.
- Animals also need a safe place to escape predators/enemies.
- They need a place to have babies.
- They need a place to be safe from bad weather.

MODULE 3, LESSON 1 (IP)

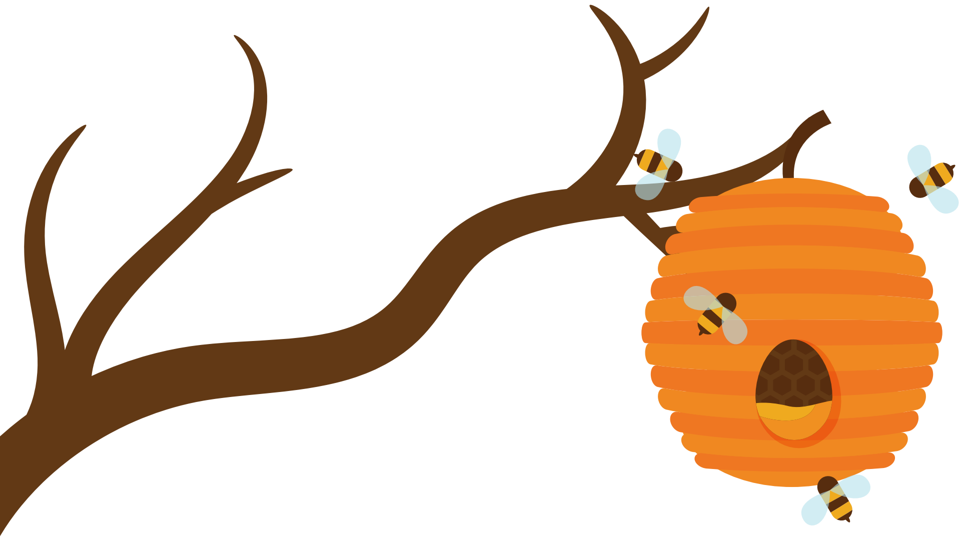
MOD 3. LESSON 1

Different animal homes.

OBJECTIVES/OUTCOMES

Learners will:

1. Understand that animals have different types of homes.
2. Understand that they have these different types of homes in different habitats.
3. Understand why all animals needs homes.



MATERIALS

- Module 3, Activity 1 (IP).

PROCEDURE OF LESSON/ACTIVITY

1. Walk around the school grounds to find animal homes. There may be ant holes or termite mounds, a bee hive, a wasp nest, a pile of rocks where snakes, rats, and tortoises could live, nests in the trees or fish if near water or the ocean.

2. Learners say why animals need homes. Educator to write each response on the board or a large sheet of paper. Discuss the animal needs for homes:

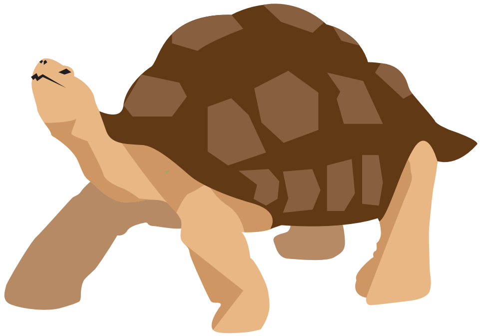
- Animals need safe places to shelter from the weather.
- Shelter to have babies and care for their young.
- A place to escape from their enemies.
- Abundant food and water, depending on their needs.

3. Ensure that learners understand that some animals :

- Make or build their homes (Birds).
- Find their homes in piles of rocks or unused holes (snakes, meerkats)
- Carry homes on their backs (Snails, tortoises, terrapins, turtles).
- Live in or near water (fish, crabs, hippos, crocodiles, frogs, elephants).
- Roam to find fresh grass, trees and water (Large herds of zebra, wildebeest, and antelope .

4. Learners complete Module 3, Activity 1 (IP).

MODULE 3, ACTIVITY 1 (IP)



Which animals live where in nature? Fill the names into the correct columns.

Live in or near rivers, streams and oceans.	Roam to find food and water.	Live in trees.	Carry their homes on their backs.	Build their homes.	Find homes in holes or burrows.

