

**1 A**

**Term 1, Week 1, Lesson 1 A**

**Lesson Title: Many different plants and animals**

**Time for lesson: 1 hour**

**A POLICY AND OUTCOMES**

<b>Sub-Topic</b>	Many different plants and animals		
<b>CAPS Page Number</b>	31		
<b>Lesson Objectives</b>			
By the end of the lesson, learners will be able to:			
<ul style="list-style-type: none"> <li>• identify different plants and animals</li> <li>• group leaves according to certain criteria</li> </ul>			
Specific Aims	1. DOING SCIENCE + TECHNOLOGY		✓
	2. UNDERSTANDING + CONNECTING IDEAS		✓
	3. SCIENCE, TECHNOLOGY + SOCIETY		✓

**SCIENCE PROCESS + DESIGN SKILLS**

1. Accessing & Recalling Information	✓	7. Raising Questions		13. Interpreting Information	✓
2. Observing		8. Predicting		14. Designing	
3. Comparing	✓	9. Hypothesizing		15. Making/ constructing	
4. Measuring		10. Planning Investigations		16. Evaluating and improving products	
5. Sorting & Classifying	✓	11. Doing Investigations		17. Communicating	✓
6. Identifying problems & Issues		12. Recording Information	✓		

**Covid 19 Quiz**

1. What causes **Covid - 19?** ( Bacteria or Virus) - **Virus**
2. What do Co- , Vi- and 19 mean in the name Covid 19?  
**-Co means Corona**  
**-Vi means Virus**  
**-19 is for 2019**
3. Where was Covid - 19 discovered? **Wuhan, China.**

## TOPIC: Plants and animals on Earth

### B POSSIBLE RESOURCES

For this lesson, you will need:

IDEAL RESOURCES	IMPROVISED RESOURCES
Resource 1: 'An egret catching a fish'	

### C CLASSROOM MANAGEMENT

1. Make sure that you are ready and prepared.
2. Write the following question onto the chalkboard before the lesson starts:

What are the seven life processes that you learnt about last year?

3. Learners should enter the classroom, then discuss the seven life processes with the teacher and then answer the question in their workbooks.
4. Discuss their answers with the learners.
5. Write the model answer onto the chalkboard.

*The seven life processes are feeding, growing, reproducing, breathing, excreting, sensing, and moving.*

### D ACCESSING INFORMATION

1. Write the following onto the chalkboard (always try to do this before the lesson starts):

#### MANY DIFFERENT PLANTS AND ANIMALS

1. There are many different habitats on Earth.
  2. Many different animals and plants live in these habitats.
  3. **Indigenous** plants are those that occur naturally in a specific place.
  4. This means that they have not been brought in from somewhere else.
  5. **Biodiversity** refers to the number of different types of animals and plants in an area.
  6. South Africa has habitats with high biodiversity.
2. Explain and discuss the following with the learners:
    - a. The learners studied habitats and the need for a habitat in Grade 4.
    - b. A habitat is a plant's or animal's home; it is the place where it grows or lives.
    - c. Animals and plants share their habitats.
    - d. If an animal or plant is referred to as 'indigenous' it means that it naturally occurs in that area.
    - e. South Africa has many indigenous plants and animals.
    - f. The number of different plants in an area is the plant diversity of that area.
    - g. The number of different animals in an area is the animal diversity of that area.

## TOPIC: Plants and animals on Earth

- h. All the plants and animals together with their habitats make up the biodiversity of that area.
- i. South Africa has habitats with high biodiversity.
- j. This means that there are many different types of plants and animals in that habitat.
- k. People come from all over the world to look at our plants and animals.
- l. Show learners Resource 1: An egret catching a fish.
- m. An egret needs to live near water as it eats fish.
- n. It lives in a water habitat.

3. Give learners some time to copy this information into their workbooks.

### **Checkpoint 1**

Ask the learners the following questions to check their understanding at this point:

- a. What does the word 'indigenous' mean?
- b. What does 'biodiversity' mean?

Answers to the checkpoint questions are as follows:

- a. 'Indigenous' refers to the plants and animals that occur naturally in a particular area.
- b. 'Biodiversity' refers to all the different types of animals and plants in that area.

### E

### CONCEPTUAL DEVELOPMENT

1. Before the lesson, collect leaves of different types (colour, shape, edges and size).
2. Write the following onto the chalkboard:

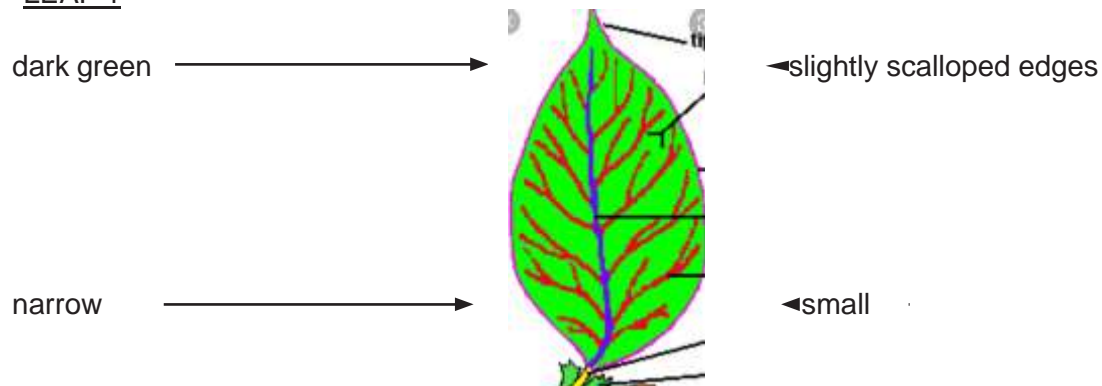
1. Most plants have leaves.
2. The leaves have different shapes.
3. Some are long and thin and some are wide.
4. Some have different colours.
  
5. COLOUR  
dark green, light green, grey, yellow, green with white marks
  
6. SHAPE  
long, thin, wide, narrow, heart-shaped
  
7. EDGES  
smooth, tooth-like, scalloped
  
8. SIZE  
small, medium, large
  
9. TASK 1
  - a. Find three different types of leaves.
  - b. Draw these leaves in your workbook.
  - c. Label your drawing to show how the leaves are different.
  - d. Write three sentences to describe each leaf.
  
