

English

A Curriculum Companion for Teaching
Environmental Education in Eritrean Elementary Schools



Acknowledgements:

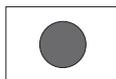
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Introduction

1

This booklet has been produced as part of the Elementary Schools Environmental Education Initiative in Eritrea (ESEE Initiative). The purpose of the initiative is building the capacity of elementary students to understand and respond to the environmental issues, which confront Eritrea so that they can appropriately contribute to a more sustainable future.

The goal of the project is to ensure that Eritrean children have equitable access to quality educational experiences, which address relevant environmental, health and hygiene education issues. Towards this goal, a range of materials has been produced for use in Eritrean classrooms and by other stakeholders in the schools' community.

Specifically, these materials have been designed to:

1. Improve the knowledge, attitude and skills of elementary school children on environmental issues. To promote health and good hygiene behaviour, thereby ensuring that the children can demonstrate capacity to prepare for and manage the country's environmental issues.
2. Train teachers so that they can appropriately use the materials. In particular, the teachers will be supported to apply child-centred inquiry learning approaches that improve quality of teaching and increase retention in schools.
3. Strengthen the capacity of PTA and community members to play key roles in preparing for and managing the environmental conditions.



2 Using the Environmental Education Curriculum Companion for English

This book has been designed to help English teachers in Eritrean Elementary Schools deliver their curriculum and meet their teaching objectives. At the same time, it introduces students to Environmental Education.

These materials are not intended to be additional to the requirements of the textbooks and teacher guides. Instead, they offer alternative ways of teaching parts of the curriculum that teachers may choose to use.

The alternative lessons offered here all include interactive child-centred activities that also contain environmental messages which help strengthen students understanding of the environment and environmental issues.

Overview

The Environmental Education Curriculum Companion for English has four main parts.

1. Activities for you to use in your class room together with background information so that you know more about the topic you are teaching.
2. Strategies to improve your teaching so that it is more effective and more child centered.
3. Toolbox contents and maintenance.
4. More information about Environmental Education.

Getting Started

- Read through the activities looking particularly at those for the grades you are teaching.
- If you are not used to working in groups it is a good idea to read the section on working in groups (page 104) before you start any activities.
- When you are next teaching a topic in the curriculum which relates to the environment, try out one or two of the activities. Make sure you read the background information before you do the activities.
- Either before or after the activities, read more about the philosophy of Environmental Education and what the activities have been designed to achieve. See more about Environmental Education on page 111.
- Reflect on how the activities went in your class and plan for how you will incorporate more of them into your teaching. Read more about how to make your teaching more effective on pages 103-111.

Integrating the activities into your teaching

These activities can be used instead of some of the activities in your textbook, or in addition to the activities in your textbook.

They are designed to help students meet the Learning Outcomes set out in the English Curriculum. They provide additional options for you to draw on when you are planning your lessons. You don't have to do every activity in the book but you will probably find that the students like this approach to learning and you will want to use many of them.

Assessment

Environmental Education is already part of the English Curriculum and does not need to be assessed separately for exam results.

Each of the activities includes ideas for formative assessment. There is more information about monitoring student progress on page 109.



The Toolbox

The Toolbox provides some practical resources to use in teaching Environmental Education. These resources can be used in all your teaching, not just on environmental topics. Use them wherever they are useful and relevant. For information on what is in the Toolbox see page 100.

See page 99 for information on how to use and maintain the Toolbox.

Overview of Environmental Education

Environmental Education is designed to engage students with issues and ideas connected to their environment. It encourages students to consider all aspects of the environment in an interrelated way and leads towards their being able to act in an environmentally sustainable way and to take positive action on environmental issues. A more detailed description of Environmental Education is included on page 111.

Student-centred learning is crucial to education for sustainability with a strong focus on encouraging higher-order thinking and self-direction by engaging students in authentic experiences related to sustainability issues.

Environmental Education within English

The English Environmental Education Curriculum Companion is organised by grade levels. There are activities at each grade level for topics in the curriculum which deal with environmental issues. In addition, there are background materials for teachers on environmental topics covered in the curriculum. Teachers are encouraged to read the background materials as part of planning their lessons and preparing activities. There are two topics in the background materials – climate change and desertification – that do not relate directly to the curriculum, but which provide a context for Environmental Education more generally.

There are references to the background materials in each of the topics covered at the grade levels. There are also references from the background materials to the activities to which they relate.





Activities

Environmental
Education within
English

3

Grade 1

Animals

There is background information for teachers on this topic on page 74.

Activity 1: Introducing animals

This activity is designed to introduce the animals in the Grade 1 English Curriculum, to be used as the animals are introduced in the lessons. It is the first in a series for building vocabulary and drama activities.

Animals in order of introduction:

- Unit 5 – cat, dog, bird.
- Unit 7 – camel, goat, cow, horse.
- Unit 15 – hen, fish.
- Unit 20 – lion, monkey, rabbit, fox, snake, leopard, ostrich, tortoise, elephant, zebra.

Time: 15–20 minutes

Purpose:

- To introduce the animals to the students.
- To rehearse names of animals in English.
- To develop group work.

What you need:

- **Toolbox:** Animal Picture Cards - Series 1



Examples of Animal Picture cards.

What to do:

Steps:

1. Show the children the picture of the animal. Name the animals in English.
2. Say 'What is this?' 'This is a
3. Ask again, 'What is this?' 'This is a
4. Repeat 3 or 4 times.
5. Divide the class into groups.
6. Give each group a picture. They then practise with each other. 'What is this?' 'This is a
7. Every few minutes, the groups swap pictures and say again- 'What is this?' 'This is a

Teaching note: Move around the room monitoring and helping groups.

Assessment ideas:

- It is important that an action or sound is linked with each animal so you can easily see the students who know the animals.
- Look around the room and see who is doing the right action and making the right sound for the animals.

Activity 2: Animal Puppet Show

Time: 15–20 minutes

Purpose:

- To build on students' knowledge of the animals.
- To continue rehearsing the names of animals in English.
- To practise and demonstrate the use of 'I' in English.

Teachers' notes:

For information on group work, refer to the 'Working in Groups' section on page 113.

What you need:

- Animal puppets for the children (instructions for making hand puppets are on the next page).

What to do:

Steps:

1. Show the children the picture of the animal. A quick revision of animals introduced in the previous lesson.
2. Select students to be the animals. Ask them to stand at the front of the class.
3. Give the students a mask or puppet.

4. Demonstrate: You say, 'What is your name?' The student says, 'I am a'. The student acts out an action and sound for their animal. The action and sounds are very important.
5. This demonstration is repeated for each animal.
6. Repeat this demonstration a couple of times using different students from the class.
7. Divide the class into groups.
8. Give each group a puppet. The students then practise with each other. The group asks, 'What is your name?' Each student takes turns to respond, 'I am a'

Teachers' notes:

Move around the room monitoring and helping groups.

Making hand puppets:

- Students draw around their hands. They then cut the shape out, cutting carefully on the line they have drawn.
- Using the cut-out shape, students draw the animal of their choice. This does not need to be a perfect drawing. The idea is to practise English, rather than spend lots of time drawing.
- Staple a strip of paper around the back fastening on both sides of the drawing so that the student can put it over their hand.



Or stick these to a softy roll, so students can put their fingers in the roll to hold the puppet.

Activity 3: Animal descriptions

Time: 15–20 minutes

Purpose:

- To build on students' knowledge of the animals.
- To extend vocabulary and develop descriptions of animals.

What you need:

- **Toolbox:** Animal Pictures - Series 1
- Animal puppets for the children (made in previous activity)

What to do:

Steps:

1. Write the words big, small, short, tall, and thin on the blackboard. When saying the words do an action to indicate what the words describes. **Gesture is important to develop understanding.**

Teachers' notes:

Do this activity after you have taught the words big, small, short, tall.

2. Say 'An elephant is big'. Invite a student to the front of the class to place the picture of the elephant under the word big.
3. Say 'A snake is thin'. Invite another student to the front of the class to place the picture of the snake under the word thin.
4. Repeat the demonstration for the different animals.
5. When all animals have been demonstrated, have all of the students in unison repeat the descriptions, for example:
 - An elephant is big (as they say this they do the action for big).
 - A snake is thin (as they say this they do the action for thin).
 - A hen is small (as they say this they do the action for small).

Assessment ideas:

It is important that a gesture is linked with each word (thin, big, small, short and tall) so you can easily see the students who know the meanings of the words. You can look around the room and see who is making the correct gesture for the words.

Activity 4: Animal drama – What do you eat?

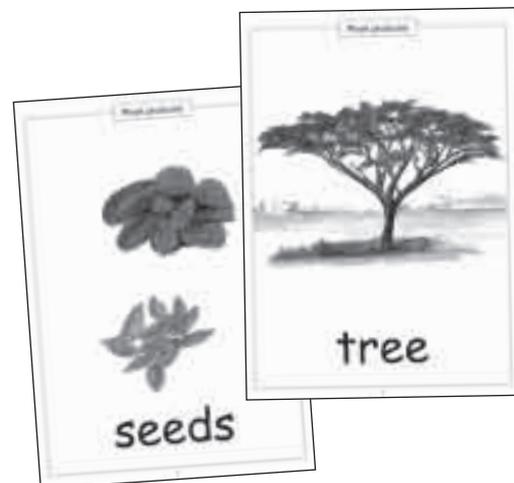
Time: 15–20 minutes

Purpose:

- To build on students' knowledge of the animals and what they eat and drink.
- To give students an opportunity to practise saying the words of animals and food.
- To give students practice at answering the question, 'What do you eat?'

What you need:

- **Toolbox:** Animals Pictures - Series 1
- **Toolbox:** Animal Food Pictures



Examples of Animal Food Pictures

What to do:

Steps:

1. Organise the students to sit in a large circle. If there is not enough room in the classroom, find a space outside or push the desks back to make room.
2. Place the pictures of the food for each animal in the middle for the students to see. (Some animals eat other smaller animals, other animals eat grain, or grass).

3. Give randomly selected students a picture of an animal (pictures spread evenly around the circle).
4. Clap or sing songs while the students pass the pictures around the circle. Say 'Stop' and the students hold onto the picture they have.
5. Ask each student with a picture, 'What Is your name?'
6. The student answers, 'I am a.....' depending on the picture they are holding.
7. Ask, 'What do you eat?' Make a gesture here so that students understand 'eat'.
8. The student must then find the food picture in the middle and answer, 'I eat.....'
9. When all students with pictures have answered the questions the game continues. Claps or sing again, and the students pass the pictures around until you say 'Stop'.

Ideas for Extension: Organise 2 or 3 students to ask the questions.

Ideas for extension: Organise the students to ask the questions to different groups. For example, one group of students asks another group of students, 'What is your name? What do you eat?' The second group of students answer, 'We eat....'



Activity 5: Animal drama/role-play

Time: 15–20 minutes

Purpose:

- To build on students' knowledge of the animals and what they eat.
- To develop vocabulary.
- To develop group work.
- To give the students time and opportunity to practise saying a number of descriptive sentences at one time.
- To give the students an opportunity to speak using the 'I' form or 'we' form in English.

What you need:

- Animal puppets for the children
- **Toolbox:** Animal Food Pictures

What to do:

Steps:

1. Show the children the pictures of the animals and the foods.
2. Either individually or in groups, students do a role-play for each animal.
3. Demonstrates by saying, 'What is your name?'
 - Individual students use the 'I' form- 'I am a lion. I am big. I eat meat. I drink water.' (The students do the sound and gesture for the animal, for example, roar, make a gesture for 'big'.)
 - Groups of students would use the 'we' form- 'We are lions. We are big. We eat meat. We drink water.' (The group of students do the sound and gesture for the animal for example, roar, make a gesture for big.)

Ideas for extension: For some students who are doing well, you can ask them some additional questions, for example: 'How many eyes do you have?'

Activity 6: Word Wave

Time: 15–20 minutes

Purpose:

- To build on students' knowledge of the animals.
- To develop vocabulary.
- To develop group work.
- To give the students an opportunity to practise saying the name of an animal.

What you need:

- A large space where children can make a circle.

What to do:

Steps:

1. Choose a group of 10 students to demonstrate this activity.
2. All 10 students stand in a circle where everyone in the class can see them.
3. Person 1 says an animal's name and does an action or sound. For example, 'lion' and the student roars.
4. Person 2 then says 'lion' and roars.
5. Person 3 then says 'lion' and roars.
6. Continue this until it comes back to the start.
7. Then person 2 says an animal's name and does an action or sound. For example, 'bird' and the student moves his or her arms.

8. This continues until everyone has had a turn.
9. Check if the students in the class understand how to play the game. If not, repeat the demonstration and explain. If the students do understand, divide the class into small groups and give each group an animal to start. Place some of the animal pictures in the middle of each group to help the children with ideas for animal names.

Ideas for extension: When the students are familiar with the process, you can have two or three animals and actions going around the circle. For example, wait until the first action is half way then Person 2 commences.

Teaching notes: This activity can be done in lots of small groups or one big group.

Grade 2

Animals

There is background information for teachers on this topic on page 74.

These activities build on what has been done in Grade 1. New animals introduced in Grade 2 are crow, frog, deer, ox and fly.

Activity 1: Class Animal Picture

Time: 35 minutes

Purpose:

- To introduce the idea that humans, animals and plants all share the same environment.
- To practise in English describing animals and where they live.
- To practise counting and numbers in English.
- To demonstrate meaning through drawing.

What you need:

- **Toolbox:** Large flip-chart paper.
- **Toolbox:** Coloured Pencils.
- A4 paper cut into four equal parts. Organise enough paper for students to draw lots of animals.

Teachers' notes:

The large drawing will be the basis for other work in this unit describing animals.

What to do:

Steps:

1. Revise the names of animals learnt in Grade 1. Ask the students to recall the names of animals and lists these animals on the board.
2. Divide students into 6 groups:
 - Ask three groups to draw the different animals and birds and cut them out. If students want to draw animals not mentioned this is good for extending children's learning and enables them to build on what they already know.
 - Ask three groups to draw a big picture of the local environment and the sea if appropriate.
3. When all groups have finished their task, tell the students to stick the animals on the big picture.

4. As a class, discuss:

- The location of the animals and birds, for example, 'Where are the hens?'
- What the animals look like, for example, 'What colour is the dog?'
- How many animals there are, for example, 'How many cows are there?'

Activity 2: Describing Animals

Time: 30 minutes

Purpose:

- To consolidate the idea that humans, animals and plants all share the same environment.
- To describe animals and where they live.
- To revise prepositions.
- To revise questions: 'Where is.....?' 'How many..... are there?'

What you need:

- Questions written on paper, for example, 'How many monkeys are there?'
- Answer stems written on paper. for example, 'There are..... monkeys.'

What to do:

Steps:

1. Display questions with the answer stems on the wall near the big picture children have done in the previous activity.
2. Ask students questions about the picture. Here are some example questions & answer stems:

• 'How many monkeys are there?'	'There are..... monkeys.'
• 'How many cows are there?'	'There are..... cows.'
• 'How many animals have 4 legs?' animals have four legs.'
• 'Where are the sheep?'	'The sheep are.....'
• 'Where are the flies?'	'The flies are
'What colour is the dog?'	'The dog is
3. Ask the whole class, and some students individually, to answer the questions.
4. Group work:
 - Divide the class into groups.
 - Give each group different questions to answer in writing.
 - Each group reports back to the class reading their written questions and answers.
 - Groups use the question stems as a model to make up their own questions for others in the class.

4. Conclusion: Thinking time for students: time for students to reflect on the lesson.
5. Ask questions to help the children reflect on the lesson. Here are some questions you could use:
 - What did you like?
 - What are you good at?
 - What can you do?
 - What did you learn?

(Select one or two questions from these suggested questions when you are introducing student reflection to your teaching.)

6. Let students take one or two minutes to think silently about the lesson and the questions.
7. Ask the students to respond to some of the questions. Remember to ask different students each time you do this activity.

Teaching note: This reflection can be done in Mother Tongue as the student may not have the language to answer in English. It is important to develop student reflection skills.

Assessment ideas:

- Record in the assessment book the students who can answer the questions.
- Record the names of groups and students who can make up questions.
- Record how well students have worked in groups.

Activity 3: Describing Animals- What am I?

Time: 30 minutes

Purpose:

- To consolidate the idea that humans, animals and plants all share the one environment;
- To describe animals – where they live, what the animals can do, how they look;
- To revise and practise using verbs – ‘I eat’, ‘I fly’.

What you need:

- Prepare a series of ‘What am I?’ statements
- The class picture done in Activity 1

What to do:

Steps:

1. As a whole-class activity, discuss the class picture as revision of previous lessons.
2. Class work:
 - Present two or three ‘What am I?’ statements that you have already prepared to the students. Students should guess the answers.

Example:

- ‘What am I?’ ‘I have four legs.’ ‘I eat grass’. ‘I have a long tail’. ‘I give milk’.
- ‘What am I?’ ‘I live in a tree’. ‘I do not have a long tail’ ‘I eat fruit’. ‘I have wings’.
- ‘What am I?’ ‘I have hair’. ‘I am big’. ‘I am brown’. ‘I have a hump’.
- ‘What am I?’ ‘I am in the tree’. ‘I am small’. ‘I eat seeds’. ‘I can fly’.

3. Group work:

- Divide students into small groups (three to six students).
- Each group is given two or three ‘What am I?’ statements for the group to solve from the class picture.
- As extension, the group can make their own ‘What am I?’ statements.

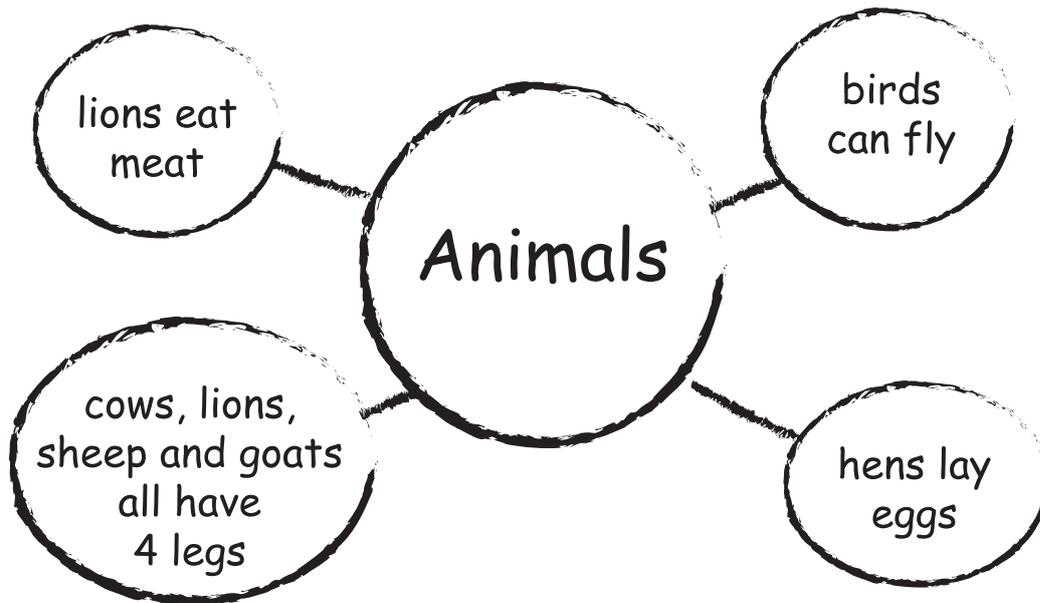
4. Conclusion: two-minute mind map:

Mind maps are similar to concept maps but have tree like branches of information that display key concepts as well as relationships. To create a mind map a key concept is placed in the centre of the page. Working out from the centre in all directions are key words or images that may also be colour coded.

- Draw a circle on the board with the word ‘animals’ in the middle.
- The students are asked what they know about animals. Draw a line out from the circle and the teacher records what the students say, in a different circle stemming from the middle. For example:

Teachers’ notes:

When reading the ‘What am I?’ statements, do gestures where possible to help understanding. For example, ‘I can fly’ – flap your arms.