Fishes antelope crabs tortoises birds crocodiles zebras elephants wildebeest
Lions foxes SA Rock pythons snakes turtles rabbits monkeys snails mongeese
Eagles squirrels leopards bush pigs moles

MODULE 3, LESSON 2 (IP)

MOD 3. LESSON 2	OBJECTIVES/OUTCOMES	MATERIALS	PROCEDURE OF LESSON/ACTIVITY
Animals that build their homes. Case study on birds (weaver birds).	Learners will: 1. Find out about the appearance and habits of birds in general. 2.Focus on the weaver bird, appreciating the skill required by birds to build their nests. 3. Find out interesting facts about weaver birds.	• Collected veld grasses, twigs, flexible little stems.	1. Learners look carefully at the pictures of birds. We know what birds are because they all have feathers. Their beaks, however, are all different. Beaks are designed for the bird to be able to eat its specific food. 2. Look specifically at the weaver birds. They build their nests all year round and are common in northern KZN. 3. If a discarded nest is available, this should be examined and discussed by the learners. The weaver builds himself a complicated, woven nest. He is the only bird that can tie a knot! 4. As a task, as the learners to collect bits of grass from the school grounds and try to make a nest. This will allow them to gain appreciation of the complexity of this task!

MODULE 3, LESSON 3 (IP)

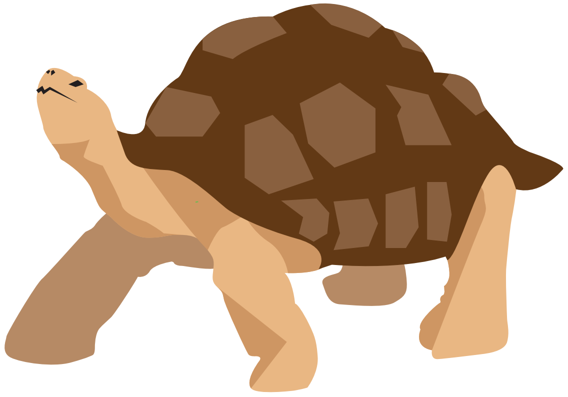
MOD 3. LESSON 3

Animals that carry their homes: Tortoises

OBJECTIVES/OUTCOMES

Learners will:

1. Gain insight into the physical characteristics of the tortoise.
2. Become aware of the dangers tortoises face and how they deal with these.
3. Visualise the "life-cycle" and life world of a tortoise in the wild.



MATERIALS

- A picture of a tortoise.
- Pictures or video clips of tortoises (and perhaps their counterparts in water, the terrapin and the turtle)
- Module 3, Activity 3 (IP).
- Scissors, glue, crayons.

PROCEDURE OF LESSON/ACTIVITY

1. Learners should understand that there are some animals that carry their homes with them. One of these animals is a tortoise. Another is a snail!

2. Learners examine a picture of a tortoise carefully. Note that its shell is attached to its body and cannot be removed: the tortoise will die. The shell is made of bone and it grows along with the animal as it grows. They only have one shell for their whole life. A tortoise may live for more than 80 years! Their shells are heavy and tortoises move slowly.

3. The shell provides protection for tortoises. They can withdraw their feet and head into the shell if threatened. Lions and other predators have been seen to roll the shell around, but the tortoise stays safe inside the shell. The shell also camouflages the animal which helps him to avoid predators. Tortoises can feel through their shells, just as we feel through our skin.

4. They do not have teeth, but have very strong beaks for breaking open fruits and eating leaves and grasses. They are herbivores.

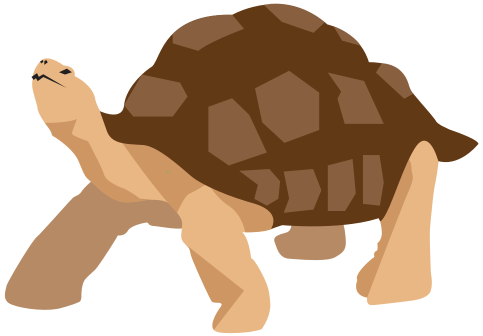
5. Tortoises carry their homes on their backs, but they still need to find good places to find food and drink water.

6. Tortoises are reptiles,which means they lay eggs when they breed. They lay eggs in sheltered places to hide them away from predators. The eggs and young hatchlings are sought after by genets, snakes, jackals, and birds of prey. Being a reptile, they are cold-blooded, which means they need the warmth of the sun to warm themselves up. The adult tortoise does not have many natural enemies.,

7. NEVER EVER catch a tortoise and keep it as a pet. It is a wild animal that needs to find the right food and meet other tortoises so that it can breed.