10. TASK 2
  - a. Collect all the leaves from the class.
  - b. Decide how you would put these leaves into groups.
  - c. This will be discussed as a class.
  - d. Put the leaves into the grouping decided upon.

3. Explain this task to the learners as follows:
  - a. Learners need to bring three leaves each to their lessons.
  - b. Learners will draw each leaf in their workbooks.
  - c. Go over the words to describe leaves according to their colour, shape, edge and size.

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- d. leaves and describe them to the class. Discuss these answers.
  - e. Each leaf should have four labels to describe the colour, shape, and size.
  - f. Let the learners discuss how to group the leaves.
  - g. Let the learners put these leaves into groups according to their decision.
  - h. Plants are normally classified according to their colour, shape and size.
4. Give learners some time to complete Task 1 in their workbooks.
  5. Ask learners to share their answers to Task 1 with the class. The learners hold up their leaves and describe them to the class. Discuss these answers.
  6. Example of an answer:

### LEAF 1



7. When learners have completed Task 1, do Task 2.
  - a. Read through the instructions on the chalkboard with the class.
  - b. Ask learners to discuss how to group all the leaves collected.

### **Checkpoint 2**

Ask the learners the following questions to check their understanding at this point:

- a. South Africa has habitats with high biodiversity. What does this mean?
- b. Name three ways in which we can group leaves.

Answers to the checkpoint questions are as follows:

- c. This means that there are many different types of plants and animals that live in a habitat.
- d. We can group leaves according to their colour, shape and size.

8. Ask the learners if they have any questions and provide answers and explanations.

## TOPIC: Plants and animals on Earth

### F

#### REFERENCE POINTS FOR FURTHER DEVELOPMENT

If you need additional information or activities on this topic, you can find these in your textbook on the following pages:

NAME OF TEXTBOOK	TOPIC	PAGE NUMBER
Study & Master	Plants and animals on Earth	12-13
Viva	Plants and animals on Earth	1-3
Platinum	Plants and animals on Earth	2
Solutions for All	Plants and animals on Earth	2-3
Day-by-Day	Plants and animals on Earth	1-3
Oxford	Plants and animals on Earth	10-15
Spot On	Plants and animals on Earth	2-3
Top Class	Plants and animals on Earth	1-2
Sasol Inzalo BkA	Plants and animals on Earth	4

### G

#### ADDITIONAL ACTIVITIES/ READING

In addition, further reading, listening or viewing activities related to this sub-topic are available through the following web links:

1. <https://goo.gl/8w4YDR> (2 1/2 mins) [South Africa Biodiversity]

Term 1, Week 1, Lesson B

**1 B**

Lesson Title: Many different plants and animals

Time for lesson: 1½ hours

**A POLICY AND OUTCOMES**

<b>Sub-Topic</b>	Plants and animals in their habitats.	
<b>CAPS Page Number</b>	31	
<b>Lesson Objectives</b>		
By the end of the lesson, learners will be able to:		
<ul style="list-style-type: none"> <li>• conduct an investigation</li> <li>• draw conclusions from the data</li> <li>• categorise information</li> </ul>		
Specific Aims	1. DOING SCIENCE + TECHNOLOGY	✓
	2. UNDERSTANDING + CONNECTING IDEAS	✓
	3. SCIENCE, TECHNOLOGY + SOCIETY	✓

**SCIENCE PROCESS + DESIGN SKILLS**

1. Accessing & Recalling Information	✓	7. Raising Questions		13. Interpreting Information	✓
2. Observing		8. Predicting		14. Designing	
3. Comparing		9. Hypothesizing		15. Making/ constructing	
4. Measuring		10. Planning Investigations	✓	16. Evaluating and improving products	
5. Sorting & Classifying	✓	11. Doing Investigations	✓	17. Communicating	
6. Identifying problems & issues		12. Recording Information	✓		

**Covid 19 Talk**

1. How can we see if we have been infected with Covid 19?

**Fever, Cough, shortness of breath, loss of sense of taste or smell, body aches and Tiredness**

2. Which three things should we do to protect ourselves and loved ones from Covid 19?

**Wear protective clothes like masks, wash and sanitise hands and surfaces regularly, social distance**

**B POSSIBLE RESOURCES**

For this lesson, you will need:

IDEAL RESOURCES	IMPROVISED RESOURCES
Resource 2: Different types of leaves	
string or wool – 9 metres per group	
four sticks	
ruler or tape measure	

**C CLASSROOM MANAGEMENT**

1. Make sure that you are ready and prepared.
2. Write the following question onto the chalkboard before the lesson starts:

Give the three ways in which leaves can be grouped.

3. Learners should enter the classroom, then discuss the seven life processes with the teacher and then answer the question in their workbooks.
4. Discuss their answers with the learners.
5. Write the model answer onto the chalkboard.

*Leaves can be grouped according to their shape, colour or size.*

**D ACCESSING INFORMATION**

1. Write the following onto the chalkboard (always try to do this before the lesson starts):

CLASSIFYING

1. Plants and animals can be classified.
2. To classify items means to put them into groups according to certain characteristics.
3. Scientists classify items to help them group and name items in an **organised** way.

2. Explain and discuss the following with the learners:
  - a. In the previous lesson, learners put their leaves into groups according to shape, colour or size.
  - b. The task from the previous lesson dealt with classifying leaves.
  - c. To classify items means to put things into groups according to certain criteria.
  - d. Colour, shape or size are the criteria used to classify leaves.
  - e. Scientists classify items to help them understand, group and name these items in an organised way.
  - f. It is easier to study plants and animals and to learn about patterns in nature if they are grouped in some way.



## TOPIC: Plants and animals on Earth

3. Give learners some time to copy this information into their workbooks.

### **Checkpoint 1**

Ask the learners the following questions to check their understanding at this point:

- a. What does the word 'classify' mean?
- b. Why do scientists classify things?

Answers to the checkpoint questions are as follows:

- a. Classify means to put into groups according to certain characteristics.
- b. Classifying helps scientists group and name items in an organised way.