🌀 Activity 4: Describing Animals – Animal Chants

Time: 30 minutes

Purpose:

- To describe animals – what they do and where they live.
- Revise the use of the ‘we’ form and to revise verbs, for example, ‘We can fly’, ‘We eat’.

What you need:

- Chalk and blackboard; or
- **Toolbox** Large paper and markers (the recorded sheets can be kept and used again).

What to do:

Steps:

1. Class work: the teacher and students discuss the animals and write a chant for some of the animals. For example:
 - We are **lions**, we **roar** (students roar).
 - We are **lions**, we eat **meat** (do eating action).
 - We are **lions**, we can **run** (students run).
 - We are **lions**, we are **big** (do an action to indicate big).
2. Group work: give each group a chant to practise and present to the class.
3. Extension group work: students in the groups choose an animal, make their own chants and present to the class.

Activity 5: What Can You See?

Time: 20–30 minutes

Purpose:

- To reinforce the names of animals to the students.
- To develop an awareness of the native animals in the immediate environment.
- To develop an awareness of the need to protect these animals.
- To develop observation skills.
- To learn how to organise information that is gathered.

Teachers' notes:

In English some words are stressed more than others. For example, in the sentence 'Lions eat meat', the words we stress are lions and meat. In a chant you stress words to make a rhythm. Learning Chants helps students with both listening skills and with speaking. You can beat on the desk to help students get the right rhythm .

What you need:

- Large area for students to sit and observe the school compound.

What to do:

Steps:

1. Introduce the lesson and explain to the students that they are going to go outside to observe the animals in the school compound. The student task is to give simple descriptions of the animals they see. For example: 'Little bird'; 'Red, brown'. Students may have to give the animal name in their mother tongue.
2. Students take a pencil and paper with them to write or draw what they see.
3. Students sit quietly on their own within a given area in the school compound and observe their surroundings and write or draw the animals they see.
4. After five to ten minutes of observation, the students return to the classroom with their teacher.
5. On the board or on paper, write the name of each of the animals or birds the students have seen. Ask the students who saw the animal or bird the following questions:
 - What colour was the bird or animal?
 - Was it big or small?
 - Was it fat or thin?
 - Record the description beside the name of the bird or animal.

Teachers' notes:

Stress the importance of looking after these animals, particularly animals like the little ground squirrel, which can be targets for stone-throwing children.

Grade 2

Weather

There is background information for teachers on this topic on page 94.

Activity 1: Introducing Weather

Time: 30 minutes

Purpose:

- To introduce 'weather' words to students.

What you need:

- Paper for student to draw on, or students can draw in their exercise books.
- **Toolbox** Coloured pencils
- 'Weather' words on paper for display: rain, windy, sunny, cloudy, hot, cold, stormy.

What to do:

Steps:

1. Display the 'weather' words around the room.
2. Explain each of the words to the students.
3. Divide the students into groups and give each group a word.
4. The students in the groups draw a picture to depict the word.
5. Ask one student in each group to be the reporter for that group. The reporter shares what their group did with the rest of the class. For example: 'This is rain'. 'It is windy in the picture'. 'It is stormy'.
6. Display the words and pictures in the classroom.
7. Conclusion: revising new words.
 - Divide the class into two groups.
 - Group One says a word and holds the picture up and Group Two has to repeat it.
 - Reverse the rolls: Group Two says a word and Group One has to repeat it.

Assessment ideas:

- Record the names of students who can draw the correct pictures in the assessment book.
- Note which students are able to say what they have drawn.

Activity 2: Reporting on Weather

Time: 5 minutes at the beginning of each lesson

Purpose:

- To help students to learn 'weather' words

What you need:

- A weather chart (this is a large sheet of paper where you record the weather each day).
- **Toolbox:** Weather Pictures.

What to do:

Steps:

1. At the beginning of each lesson ask the students: 'What was the weather like yesterday?' Students look at the weather chart from yesterday.
2. The students answer: 'Yesterday it was.....'
3. Now ask the students: 'What is the weather like today?'
4. The students answer: 'Today it is.....'
5. Ask a student to place the correct word and picture on the weather chart.

Ideas for Extension: 'Today it is not.....?'

- When students become familiar with the weather words, extend their knowledge of them by asking the students for more words: hail, stormy, snowing, whirl wind etc. The students may give the extra words in their mother tongue to be translated into English by the teacher.
- The daily weather report can now include: 'Is it snowing today?' 'No it is not snowing today.'
- Once the students are familiar with the activity, they can lead it. Students ask the class what the weather is like. Students put the correct weather on the chart.

Assessment ideas

Add the names of students who can ask and answer questions to the assessment records.



Examples of Weather Pictures.

Teachers' notes:

As the children become very familiar with the weather words, add more words on cards for the students to use.

Activity 3: Today's Weather - Question and Answer

Time: 20 minutes

Purpose:

- To help students learn '*weather*' words.
- To practise asking and answering questions about the weather in English.

What you need:

- A space where children can stand/sit in a circle. Take the children outside if there is not enough room in the classroom.

What to do:

Steps:

1. Organise the children to sit in a circle.
2. Hold up a picture of what the weather is like. This can be what the weather is like today or you can choose any picture.
3. Tell one of the students (student 1) to start the activity by saying to the student next to him or her (student 2): 'Today the weather is hot' and give them the picture.
4. Student 2 says to student 1: 'What is the weather like?' Student 1 responds: 'Today the weather is hot'.
5. Student 2 turns to Student 3 and says: 'Today the weather is hot' and gives them the picture.
6. Student 3 says to student 2: 'What is the weather like?' Student 2 turns to student 3 and says: 'Today the weather is hot'.
7. This process keeps going all the way round the circle.

Teaching notes:

- When the hot weather process is going smoothly, the leader (student 1) can introduce another weather going in the other direction. The same process is used, passing questions and answers back and forth.
- This can be done in small groups to start, then bigger groups until the whole class is involved.

Activity 4: Weather Drama

Time: 20 minutes

Purpose:

- To practise describing weather conditions in English.

What you need:

- A large space where students can move.

What to do:

Steps:

1. Say to the students: 'It is windy'. Students do actions to show it is windy. For example, waving their hands around.
2. Say to the students: 'It is hot'. Students do actions to show it is hot.
3. Continue describing different weather conditions. Identify students who are doing interesting things to show the words. Ask these students to demonstrate the actions to the whole class.

Ideas for extension: Guess what the weather is like: ask individual student to come out and act a weather word. The students ask: 'What is the weather like?' The rest of the class guess and answer: 'The weather is.....'.

Assessment ideas:

- Record in the assessment book the names of students who can act out words well.
- Note students who can ask and answer questions.

Teachers' notes:

Use the weather words students have been working with in previous lessons. Encourage students to do actions to describe the words.

Activity 5: Whirlwind/Cyclone

Time: 20 minutes

Purpose:

- To demonstrate a whirlwind.

What you need:

- A large space where students can move.

What to do:

Steps:

1. Divides the students into groups of 5 or 6.
2. Tell the students lie down on their backs with their heads facing the middle of the circle. Place a rock at the feet of the student who will start (student 1).
3. Student 1 gets up and runs around the circle past the other's feet.
4. Once he or she has gone all the way round, person 2 gets up and follows person 1 around.
5. As they come round the circle the next time, person 3 get up and follows.
6. This continues until all the group are up and running.
7. Person 1 stops running and lies down at the starting position.
8. On the next lap, person 2 stops and lies down.
9. This keeps going until all the group are resting on the ground in the calm after the storm.
10. Asks the students to describe a whirlwind.

Grade 2

Plants

There is background information for teachers on this topic on page 91

These activities will help the students to understand the concepts required (describe plants, identify basic parts of plants, compare plants) in the unit on Plants in the Grade 2 curriculum.

GRADE 2

Activity 1: Seed Poem

Time: 20 minutes

Purpose:

- To learn the poem which describes the growing process from seed to plant.
- To understand sun and water are needed to grow things.

What you need:

- **Toolbox:** Seed Poem Sheet.

What to do:

Steps:

1. Display the poem and read it out loud to the children. Demonstrate actions to the poem as you read the poem.
2. Get the students to practise saying the words and discuss the meaning of the words.
3. Draw a picture on the board to show the students the shoot (the part of the plant which comes out of the ground first), the petals, and a shower of rain.
4. Read the poem again and get students to do the actions:
 - 'Here is the seed': children curled up on the floor in a ball like a seed.
 - 'Here is the shoot': arms start to move up; students start to slowly stand up, moving arms slowly up; students stretching tall, arms out.

Here is the Seed

Here is the seed,
Small and round
Hidden underneath
The ground.

Here is the shoot,
Tiny and small,
Slowly, slowly
Growing tall.

Here is the sun.
Here is the shower.
Here are the petals.
Here is the flower.



Ideas for extension: Reads the poem again and ask students to draw a series of pictures on the board, or on paper, to show each stage as the seed turns into a flower.

Role-play

- The teacher chooses a student to be the seed, another student to be the sun and a third student to be the rain.
- Divide the rest of the students into 3 groups, one group for each paragraph of the poem.
- The class all read the poem and the students perform the poem.

Assessment ideas:

- Record the names of students who read the poem well.
- Record the names of students who participate in the group performance.
- Note the skill and creativity in the actions of the students performing the poem.

Activity 2: A Model Plant

Time: 30 minutes

Purpose:

- To learn the parts of a plant by making a model of a plant, for example, a tree or a flower.
- To learn to say the parts of a plant in English.
- To participate in group work.

What you need:

- Items to be found in the school compound: rocks, dead leaves from trees, sticks or branches laying on the ground.

What to do:

Steps:

1. Explain to students that they will be making large models of plants outside. This activity is to be done outside in the school compound using any available materials lying around.
2. Explain they are to use only materials they find on the ground (these materials can be natural or made by people).
3. Organise the students into groups of 6.
4. Ask each group to write the parts of the plant on small pieces of paper to label their model.
5. Take the students outside to make the models.
6. When the groups are finished, the class moves to each model to look at the finished product. Each group must explain to the rest of the class what they have done, naming and showing the parts of their plant.

Assessment ideas

- Records how students have created the model and who has correctly labelled the parts of the plant in the assessment book .
- Record how well students work as a group.

Activity 3: Plant Growth

Time: 20 minutes to start. Ongoing activity while plants are growing.

Purpose:

- To learn the parts of a plant.
- To see how plants grow.
- To participate in group work.
- To record observations in a table.

What you need:

- 1 glass jar or plastic bottle per group of six.
- Paper to line the jar.
- Soil.
- Corn or bean seeds (2 or 3 per group). Ask the children to bring these from home. There are some seeds in the **Toolbox**, but only use these if the children are not able to bring seeds from home.

What to do:

Steps:

1. Ask the students to bring a glass jar or cut-off clear plastic bottle to school. There needs to be one jar per group.
2. Each group collects the materials they need: glass jar, paper to line the jar, seeds, soil.
3. The students in each group make a cylinder with the paper and put it inside the jar.
4. The students fill the jar with soil. Make sure the soil is inside the paper cylinder so the paper is against the glass.
5. The seeds are placed between the paper and the glass so they can be seen.
6. Enough water is put in the jar to ensure the paper and seeds become wet. Watch not to flood the seeds with too much water.
7. The jars are positioned where they will get some sun and students are able to watch the plants grow.
8. Each day look at the plants with the children. Explain to them how the plant is growing.

Assessment ideas

- Note who can explain how the plant grew.
- Note how well students worked as a group.

6. Conclusion: Thinking time: time for students to reflect on their lesson:

- To help the children reflect on the lesson, ask 'What did you learn?'
- Let students take 1 or 2 minutes to think silently about the lesson and the question.
- Ask students to respond to the question.

Assessment ideas

- Note who can explain how the plant grew.
- Note how well students worked as a group.



Teachers' notes:

Reflection can be done in Tigrinya as the student may not have the language to answer in English. It is important to develop student reflection skills.

Grade 3

At the zoo

There is background information for teachers on animals on page 74.

This unit is about making students aware of the purpose of a zoo and the need to care for the animals. Some of the work in this unit is integrated with Mathematics.

Activity 1: Finding Your Way Around the Zoo Lesson 1

Time: 20–30 minutes

Purpose:

- To help students remember vocabulary.
- To listen and follow directions.
- To becoming familiar with a zoo.

What you need:

- **Toolbox:** 10 laminated copies of the Red Sea Zoo.

What to do:

Steps:

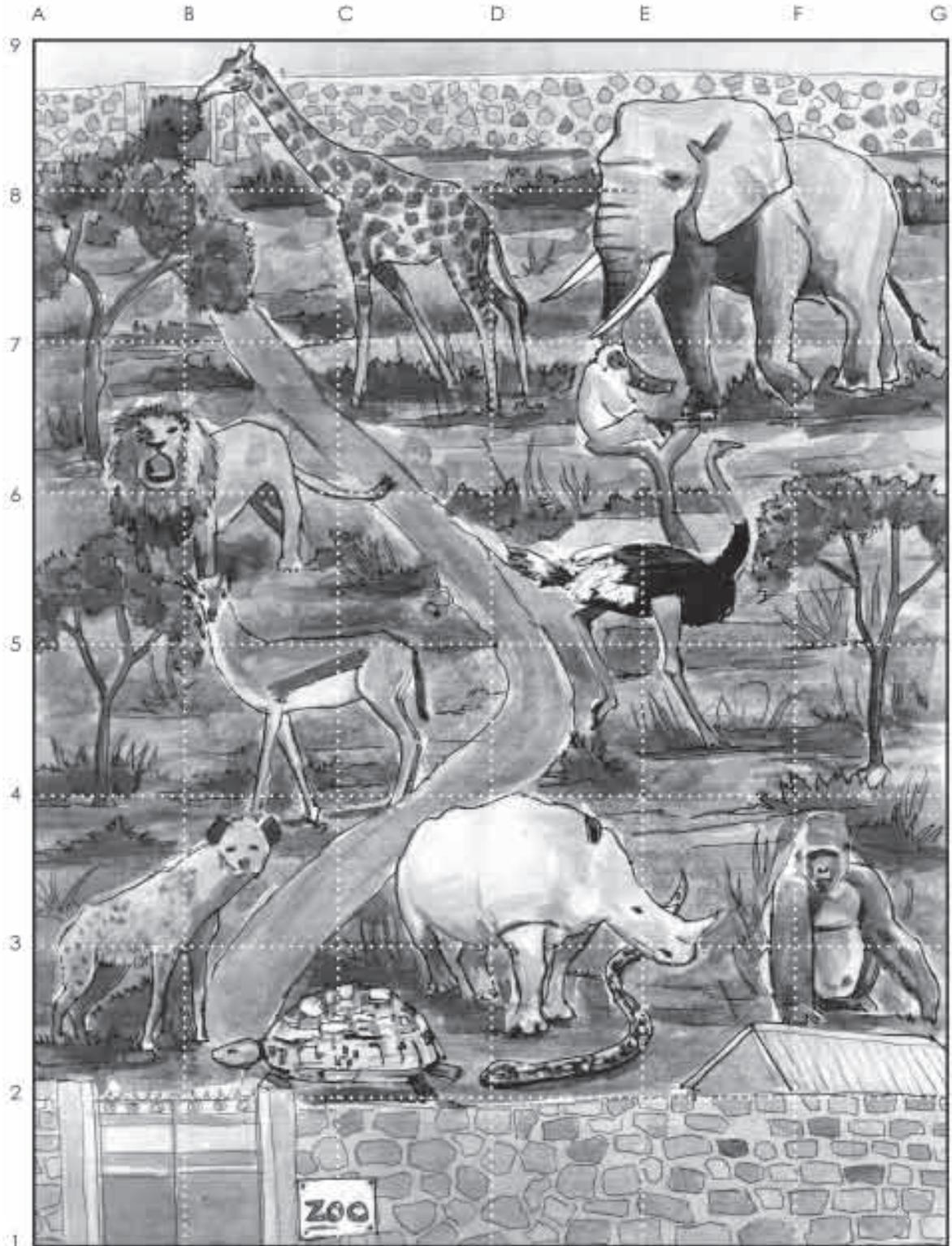
1. Prepare a quick illustration of a grid map on the blackboard before the class.
2. Introduce the idea of locating things on a map by using grid references.
3. Divide the class into groups of 6 students.
4. Give each group a copy of the map of the Red Sea Zoo.
5. Ask the students to locate different things on the map and give the grid references.
For example: 'Where is the monkey?' Students: 'The monkey is at D6'.
'What animal is at D2?' 'The is at D2'.
6. Ask each group to prepare some location questions to ask other groups.

7. Once the questions are ready, pairs groups together to ask location questions of each other. For example, Group 1 can ask Group 2, Group 3 can ask Group 4.

Assessment ideas:

Record in the assessment book the names of students who can follow instructions to find the animals or places on the map. Share this information with the Maths Teacher.

Red Sea Zoo



Activity 2: Finding Your Way Around the Zoo: Lesson 2

Time: 35 minutes

Purpose:

- To reinforce vocabulary: ‘first’, ‘then’, ‘finally’, ‘near’.
- To listen and follow directions.
- To becoming familiar with a zoo.

What you need:

- **Toolbox:** 10 laminated copies of the Red Sea Zoo.
- A small stone or a seed to represent the zookeeper.

What to do:

Steps:

1. Introduce the lesson to the class and explain that you will describe the zookeeper’s morning to the class.
2. Organise the class into groups and give each group a map of the Red Sea Zoo to share and a stone to represent the zookeeper.
3. Tell the students where the zoo keeper is going this morning. The students in the groups follow your directions as the zookeeper takes on his morning round by moving the stone around the map to each location as it is read out. For example: First the zoo keeper visits the monkeys: ‘Where are they?’ ‘What animals are near the monkeys?’ Then the zoo keeper goes to the lions: ‘Where are they?’ ‘What animals are near the lions?’ Then the zoo keeper goes to the seals: ‘Where are they?’ ‘What animals are near the seals?’ This keeps going to as many places around the zoo as you like. Finally, the zoo keeper goes back to the office for tea.
4. Get each group of students to make up their own zookeeper’s trip around the zoo
5. Pairs groups and they take turns to share their directions. For example, Group 1 can give directions for Group 2, Group 3 can give directions to Group 4 etc.

Activity 3: How to Best Look After Animals in Zoos

Time: 30 minutes

Purpose:

- To give and respond to simple descriptions.
- To understand the importance of looking after animals properly.

What you need:

- **Toolbox:** Zoo Pictures 1 and 2.
 1. Animals in a zoo environment where there is plenty of room and which is natural looking.
 2. A picture of animals in a zoo environment where there are small cages, concrete floors or no plant life.

What to do:

Steps:

1. *Class work:* show the class the pictures and asks some questions. For example: 'Do you think the monkeys are happy?' 'Why not?' Discuss with the class the problems for the lions etc.
2. Explain to the students they are going to look at some pictures and describe them. Write possible questions on the board to help guide the students with their descriptions. For example: 'What is in the picture?' 'Are the animals happy?' Ask the students for some ideas.
3. *Group work:* divide the class into groups of 6. Give each group a picture card to discuss.
4. Students describe their picture.
5. A reporter from each group reports back to the class.
6. Think about the photos and describe the best care a zoo can provide for the animals.

Ideas for extension:

1. Students are given a piece of paper, folding it in half. At the top of one side, they write 'Good Zoo', on the other side 'Bad Zoo'.
2. Students choose an animal and draw that animal in a 'good zoo' enclosure and then in a 'bad zoo' enclosure.
3. Students share the results: 'this is good for the well being of animals because.....'; 'This is bad for the well being of animals because.....'
4. Students can debate the points 'for' and 'against' keeping animals in zoos or captivity.

Activity 4: Design a Zoo

Time: 30 minutes

Purpose:

- To describe a good environment for animals.
- To design an ideal zoo.
- To draw a map.
- To create labels in English for the map.