8. Learners complete Module 3, Activity 3 (IP).

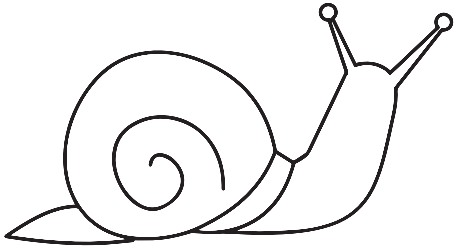
MODULE 3, ACTIVITY 3 (IP)



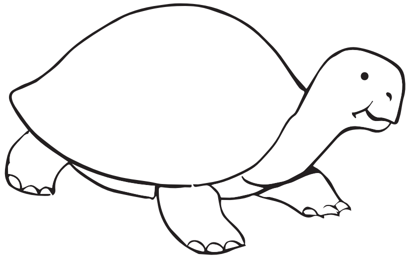
Tortoises and snails live inside their shells and so carry their homes around with them.
Tick each sentence that is true.

- ☐ Snails and tortoises have shells when they hatch out of the eggs.
- ☐ The tortoises shells are made of bone.
- ☐ Their shells grow with them.
- ☐ They cannot live without their shells.
- ☐ Snails and tortoises are both plant eaters.
- ☐ Their shells protect them against their enemies.
- ☐ Snails and tortoises can retreat into their shells.
- ☐ Snails are very common on our gardens.
- ☐ Never keep a tortoise as a pet.

Trace over the spiral shape of the snail's body. Draw some more spirals of your own, add a snail's body and draw some leaves for it to eat.

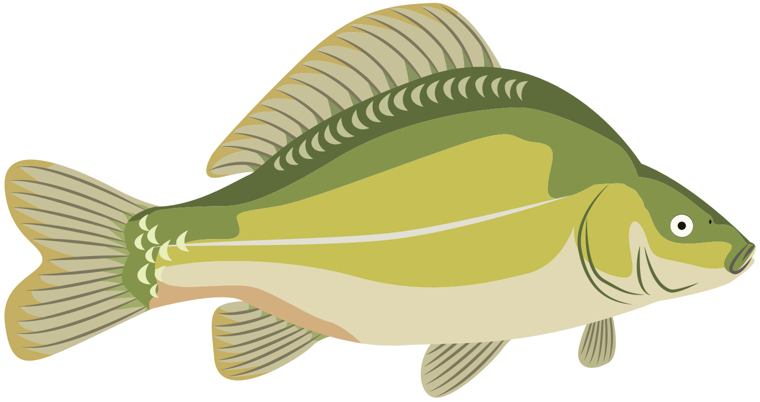


Draw markings onto the tortoise's shell and colour ir in to show how the colours camoflauge it. Draw some things the tortoise could hide in.

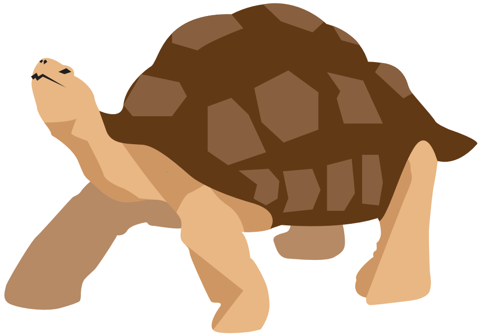


MODULE 3, LESSON 4 (IP)