## **E**

### **CONCEPTUAL DEVELOPMENT**

1. To do this activity, each group will need the following:
  - 30m of string or wool
  - four short sticks
  - ruler or tape measure
2. Ensure you have these materials prepared for each group before the lesson starts.
3. Divide the learners into groups of four or six.
4. Write the following onto the chalkboard (always try to do this before the lesson starts):

### **PRACTICAL TASK**

#### **METHOD**

- a. Measure out an square area 6 metres by 6 metres somewhere on the school grounds. (6 big steps by 6 big steps)
  - b. Put a stick in each corner of the square.
  - c. Tie the wool or string around these sticks to mark out you area.
  - d. Complete the task as outlined below: (Draw the table into your workbook)
  - e. Each learner should complete the task individually.
5. Make sure the learners understand what they have to do.
  6. Explain that they must try to choose an area that has plants, soil and rocks in it.
  7. Ensure that the learners understand what a "bird's-eye" view is. (A bird's eye view is the view from the top, as if a bird was looking down. You only see the shape of the top of the object.)
  8. Now ask the learners to copy the questions for the task into their workbooks.
  9. This will need to be written onto the chalkboard: After the learners have copied down the task, ask them if they have any questions.

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### Task 1: (3 marks)

- a. Use half a page to draw a bird's-eye view of the area. In the diagram draw and label all the natural features you can see.
- b. Give a suitable name to this habitat.

### Task 2: (3 marks)

- a. Draw a front view of the plants you can see in your marked off area.
- b. Do you see any flowers, fruits or seeds in this habitat? Draw what you observe.

### Task 3: (3 marks)

- a. Choose one leaf from a plant in your area and sketch it in detail.
- b. Label the following:
  - Leaf edge
  - Leaf surface
  - Veins
  - Leaf stem

### Task 4: (3 marks)

- a. Look under any stones, on tree bark, in plants and in the soil. Draw and name any creatures you can see.
- b. What other living creatures could live in this habitat?

### Task 5: (3 marks)

- a. Name 3 animals that could not live in this habitat. Give reasons why.

TOTAL 15 marks

10. After the learners have copied down the task, ask them if they have any questions.
11. Explain any terminology they may not understand.
12. Allow learners out of the class to complete the activity.
13. Supervise them and assist whilst they are completing the activity.
14. Mark the learners' work using the rubric.

## TOPIC: Plants and animals on Earth

### F

#### REFERENCE POINTS FOR FURTHER DEVELOPMENT

If you need additional information or activities on this topic, you can find these in your textbook on the following pages:

NAME OF TEXTBOOK	TOPIC	PAGE NUMBER
Study & Master	Plants and animals on Earth	17
Viva	Plants and animals on Earth	3-4
Platinum	Plants and animals on Earth	13
Solutions for All	Plants and animals on Earth	2-4
Day-by-Day	Plants and animals on Earth	4-5
Oxford	Plants and animals on Earth	-
Spot On	Plants and animals on Earth	3
Top Class	Plants and animals on Earth	5
Sasol Inzalo Bk A	Plants and animals on Earth	16-17

### G

#### ADDITIONAL ACTIVITIES/ READING

In addition, further reading, listening or viewing activities related to this sub-topic are available through the following web links:

**N/A**

Term 1, Week 1, Lesson C

**1 C**

Lesson Title: Habitats: Plants and Animals

Time for lesson: 1 hour

**A POLICY AND OUTCOMES**

<b>Sub-Topic</b>	Plants and animals living in different habitats on Earth.	
<b>CAPS Page Number</b>	31	
<b>Lesson Objectives</b>		
By the end of the lesson, learners will be able to:		
<ul style="list-style-type: none"> <li>• name four different types of habitats</li> <li>• give examples of animals and plants living in these habitats</li> <li>• describe some characteristics of these animals and plants</li> </ul>		
Specific Aims	1. DOING SCIENCE + TECHNOLOGY	✓
	2. UNDERSTANDING + CONNECTING IDEAS	✓
	3. SCIENCE, TECHNOLOGY + SOCIETY	✓

**SCIENCE PROCESS + DESIGN SKILLS**

1. Accessing & Recalling Information	✓	7. Raising Questions	✓	13. Interpreting Information	✓
2. Observing		8. Predicting		14. Designing	
3. Comparing		9. Hypothesizing		15. Making/ constructing	
4. Measuring		10. Planning Investigations		16. Evaluating and improving products	
5. Sorting & Classifying	✓	11. Doing Investigations		17. Communicating	
6. Identifying problems & issues		12. Recording Information	✓		

**Covid 19 Talk – Taking good care of ourselves**

It is important that we are in good and stable health to prevent infections. Here are some ways to take good care of our bodies

- Eat well and rest enough
- Exercise regularly
- Talk to friends and family openly about your feelings
- Get accurate and reliable information about Covid

**B**

**POSSIBLE RESOURCES**

For this lesson, you will need:

IDEAL RESOURCES	IMPROVISED RESOURCES
Resource 2: Different types of leaves	
Resource 3: Different habitats	
Resource 4: Different habitats continued	

**C**

**CLASSROOM MANAGEMENT**

1. Make sure that you are ready and prepared.
2. Write the following question onto the chalkboard before the lesson starts:

What do we mean by the word 'habitat'?

3. Learners should enter the classroom, then discuss the seven life processes with the teacher and then answer the question in their workbooks.
4. Discuss their answers with the learners.
5. Write the model answer onto the chalkboard.

*A habitat is a plant or animal's home; it is the place where a plant or animal grows or lives.*

**D**

**ACCESSING INFORMATION**

1. Write the following onto the chalkboard (always try to do this before the lesson starts):

DIFFERENT HABITATS

Plants grow in different habitats.

1. The water lily lives in water.
2. Their leaves are large and flat so they can float on water.
3. The aloe lives in dry areas.
4. Their leaves are thick and fleshy so that they can store water.
5. The clivia does not like lots of light so it grows in a forest.

Animals live in different habitats.

1. The frog lives in water.
2. It has **webbed** fingers and toes so that it can swim.
3. Sunbirds have long beaks to suck nectar from flowers on plants.
4. It lives in a **floral** area.
5. The elephant has a trunk and tusks to help it get food to eat.
6. The trunk can reach leaves on trees and the tusks dig up roots.
7. They like living in grassland areas.
8. Ostriches like to live in hot areas like a desert.
9. They have long, strong legs to protect themselves.