What you need:

- **Toolbox:** Drawing paper.
- **Toolbox:** Pencils.

What to do:

Steps:

1. Discuss ideas from the previous lessons with your class. For example, ‘What do animals need?’ ‘What makes a good zoo?’ These can be listed on the board.
2. Ask the students to design a zoo of their choice. For example, What animals will it have? What else can be included in the design of the zoo?
3. Explain how to draw a map using the Red Sea Zoo map as an example.
4. Give the students paper and pencils and time to draw the zoo design. The students can do the drawing in their exercise books if no other paper is available.
5. Conclusion: Display the maps in the classroom.
6. Thinking-Time – time for students to reflect on their lesson/developing student reflections:
 - To help the children reflect on the lesson, ask: What did you learn?’
 - Let students take 1 or 2 minutes to think silently about the lesson and the question.
 - Ask students to respond to the question.

Assessment ideas:

- Record in the assessment book the names of students who have developed good design ideas that cater well for the animals.
- Note students who have grasped the idea of how to draw a map.
- Note students who can correctly label animals and buildings in English.

Activity 5: Word Wave

Time: 20 minutes

Purpose:

- To reinforce the names of animals found in zoos.

What you need:

- A large space for children to form a circle.
- Vocabulary words on cards or paper including names of animals in the zoo, for example: 'Lion', 'seal', 'hyena', 'fox', 'tortoise', 'monkey', 'giraffe', 'elephant', 'bird', 'cheetah', 'snake', 'lizard'.

What to do:

Steps:

1. Organise the students into a big circle with the vocabulary words in the middle for all to see. (If you have a very large class you could do this as a group activity - first demonstrate the activity with one group of students).
2. Choose a student to pick a word from the cards.
3. Tell the student to say the word on their card and make an action or a noise to match the word.
4. The next student says the same word out loud and makes a matching noise or action.
5. Continue with each student taking a turn until it comes back to the start.
6. Student 2 then chooses a word.
7. That student says the word and makes a matching action or sound.
8. This continues until all students have had a turn.

Activity 6: Who Am I?

Time: 20 minutes

Purpose:

- To reinforce the names of animals.
- To describe animals found in the zoo.
- To start to understand how animals are classified.
- To reinforce 'can' for polite requests.

What you need:

- A large outdoor space for children to move.
- **Toolbox:** Animal Pictures, Series 3

What to do:

Steps:

1. Give each student a card with an animal name on it.
2. Each student puts that word on the back of another student without them seeing it.
3. The students move around the room and ask each other questions that can be answered 'yes' or 'no' until each student has discovered what animal they are.
4. Before students can ask a question, they must ask the person: 'Can you help me?'
Students can also say 'Can I help you?' to get someone to ask a question. For example:
 - Student 1: 'Can you help me?' 'Do I have 4 legs?'
 - Student 2 answers "yes" or "no."
 - Student 1: 'Can I help you?'
 - Student 2: 'Am I a lion?'
 - Student 1: answers 'yes' or 'no'.
 - Student 1: 'Can you help me?' 'Do I eat grass?'
 - Student 2: answers 'yes' or 'no'.

Ideas for extension: Students record the questions they asked. Teacher can discuss with students afterwards the kinds of questions that made it easier to find out the correct answer. Generally, these questions are used to classify animals. For example, 'Am I a reptile?' 'Do I have feathers?' 'Am I a bird?' 'Am I a mammal?'

On the farm

There is background information for teachers on this topic on page 82.



Activity 1: Village Walk/Field trip

Time: This will depend on how near the farming area is to the school. If it is a fair distance, negotiate with another class teacher to extend the field trip to 2 periods or all day.

Purpose:

- To explore what a farm is like in Eritrea.
- To become aware that not all farms are the same.

What you need:

- Paper and pencils.

What to do:

1. Before starting, talk with the students about what to look for on the excursion:
 - What types of animals will they see?
 - What are the animals doing?
 - What are the people doing?
 - What types of plants are grown?
2. Class starts the walk.
3. Back at school, discuss with the children what they saw: 'What did you see?' 'I saw.....' Ask: 'What problems do these farmers face?'
4. Record students' answers on the board.

Activity 2: Farm Drawings

Time: 30 minutes

Purpose:

- To consolidate ideas about what a farm is.
- To practise asking and answering questions.

What you need:

- **Toolbox:** Drawing paper.
- Pencils.

What to do:

Steps:

1. The teacher writes the word '*farm*' on the board. The class discusses with the students what a farm is, the types of animals on a farm and what other things are found on a farm. Remind the students about the things you saw on your excursion.
2. Ask the students to draw a picture of a farm.
3. Ask a student to bring out their picture. Demonstrate the question and answer activity. Some question and answer stems can be written on the board, for example: 'Where is/are the hens?' 'The hens are.....' 'Do you have cows?' 'Yes I have cows?'/ 'There are no cows'. 'How many sheep?' 'There are sheep'.
4. Pair Work: *Inside out circle: Students move around in the circle asking and answering questions. This can be done in 3 or 4 small groups, or one big one if there is room.
5. While the students are working in pairs, the teacher moves around also asking questions to the students.
6. Choose some pairs to come out and demonstrate their questions and answers to the class.



Teaching notes: *Inside/outside circles Students are placed in two circles. Students in the inner circle face outwards, directly facing another student in the outer circle. This strategy enables discussion between students while encouraging movement and interaction.

Assessment ideas:

As you move around the circles, note students who can ask and answer questions.

Activity 3: What do you Want to be?

Time: 35 minutes

Purpose:

- To make puppets for role-play.

What you need:

- **Toolbox:** Drawing paper.
- Pencils.
- **Toolbox:** Scissors.
- **Toolbox:** Stapler.



What to do:

Steps:

1. Using paper, students make *hand puppets of an animal found on a farm.

Teaching notes: *Making hand puppets

- Students draw around their hands and cut the shape out carefully on the line they have drawn.
- Using the cut-out shape, students draw the animal of their choice, for example, cow, goat, etc.
- Staple a strip of paper around the back, fastening both sides of the drawing so that the student can put it over their hand, or stick these to a softy roll so students can put their fingers in the roll to hold the puppet. Alternatively, stick these to a stick so students can hold the puppet.



Activity 4: What do you do every day?

Time: 30 minutes

Purpose:

- To practise question-and-answer.
- To practise speaking and listening.
- To reinforce the daily habits of animals.

What you need:

- Students' hand puppets.

What to do:

Steps:

1. Revise what animals do, and make a list on the board.
2. Demonstrate a puppet role play with one of the students. You ask: 'What do you do every day?' Students answer: 'Every day I' (depending on what animal puppet they have). For example, if the student had a cow: 'Every day I give milk', or 'every day I eat grass'.
3. In pairs, students ask and answer questions of each other: 'What do you do every day?' 'Every day I.....'

Teaching notes: Pair work can be done as an Inside/Outside circles activity (refer to previous lesson) or students can randomly pair up and the teacher gives a set time and then asks the students to change partners.

Activity 5: Question and Answer – On the Farm

Time: 30 minutes

Purpose:

- Practising question-and-answer.
- Practising speaking and listening.
- Reinforcing the daily habits of animals and vocabulary.

What you need:

- Real objects such as seeds, plants, coffee beans, some soil, different vegetables.

What to do:

Steps:

1. Organise children to sit in a circle.
2. Nominate one of the students to be a leader. Get the leader to hold up an object.
3. The leader says to the person next to them (person 2): 'This is a wheat seed' and gives them the seed.
4. Person 2 says to person 1: 'What is this?' Person 1 responds: 'This is a wheat seed'.
5. Person 2 then turns to person 3 and says: 'This is a wheat seed' and gives them the seed.
6. This process keeps going until everyone has had a turn.

Teachers' notes:

When the seed process is going smoothly, the leader (person 1) can introduce another item going in the other direction. The same process is used, passing questions and answers back and forth.

This can be done in small groups to start, then bigger groups until the whole class is involved.

Activity 6: Word Wave – Farm Words

Time: 15–20 minutes

Purpose:

- To practise speaking and listening.
- To reinforce vocabulary.

What you need:

- Vocabulary words written on paper: ‘push’, ‘pull’, ‘rain’, ‘smell’, ‘kill’, ‘climb’, ‘carry’.
- A large space where students can make one big circle or several smaller ones.

What to do:

Steps:

1. Organise all the students to stand in a circle. Place the written words in the centre so the students can see them.
2. Person 1 chooses a word and does an action or sound. For example, making a pushing motion.
3. Person 2 then says ‘push’ and makes the pushing motion.
4. Person 3 then says ‘push’ and makes the pushing motion.
5. Continue this until it comes back to the start.
6. Then person 2 chooses a word and does an action or sound. For example, ‘climb’ and does a climbing action.
7. This continues until everyone has had a turn.

Ideas for extension: When the students are familiar with the process, you can have 2 or 3 words and actions going around the circle. For example, wait until the first action is half way, then person 2 starts.

Grade 3

Our Environment

There is background information for teachers on this topic on page 88.

The idea behind these activities is to make students aware of rubbish and who makes rubbish. The students will become aware of the role they play in making their environment healthy.



Activity 1: Healthy and Unhealthy Environments

GRADE 3

Time: 35 minutes

Purpose:

- To define healthy (clean) and unhealthy (dirty) environments.
- To observe and record findings.
- To learn the '1,3,6 Brainstorm' thinking process.

What you need:

- **Toolbox:** Large sheet of paper.
- **Toolbox:** Markers.

What to do:

Steps:

1. Lead a brainstorm in the class on the question 'What is Rubbish?'
2. List ideas on the large piece of paper (*Brainstorm 1,3,6).
3. Ask: 'Where does rubbish come from?' Write a list of the rubbish and where it is found.
4. Discuss with students: 'What rubbish is in the classroom?' 'Where does it come from?' 'Is it healthy to have rubbish in the classroom?'
5. Take the whole class out into the compound and ask: 'What rubbish is there in the compound?' 'Where does it come from?' 'Is it healthy to have rubbish in the compound?'
6. Take the whole class on a short walk in the area around the school and ask: 'What rubbish is there?' 'Where does it come from?' 'Is it healthy to have rubbish in the village/town?' (Teacher note: this may have to be done in another lesson if time runs out.)

7. Make a table and ask students to list the types of rubbish found in these places:

- the classroom
- the compound
- the family
- the village or town.

In preparation for the next lesson answer the following questions: 'What can we do about the rubbish?' 'What do we want to tell people about rubbish?'

Classroom rubbish	Compound rubbish	Family rubbish	Village/Town rubbish

8. Conclusion: Pairs Share Learnings

- In pairs, get students to talk about what they learnt.
- Each pair shares 1 thing they learnt with the rest of the class.

Teaching notes: 1, 3, 6 Brain storm

- Think about the given topic or issue for discussion and write their ideas down.
- Each student then joins with 2 other students to combine and discuss their ideas. They then come up with joint ideas.
- Each group of 3 joins with another group of 3 and they combine their ideas and discuss.
- One member from each group of 6 then shares their group ideas with the class.

Assessment ideas:

Use the students' responses to the Pair/Share to reveal students understanding of the lesson.

Ideas for extension:

- Students put into action the ideas they come up with.
- Students could create a poster to place around school or the community to remind people to put waste into the rubbish bin.
- Students could write a letter, with the assistance of the teacher, for the local paper about rubbish and the importance of disposing of waste properly.

Activity 2: Dangerous Rubbish

Time: 30 minutes

Purpose:

- To identify rubbish that may be dangerous to humans and animals.

What you need:

- Examples of rubbish – children can bring a small number of pieces of rubbish to school. Tell them exactly what you want them to bring.
- Large area outside.

What to do:

Steps:

1. Take the class outside (Prepare a display of the rubbish the children have brought).
2. Draw three big circles on the ground. Place a sign on each circle:
 - Rubbish that can't hurt people or animals.
 - Rubbish that can hurt people or animals.
 - Rubbish that can hurt animals if they eat it.
3. Get the class to discuss what is meant by dangerous: 'things that can hurt you'. Explain the 3 groups to the students.
4. Divide the class into groups. Each group must decide which circle the displayed rubbish should be placed.
5. Each group sends a representative to put the rubbish in the circles.
6. Conclusion: Thinking Time – time for students to reflect on their lesson, developing student reflections.
 - To help the children reflect on the lesson, ask the question: 'What did you learn?'
 - Let students take 1 or 2 minutes to think silently about the lesson and the question.
 - Ask students to respond to the question.

Activity 3: Healthy and Unhealthy Environments Poster

Time: 35 minutes

Purpose:

- To use posters to communicate a message about 'healthy' and 'unhealthy' environments.
- Learn to use 'Think-Pair-Share' as a thinking tool.

What you need:

- **Toolbox:** Sheets of drawing paper.
- **Toolbox:** Coloured pencils.
- **Toolbox:** Reduce, Reuse, Recycle, (RRR) Poster.

What to do:

Steps:

1. Discuss what students learned in the previous lessons on rubbish and where it can be found.
2. Ask: 'What can we do about the rubbish?' 'What do we want to tell people about rubbish?'
3. Introduce the idea of the 3 Rs of rubbish. Show students the RRR poster.
 - **Reduce** - the less rubbish we produce, the better it is for the planet, for example write on both sides of the paper.
 - **Reuse** - where possible reuse things rather than buying new ones, for example you can reuse old tins as plant containers.
 - **Recycle**- we can make rubbish into something else, for example we can tear up paper and use it as mulch.
4. Ask the students what message they would like to tell people about rubbish.
5. *Think Pair Share. The teacher lists the suggestions on the board.
6. The students choose a message or make one of their own. They each make a poster to display in the classroom and /or around the school.
7. The students present their posters and its message to the class.

Teaching notes: *Think, Pair, Share: This strategy encourages students to think first and then discuss their opinions with a small group of people. Set a time for each section:

- Students begin by reflecting on their opinions and ideas on the topic and record them.



Teachers' notes:

This exercise will emphasise to the students that all rubbish is dangerous in some way.

- Next, the students are required to come together in pairs and share their ideas and collate a group response.
- A member from each pair shares their ideas with the class.

Assessment ideas:

Record the names of students who can present ideas clearly in a poster format. Note creativity and care in completing the poster.

Activity 4: Decomposing Rubbish

Time: 30 minutes to start

Ongoing over a few weeks to check how things are decomposing and for students to write their reports.

Purpose:

- To understand that the rubbish we create is hard to get rid of and can have a lasting effect on the environment.
- To read data in charts.
- To write report on findings from experiments.

What you need:

- Rubbish: paper, metal, food scraps of different kinds, plastic, glass – ask a few students to bring these.
- Sticks to be used as markers.
- **Toolbox:** Reduce, Reuse, Recycle, (RRR) Poster.

What to do:

Steps:

1. Display a collection of rubbish. Ask the students which rubbish they think will decompose/rot. Record their suggestions on the board:

Rubbish item	Decompose	Will not decompose
<i>paper</i>		
<i>metal</i>		

2. Take the students outside and bury 3 items of rubbish in an area in the school compound. Mark where you have buried the rubbish items.
3. Students can dig up each item on a weekly basis and record how much they have decomposed (they can draw the items).

4. Students can use the following table to record their findings. Put the table on the board for students to copy.

This is an example of how to fill the table in.

Week	Item	Breakdown
1	Bread	0 decomposed
2	Bread	$\frac{1}{4}$ decomposed
3	Bread	$\frac{3}{4}$ decomposed
4	Bread	No item evident – totally decomposed

5. In groups students discuss what has happened to the rubbish items over four weeks. Get each group to write one sentence. Read the sentences to the

6. Class discussion: What items decomposed the quickest? What type of material were they made from – natural or man made?

7. Write the table below on the board. Discuss which of the items are natural and which are man made.

- With the items that take the longest time to breakdown in the environment, from what materials were they made?
- What impact could long-lasting materials that are thrown away as rubbish have on our environment?

Rubbish Breakdown times

Item	Breakdown time
Banana Peel	2 Years
Wool socks	1 to 5 years
Plastic bags	20 to 1000 years
Nylon fabric	30 to 40 years
Leather	Up to 50 years
Tin cans	50 years
Glass bottles	1 million years
Plastic bottles	1 million years
Timber	1 to 5 years
Paper	up to 6 months

Teachers' notes:

This activity is best done in the wet season when there is moisture in the soil.

9. Conclusion: Thinking Time

- Teachers ask: 'How might knowing about rubbish decomposing help us today?'
- Give students 1 or 2 minutes to think about this and then share their ideas.

Assessment ideas:

Use the students' answers from the Thinking-Time to assess their understanding of the lesson.

Activity 5: What can you do?

Time: 30 minutes

Purpose:

- To develop in students the idea that they can have a positive impact on the environment.

What you need:

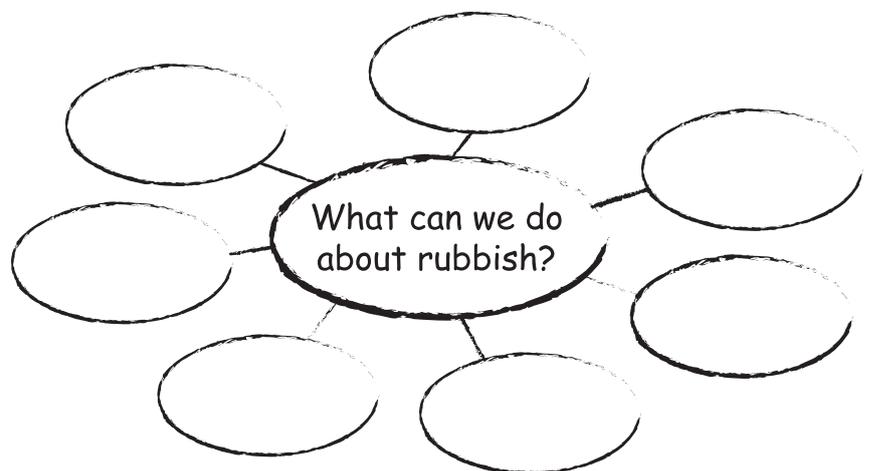
- Flip chart paper/blackboard.
- Markers/chalk.
- Strips of paper for students to write on.

What to do:**Steps:**

1. Review what the students have learnt in the unit using a mind map. List all students' ideas.
2. Group Work: What can we do about rubbish?
 - In groups, students discuss what they can do to help the rubbish problem.
 - The reporter from each group reports back to the class.
 - Write the actions on the board from each of the groups.
 - Get each group to take some of the actions and write them on separate strips of paper.
 - Display these ideas on the wall to remind students of the actions they have decided to take.

Assessment ideas:

Use the students' ideas from the group work – 'What can we do about rubbish?' – to assess their understanding of the lesson.



Activity 6: What Can You See?

Time: 35 minutes

Purpose:

- To reinforce animal names to the students.
- To develop an awareness of the native animals, birds and insects in the immediate environment.
- To develop an awareness of the need to protect these animals.
- To develop observation skills and recording of observations.

What you need:

- Large area for students to sit and observe the compound.
- **Toolbox:** Animal Pictures, Series 1, 2, 3.
- **Toolbox** Bird Identifier Pictures.
- **Toolbox** Insect Identifier Pictures.

What to do:

Steps:

1. Introduce the lesson and explain the class is going to go outside to observe the animals, birds and insects in the school compound and that they are going to give simple descriptions of what they see. For example: 'What can you see in the school compound?' 'In the compound I can see.....'. Students may have to give the animal, bird or insect name in their mother tongue.
2. Students take a pencil and paper with them to write about, or draw, what they see.
3. Get students to sit quietly, on their own, within a given area in the school compound and to observe their surroundings.
4. The students write or draw the animals, birds or insects they see.
5. Back in the classroom, make a class list of all the findings: 'What can we see in the school compound?' 'In the compound we can see.....'.
6. See if students can identify the names of any birds, animals or insects from the cards.
7. In pairs, students write what they can see in the school compound. One student from each pair reports back to the class on what they saw.