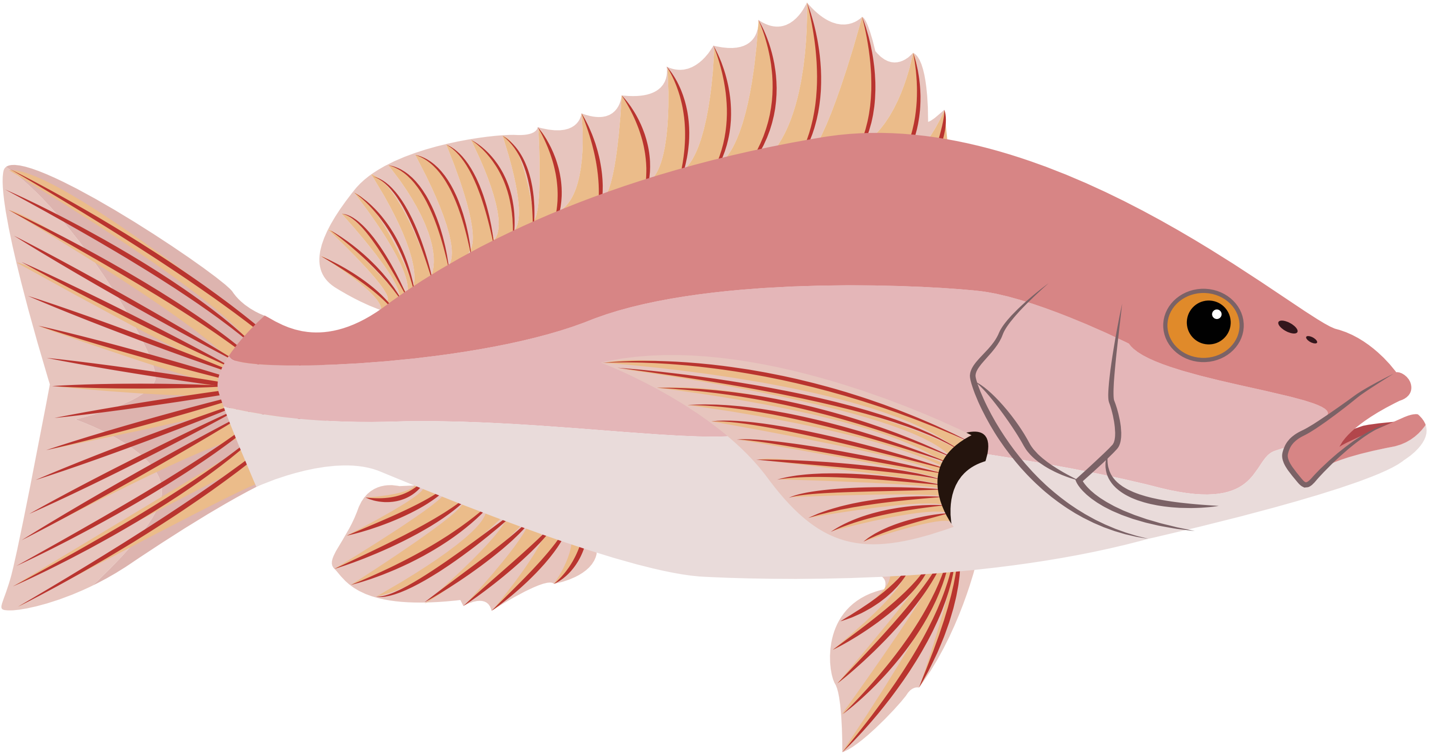
MOD 3. LESSON 4	OBJECTIVES/OUTCOMES	MATERIALS	PROCEDURE OF LESSON/ACTIVITY
Animals that live in water: Fish	Learners will: 1. Understand that fish can breathe in water and humans cannot. 2. Understand the basic structure of a fish's body. 3. Understand the importance of healthy, unpolluted water for the fish to live in.	• Pictures of fish in the oceans or rivers from books. • Module 3, Activity 4 (IP). • Pencils, pens, crayons.	1. Invite learners say what they know about fish. Discuss each contribution they make. Fish live in water as they have gills that extract the oxygen from the water. They have fins and a tail to help them move through that water. The tail also helps the fish to steer itself and to swim away from predators very quickly. 2. Water is where fish have their homes. Without water there would be no fish. Humans eat enormous quantities of fish. Talk about the canned pilchards, dried and fresh fish that humans eat. If we pollute our waters and destroy the fish life, we would starve, together with many animals. In order to prevent this from happening, we need to keep our natural water, both fresh and sea water, clean and rubbish-free. Some may have fished with their parents at a river or in the sea. Talk about this too. Emphasise cleaning up any litter and scraps when they leave the site. 3. Learners complete Module 3, Activity 4 (IP).



MODULE 3, ACTIVITY 4 (IP)



Label the body of this fish with these names: gills, tail, scales, fins. Draw a line from the body part to meet your label. Draw in some rocks, sand, water plants, creatures and water.