2. Explain and discuss the following with the learners:
  - a. Remind the learners that they learnt about habitats in Grade 4.
  - b. The learners studied grassland, forest, river and sea habitats.
  - c. The learners also looked at the need for a habitat, such as food, water, shelter, to raise their young and to escape from danger.
  - d. Show learners Resource 3: Different habitats.
  - e. Explain that the sunbird has a long beak so that the beak can go into a flower to get nectar.
  - f. It likes to live in a floral area, which means an area where plants have many flowers.
  - g. The elephant has a trunk for getting leaves of trees and tusks for digging up roots.
  - h. They also use their trunks and tusks to defend themselves.
  - i. Grassland areas have grass and trees like acacias (thorn trees).
  - j. Show learners Resource 4: Different habitats continued.
  - k. Explain that the clivia grows under trees as it does not like a lot of light.
  - l. You will find clivias in a forest.

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- m. Ostriches like to live in hot areas like a desert.
- n. They can run fast and kick hard to protect themselves.
- o. In a desert area, they can see far.

### **Checkpoint 1**

Ask learners the following questions to check their understanding at this point:

- a. Name one plant or animal that lives in or near water.
- b. Why does a sunbird have a long beak?

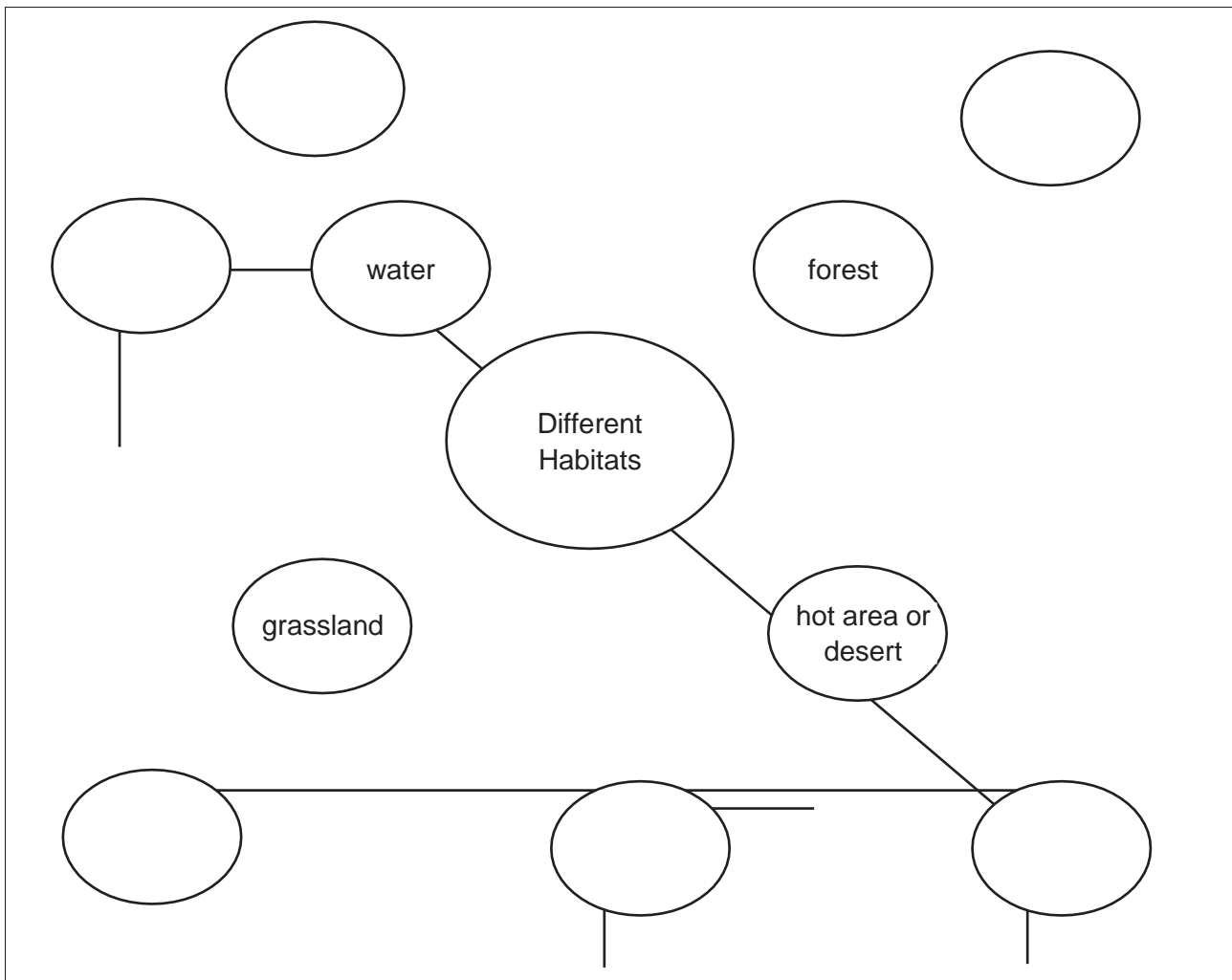
Answers to the checkpoint questions are as follows:

- a. Many answers will be correct, e.g. water lily or frog. Learners might list other plants or animals that live on or near water.
- b. A sunbird has a long beak so that the beak can enter a flower to get nectar.