Activity 7: Can You See?

Time: 35 minutes

Purpose:

- To reinforce the animal names.
- To develop an awareness of the native animals and their environments.
- To develop observation skills.

Teachers' notes:

Stress the importance of looking after these animals, particularly animals like the little Ground Squirrel, which can be targets for stone-throwing children.

What you need:

- **Toolbox** Animal Pictures, Series 1, 2, 3
- Environment Cards: You will need to write the names of some different environments on cards or paper, for example, sea, mangrove, forest, desert, river, high mountains.

What to do:

Steps:

1. Introduce the animals and environments in the picture cards to the students.
2. The class is divided into groups of 6.
3. Each group is given a set of animal and environment cards.
4. Students have to sort the animals into their correct environment.
5. When this is done, the teacher asks the students some questions about where animals are found. For example: 'In the sea, can you see a dog?' Students answer 'yes' or 'no – you can't see a dog in the sea'.
6. Ask the students to make up 'Can you see?' questions for the class when they are familiar with the question-and-answer format.
7. Groups can ask the class their questions or the teacher can pair up groups and they can ask each other questions about where animals live.

Grade 4

Animals

There is background information for teachers on this topic on page 74.

Activity 1: The Web of Life – Lesson 1

Time: 35 minutes

Purpose:

- To help students understand the diet of different animals.
- To practise using the names of the different types of diet.

What you need:

- **Toolbox:** Web of Life cards.
- **Toolbox:** Animal Pictures, Series 1, 2 and 3.
- **Toolbox:** Food Pictures.
- Paper for 5 headings in each group.

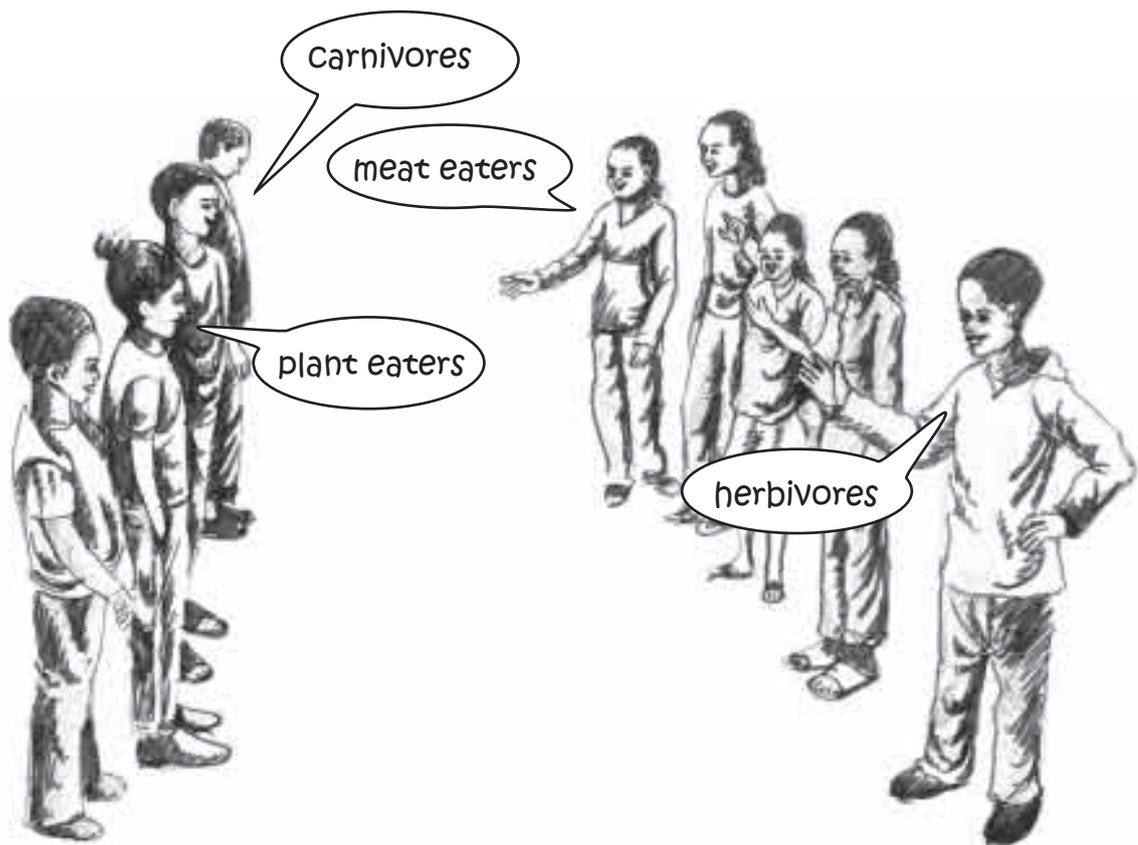
Teachers' notes:

The conclusion can be done in groups with students talking together about what they learnt. Then a reporter from each group shares what they learnt.

What to do:

Steps:

1. Write the following words on the board:
 - *scavengers*: clean up other animals which are killed.
 - *carnivores*: meat eaters.
 - *herbivores*: plant eaters.
 - *producers*: food; things that are growing.
2. Discuss the words and their meanings. Write the meanings on the board.
3. Divide the class into two groups:
 - Group 1 says a word and group 2 has to read the meaning.
 - Reverse the rolls: Group 2 says a word and group 1 has to read the meaning.



4. Group work:

- Divide students into groups of 6 students.
- Give each group a set of animal cards. Get them to write the 4 headings onto 4 separate pieces of paper.
- Ask the students to group the animals and plants under these headings: scavengers, carnivores, herbivores, and producers.
- Ask each group reports back to the class about which animals and plants they placed under each of the headings.
- Get the class to discuss the correct groupings.

5. Conclusion: Thinking time: (Reflection Time)

- Ask: What did you learn?
- Give the students 1 or 2 minutes to think quietly about what they learnt.
- Students share what they learnt. Not all students have to share but make sure a range of students do, including good students and weaker students.

Assessment ideas:

Record the names of students that worked well in groups. Make a note of students who need suggestions to assist them with improving their work in groups.

Activity 2: The Web of Life – Lesson 2

Time: 35 minutes

Purpose:

- To help students understand the inter-relationships between living things.
- To raise awareness of the need to maintain a balance in all living things.
- To use a visual mapping tool to explain relationships between living things.
- To practise asking and answering questions.
- To build knowledge of animals and plants and practise using the names of these animals and plants.

What you need:

- **Toolbox:** Animal Pictures: Series 1, 2 and 3.
- **Toolbox :** Food Cards.
- Space outside.

What to do:

Steps:

1. Review the last lesson. Write the names of animals and plants on the board.
2. Introduce the task for the lesson. The students are going to make links between the plants and animals. The students will be drawing links between the things that animals need in order to live, for example a horse needs grass. Explain the activity before you go outside.
3. Group work – the students will carry out the task outside:
 - Divide the students into groups. Give each group a set of the Animal picture cards and the Food cards. Tell the group to lay them out on the ground. Using the picture cards, the group has to decide on the links between the plants and animals. ‘What do lions eat?’ – draw the link in the soil to what they eat. ‘What eats grass?’ – draw the link in the soil. Students continue to draw a line in the dirt to link the plants and animals
 - Move around helping and discussing with each group the links they are making.
 - When all groups have finished, conduct the *Bus Stop activity.

Teachers’ notes:

*Bus Stop activity

One student from each group stays with their work. This student has the role of explaining, or answering questions, about the links the group chose.

The other students walk around, stopping and looking at the work the other groups did, asking questions or making constructive comments.



The Web of Life - Lesson 2, activity.

Activity 3: The Web of Life – Lesson 3

Time: 35 minutes

Purpose:

- To help students understand the inter-relationships between living things.
- To help students understand the need to maintain a balance in all living things.

What you need:

- **Toolbox:** Web of Life cards
- Space outside.
- **Toolbox** Long ball of string.
- Sticky tape for attaching Web of Life cards to the students.

What to do:

Steps:

1. Write the names of animals and plants on the board. Ask a student to repeat what they did in the last lesson by drawing a line with chalk between animals and plants representing the relationship.
2. Ask the question: 'What would happen if one of the plants or animals was to die out?' For example a student might predict that if the grass dies, the goats and horses will have nothing to eat and they will die too. Get students to predict other things that might happen. List the predictions on the board.

3. Give each student one of the Web of Life cards. They can attached these cards with sticky tape. If you have a big class, you can have two or three students share a card.
4. Organise students into a circle.
5. The ball of string begins with one student. They are to pass the string to another student who is wearing a card that links with theirs. For example, the giraffe needs grass, the grass will pass to the sun or water. By doing this, the students link the plants and animals as they did in the diagram on the blackboard. Students hold the string tight to create the Web of Life.
6. Continue passing the string until all the links have been made. Then take out one of the animals or plants. Tell a story that explains why that animal or plant ceases to be in the web, for example, the giraffes have gone because people shot them all. The student with this label drops the string. Ask the question: 'What happens to the web?' (You will see that the web begins to fall apart as students drop the string. The Web of Life is the same, it begins to fall apart each time something is lost from the ecosystem).
7. Discuss as a class the importance of all living things. Ask students: Is it important to look after all living things? Why?
8. Conclusion: Thinking time. Student reflection: Ask the students: 'Why is it important to know about the web of life?' Students may answer in their mother tongue if they do not have the English skills to answer fully.



The Web of Life - Lesson 3 activity.

Activity 4: Mini Report

Time: 1–3 lessons, if needed.

Purpose:

- To help students understand the inter-relationships between living things.
- To help students understand the need to maintain a balance in all living things.
- To describe animals.
- To learn to write a report.

What you need:

- **Toolkit:** Animal Pictures
- **Toolkit** Reference books on animals (optional).

What to do:

Steps:

1. Write the following report format on the board.

Report Format: Reports often have 3 main parts:

- *Introduction* to tell readers the topic and describe what the report will focus on about the topic.
- *Detailed facts* organised under headings and in paragraphs (it can also have diagrams, photographs, maps and charts with labels and captions).
- *Conclusion* which is a short summary of what the facts say about the topic.

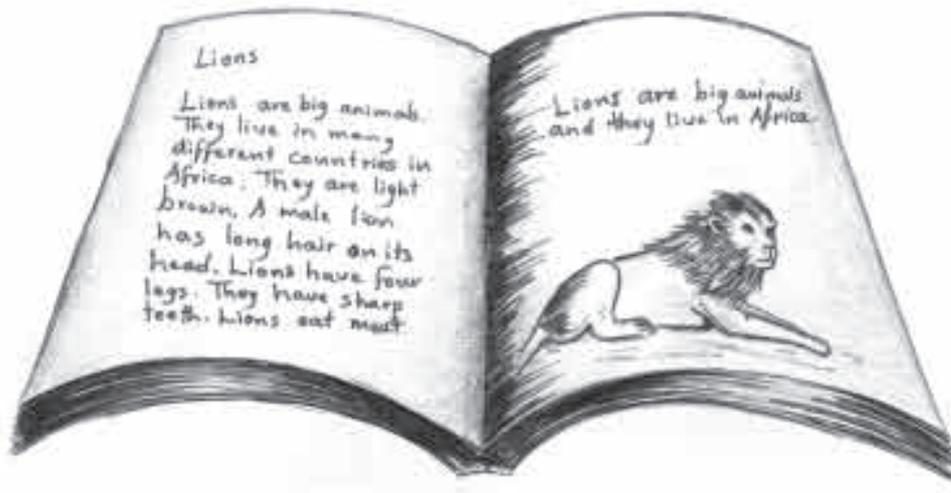
Here is an example:

- *Heading:* what the report is about: Lions
- *Introduction:* Lions are very big animals.
- *Detailed facts:* Lions lives in Africa. They are light brown. A boy lion has long hair on its head. Lions have 4 legs. They have sharp teeth. Lions are big. Lions eat meat.
- *Conclusion:* Lions are big animals and they live in Africa.

2. Get students select a plant or animal they want to write about. This can be done in pairs or individually.
3. Tell students to gather their information about the animal they have chosen. This can be done from the pictures or available reference books.
4. Tell them to write their information using the format on the board as a model.
5. Select some students to present their work to the class.

Teachers' notes:

The students will just write a couple of sentences for their report. This activity will introduce them to the idea of writing a short report.



6. Conclusion – Thinking time: Student reflection: Ask the following 2 questions about the web of life and the report activities: ‘What did you learn?’ ‘What did you enjoy doing?’

Assessment ideas:

- Record in the assessment book the names of students who are able to produce a report using the correct format.
- Record which students needed assistance. Consider what you could do next time a report is written in class to assist these students to improve.
- Note students who can give good descriptions of animals, for example, 4 or more different pieces of information on an animal.

Activity 5: Hungry Hyena Drama

Time: 1–2 lessons

Purpose:

- To practise reading.
- To practise describing animals.

What you need:

- Copies of the book the *Hungry Hyena*.

What to do:

Steps:

1. The teacher reads the story *Hungry Hyena* to the students.
2. In groups, the students read the story.
3. Ask the students if there are any tricky words. Discuss these words.

4. Choose students to play the parts in the drama: Hyena, Monkeys, Story teller. Students can read their parts from the book.
5. Make a chant (see teachers' notes on Chants on page 20) to summarise the story. Divide the class into 2 groups. One group says the line first, then the other group repeat the line. The students can do actions for each line. Remember to beat the rhythm on the desk to help students get the right stress pattern.

The hyena was hungry.	The hyena was hungry.
He saw the tomatoes.	He saw the tomatoes.
He ate the tomatoes.	He ate the tomatoes.
The monkeys were angry.	The monkeys were angry.
They tricked the hyena.	They tricked the hyena.
He ate the hot peppers.	He ate the hot peppers.
The monkeys were laughing.	The monkeys were laughing.
The hyena was running.	The hyena was running.
That is the end.	That is the end.

Ideas for extension: This type of chant can also be used to describe the animals in the story or any other animals the students want to choose. For example:

Hyenas are brown	Hyenas are brown
They have 4 legs	They have 4 legs
Hyenas eat meat	Hyenas eat meat

Keep going with the description. Children can also make up their own chants in groups or individually.

Activity 6: Taking this further

Time: 35 minutes

Purpose:

- To help students understand the inter-relationships between living things.
- To help students understand the need to maintain a balance in all living things.
- To help students to develop ideas on what they can do to help the environment.
- To organise ideas and make a commitment to do something to help the environment.

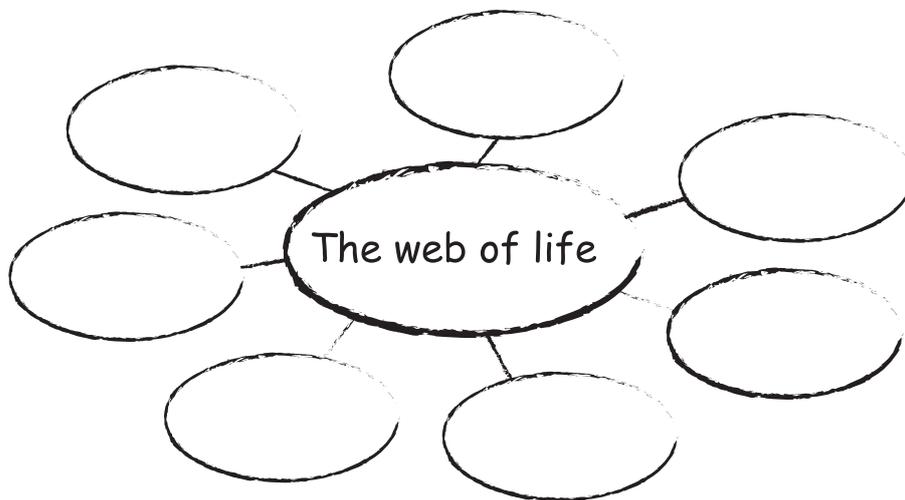
What you need:

- Flip chart paper/blackboard.
- Markers/chalk.
- Strips of paper for students to write on.

What to do:

Steps:

1. Review what the students have learnt in the unit on animals using a mind map.
2. Draw the mind map on the board.
3. List all students ideas onto the mind map.



1. Group work: What can we do to help our environment?
2. Divide the students into groups of 6. Tell the students discuss what they can do to help the environment.
3. Assign the role of 'reporter' in each group, who reports back to the class.
4. Record the actions reported on the board.
5. Tell each group to take some of the actions and write them on separate strips of paper.
6. Put the strips of paper on the classroom walls to remind students of actions they can take to help the environment.

Grade 4

Safety - mine risk

*These activities deal with safety in relation to land mines and explosive remnants of war (ERW). **It is very important that you read the background information for teachers on this topic on page 85 before doing this activity.** You will need to explain what land mines, UXO and ERW are to children in mother tongue*

Activity 1: Who Will Survive?

Time: 30 minutes

Purpose:

- To help students to understand that their choices can have terrible consequences.
- To listen to statements that are read and to understand the content.

What you need:

- Balloon-shaped cut outs from black paper – one for each student in the class.
If you don't have black paper, use any rough paper and draw a black X on it.

What to do:

Steps:

Before the class:

1. Write some statements about land mine/ERW safety. Students will choose from: **agree** meaning they think the statement is correct, **disagree** meaning they think the statement is wrong, or **don't know** meaning that they are not sure if the statement is right or wrong.

For example:

- Land mines/ERW all look the same.
- All land mines are buried under the ground.
- Land mines/ERW will only explode if you step on them.
- Landmines/ERW are always made of metal.

- Landmines/ERW can be many different colours.
 - UXO are not as dangerous as landmines because you can see them.
2. Write 3 signs for the room: 'AGREE', 'DISAGREE', 'NOT SURE'. Place the AGREE sign on one side of the room, the DISAGREE sign on the other and the NOT SURE in the middle.
 3. Have the cut-out balloons handy somewhere in the room.

In class time:

1. Ask the students to place themselves at one of the signs each time you read a statement.
2. Each time a student or students stand near an answer that is unsafe, give them a cut-out balloon – this will represent a person hurt or killed by a landmine, UXO or by playing somewhere not safe.
3. Each time you give a student a balloon, discuss the reasons with the class. Explain that being unsure can be just as bad as making an unsafe choice.
4. At the end of the session, get the class to discuss how many students survived.

Activity 2: Five-line Dramas

Time: 35 minutes

Purpose:

- To understand that the choices students make can have terrible consequences.
- To reinforce making good choices.
- To reinforce the dangers of land mines and UXO.
- To reinforce the physical, economic and social effects of land mines and UXO.
- To develop drama skills in the students.

What you need:

- Space for groups to work in.

What to do:

Before the class: Write the five-line dramas on the blackboard.

Examples of five-line dramas:

1. You can't fence that area. I need it to farm there.
2. Get out of my way. You are a silly old man.
3. What is happening on here?
4. He is trying to stop me farming.
5. It is very dangerous to farm here.

1. Where will we get wood for cooking?
2. It is not safe to go in there.
3. I have been there before.
4. A child was hurt in there yesterday.
5. Oh no, this is not good.

1. Let us plough the land here.
2. It is too near to the minefield.
3. What else can we do? We need to grow crops.
4. Come on! Let's plough here.
5. Stop! We can't do it. You know what will happen.

1. Don't hit it with the stick.
2. Why not?
3. You don't know what it is.
4. It looks like an old tin.
5. It could be dangerous.

1. Come this way.
2. Are you sure it is safe?
3. It is a quick way home.
4. We will be alright. Look, there is a path.
5. But there is something across the path.

1. Hey! What do you think you are doing?
2. I am not doing anything wrong.
3. You can't play here.
4. Why? It is fun.
5. The old tank is dangerous.

1. Where are your cows?
2. My cows are dead.
3. What happened?
4. They went into the dangerous field near the village.
5. How will you get money now?