MODULE 3, LESSON 5 (IP)

MOD 3. LESSON 5

Animals whose home is where the food is: zebra.

OBJECTIVES/OUTCOMES

Learners will:

1. Understand that some animals would soon deplete their food source if they lived in one place, so they have to roam to find food.
2. Understand that these animals live in large groups that migrate over great distances to find food and water.

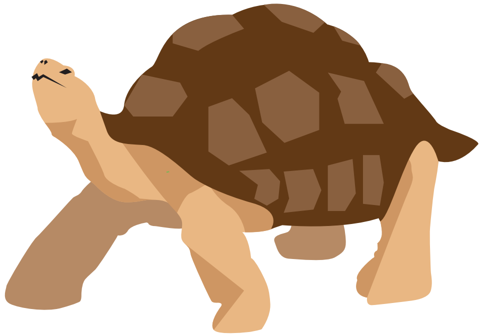
MATERIALS

- Module 3, Activity 5 (IP).

PROCEDURE OF LESSON/ACTIVITY

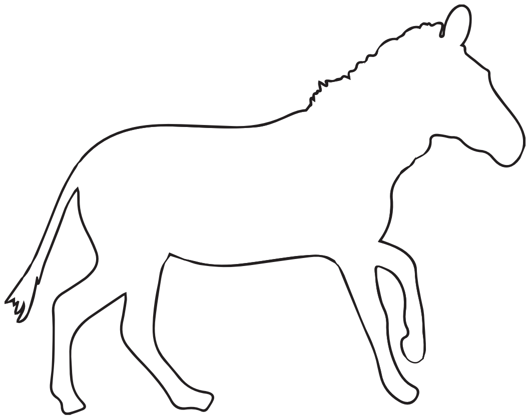
1. Discuss with the learners that there are some animals whose home is where they roam. Ask why they think animals would roam? Discuss just how much certain large animals eat and drink. These include antelopes, wildebeest and zebras, amongst others.
2. Ask learners to suggest what would happen to the environment if these animals stayed in the same place. The plants would all get eaten and there would be no food. The water source may even dry up. These animals live in large herds. This protects them from their enemies, which include lions, cheetahs and leopards, as they are difficult to see within the herd when they are running away from danger. The animals also help to protect each other. These roaming animals are the food source of many hunting creatures that share their environment with them. These large herds consume huge amounts of water every day.
3. Zebras are always found in herds and their home is where the food and water are. They stick together.
4. Each zebra's stripes are different and unique, just like our human finger prints are unique. Zebras sleep standing up, between the trees they call home.
5. Learners complete Module 3, Activity 5 (IP).

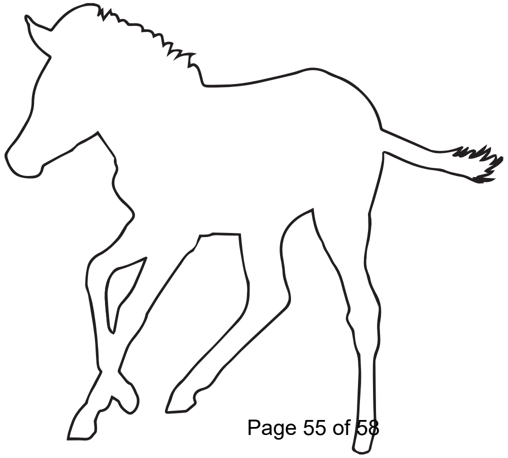
MODULE 3, ACTIVITY 5 (IP)



Answer true or false.
Then fill in these zebras' stripes to show they each have unique markings. Draw some trees and grass.