## **E**

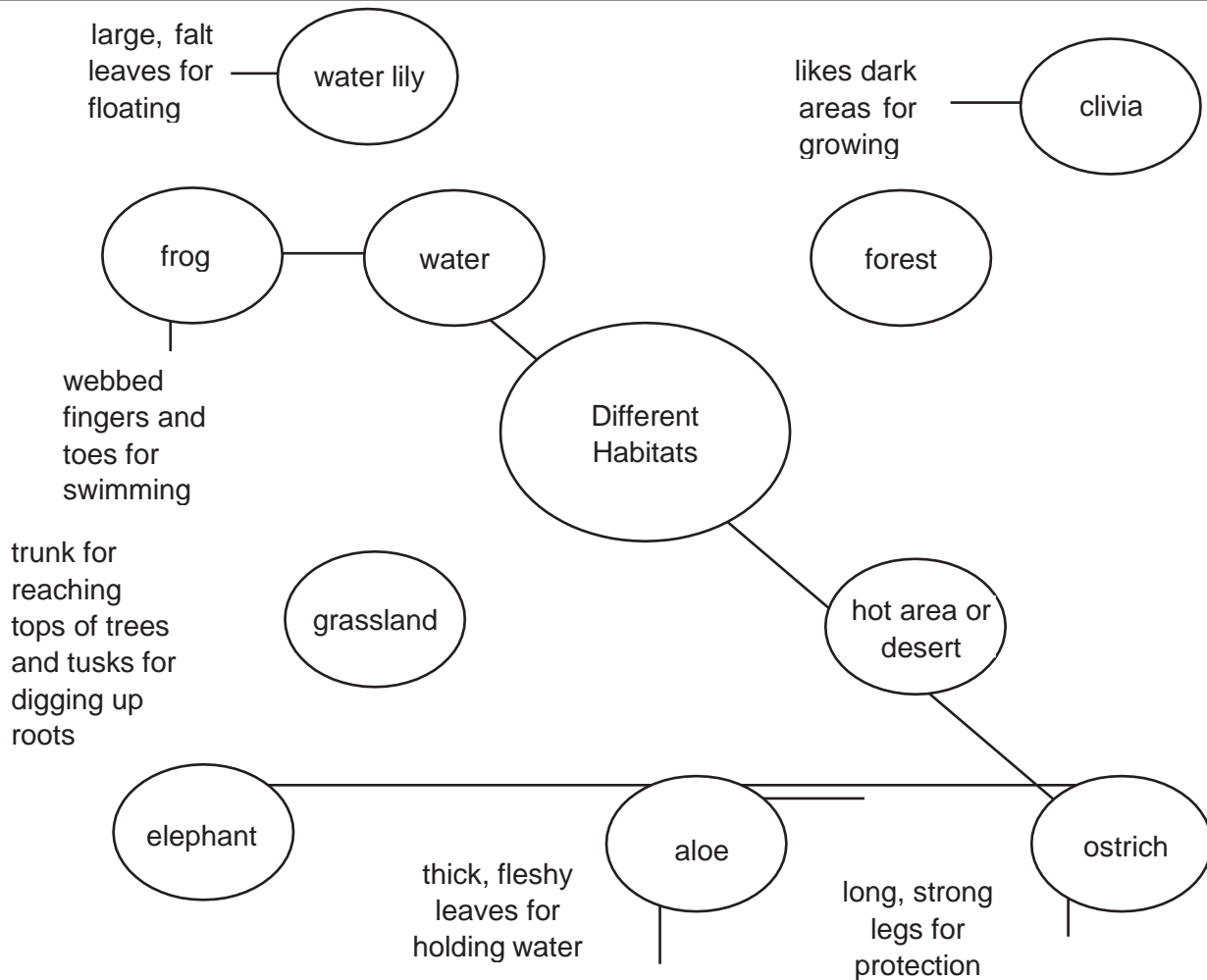
### **CONCEPTUAL DEVELOPMENT**

1. Draw the following diagram onto the chalkboard (always try to do this before the lesson starts):



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2. Explain the following to the learners:
  - a. Learners must copy this diagram into their workbooks.
  - b. In the empty circles, they must fill in the correct animals and plants from the information on the chalkboard.
  - c. Then at the end of the lines coming out from those circles, the learners must fill in information about that plant or animal.
3. Give learners some time to complete this task in their workbooks.
4. The model answer is:



### **Checkpoint 2**

Ask the learners the following questions to check their understanding at this point:

- a. Name four different types of habitats.
- b. Why can a frog swim so well in water?

Answers to the checkpoint questions are as follows:

- a. Grassland, desert, water, forest
- b. It has webbed fingers and toes.

5. Ask the learners if they have any questions and provide answers and explanations.



## TOPIC: Plants and animals on Earth

### F

#### REFERENCE POINTS FOR FURTHER DEVELOPMENT

If you need additional information or activities on this topic, you can find these in your textbook on the following pages:

NAME OF TEXTBOOK	TOPIC	PAGE NUMBER
Study & Master	Plants and animals on Earth	13-16
Viva	Plants and animals on Earth	2-4
Platinum	Plants and animals on Earth	4-5
Solutions for All	Plants and animals on Earth	-
Day-by-Day	Plants and animals on Earth	1-2
Oxford	Plants and animals on Earth	-
Spot On	Plants and animals on Earth	3
Top Class	Plants and animals on Earth	2
Sasol Inzalo BkA	Plants and animals on Earth	2-17

### G

#### ADDITIONAL ACTIVITIES/ READING

In addition, further reading, listening or viewing activities related to this sub-topic are available through the following web links:

1. <https://goo.gl/QEVmsq> (4min) [Animal Habitats]
2. <https://goo.gl/NbSjih> (1min) [Habitats - Grasslands – an introduction]
3. <https://goo.gl/qkdkdh> (4min) [Animals and their habitats]

**2 A**

**Term 1, Week 2, Lesson A**

**Lesson Title: Inter-dependence**

**Time for lesson: 1 hour**

**A POLICY AND OUTCOMES**

<b>Sub-Topic</b>	Plants and animals depend on each other	
<b>CAPS Page Number</b>	31	
<b>Lesson Objectives</b>		
By the end of the lesson, learners will be able to:		
<ul style="list-style-type: none"> <li>• define inter-dependence</li> <li>• describe how plants and animals depend on each other.</li> </ul>		
<b>Specific Aims</b>	1. DOING SCIENCE + TECHNOLOGY	✓
	2. UNDERSTANDING + CONNECTING IDEAS	✓
	3. SCIENCE, TECHNOLOGY + SOCIETY	

**SCIENCE PROCESS + DESIGN SKILLS**

1. Accessing & Recalling Information	✓	7. Raising Questions	✓	13. Interpreting Information	✓
2. Observing	✓	8. Predicting		14. Designing	
3. Comparing		9. Hypothesizing	✓	15. Making/ constructing	
4. Measuring		10. Planning Investigations		16. Evaluating and improving products	
5. Sorting & Classifying		11. Doing Investigations		17. Communicating	
6. Identifying problems & issues	✓	12. Recording Information			

**Covid 19 Talk - Stigma**

A stigma is a negative attitude or feeling towards a person because of a condition or illness. Many people have suffered due to stigmas. Some have lost their friends, family, and jobs and loved ones due to this stigma.