Class time:

Steps:

1. Divide the class into groups of 5.
2. Give a drama to each group to act. Get them to copy their drama into their exercise books.
3. The group must look at the drama and think about what is happening, who they are and where they are.
4. Each student must say a line and add actions to help tell the story.
5. Then get the groups to perform their drama in front of the class.
6. Encourage the class to discuss what the drama was about after each group has finished. What was the message?
7. When the students have done their drama, ask each group to think about adding one more line to their drama. What line would they add? Ask students to share their ideas.
8. Then get each group to perform their play again with the extra line.

Grade 4

Our Health

There is background information for teachers on this topic on page 88.

Activity 1: Washing Our Hands Poster

Time: 35 minutes

Purpose:

- To show that germs live on our hands if we do not wash them.
- To reinforce the importance of washing our hands.
- To communicate a message about healthy habits: washing hands.

What you need:

- **Toolbox:** Drawing paper.
- **Toolbox:** Hand washing Poster, *Don't Spread your Germs, Wash your Hands!*
- Pencils.

What to do:

Steps:

1. Show students the Hand washing Poster, then ask the class to brainstorm all the things they know about hand washing. Record this on the board.
2. Discuss what messages the students think are most important about washing hands: Lists these on the board for students to use.
3. Get students to create posters about washing hands to be displayed around the school. You do this as a group activity or get students to work in pairs or by themselves.

Activity 2: Clean Air and Ventilation

This experiment highlights the importance of having good ventilation. For example, on buses there needs to be ventilation to stop the spread of germs from people coughing and sneezing and to have good levels of oxygen for people to breath properly.

Time: 35 minutes

Purpose:

- To show the importance of proper ventilation.
- To write a report on observations.

What you need:

- 2 glass jars with lids (a tiny hole in one lid, the other with a large whole).
- Paper.
- Matches.
- Drawing Paper.
- Pencils.

What to do:

Steps:

1. Get the class to discuss why it is important to have clean air to breath. List the students' ideas on the board.
2. Experiment 1:
 - Put some paper in one of the glass jars.
 - Light the paper, then put the lid with the small hole on the jar.
 - Students watch what happens.
3. Experiment 2:
 - Put some paper in the second jar.
 - Light the paper and put the lid with the large hole on the jar.
 - Students watch what happens.
4. Get the students to draw what happened in both experiments. Explain to students that people are like the fire - they need plenty of fresh air in order to be healthy.
5. Divide the students into groups or pairs, and get each group or pair to write a sentence about good ventilation and how it keeps us healthy.
6. Get a reporter from each group to read these to the class.
7. Conclusion: Thinking time – time for students to reflect on their lesson; developing student reflections.
 - To help the children reflect on the lesson, ask the question, 'What did you learn?'

- Get students to take 1 or 2 minutes to think silently about the lesson and the question.
- Ask students to respond to the question.
- Get students write a sentence or a few sentences about what they learnt from the experiment.

Activity 3: Role-play – Travelling on a bus with no ventilation

Time: 30 minutes

Purpose:

- To reinforce the importance of clean fresh air and good ventilation.
- To use English to perform a role-play for the class.

What you need:

- A large space, perhaps outside.

What to do:

Steps:

1. Remind the class about the last lesson and the experiment you did. Get students to suggest what happens to people when there is not good ventilation.
2. Select a student to play the role of a bus driver and organise students into small groups.
3. The bus driver moves around the area, stopping and picking up people. (Make sure the students keep very close together behind the driver).
4. As the bus gets full, a few students pretend to cough and sneeze.
5. A student pretends to try to open a window.
6. Another student pretends to close the window in the bus. (Other students continue to pretend to cough and sneeze).
7. The students pretend to repeat the opening and closing of the window.
8. The bus stops and all the passengers get off the bus coughing and sneezing.
9. Conclusion: Thinking time: time for students to reflect on their lesson; developing student reflections.
 - To help the children reflect on the lesson, ask the question: ‘What did you learn?’
 - Students to take 1 or 2 minutes to think silently about the lesson and the question.
 - Ask students to respond to the question.
 - Have students write a sentence or two about what they learnt from the role-play.

Teachers’ notes:

This could be done in the classroom using a middle row of desks as the bus. Students all cram into the seats.

Grade 5

Living Together

There is background information for teachers on this topic on page 87.

These activities are designed to support the Grade 5 Unit: Living Together. It will help the students understand that we are all living together in the environment and that we have to look after it.

Activity 1: Story of a River

Time: 35 minutes

Purpose:

- To examine how human actions affect water quality.
- To listen to a story and be part of a drama based on the story.

What you need:

- Large container of water.
- Pollutants (these are not real pollutants but things children make to look like pollutants).
- Labels.
- *Story of a River*

What to do:

Steps:

1. Read *Story of a River* and prepare the following materials before the lesson:
 - Collect a large container and fill it with water (a clothes-washing dish, a bucket or a cut-off drum). This is going to represent the river.
 - Prepare the pollutants: these are the items in bold in *Story of a River*. Use jars or bottles with liquid solutions for the liquid wastes and bags for the solid waste. For example, collect some goat and cow manure, fertilisers (maybe a little bit of flour), dangerous chemicals (a little beriberi mixed with water), oils (a little cooking oil), paint (coffee mixed with water), detergents (washing powder mixed with water), benzene (some tea mixed with water to match the colour of petrol).

2. At the start of the lesson, give the bottles and bags of waste to students. Ask them to read out what they have and discuss what they are.
3. Put the large container of water at the front of the room.
4. Tell the students that as you will read *Story of a River* aloud to them. When their 'labels' are mentioned in the story, they have to empty their bottles or bags into the container of water. After each paragraph you read, ask the students the same questions. At first, they will answer that they would like to swim in the river, play by the river and eat the fish. As the students add the pollutants and the river becomes dirty, they say that they do not want to swim in the river, play by the river, or eat the fish caught in the river.

The Story of a River

Once there was a beautiful river not far from here. In the river there were lots of tiny plants, little insects and fish. Sometimes birds would come and eat the fish. The water in the river was cold and clean. It was very clear and clean.

If it was a hot sunny day would you like to swim in the river?

Would you like to play near the river?

Would you eat the fish caught in the river?

Sometimes leaves and bits of grass fell into the river. But this was good food for the insects and fish in the river. They ate the dead leaves and grass and kept the river clean. Sometimes old sticks and bits of dead tree fell into the river but the insects would eat these too. One day some people came to live near the river. They caught fish from the river. The people were very careful to look after the river.

If it was a hot sunny day would you like to swim in the river?

Would you like to play near the river?

Would you eat the fish caught in the river?

After many years more people from far away came to the river. They built a town near the river. The town was bigger than the village and soon there was a lot of rubbish. Some of the rubbish, like paper and rotting vegetables, ended up in the river. As the town grew, the people needed more food so they started to cut down the trees near the river to make farms. The soil was ploughed and there were no trees to hold the soil together. A lot of soil was washed into the river. The people near the river had goats and cows on their farms. Sometimes the goat manure and cow manure got into the river. The farmers put fertiliser on the crops so that they could grow more food for the people in the town. Sometimes they sprayed dangerous chemicals to kill the weeds on the hills. This was sometimes washed into the river.

If it was a hot sunny day would you like to swim in the river?

Would you like to play near the river?

Would you eat the fish caught in the river?

The town grew and more houses and shops were built. When buildings were built, more rubbish fell into the river. Pipes were built to carry the waste from the bathrooms and toilets of the new houses. But sometimes waste would end up in the river. Many factories

were built in the town so the people had jobs. The factories made things for the people so there was more rubbish. But sometimes they had accidents and things like oil and paint got washed into the river. The fish and insects could not live in the river – they could not eat oil and paint.

If it was a hot sunny day would you like to swim in the river?

Would you like to play near the river?

Would you eat the fish caught in the river?

The town kept growing. Now many people used cars to drive from place to place. Cars were good but sometimes they dropped benzene on to the road. When it rained, the benzene would wash into the river. The people washed their cars using detergents and they also got washed in to the river. As the town got busier, there was more rubbish. Soon there were old plastic bags floating in the river. And then one day a truck carrying dangerous chemicals crashed and the dangerous chemicals went into the river.

If it was a hot sunny day would you like to swim in the river?

Would you like to play near the river?

Would you eat the fish caught in the river?

5. Conclusion: Thinking time – time for students to reflect on their lesson; developing student reflections.

- To help the children reflect on the lesson, ask the question, ‘What did you learn?’
- Get students to take 1 or 2 minutes to think silently about the lesson and the question.
- Ask students to respond to the question.

Activity 3: Cooperative Squares

Time: 35 minutes

Purpose:

- To understand the importance of working together.
- To highlights the advantage of clear instructions.

What you need:

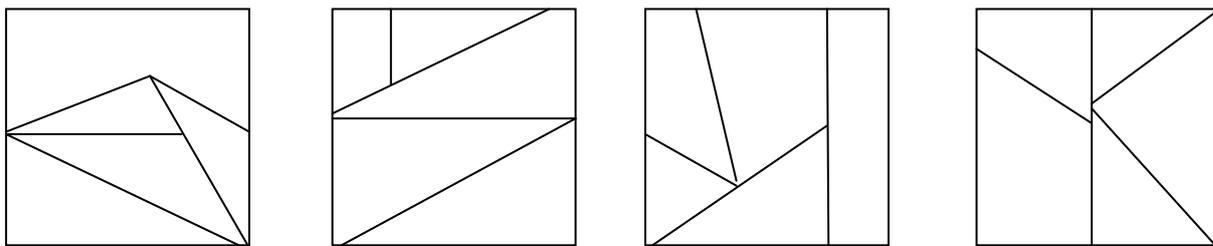
- 6 envelopes labelled ‘A’, ‘B’, ‘C’, ‘D’, ‘E’, ‘F’.
- Each envelope has a big square cut into 5 or 6 pieces (this will depend on how many students you want in each group). Use hard card or have the squares laminated so they last.

What to do:

Steps:

Before the class:

1. Cut out enough squares for the number of groups in your class.
2. On each square, draw and cut out a pattern of 5 or 6 pieces. Example patterns:



Class:

1. Divide the class into groups of 5 (more depending on the size of the class). Ask each group to choose an observer.
2. Read the instructions to the class:
 - Each group has an envelope, which has pieces of card in it. Tell students to open the envelope and give each member of the group at least 1 piece of card.
 - Each group must choose an observer. The job of the observer is to watch what happens in the group during the activity and report back to the class.
3. The group must put the pieces of card together to make a square. There are 2 important rules:
 - No one must speak or signal during the exercise
 - The piece of card belongs to the person holding it and he or she decides what to do with it.
4. The task is finished when the square is complete.
5. Next the groups swap envelopes. Repeat the activity, but this time the group members are able to discuss with each other.
6. Conclusion: Ask the observers the following questions:
 - Did the group work together to put the square together?
 - Did anyone argue?
 - Did anyone try to talk when they tried to put the first square together?
 - Was the job done faster when the group was able to have a discussion?
 - Did any student do more than the others?
 - Who did the most work in the group?

7. Class Discussion:

- Which was easier: being able to discuss or not being able to discuss?
- Who gave the most advice in the group?

8. Thinking time – time for students to reflect on their lesson.

- To help the children reflect on the lesson ask ‘What did you learn?’
- Get students to take 1 or 2 minutes to think silently about the lesson and the question.
- Ask students to respond to the question.



4

Background information for teachers

Animals

Learning about animals is an important part of the elementary school curriculum. When you are teaching students about animals in English, you have a great opportunity to do some Environmental Education as well as language learning. You can make sure that students can recognise and describe animals in English. You can teach them some basic skills in observing and understanding the natural world. You can also make sure they develop environmentally friendly attitudes to animals

The inter-dependence of life

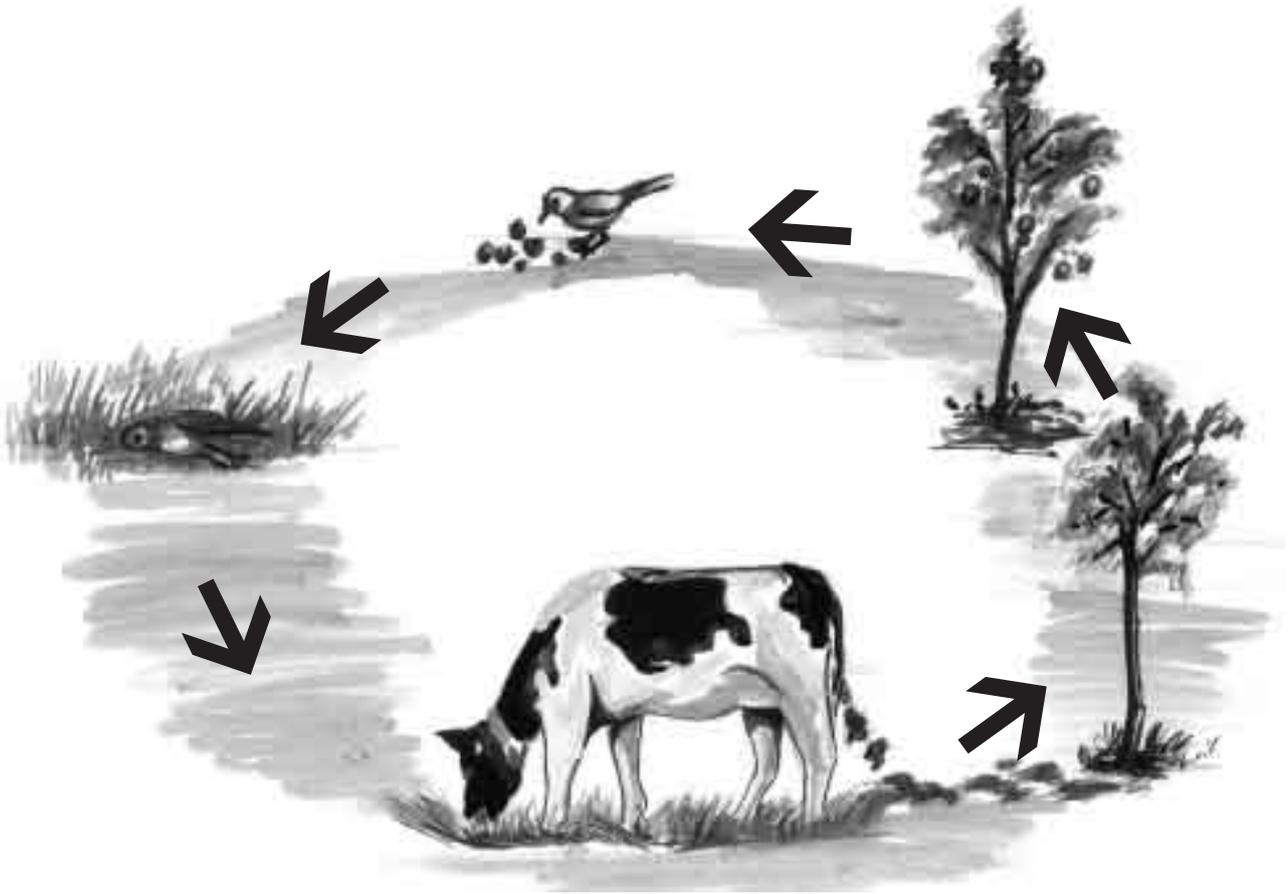
One of the most important things for children to understand is how all things in the natural world are connected and how all depend on each other. If you think about any animal, for instance a cow, you can soon see that it is part of a complex web of life.

As students develop more advanced language skills in the higher grades, make sure they can describe not just an animal, but its relationship to other things in the natural world.

Observing animals

Observing animals is a great example of the way you can integrate learning environmental content with learning English.

To help students both with content and language learning, work out a set of observation questions for each grade level. Encourage students to observe animals, birds and insects in school grounds and at home. Children can observe domestic animals, their pets or wild animals. Encourage them to learn directly from their own observations and not just from their textbooks.



An example of a food chain:
 grass → cow → manure → tree → fruit → bird → decomposing bird → grass

Here is an example of observation questions for Grade 2 students:

Date

Time

Place

What is this animal called?

What colour is this animal?

What noise does this animal make?

Is this animal big or small?

Students at this grade only have a small vocabulary and limited language forms, so keep the questions simple.

At higher grades, you can ask for more complex information:

Date

Time

Place

What is the name of the animal?

How many of these animals can you see?

How big is the animal?

What colour is the animal?

Is this a domestic animal, a pet animal, or a wild animal?

What noise does the animal make?

What is the animal doing?

Doing an observation sheet of this kind helps students in a number of ways. The repetition helps them to learn a core vocabulary and set of question forms. As they learn more English, their observations will become more detailed, but they are building on a process of observing and describing that is already familiar to them. They are also practising skills from other disciplines, for example, measuring and estimating size is a skill they are learning in mathematics. Using a structured approach to observation is important for Science, Social Studies and learning about the environment.

Definitions

You will see animals described in many different ways. Here are some definitions to help you:

- **Domestic animals.** These are animals that live with people, for example, goats and sheep.
- **Endangered animals.** These are animals that are in danger of becoming extinct.
- **Extinct animals.** These are groups of animals that have all died out, with no representative of their species left alive anywhere.
- **Indigenous animals.** These are animals that occur naturally in an area, for example, the African Wild Ass occurs naturally in the Horn of Africa, so we say it is indigenous to the Horn of Africa – it has not been brought to the Horn of Africa from somewhere else.
- **Introduced animals.** These are animals that have been brought into an area from somewhere else. For example, cows do not occur naturally in the Horn of Africa. They have been brought in as people settled the area, because they provided meat and milk. Introduced animals are sometimes called exotic animals.
- **Native animals.** This means the animal is native to the country, but may have come from another part of Eritrea.
- **Pet animals.** These are animals that are kept as companions. In some cultures, pet animals, such as cats and dogs, are considered part of a family.

- **Tame animals.** These are animals that can be handled and petted by people. Some animals, like cats and dogs, grow up with people and are used to them from a young age. It is possible to tame wild animals and birds, but it takes a lot of patience and skill.
- **Wild animals.** These are animals that are not accustomed to people. They may be dangerous animals like poisonous snakes or hyenas, or they may be gentle animals like gazelle.
- **African elephant.** There are many African elephants in other parts of Africa, but in Eritrea there is only a small number and they are found only in Gash Barka. Elephant populations grow slowly because the elephant reproduces only every four years. They are at high risk of extinction in Eritrea.
- **The Greater Kudu.** Found in Gash Barka and on the eastern escarpment.
- Other animals which are becoming scarce or 'vulnerable' to extinction in Eritrea are Soemmerring's gazelle, dorcas gazelle, ostriches and leopards.

Endangered Wild Animals of Eritrea

The native wildlife of Eritrea has been badly affected by decades of war and by persistent drought. Preserving the wildlife that currently exists will take a big effort from all Eritreans. So it is important that students learn from a young age about the value of conservation.

Some species threatened with extinction are:

- **The African Wild Ass.** This species lives in the dry areas of the Horn of Africa in Eritrea, Ethiopia and Somalia. Because Eritrea has the biggest number of these animals, it is particularly important that they are preserved here. The African Wild Ass is found in Northern and Southern Red Sea. It is critically endangered.
- **The Nubian Ibex.** This species lives in the north-western Sahel, around the Kerkebet area.

Where can I get more information about animals?

The Environmental Education Curriculum Companion for Science and the Environmental Education Curriculum Companion for Social Studies contain more information about animals.

The Ministry of Land, Water and Environment has more information about Eritrean animals.

Curriculum links

Grade 1 topic – Animals.

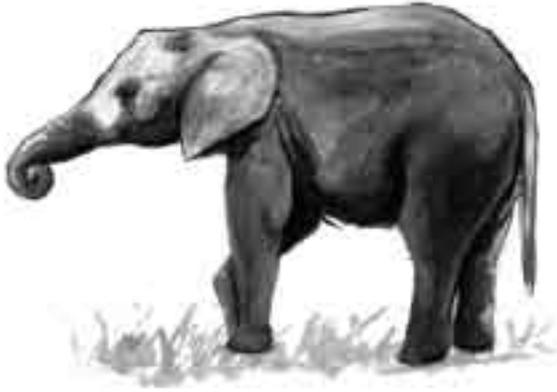
Grade 2 topic – Animals.