	TRUE	FALSE
1. Zebras like to eat meat so they are carnivores.	☐	☐
2. Zebras move around in large herds.	☐	☐
3. Zebras stripes are all the same	☐	☐
4. Zebras live wherever they find enough food and water.	☐	☐
5. Zebras are hunted by lions and leopards.	☐	☐
6. Zebras move in large herds for protection.	☐	☐
7. Zebras eat plants so they are herbivores.	☐	☐
8. Zebras sleep standing up.	☐	☐





MODULE 3, LESSON 6 (IP)

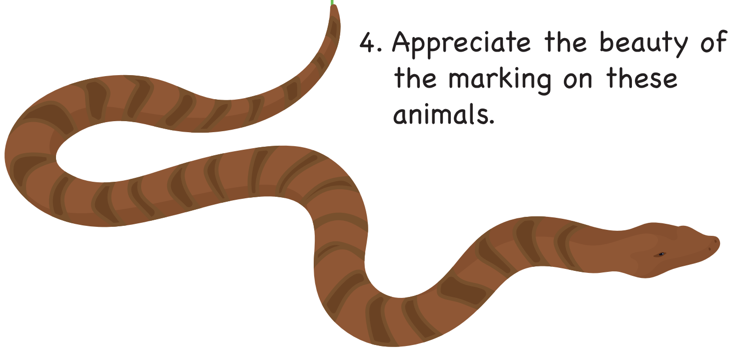
MOD 3. LESSON 6

Animals that find homes. Case study: African rock python.

OBJECTIVES/OUTCOMES

Learners will:

1. Gain respect for the African Rock python and understand that it should not be killed on sight.
2. Understand the habits, habitats and behaviours of the African Rock Python.
3. Understand that some animals look for homes in their habitats, where they can breed in safety and shelter from the environment.
4. Appreciate the beauty of the marking on these animals.



MATERIALS

- Video clip and/or pictures from books of the African Rock Python.
- Module 3, Activity 6 (IP).

PROCEDURE OF LESSON/ACTIVITY

1. Show learners pictures of a rock python. Emphasise throughout that these creatures have a particular purpose in the environment (They maintain the balance of nature by feeding on rats and other creatures) and should not simply be killed because we may fear them. Pythons are not poisonous, and do not go out to find humans to eat! However, we need to stay out of their way. Never keep one as a pet as this is extremely cruel.

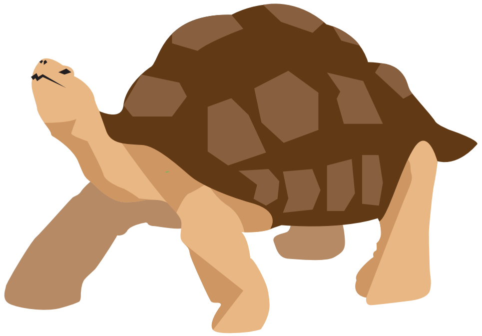
2. Pythons find their homes, which may be under piles of rubble, rocks or stones, or in empty burrows that have been abandoned by bush pigs or porcupines. It may also find a home in crevices in a rock face or grooves in a cliff. They might even live in the same place for their whole lives! They eat monkeys, antelopes, bats, lizards, birds and rodents. They kill their prey by squeezing it to death (constricting it).

3. The African Rock Python is the largest python species in Africa, and can grow up to 7 meters in length. They may have to move if they no longer fit into their homes! Pythons are reptiles. If they are disturbed by human development, they may also leave their natural homes and look for a home under some building rubble, for example.They lay eggs that hatch into little pythons.

4. Never keep pythons as pets, and don’t kill them for no reason. Stay away from them, and avoid having piles of rubble, rubbish, rocks and stones near human living spaces.

5. Learners complete Module 3, Activity 6 (IP).

MODULE 3, ACTIVITY 6 (IP)



The African Rock Python is one of the biggest snakes in the world. It is not dangerous to humans as long as you leave them alone. Never keep one as a pet! Answer true or false below.

	TRUE	FALSE
1. A python can grow to seven meters in length.	☐	☐
2. Pythons are venemous snakes, just like the mamba.	☐	☐
3. Pythons find suitable homes such as under piles of rocks or abandoned burrows.	☐	☐
4. Pythons like to live near humans.	☐	☐
5. Pythons may leave their homes when they grow too big.	☐	☐
6. They squeeze, or constrict their prey to death.	☐	☐
7. Pythons eat monkeys, small buck, bats, lizards and rodents.	☐	☐
8. A rock python might spend his whole life in one place.	☐	☐
9. Pythons build their homes out of rocks and logs.	☐	☐
10. Pythons find homes where they will also find food.	☐	☐
11. It is very cruel to keep a python as a pet. It is a wild animal.	☐	☐

The African Rock Python has exquisite markings. Colour him in to show these.