As young Scientists we should understand that anyone can be infected or affected by a disease. We need to show care and love for our loved ones at a time of difficulty by encouraging them to open up and feel free about their health and conditions.

**B POSSIBLE RESOURCES**

For this lesson, you will need:

IDEAL RESOURCES	IMPROVISED RESOURCES
Resource 5: Lions in the shade of a tree	
Resource 6: Inter-dependence: Oxpeckers on a giraffe	
Resource 7: Bees pollinating a plant	

**C CLASSROOM MANAGEMENT**

1. Make sure that you are ready and prepared.
2. Write the following question onto the chalkboard before the lesson starts:

Why does a water lily have large, flat leaves?

3. Learners should enter the classroom and answer the question in their workbooks.
4. Discuss the answer with the learners.
5. Write the model answer onto the chalkboard.

*The water lily has large flat leaves so that it can float on water.*

**D**

**ACCESSING INFORMATION**

1. Write the following onto the chalkboard (always try to do this before the lesson starts):

INTER-DEPENDENCE BETWEEN PLANTS AND ANIMALS

1. Inter-dependence is when two or more things depend on each other.
2. Animals and plants depend on each other for food, shelter and **reproduction**.

FOOD

1. Animals cannot make their own food.
2. They eat plants or other animals that have eaten plants.

SHELTER

1. Trees provide shelter for birds to make their nests.
2. Trees provide shelter from the weather.
3. Insects live in plants.
4. Spiders make their webs in these plants.

AGENTS OF POLLINATION

1. Some plants need animals to **disperse** their seeds.
2. Animals either pick up the seeds in their fur or carry them in their **droppings**.
3. Some insects **pollinate** plants.

2. Explain and discuss the following with the learners:
  - a. Plants need to have their seeds spread over a large area.
  - b. Animals carry seeds in two ways: droppings or when seeds get caught in their fur.
  - c. Insects and plants need each other.
  - d. They are inter-dependent.
  - e. Lions need protection from the sun, so they will lie under a tree in the middle of the day.
  - f. Show learners Resource 6: Lions in the shade of a tree.
  - g. Without the shade of trees, lions would not be able to rest in order to hunt. It would be too hot.
3. Give learners some time to copy this information from the chalkboard into their workbooks.

### **Checkpoint 1**

Ask learners the following questions to check their understanding at this point:

- a. Name two things that animals depend on plants for.
- b. Give one way in which animals can disperse plant seeds.

Answers to the checkpoint questions are as follows:

- a. Animals need plants to provide shelter and food.
- b. Either answer: They can disperse plant seeds by their droppings or by carrying them in their fur.

## **E**

### **CONCEPTUAL DEVELOPMENT**

1. Write the following onto the chalkboard (always try to do this before the lesson starts).

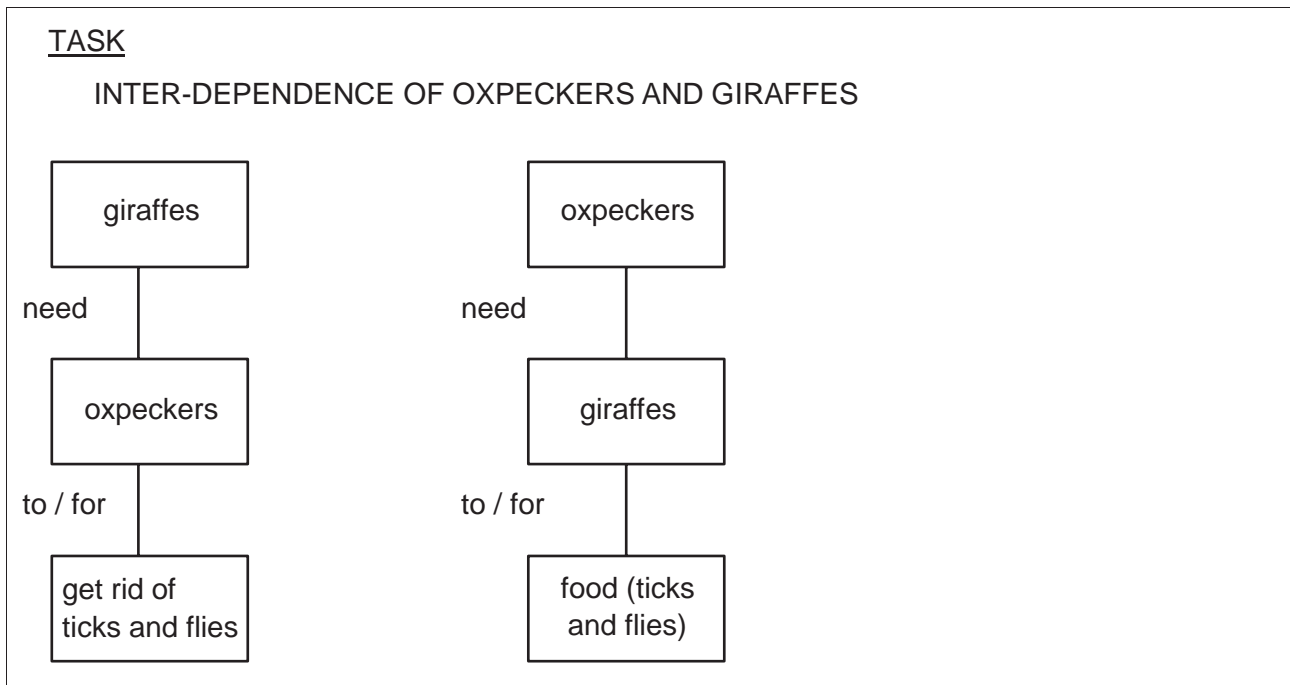
- A**
1. Ticks and flies bother giraffes.
  2. A bird called an oxpecker will land on a giraffe and pick off and eat these ticks and flies.
  3. The oxpecker and giraffe are inter-dependent.
- B**
1. Bees land on flowers to get **nectar**.
  2. Bees need nectar to make honey.
  3. The pollen from the flower sticks to the bees' legs.
  4. The pollen gets taken to another flower by the bees.
  5. Pollination then takes place.
  6. The plant can then make seeds.