Grade 3 topic – At the Zoo.

Grade 4 topic – Animals.

ENDANGERED AND VULNERABLE!

Wild Animals of Eritrea



Elephant



African Wild Ass



Leopard



Greater Kudu



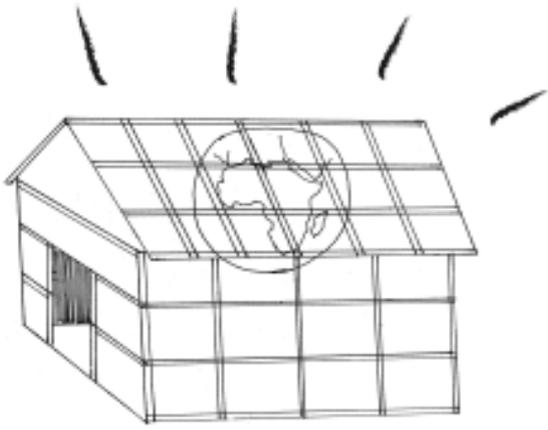
Ostrich



Nubian Ibex



Soemmering's Gazelle



Climate Change

What is climate change?

Climate change is the change that is occurring because of the increase in the average temperature across the earth. This increase in temperature is known as global warming.

Does it matter if the temperature goes up a few degrees?

Even a small change in average temperature across the world can make a big difference. Some of the effects can be:

- Rising sea levels caused by melting of ice on the polar ice caps.
- Increasing number of storms.
- More unpredictable weather.
- More droughts.
- Stress on animals and plants that need predictable weather to survive.
- Stress on fragile ecosystem such as coral reefs.

Do all scientists agree about global warming?

All scientists agree that the earth is getting warmer. There is now a great deal of evidence to support this view, for example:

- 1995 to 2006 saw eleven of the twelve warmest years on record (since 1850).
- The Earth's average surface temperature has risen 0.74 degrees Celsius since 1900.

- Heat waves and extreme rainfall have become more common in many regions.
- The sea level has risen 1.8 mm per year since 1961 and the rate is accelerating.
- There have been fewer frosts, thus the ice sheets of Antarctica and Greenland are shrinking.
- The distribution of plants and animals is changing.

*Information from the New South Wales Government
Department of Environment and Climate Change.*

Most scientists agree that the main cause of these changes is human activity contributing to an increase in greenhouse gasses. A small number of scientists believe that the changes are caused by the natural climate cycles of the earth that take place over hundreds of year.

What are greenhouse gases?

The sun beams down on the earth and warms it up. This warmth releases gases that are called greenhouse gases. They form a shield around the earth that acts like a barrier to hold in warmth. If this barrier formed of greenhouse gases did not exist, the warmth from the sun would be lost and the planet would cool down. So greenhouse gases are natural and they help the earth.

What do most scientists think is causing global warming?

Most scientists think that the problem is that humans have caused a lot of extra greenhouse gases to be produced. This has made the shield thicker and denser and so more warmth is being trapped inside. The result is that the temperature of the earth is increasing.

Some of the human activities causing greenhouse gases include:

- Driving cars, planes and trains that produce carbon dioxide and nitrous oxide.

- Burning fossil fuels such as wood, oil, or gas.
- Creating large amounts of garbage that give off methane when they decay.

Ecological Footprints

If we walk on sand we leave an impression of our foot – a footprint. Similarly, everything that we do leaves a small impression on the earth: each thing that we buy or grow or discard or consume has an effect. Scientists have worked out a way to measure these effects, called The Ecological Footprint. Each person has an Ecological Footprint and so does a school, a village, a business and even a country.

The Ecological Footprint for a country measures the total area of land required to produce the food, fibre and timber that a country uses and the area needed to absorb its waste and house its infrastructure such as cities, villages, roads and bridges.

If we added together all the footprints for all the people living in the world, we would find that the human world's Ecological Footprint is 23% larger than what the planet can support. This is the same as spending 23% more money than you have.

So what can we do about global warming and climate change?

Each person on earth can contribute to solving the problem of climate change. We can each work to reduce our Ecological Footprint. Each of us can make better choices about what we consume, how we reduce the garbage we produce and how we re-use and recycle things. Even small things like using a solar cooker or using an energy efficient stove can make a big difference.

Curriculum links

In the Elementary School English Language curriculum, you do not have a topic dealing directly with climate change. It is background information that will help you when you

teach all the Environmental Education topics in the English Language curriculum.

Desertification

What is desertification?

Desertification happens when land that has been able to support people gradually turns into desert. It is a process that occurs in dry and fragile ecosystem. It affects topsoil, earth, ground water reserves, surface runoff, animals, plants and humans. Desertification causes soils to erode and disappear. There is less water. The number of plants and animals that can live on the land is reduced. This makes it harder for farmers to make a living and results in more poverty.

Why is it occurring?

Desertification occurs because of human actions and because of changing climate patterns. It is occurring in many parts of the world where people live in dry climates. In fact, desertification now damages almost a quarter of the land surface of the world.

There are four main human activities leading to desertification:

- Over-cultivation that exhausts the soil.
- Over-grazing that removes the covering of plants protecting the soil from erosion.
- Deforestation that destroys the trees binding the soil to the land.
- Poor irrigation practices that cause the soil to become salty.

Climate change is also having a big affect on dry land areas. It is causing a general rise in temperatures across the world and is also causing more droughts. When the temperatures rise, the amount of water in the soil is also reduced. This change in climate creates the conditions for desertification. When human actions are added, the result is that areas which used to be fertile become desert.



Photo courtesy of Ministry of Agriculture, Asmara

Desertification in Eritrea

What can be done about desertification?

There are a number of steps that can be taken to reduce desertification:

- Improve soil fertility: the fragile soil need to be built up with organic material. The cheapest and most effective way to do this is with compost. In the Green Club Manual, there is information on making compost.
- Reduce the effect of wind: wind blows away fragile soil. You can reduce the effect of the wind by terracing and by planting trees that act as a wind break.
- Reduce water erosion: although Eritrea is a dry country, the rains when they come are often very heavy. Because the topsoil is loose, the sudden rush of water can cause erosion. Your Green Club Manual gives practical activities for reducing erosion.
- Plant trees: planting trees, or reforestation, is one of the best things you can do to reduce desertification.
- Eliminate over-grazing: reducing the number of animals grazing in an area will

help plants to establish. This helps in reducing erosion.

How do I teach students about desertification?

Desertification is a complex topic and you will not be directly teaching this to your students. You can, however, begin to put the building blocks of understanding in place when you are teaching students about weather, plants, animals and farms.

Most students learn about the environment best through practical activities. Involving the students in activities such as observing birds and animals, working in a school garden or learning to make compost are good examples of practical environmental activities. By doing these, children are building the knowledge and skills they need for learning about more complex topics in higher levels. These activities help students to experience the environment and to develop positive attitudes. They are also ideal settings for language learning. Children want to communicate when they are having fun and learning new things. This provides a good motivation for learning English.

Where can I get more information about desertification?

The Environmental Education Curriculum Companion for Social Studies and the Environmental Education Curriculum Companion for Science both contain more technical information about desertification.

There is an excellent teacher's kit on desertification available on the UNESCO website at www.unesco.org. It contains lots of technical information as well as teaching resources and ideas for learning activities.

Curriculum links

Desertification is not a topic in the elementary school English language curriculum, but it is important background information for you when you are teaching any environmental topic.

Farming

Farming is an essential part of life in Eritrea. Farmers grow crops to feed their families and to sell to other people. They grow grains such as teff, wheat, maize and sorghum. They also grow fruit and vegetables. Farmers keep animals such as goats, sheep, donkeys, cattle

and camels. Some animals help the farmer with carrying loads while others provide milk, meat, wool and leather. Without farms, people would not have enough to eat.

In Eritrea, farms vary in size. There are large farms that grow crops for the market. There are small farms that may be made up of a couple of fields in different locations, together with grazing land they share with other people in the village. There may be an area near the house where vegetables are grown and chickens are kept. Some small farms are only able to grow enough to feed a family. There is no excess to send to the market. This is called subsistence farming. Others are able to send some produce to market as well as providing food for the family.

Sustainable farming

Sustainable farming is farming that uses land so that it continues to produce food in the long term. This means that the soil stays rich and can keep producing crops year after year. The pasture continues to support animals. The overall environment of the farm is not damaged and the farmers continue to enjoy a good quality of life.





In order to farm sustainably, there are some actions that farmers need to avoid.

- **Clearing bushes and trees to plant crops**

This can result in erosion because the trees and bushes which hold the soil are now gone. The loose soil can be blown away by wind or, when the rain comes, soil can wash away. Where forests are removed, this also affects the climate. All plants bring moisture up from the soil through their roots and up to tiny openings in their leaves. The moisture then evaporates into the air. About 10% of the total moisture in the atmosphere comes from this process, which is called transpiration. When trees are removed, this source of moisture is gone. This contributes to drought.

- **Overcultivation**

This is growing the same crops year after year in the same piece of land. All plants need three things to grow – sunlight, water and soil nutrients. Unless you replace nutrients, the plants will become weaker and produce less and less food. Eventually the crops will not grow at all. Soil nutrients can be replaced by digging manure and compost into the soil. The

Green Club Manual has details on how to make compost. Because each kind of plant needs slightly different nutrients, it is also important to rotate crops. This helps keep the soil in good condition and also helps to control pests.

- **Overgrazing**

Overgrazing happens when there are too many animals grazing on an area of land. They eat grass and even shrubs and small trees, too fast for them to re-grow. This leaves the soil bare and results in erosion. Once grazing areas have been damaged in this way, it is very difficult to return them to good health.

- **Use of chemicals**

Some farmers use chemicals to kill pests. Sustainable farming discourages the use of chemicals. Pesticides do kill insects that attack crops, but they may also kill beneficial insects. Birds may be killed when they eat the insects, which have been sprayed with insecticide. Some of the pesticide may remain on fruit or vegetables and be eaten by humans causing illness. Some farmers also use chemicals to fertilize the soil. This can result in increases in crop yields in the short term, but has long-term consequences. It may actually damage the soil, for example, by making it acidic.

It may also get into the water system and cause damage in rivers, lakes and the sea.

Farm animals

Animals provide milk, meat, wool and leather. They also carry heavy loads and assist with farm work such as ploughing. Humans depend on animals and in return animals should be treated with care and respect. This helps both animals and humans. A well-treated animal is healthier and better able to work. They also produce more milk and better meat.

As a teacher you should encourage students to look after animals and treat them well. You can do this by being a good role model in your own treatment of animals and helping children to understand the beneficial role of animals in our life.

Teaching students about farming

As an English teacher you will be introducing students to vocabulary about farms, animals and plants. The best way for students to develop environmentally sustainable attitudes about farming is through practical activities. Students will learn about soil, natural fertilisers and growing plants by working in a school garden or helping to plant trees at school. This provides an essential building block for learning about farming at higher Grades of school. It is also an ideal setting for integrating English with learning practical skills.

You can teach students about animals in active ways also. One example is through active observation of animals. Give students a set of simple questions and get them the answer the questions by watching farm animals. By learning about animals and their behaviour, students will be developing skills in observation, learning vocabulary and developing environmentally friendly attitudes to animals.



Many students come from farming families. If you live in a rural area, make sure you draw on the practical farming experience of children. Many of them will help with animals or work in the field. It is important to connect their everyday experience of farming with what they are learning in school.

Where can I get more information about farming?

You can get more information about farming in the *Green Club and Mini forest Guide*.

The Ministry of Agriculture also has more detailed information on a variety of farming topics.

Curriculum links

Grade 3 topic – On the farm.

Other topics you teach also relate to farming. In Grades 1, 2, 3 and 4 you will be teaching units on Animals. In Grade 2 you will be teaching a Unit on Plants and a Unit on Weather.

Landmines and Explosive Remnants of War (ERW)

Why teach your students about landmines/ERW?

It is now many years since the end of the liberation struggle but land mines and explosive remnants of war are still injuring and even killing children.

Children often walk long distances looking after animals, getting water, collecting firewood and other agricultural activities. They are curious about new things and new places and like to explore. In most of the war-affected communities, even the school compound is highly contaminated mainly from explosive remnants of war. Therefore, it is important to mention that even school compounds and playgrounds in the war-affected communities are still dangerous areas. You may think the area around your school is safe, but children often go a long way from the school into areas that could be dangerous.

The important message to teach children is:

Do not go near, touch, step on, or play with any unfamiliar objects. Even familiar objects can be dangerous because they may be a booby trap. Some landmines or other dangerous items have been designed intentionally so that they look like objects for play, such as a toy, a pen or pencil, or other things attractive to children. Therefore, the core message for children that should be conveyed is that any objects in the field should not be picked up, approached, touch, played with or stepped on. If you see any objects that look dangerous, immediately inform parents, adults, administration, nearby demining agency or MRE teams.

The important message to teach children is:

Mines and UXO can be anywhere – do not enter an area unless you know it is safe. If you get lost, or if you go into unknown areas, ask adults who are living in the area.

Remember: tell your parents where are you going and how long you are going to staying in the field.

Teaching children some simple rules about land mines and unexploded ordinance may save their lives.

What are land mines and explosive remnants of war (ERW)?

Land mines are explosive devices designed to injure or kill any person who puts pressure on them, for example, by stepping on them, or by disturbing a wire which is attached to them. They come in many different shapes. They are usually buried, or hidden in long grass, among trees or even lying in water. During the raining season, mines/ERW can move from the minified into the safe area due to floods. Therefore, during the wet season, water floods and water resources can be contaminated, particularly if there is minefield in the nearby areas.

Explosive Remnants of war (ERW) are explosive weapons which are fired, armed, launched or projected from airstrike/artillery, shelling, etc and, for some reason, have not exploded. They can be also abandoned in the military areas like checkpoints, military camps and other similar places that have been used for military purpose. They include grenades, rockets, mortars, artillery shells, fuses and bullets. They are very dangerous because they can explode at any time. Injuries and even death occur when people touch them, try to move them, step on them, or hit them with stones or sticks.

Where are land mines and UXO likely to be found?

Land mines and UXO can be found almost anywhere, but there are some areas where they are more likely to be found:

- Any place where fighting has previously taken place – if you are a new teacher, make sure you check with your School Director about any landmines or UXO known to be in the school district.
- Around military buildings and installations.
- Around abandoned checkpoints.
- Along former trench lines.
- Around entrances to storage areas.
- Around power lines and electrical pylons.
- Around railway tracks and depots.
- Around abandoned and destroyed buildings and houses.
- Around abandoned military vehicles or equipment.
- Shoulders or edges of roads.
- Areas marked as mined.

What do land mine and UXO warning signs look like?

There are many ways these sites can be marked:

- The official red marking sign of the Skull and Crossbones.
- Coloured stones in red and white.
- String or tape across an area.
- Stick placed in the ground.

- Sticks or stones placed in an X pattern.
- A pile of stones or a circle of stones.
- Animal skeletons.
- Hand written signs.
- A red cloth tied to a tree.
- A can on a post.
- A clump of grass tied in the middle.
- A broken off branch.

Mine/ERW common indicators:

- Mine craters.
- Mine/ammunition packing.
- Abandoned or destroyed military equipment.
- Former military positions, like a trench.
- Disturbed ground or unused ground.
- Trip wires.
- Unattended fields or buildings.
- Remnants of casualties, like animal/human skeletons.

What should children do if they find land mines or UXO?

If children think they have seen ERW or a similar dangerous object, they should stay away from it and not explore further, They should make a mental note of where they are and they should report it immediately to parents, teachers, village authorities, police or the army. If children think they have come close to a mine or realise that they are in the middle of a minefield, they should immediately freeze where they are and shout for help. They should not let their friends come near them.

The important message to teach children is:

If you see a sign and you are not sure what it means, treat it as a sign of danger.

If there is no warning sign, it doesn't mean that the area is safe. There may be land mines or UXO which have not been found yet.

What else can children do to avoid danger?

- Children should make sure they tell someone where they are going and when they will be back.
- They should stick to well-known places and not touch unknown metals, plastics or wires.
- They should not touch objects at the edge of roads and paths.

Where can I get more information?

You can get more information from The Eritrean Demining Authority MRE teams, parents, adults, community-based MRE volunteers and community liaison

Curriculum links

Grade 4 topic – Safety

The important message to teach children is:

If you see something suspicious which could be a land mine or UXO, stay away and do not go near it. Report it immediately. Don't try to explore any further yourself. If you think you are in a minefield, don't move – shout for help and wait until an adult comes to rescue you.

Living Together in the Environment

Environmental Education is sometimes called *Education for Sustainable Development*, or *Education for Sustainability*. Whatever we call it, the goal of this kind of education is to develop the knowledge, skills and attitudes that young people need to help create a sustainable society.

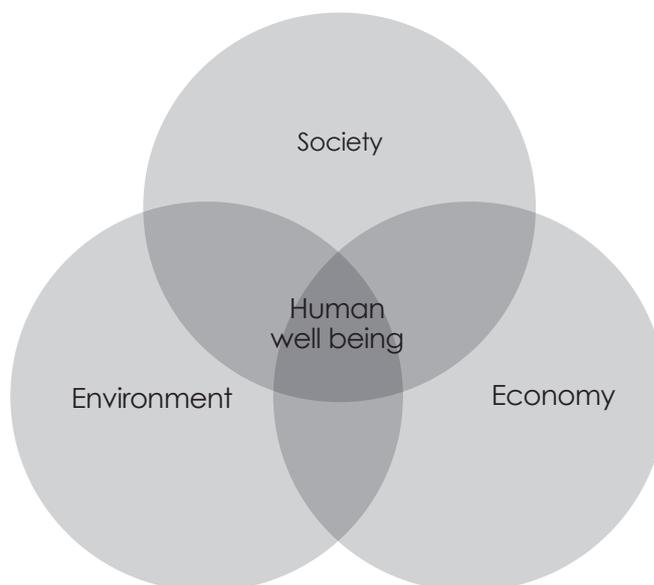
Here is one good definition of sustainable development

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their needs.

Bruntland Commission

To achieve this kind of future, we need to think about more than nature conservation or recycling. We also need to consider the way our society functions and the way our economy works.

You can see from the diagram below, that human wellbeing is affected by the nature of society, the economy and the environment in which we live. If these sectors are all working well together, then human



wellbeing is improved. If they are moving in different directions, then human well being is lessened.

Living together peacefully contributes to all three areas. Good interpersonal skills are needed for a well-functioning society. They are also needed in employment and in working on environmental issues. So developing skills for living together peacefully is a vital building block in developing a sustainable society.

The environment and peace

War and conflict have a devastating effect on the environment. The liberation struggle in Eritrea is a good example of this. The end of the struggle has allowed animal populations to recover, national programs of reforestation to be established and building of dams to be undertaken. Peace has been good for the Eritrean society, it has been good for the environment and it has been good for the economy.

Even conflict within communities is bad for the environment. Where there is serious disagreement in a community, energy is spent on conflict rather than on other positive community initiatives. Environmental issues are likely to be neglected. So, reducing community conflict actually helps the environment as well as increasing human wellbeing.

Teaching interpersonal skills

Living peacefully with other people is a vitally important skill for children to learn. It will help children to contribute to their communities and it will help them in future employment. It will help them to contribute to the sustainable development of Eritrea.

There are many opportunities in the classroom to help children develop these skills. A good example is group work. In English, you need to do lots of group work because you are working with large classes. Of course, this is an effective language-development strategy, but it also gives

you opportunities to help children with interpersonal skills. Make sure you give children clear instructions for how they should work together, as well as instructions on the language activity. Praise children for working together effectively, as well as for learning English. Teach children strategies for managing groups, such as developing group rules. They can use this kind of strategy in an informal way in their group interaction outside the classroom.