2. Explain this task to the learners as follows:

- a. Show learners Resource 6: Inter-dependence: Oxpeckers on a giraffe.
- b. The giraffe has ticks and flies that bother it.
- c. The oxpeckers pick off these pests.
- d. This helps the giraffe get rid of unwanted pests.
- e. This helps the oxpecker as it eats these pests.
- f. The giraffe and the oxpeckers are inter-dependent.
- g. Show learners Resource 7: Bees pollinating a plant.
- h. Bees depend on the nectar inside plants to make their honey.
- i. The flowers depend on the bees to pollinate them.
- j. Without nectar, bees cannot make honey, and without pollen going to another flower, the plants cannot reproduce.

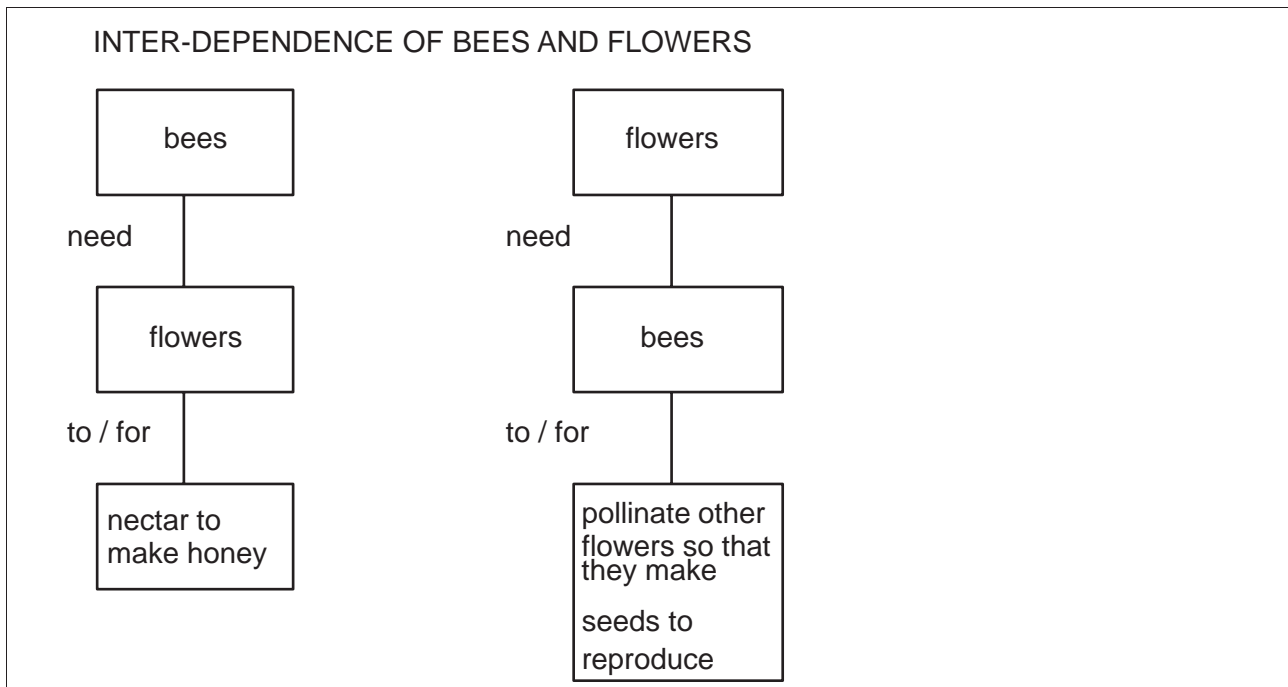
## TOPIC: Plants and animals on Earth

- k. Explain how pollen sticks on the bees' legs and it then gets taken to other plant.
  - l. Pollination enables the plants to make seeds.
  - m. Bees need flowers for their nectar and flower need bees for pollination.
3. Draw the following diagram on the chalkboard. Always try to do this before the lesson starts.



4. Explain the following to the learners:
- a. The diagram shows why the one animal/bird is dependent on another animal/bird.
  - b. It then shows how they are inter-dependent.
  - c. Do a similar diagram for bees and flowers.
  - d. Learners must write the following heading in their workbooks: INTER-DEPENDENCE OF BEES AND FLOWERS
5. Give learners some time to complete this task in their workbooks.
6. The model answer for this task is as follows:

## TOPIC: Plants and animals on Earth



### Checkpoint 2

Ask the learners the following questions to check their understanding at this point:

- a. What do bees get from flowers?
- b. What do they use this for?

Answers to the checkpoint questions are as follows:

- a. Bees get nectar from flowers.
- b. They use nectar to make honey.

7. Ask the learners if they have any questions and provide answers and explanations.

## TOPIC: Plants and animals on Earth

### F

#### REFERENCE POINTS FOR FURTHER DEVELOPMENT

If you need additional information or activities on this topic, you can find these in your textbook on the following pages:

NAME OF TEXTBOOK	TOPIC	PAGE NUMBER
Study & Master	Plants and animals on Earth	18-19
Viva	Plants and animals on Earth	5
Platinum	Plants and animals on Earth	6-7
Solutions for All	Plants and animals on Earth	6-7
Day-by-Day	Plants and animals on Earth	6-7
Oxford	Plants and animals on Earth	16
Spot On	Plants and animals on Earth	4
Top Class	Plants and animals on Earth	4
Sasol Inzalo BkA	Plants and animals on Earth	18-23

### G

#### ADDITIONAL ACTIVITIES/ READING

In addition, further reading, listening or viewing activities related to this sub-topic are available through the following web links:

1. <https://goo.gl/haXJgM> (3min 30sec) [How plants and animals depend on each other]
2. <https://goo.gl/UJ11t6> (2min 30sec) [Pollination lesson]



**2 B**

**Term 1, Week 2, Lesson B**

**Lesson Title: Inter-dependence**

**Time for lesson: 1 hour**

**A POLICY AND OUTCOMES**

<b>Sub-Topic</b>	Interdependence between living things and resources available	
<b>CAPS Page Number</b>	31	
<b>Lesson Objectives</b>		
By the end of the lesson, learners will be able to:		
<ul style="list-style-type: none"> <li>• Explain what is meant by non-living resources</li> <li>• Describe how animals need both living and non-living resources in order to survive.</li> </ul>		
Specific Aims	1. DOING SCIENCE + TECHNOLOGY	✓
	2. UNDERSTANDING + CONNECTING IDEAS	✓
	3. SCIENCE, TECHNOLOGY + SOCIETY	✓

**SCIENCE PROCESS + DESIGN SKILLS**

1. Accessing & Recalling Information	✓	7. Raising Questions	✓	13. Interpreting Information	✓
2. Observing		8. Predicting		14. Designing	
3. Comparing		9. Hypothesizing		15. Making/ constructing	
4. Measuring		10. Planning Investigations		16. Evaluating and improving products	
5. Sorting & Classifying		11. Doing Investigations		17. Communicating	
6. Identifying problems & Issues		12. Recording Information	✓		

**Covid 19 Talk – Vaccination**

A vaccine is a substance that is introduced into our bodies so that we have a stronger immune system. A strong immune system fights against diseases and infection that invade our bodies. Sometimes our own immune systems are weak and cannot fight diseases like Covid 19 on their own. When a vaccine is introduced it helps our bodies to fight. We have been vaccinated before for diseases such as Polio, Chicken pox.