The activities in this Curriculum Companion will help students to make the connection between good interpersonal skills and effective action for the environment.

Curriculum links

Grade 5 topic – Living Together

Personal Hygiene, Sanitation and Waste

Personal hygiene

Good personal hygiene is an important part of staying healthy. Teachers have an important role in helping students develop good hygiene habits. Students need to wash their hands before eating and after using the toilet. This is not always easy to do as not all schools have a water supply. Where students need to bring water from home, encourage them to bring enough water for both drinking and hand washing.

While most students know the importance of washing their hands, they are not always aware of the importance of face washing. Keeping their face clean helps to cut down on eye disease, particularly trachoma. This is a serious disease that can cause blindness. Encourage children to wash their faces every morning and every evening.

Remember that the Health Focus Person in your school is monitoring the health of students. If you are concerned about the health of a student, make sure you report it to the Health Focus Person.

Sanitation

If your school has working toilets, encourage students to use them. Using toilets helps to reduce the amount of sickness your students suffer from in your school. Toilets are also important in providing privacy for students. Older girls who are menstruating in particular need privacy and are more likely to stay at school if toilets are available.

Even if there are no toilet facilities, encourage students to wash their hands after going to the toilet.

Waste

Eritrea has a lot to be proud of in relation to waste. It is one of the few countries in the world that has banned single-use plastic bags. In general, Eritreans do not use a lot of consumer products and packaging so less waste is produced. The country is already ahead of many parts of the world in responsible management of waste and there is even more that can be done.

Here are the 3 Rs of waste management:

Reduce – the less rubbish we produce, the better it is for the planet. Getting rid of plastic bags is a good example of reducing the amount of rubbish we have to deal with.

Re-use – where possible, re-use things rather than buying new ones.

Recycle – recycling is making use of one product to produce another, for example, glass bottles can be recycled in a factory and used to make new bottles. In the schoolyard, there are quite a few things that can be recycled. Paper is a good example. First, make sure that students use both sides of their paper. Then once it is completely used, it can be made into compost or mulch. See the Green Club Manual for how to make compost.

Schools can play a big role in educating children about waste. Start by making sure that the schoolyard is tidy and that there is no rubbish lying around. Children should be encouraged to take pride in their surroundings.



Waste should be buried, as it can attract pests and disease. Burning waste creates pollution and burning of plastic releases toxic fumes.



Old plastic bottles can be dug in near the roots of plants for drip watering.

Rubbish within the school should be sorted into things that can be reused and recycled and those things that need to be disposed of.

Try to find as many uses as you can for bottles and other containers. Plastic bottles, for example, can be used to water trees.

Any organic matter such as paper, food scraps and trimmings from trees can be recycled into compost or used as mulch.

School gardens are a great way to give students practical skills in recycling by making compost and mulch. See the Green Club Manual for information on school gardens.

Once you have re-used and recycled as much of the rubbish as you can, anything remaining should be buried. Burning rubbish is very dangerous because some plastics give off poisonous gases when they are burnt.

Where can I get more information about hygiene, sanitation and waste?

The Environmental Education Curriculum Companion for Science, the Environmental Education Curriculum Companion for Social Studies and the Green Club Manual all give more detailed information on these topics.

Curriculum links

Grade 3 topic – Our Environment.

Grade 4 topic – Our Health.

Plants

What is a plant?

A plant is a living thing that grows in earth or water or on other plants. It usually has a stem, leaves, flowers and roots. It produces seeds. Trees, shrubs, grasses and ground covers are plants.

Are plants alive in the same way as humans and animals?

All living things have some common features:

- They grow and die.
- They need energy, nutrients, air and water.
- They reproduce.
- They are made up of living cells.
- They react to what is around them.

If you look at this list, you will see that plants are definitely alive. If you are trying to explain this to students, it helps to compare a rock and a plant. Making the distinction between living and non-living things is an important part of student learning.

Of course, plants don't talk the way humans do and they don't fly like birds. So they are definitely living things but they are not the same as animals or humans.

What's so important about plants?

Plants are a vital part of the balance of nature. Without plants, our world could not exist as we know it. They are essential for both human and animal life.

Animals use plants for food, for shelter and for building nests.

If you start to make a list of how people use plants, you will find that you have a very long list. Like animals, we use plants for food and shelter and for building homes. We also burn wood for cooking and heating. We make

furniture from wood. We can make clothes from plants, for example, linen and cotton. We make paper from wood or other plants.

We also use plants to provide shade, reduce wind, reduce noise and to prevent soil erosion.

Plants are very beautiful. Many people grow them simply because they like to look at them. Gardens are a very old part of human culture.

What role do plants play in feeding people?

All our food comes either directly or indirectly from plants. Here are some examples of the way we use plants for food:

- Cereals: these are the grain crops that form the main part of many people's diet, such as rice, maize and wheat.
- Other staple crops: many people rely for a large part of their diet on other staple crops such as potatoes, yams, cassava and legumes.
- Sugar: made from either sugar cane or sugar beet.
- Cooking oils: these are made from seeds or fruits for example, olive oil, sunflower oil and rapeseed oil.
- Vegetables and fruit: these form an essential part of our daily diet.
- Nuts and seeds: in many parts of the world, nuts such as almonds and seeds, like pumpkin seeds and sesame seeds, are a common part of the human diet.
- Dairy products: milk, cheese and butter come indirectly from plants because cows and goats need plants to feed on.
- Meat: meat also comes indirectly from plants because animals feed on plants.

What parts are plants made up of?

Roots

The roots of a plant are what hold it in the soil. They absorb water and minerals from the soil that the plant needs in order to grow.

Stem

The stem supports the plant. It takes the water and minerals from the roots to other parts of the plant. It also takes the food made by the leaves to other parts of the plant.

Leaves

The leaves make food for the plant by capturing sunlight. This process is called photosynthesis.

Flowers

The flowers contain the reproductive parts of the plant. They contain both pollen and tiny eggs. When the eggs are fertilised by the pollen, they develop into fruit. These fruit contain seeds from which the new plants will grow.

Fruit

Fruits provide the covering for seeds.

Seeds

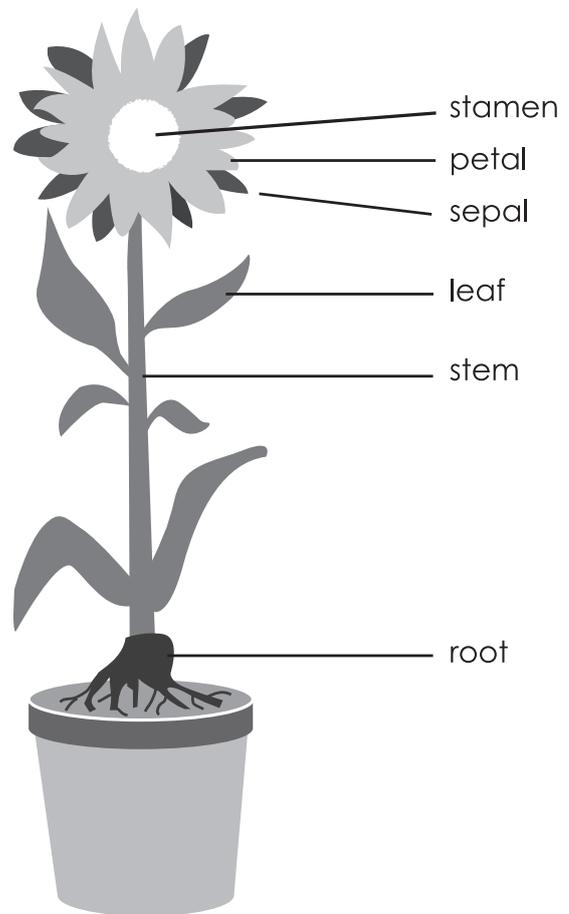
Seeds contain new life. Food is stored in the seed to support the early growth of the plant.

What is the difference between a fruit and a vegetable?

A fruit is what a flower becomes after it has been pollinated. The seeds of the plant are inside the fruit.

Vegetables are other plant parts that humans eat. For example, a carrot is a root, lettuces are leaves and celery is a stalk.

This is a very clear distinction to scientists. They say, for example, that tomatoes are fruit



because they contain seeds. Many people, however, say that tomatoes are vegetables.

So the difference between fruit and vegetables is very clear scientifically, but in everyday language it is not such an important distinction.

A good game to play with students when you are teaching them the names of vegetables and fruit is 'What Part Is It?'. Just put up the following list on the board:

- Root
- Stem
- Leaf
- Seed
- Flower
- Fruit

Prepare a list of the words you want to teach the students, for example:

- Carrots
- Lettuce
- Celery
- Coffee
- Tea
- Potato
- Peanuts
- Oranges
- Pumpkin

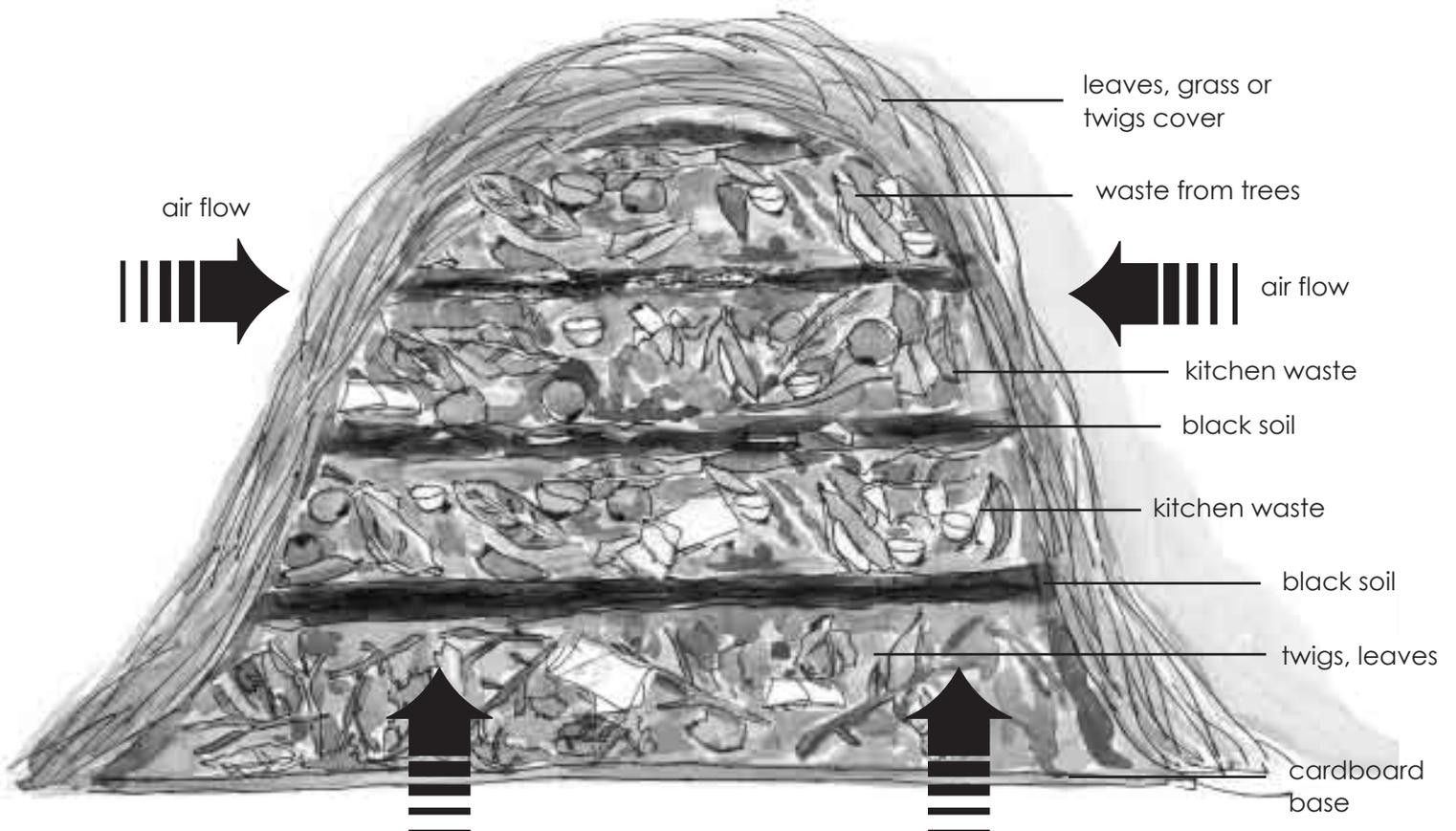
Then go through the list with students asking what part of a plant is each item on the list.

You can do this as a quick whole-class exercise, or you can do it as a short exercise while students are working in groups. If you do it as whole-class exercise, get all the students to write their answer before you call on someone to respond. Walk around the

room making sure all students have written something before you take an answer from anyone. This is important, otherwise the class tends to leave it to the good students to answer.

What is the best way to teach children about plants?

Practical activities are the best way to teach students about plants. In the classroom, make sure you bring actual examples of plants for students to look at rather than just using diagrams. Diagrams can be a good way to explain the parts of a plant, but it is important to make sure that students take the next step and apply their knowledge to actual plants. You can involve students in collecting material for the classroom. For example, when you are teaching students about the parts of a plant, you can get them to bring in as many different kinds of leaves as they can find.



Composting of organic materials is taught in the *Green Clubs* manual.

Teaching students about plants is also a good outdoor activity. You could take students outside to look at different kinds of plants. Students may be involved in a school garden or a tree-planting program. Make sure you connect this practical activity with their learning in English.

Involving students in growing plants is an ideal activity. They are much more likely to remember vocabulary and language forms if they are associated with an experience they enjoyed. Even if water is scarce at your school, children can germinate a corn seed in the classroom. There are also hardy plants children can grow in small containers, for example, succulents or geraniums.

Where can I get more information?

You can get more information about plants from the Curriculum Companion for Social Studies, the Curriculum Companion for Science & Mathematics and the Green Clubs and Mini Forest guide.

Curriculum links

Grade 2 topic – Plants.



Weather

A great topic for Environmental Education

All students know something about the weather because they experience it every day. It affects how they feel and how their families live. Everyone is interested in the weather.

Children can learn facts about weather. They can actively explore the weather, for example, by measuring and charting the daily temperature. They can also develop environment-friendly behaviours and attitudes that help to make the most of weather. For example, they can be involved in collecting rainwater for watering plants.

A great topic for English language education

Weather is also a great topic for English language education. If children are busy and active in learning about weather, they will enjoy writing and talking about it in English.

Weather is the basis for many good stories. If you talk to people in the community, you will hear stories about storms, drought and heavy falls of rain. Encourage children to talk to their families about the weather. They could ask their parents about the hottest summer they can remember, the heaviest rain they have ever known or if hail has ever fallen in their district. They can do this in their mother tongue. It will still help them when they come to speaking and writing about weather in English.

Weather causes strong feelings. Children know the physical feelings of cold and hot. They know how wind feels and how they feel if they are caught in the rain. They also know the emotional feeling of their family when the rain is late in coming and the joy they feel when it does come. Strong feelings are a good motivation to communicate and this will help children when they talk and write about the weather in English.

What's the difference between climate and weather?

When we talk about climate, we are talking about what happens over time and over a large area. For example, we could say that Eritrea has a hot, dry climate. We mean that, on average over time, Eritrea is hot and dry.

Weather, on the other hand, is what happens at a particular place at a particular time. For example, we might say the weather today is cold and wet. We mean at this particular place, at this particular time, the weather is cold and wet.

The Eritrean climate

Eritrea has three main geographical zones each with their own climatic conditions.

The eastern escarpment and coastal plain

This is the area that borders the Red Sea. It is the hottest and driest part of Eritrea. The hottest part of the year is from June to September when temperatures can be over 40°C. This is also the season when it rains. The climate at this time of year is very humid. It never gets cold in this zone but it is cooler from October to May.

The central highlands

This area is over 2,000 metres above sea level so the temperatures are much cooler especially in winter. May is the hottest month in the highlands with temperatures

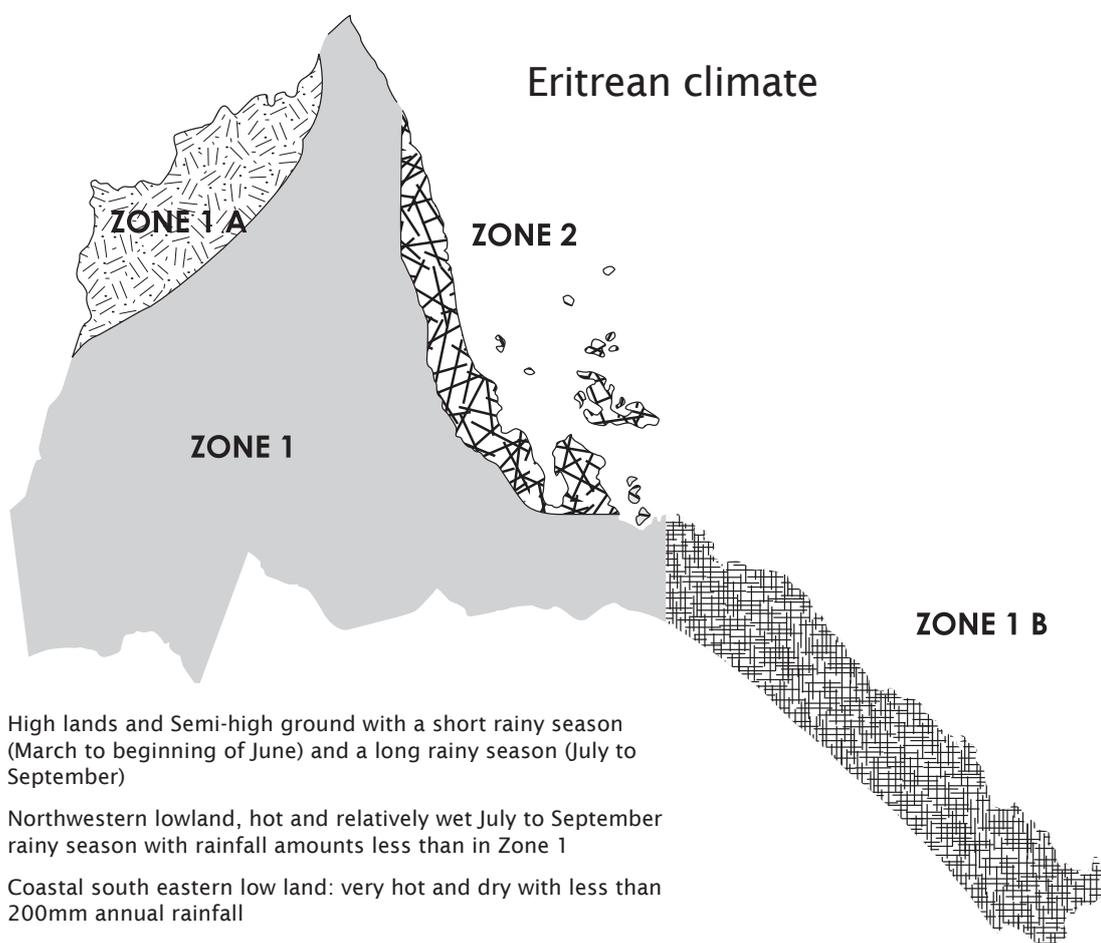
around 30°C. The coolest time of the year is from December to February. Temperatures can get down to near freezing point (0°C) at this time of year. Rain falls in the highlands from June to September.

The western lowlands

This area has a hot summer from April to June with the highest temperatures reaching around 40°C. December is the coolest month with temperatures going down to around 13°C. Rain falls in the western lowlands from June to September.