The South African government has procured vaccines to be used to vaccinate the population. This will most likely help in fighting the Covid 19 pandemic.

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### B POSSIBLE RESOURCES

For this lesson, you will need:

IDEAL RESOURCES	IMPROVISED RESOURCES
Resource 8: Crocodiles	

### C CLASSROOM MANAGEMENT

1. Make sure that you are ready and prepared.
2. Write the following question onto the chalkboard before the lesson starts:

What does inter-dependence mean?

3. Learners should enter the classroom and answer the question in their workbooks.
4. Discuss the answer with the learners.
5. Write the model answer onto the chalkboard.

*It means when two or more things depend on each other.*

### D ACCESSING INFORMATION

1. Write the following onto the chalkboard (always try to do this before the lesson starts):

#### INTER-DEPENDENCE BETWEEN PLANTS, ANIMALS AND RESOURCES

1. Living things need non-living things as well as each other to survive.
  2. Plants need air, water, soil and sunlight from their habitats to survive.
  3. Animals need air, water, food and shelter from their habitats to survive.
  4. Resources are existing things that are needed for animals and plants to survive.
  5. Animals make use of these resources for food, **protection** and **reproduction**.
2. Explain and discuss the following with the learners:
    - a. Plants and animals depend on their habitats for their needs.
    - b. Plants need sunlight, water, minerals from the soil and carbon dioxide from the air to survive.
    - c. Animals need sunlight, water, food and oxygen to survive.
    - d. Many animals need a shelter of some sort as well as which also acts as protection from predators.
    - e. To protect themselves, birds make nests high up in trees and meerkats make burrows in the ground.
    - f. These shelters also keep their young safe.
  3. Give learners some time to copy this information into their workbooks.

### Checkpoint 1

Ask learners the following questions to check their understanding at this point:

- a. Name three non-living resources.
- b. What do animals get from their habitats that they need in order to survive?

Answers to the checkpoint questions are as follows:

- a. Any three of: air, water, soil, food.
- b. Animals get air, water, soil, food and shelter in order to survive.

### **E**

### **Conceptual Development**

1. Write the following onto the chalkboard (always try to do this before the lesson starts):

#### CROCODILES

1. Crocodiles live in water and on land next to water.
2. They **prey** on animals that come to drink at a river or a watering hole.
3. Crocodiles can move very fast.
4. They can also swim without making ripples in the water.
5. Their eyes and snout (nose) lie just above the water.
6. They lay their eggs in river banks.
7. Crocodiles eat about 50 times a year.
8. Crocodiles breathe air like people but they can hold their breath underwater for a very long time.

#### TASK

Complete the following sentences using the following words:

water; living; animals; land; air; non-living; eggs

- a. Crocodiles live in \_\_\_\_ and on \_\_\_\_.
- b. They need \_\_\_\_ to breathe but they can be underwater for a long time.
- c. They survive by eating other \_\_\_\_.
- d. Crocodiles need both \_\_\_\_ and \_\_\_\_ things to survive.
- e. They keep their \_\_\_\_ safe by laying them in river banks.

2. Explain this task to the learners as follows:
  - a. The crocodile lives in a water habitat and a land habitat.
  - b. They eat other animals.
  - c. These animals eat other animals or plants in order to live and grow.

## TOPIC: Plants and animals on Earth

- d. Crocodiles keep their eggs safe by laying their eggs in river banks.
  - e. Crocodiles can lie still underwater for up to two hours.
  - f. Crocodiles can move very fast.
  - g. They wait to attack their prey.
  - h. Show learners Resource 8: Crocodiles.
3. Ask learners to complete the task in their workbooks by filling in the correct words from the given list.
  4. Give learners some time to complete this task in their workbooks.
  5. The model answers for the task are:

### CROCODILES

- a. Crocodiles live in water and on land.
- b. They need air to breathe but they can be underwater for a long time.
- c. They survive by eating other animals.
- d. Crocodiles need both living and non-living things to survive.
- e. They keep their eggs safe by laying them on river banks.

### **Checkpoint 2**

Ask the learners the following questions to check their understanding at this point:

- a. In what habitats does a crocodile live?
- b. Why does a crocodile lay its eggs on a riverbank?

Answers to the checkpoint questions are as follows:

- a. A crocodile lives in the water and on land.
- b. It lays its eggs in a river bank to keep them safe.

6. Ask the learners if they have any questions and provide answers and explanations.

## **F REFERENCE POINTS FOR FURTHER DEVELOPMENT**

If you need additional information or activities on this topic, you can find these in your textbook on the following pages:

NAME OF TEXTBOOK	TOPIC	PAGE NUMBER
Study & Master	Plants and animals on Earth	19
Viva	Plants and animals on Earth	8-9
Platinum	Plants and animals on Earth	8-9
Solutions for All	Plants and animals on Earth	6-7
Day-by-Day	Plants and animals on Earth	8
Oxford	Plants and animals on Earth	17
Spot On	Plants and animals on Earth	4-5
Top Class	Plants and animals on Earth	4
Sasol Inzalo BkA	Plants and animals on Earth	23-27

## **G ADDITIONAL ACTIVITIES/ READING**

In addition, further reading, listening or viewing activities related to this sub-topic are available through the following web links:

1. <https://goo.gl/1n6a7T> (6min 30sec) [Understanding ecosystems]
2. <https://goo.gl/5gpF3Z> (8min) [Living and non-living objects]