Your local climate

Each district varies depending on the local vegetation, the hills and other landforms, whether it is near a river or near the coast and many other local factors. It is fun for you and your students to find out about your local weather. You will know which



geographic zone your school is in. That will give you the broad outline of your climate. Gather as much information as you can about the temperatures, rainfall, winds and cloud formations in your area. The teachers in Social Studies and Science will also be working with students to gather information about local weather. Once you have introduced the topic of weather in Grade 3, make a school weather report part of the introductory activities for one of your English classes each week. A different group of students can report each time. This can be a very simple report at Grade 3 and can become more complex by the time students reach Grade 5.

Did you know?

Did you know that one of the hottest places on earth is in Eritrea? This is the Dankalia region, a narrow strip of land about 50 kilometres wide stretching from south of Massawa down to the Djibouti border. It is a volcanic desert and temperatures in summer can be over 50°C.

Building your weather vocabulary

One of the best things about teaching English is that you will continue to improve your own English. How do you remember vocabulary? It is not always easy to remember words unless you use them often. A vocabulary notebook is a good tool to help you remember. You can organise it under Topic headings and list any words related to the Topic or you could make mind maps under different topics

Making a mind map for weather

- Put 'Weather' in the middle of your page in a circle.
- Add as many different kinds of weather as you can think of.
- Now you can add lists of words to each of the kinds of weather. For example, under rain you could have three lists – 1. kinds of rain, 2. feelings about rain, 3. verbs for rain.

Add the three lists to the rain bubble:

1. Kinds of rain

Drizzle

Heavy rain

Light rain

2. Feelings – rain

Cold

Wet

Shivering

Drenched

Wet through

Wet to the bone

Soaked

Damp

3. Verbs for rain

Pouring

Teeming

Raining

Raining cats and dogs

You can build up lists in the same way for each of the sub-topics in your mind map.

There is no correct way to do a mind map. Each person's mind is different, so each mind map will be different.

When you find new words or expressions for weather, you can add them to your mind map. If the map gets too complicated, then start again using one of the sub-topics as the centre of your map.

Where can I get more information about weather?

The Environmental Education Curriculum Companion for Social Studies and the Environmental Curriculum Companion for Science contain more technical information about weather. Make sure you read these and talk to other teachers about their lessons on weather.

Curriculum links

Grade 2 topic – Weather.

Grade 3 topic – Weather.

Glossary

Biodiversity: the number and variety of organisms that are found in a specified geographic area.

Carnivores: meat eaters.

Climate change: climate change is the change that is happening because of the increase in the average temperature across the earth. This increase in temperature is known as global warming.

Deforestation: the cutting down, clearing, burning and removing of trees from the land.

Desertification: this is the change which happens when land which used to support people gradually turns to desert.

Domestic animals: animals that live with people, for example, goats and sheep.

Drizzle: this is light rain

Endangered animals: animals that are in danger of becoming extinct.

ERW: explosive remnants of war.

Extinct animals: groups of animals that have all died out and of which there is no representative of their species left alive anywhere.

Food chain: a series of organisms that depend on one another in turn for food.

Food web: a complex of interrelated food chains in an ecological community.

Global warming: this is the average increase in temperature which is happening across the earth. It is caused by the increase in greenhouse gases.

Greenhouse gases: these are the gases that form a shield around the earth to hold in warmth. Humans are now producing extra greenhouse gases so the shield is thicker and more dense. The result is that the average temperature of the earth is increasing.

Herbivores: plant eaters.

Indigenous animals: occur naturally in an area.

Introduced animals: brought into an area from somewhere else. Introduced animals are sometimes called exotic animals.

Native animals: this means the animal is native to the country but may have come from another part of Eritrea.

Omnivores: meat and plant eaters

Over cultivation: this is when the same crops are grown over and over again in the same place without adding any fertilizer, and the soil begins to lose micro-nutrients.

Over grazing: this is when too many animals are allowed to graze on an area. It results in the loss of plant cover and leads to erosion.

Personal hygiene: this means being clean, washing hands, face, and body in order to prevent diseases.

Photosynthesis: the process by which leaves make food for the plant by capturing sunlight.

Pollination: this is transferring pollen from one plant to another, or from one part of a plant to another, in order to fertilize the plant. Pollination is needed before seeds can form.

Producers: food; things that are growing.

Sanitation: this is the disposal of human waste in a way that is safe and hygienic.

Scavengers: clean up the kill from other animals.

Soil fertility: this is the ability of soil to provide the nutrients that plant need in order to grow.

Glossary

Sustainable farming: this is using land so that it continues to produce food in the long term.

Teeming: this means raining very heavily.

To drench: This means to make something wet all over. We use the expression 'I was drenched' to mean I was wet all over by the rain.

To pour: This means moving a liquid from one container to another, for example from a bottle to a glass. We use this word in relation to weather to mean raining very heavily.

To shiver: this means to shake with cold.

To soak: this means to make something very wet. We use the expression 'I was soaked' to mean the rain made me very wet.

Unexploded ordinance (UXO): explosive weapons that for some reason have not exploded.

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Toolbox

5

Contents of the Toolbox

The Toolbox provides some of the physical material needed to conduct the activities. Where materials are needed from the Toolbox for an activity, this is noted under 'What you need'. If items in the Toolbox run-out, or need replacing, the PTA could assist in raising money to replenish these items. Other items such as seeds or aluminum foil could be bought from home by students.

Using the Toolbox to integrate Environmental Studies

Operation and maintenance of the Toolbox:

- **Toolbox Log.** Each time someone takes any equipment from the Toolbox, they should sign for the pieces they are using and sign again when they return them. An equipment log will be kept in each Toolbox.
- **Paper materials.** It is important that books, posters, student resource materials and pictures be kept in a dry place that is well aerated and free from insects. If these materials do get wet, it is important to dry them immediately and not to put wet items back with the dry items.
- **Outdoor equipment.** If any equipment is used outdoors, it is very important to ensure that it is clean and dry before it is put away. It is important to store this equipment in a dry, well-aerated area free from insect or animal damage.
- **Specialist equipment.** Some items don't just need care in storage, they need skill in setting them up for correct use. For example, instructions for the H₂S water testing kits need to be followed carefully to maximise the accuracy of results.

Toolbox contents

The materials are supported by a Toolbox of items to use with activities.

Item (Alphabetical order)	QTY
<ul style="list-style-type: none"> • 1 Metal box for storage of the items. • 2 padlocks. The box can be locked if your school does not have a safe storage room, but if you choose to lock the box, please ensure all teachers can have access. 	
Aluminium foil –large rolls (to make solar cooker) 150m x 44cm, or 150x 30cm.	5 rolls
Animal pictures, series 1: A4 size, 20 cards in each set (cat, dog, bird, camel, goat, cow, horse, hen, fish, lion, monkey, rabbit, snake, leopard, ostrich, tortoise, zebra, elephant, hyena, fox).	10 sets
Animal pictures - ENDANGERED AND VULNERABLE, series 2: A4 size, 7 cards in each set, (African wild ass, nubian ibex, African elephant, greater kudu, Soemmerring's gazelle, ostrich, leopard).	1 set
Animal pictures – African Animals, series 3: A4 size, 16 cards in each set, (rhinoceros, chameleon, lizard, aardvark, buffalo, eland, impala, crocodile, Arabian bustard, hedgehog, hippopotamus, giant golden mole, green turtle, Egyptian goose, gorilla, dolphin).	1 set
Animal Food Pictures: A5 size, 13 cards in each set, (meat, seeds, mice, bananas, hay, hen, insects, lizard, tree, fruit, bird, water, milk - with words).	1 set
Ball of nylon string (for web of life game) about 50 metres long	2 balls
Bird Identifier: Picture Card	10 sets
Brightly coloured twine (for hanging up artwork) roughly 80 metres	2 balls
Chalk, assorted colours, calcium carbonate, in box of 100	13 boxes of 100
Clear plastic bags –Polythene (plain) (for tree transpiration activity) - approx A3 size (297*420mm). 60/kit (<i>please re-use for each class</i>).	60
Clear plastic bags - Heat resistant (for solar cooking). A4 size (210 × 297 mm) 50 / kit. (<i>please re-use for each class</i>).	50
Clock with a second hand for a classroom. Analogue display. 350mm diameter. - Battery for clock. 1xAA. 1 Pack of 4	1
Clothes pegs (for hanging up artwork in classroom) 40/kit	40
Colouring pencils, Set of 12 assorted colours. Metal box.	12 packs
Composting poster: Simple Steps to Making compost	1 poster
Crayons, wax, 8 colours per pack/box of 10 packs.	6 boxes of 10 packs.
Deforestation Information Cards	10 sets
Drawing pad white, A3, 50 sheets. pack of 10	2 packs of 10
Ecosystems of Eritrea: Map	1 poster
Elastic bands: packet of 100 (<i>please re-use for each class</i>).	2 packets
Eye dropper (Pippet) 155 mm. Plastic. graduation 1 mm	2
Marker, flip chart, assorted colours (tip-4.5mm)/pack of 4	6 packs
Glue, classroom use, bottle, approx. 170 ml.	10 bottles

Greenhouse information cards	10 sets
Hand washing poster: Steps to wash your hands	1 poster
Hand washing poster: Don't spread germs	1 poster
Hygiene, sanitation, water, health Information Cards	10 sets
Inflatable globe, (diameter of 42cm), without stand	1
Insect identifier: Picture Cards	10 sets
Plastic binoculars for kids. Magnification 3 x.	10
Magnifying glass: Magnification x 4, or x 5, plastic handle	8
Masking tape (for making a solar cooker) 50mm x 50m. auto grade	4 rolls
Measuring containers (PP beaker) measurement 10ml . 1 of each/set Capacity 1000 ml (1), 100ml (1) and 25ml (1).	1 set
Measuring spoons (for waste activity and soil activity) 1 of each/set <ul style="list-style-type: none"> • tablespoon approx. 15 ml (1) • 1/2 tablespoon approx. 7-8 ml (1) • teaspoon (1/3 tablespoon) approx. 4-5 ml (1) 	1 set
Measuring tape – length 5 metre, retractable	10 pieces
Paint, black, for blackboards. 500 ml per tin NB: The inside lid of the metal box can be painted with blackboard paint and used as a blackboard. The blackboard paint can also be used on a smooth surface e.g. wood or on a wall.	4 tins
Paint brushes for blackboards 50-60mm	2 brushes
Paper, white, A4, 1 ream – 500 sheets	3 reams
Paper, black, A4, 1 ream – 500 sheets (<i>please re-use for each class</i>).	1 ream
Pencil, black, HB grade. Box of 10	13 boxes of 10
Plant information cards	10 sets
Red food dye – small bottle 100ml	1 bottle
Red Sea Zoo	10 copies
RRR - Reduce, Reuse, Recycle Poster	1 poster
Plastic wrap (for experiment to understand the water cycle and condensation) 300 mm X 300 m. catering size. (<i>please re-use for each class</i>).	1 roll
Ruler, plastic, 30cm. Pack of 10	5 packs of 10
Scissors, blunt, safe for school use. 135mm. Box of 10	7 boxes of 10
Seeds: packets of corn and beans	1 set
Seed Poem	10 copies
Gardening equipment: 5 of each <ul style="list-style-type: none"> • Hand trowel (Green club), 285*87mm, carbon steel (5) • Weeding fork (green Club), 285*80mm, carbon steel (5) • Spade (Green club). Wooden shaft and plastic handle 940mm Blade (235*140mm) (5) 	1 set
Soap: toilet bar, approx 110g. Wrapped.	50 bars
Soil Texture Chart	10 copies
Solar cooker kit	1 kit
Stapler: metal base half strip accepts 26/6 staples.	5

Staples: 26/6. 5000 per box	2 boxes
Sticky Tape: transparent 1,5cm x 10m/box of 20	2 boxes
Thermometers: spirit filled - 10 degree C + 100 degree C. Child safe easy to read (for measuring temp of weather and water)	3
Water cycle definition cards	10 sets
Water cycle picture cards	10 sets
Water testing kit: Bacteriological H ₂ S field testing kit	40 kits
Web of life cards: A5 size, 19 cards in each set. (hyena, vulture, cheetah, hunting dog, lion, baboon, giraffe, impala, seeds, wildebeest, tree, grass, bacteria, dung beetle, fungi, sun, water, bird, insects).	1 set
What is climate story	10 sets
Weather picture cards: A5 in size, 7 cards in each set, (rain, windy, cloudy, sunny, hot, cold, storm).	1 set
Zoo Pictures	10 sets

Books

These books can be stored in your school library to allow all students access.

Title/ISBN	Quantity
<i>Book of Eritrean medicinal plants</i> ISBN 99948-53-00-7	1
Jaws Discovery series- 8 books <i>Deserts : The driest places in the world</i> ISBN:9780435898564 <i>Disaster! Natural disasters of the world around us</i> ISBN: 9780435898939 <i>In Danger! Endangered species of the world</i> ISBN 9780435898595 <i>It Works! Jaws Discovery</i> ISBN 9780435898908 <i>Patterns in Nature</i> ISBN 9780435898588 <i>Sensation JAWS Discovery</i> ISBN 9780435898526 <i>Shapes in the world around us</i> ISBN 9780435898557 <i>Water: Nature's liquid miracle</i> ISBN 9780435898571	1 of each
<i>Africa's most amazing animals</i> ISBN: 1410930920	1
<i>The oceans most amazing animals</i> ISBN: 1410930971	1
<i>My First Book of Southern African Insects</i> ISBN: 9781770072138	1
<i>Let's Go Picture Dictionary</i> , Monolingual English Edition, Paperback ISBN 9780194358651 Using the Picture Dictionary Pictures are a great help when you are teaching new vocabulary. Use the Picture Dictionary to show students a picture of what you are talking about, rather than always translating from Mother Tongue. The Picture Dictionary is based on high frequency words so you should find all the vocabulary you need at the grades 1 to 5. The Picture Dictionary is based around topics, for example family, and weather. The illustrations, vocabulary and exercises all focus on the topic. There is also an alphabetical index so that you can look up individual words to check the page on which they are illustrated.	1



Effective teaching methods for Environmental Education

6

The following section has suggestions to support teachers with a learner-centred approach to teaching English that integrates the learning of Environmental Education.

Teaching both content and language skills in Environmental Education

As an English teacher, you are concerned about teaching both language skills and content. Because students will be moving into an English medium for all their classes from middle school onwards, it is especially important that they are able to both understand concepts and are able to express them in English. English classes are vitally important for their future success in school.

Environmental Education is a good example of how you can integrate teaching content with teaching language skills. All the activities

in the Environmental Education Curriculum Companion for English are designed to help students with both content and language. Each activity focuses on one of the content topics in the curriculum and also lists the language skills that are being developed.

Practical activities are one of the best ways to combine content and language learning. A good example of this is a school garden. Children will enjoy working in the garden and will be motivated to communicate. It will be fun for them to learn names of vegetables and flowers in English because they are directly involved in growing them. Working in the garden involves lots of activity and that means lots of verbs which can be learned in a practical context. They also have plenty of questions such as, 'How to do things in the garden?', 'What is happening in the garden?', 'When will vegetables be ready to eat?' and 'Where is it best to plant a particular flower?' There are also plenty of good stories

to be told and written about the garden. So working together in a school garden teaches students practical environmental skills and also provides wonderful opportunities for language learning.

English as a cross-curricular activity

English is an important cross-curricular activity. As students are moving to an English medium in middle school, they need to be able to do their learning for all subjects in English by the time they complete Grade 5. In Grades 4 and 5 particularly, you need to keep this in mind when you plan activities. You also need to be aware of what other teachers are doing in their subjects. This helps you to connect their English language learning with the content in other subjects.

A school garden is a good example of how you can work across the curriculum.

If possible, try to plan activities with other teachers that go across the curriculum. You might agree, for example, to follow up a Science activity about animals by doing some observation of animals or birds in the school area. You can help the students to make the connections between subjects by referring to what they have already learned in other subjects. This helps students to integrate their learning and also helps prepare them for learning all subjects in English.

Working in groups

Why is group work important?

Large classes are a big problem for English teachers. You know that in order to make progress, students need plenty of opportunity to talk. They need to try out new language forms and new vocabulary for themselves. If each student in a large class takes a turn to say something, it takes a lot of time and students get fed up. The best solution is group work. Environmental Education activities work best when all students are

involved, so group work is ideal for teaching environmental topics in English.

What if my students have never done group work?

Both students and teachers need time and practice for working in groups. Here are a few tips for getting started:

- **Start simple.** The first time you do a group activity, pick a short simple task. Just do one group activity with your class.
- **Give all the instructions for the activity first before you move the students into groups.** Once students are clear about their task, give them clear instructions on how to form groups.
- **Choose the simplest way of forming groups when you first start using group work.** This will be to form groups of six – three students turn around to face the three students in the desk behind them. Check the classroom before you start. If some students need to move to make up numbers for groups, be ready with instructions for them.
- **Make sure the students quickly get any materials they need for the activity.** You can use a couple of students to hand things out if necessary
- **Keep the activity short and make sure there is something for each student to do in the group.**
- **Move around the classroom while the students are doing the activity.** Help students who are not sure what to do, but don't spend too much time with any single group.
- **Stop the activity when most students have completed the tasks.** Students will get restless once they have finished, so stop the activity even if not every student has finished. As students do more group work, you can be more flexible about when you stop an activity.



Students can turn around and form a group with the students at the desk behind them.

- Pick an activity to start with that you are sure students will enjoy. Once students decide that group work is fun, they will want to do group work more often.

What size of group is best?

You can use different size groups for different activities. For example, if you are doing a song or poem, you might just divide the class into two groups – the two halves of the room, or boys and girls, for example. Students can also work in pairs. This is quick to organise and gives lots of opportunity for language practice.

Many of the activities in the Environmental Education Curriculum Companion for English are designed for groups of six. This is a good number to allow individual participation. It is also good for groups working at desks. The Toolbox has material sets based on a class of 60 – 10 sets for groups of 6 students. If your classes have a bigger or smaller number of students, make sure you change the group numbers.

Don't forget about working in pairs

Working in pairs is the easiest and quickest way to get your students to practise English. Students can work with their neighbour

without moving the whole class around, or you can try other ways of forming pairs.

Remember that each time you teach something new, such as new vocabulary or new language forms, students need a chance to practise it for themselves. Practising by having the whole class repeat things is fine, but some students don't participate when you do this. So encourage practice in pairs to make sure that all students are getting the practise they need. You will need to move around the room during pair practice so that you can monitor student progress.

Are there other ways of organising groups?

There are many ways to organise groups. In fact, getting into groups can help students practice their English. Here are a few ideas:

- **Organise by numbers.** Count from one to 10 around the room. It is good practice and can be done quickly. All the ones form a group, all the twos form another group and so on.
- **Organise by birthdays.** Get the students to line up in order of their birthdays. Again, this is good English practice. You can then divide into groups

of six or form a group for each month, depending on the activity (for example, those who were born on 1st to 5th form one group, 6th to 10th form another group or else organise by months and then by dates in each of those months).

- **Organise by animal cards (see the Toolbox).** Give out cards of animals and ask students to find the others with the same animal. You could give them a question they have to ask, for example, a student has a card with a rabbit and she has to ask other students 'Are you a rabbit?' If the answer is 'No', then she has to move on and ask another student. Remember to tell students that they must not show their card to other students.
- **Select the group members yourself.** For some activities you might want to put the students into particular groups. You might want to put the more advanced students together so they can do some more difficult work. You might want to put weaker students together so you can give them a bit more help. You might want to split up noisy students. Whatever your reason, make sure you have done the student lists in advance.

Remember, however you choose to put students into groups, it needs to be done fairly quickly and without too much fuss. If students are moving from their usual desk, make sure you give clear instructions about where each group will be sitting. When students first start working in groups, it is best to keep it simple.

Are students really learning when they work in groups?

There is a lot of research to show that group work is a very effective learning strategy. For language learners, the amount of time they spend independently producing language is directly related to their progress. Group and pair work is the most efficient way to do this.

How do I get shy students to participate?

Sometimes students are shy about speaking in class, especially when they are learning a language. They are afraid they will make a mistake and look foolish. Often, the same good students will answer all the questions in class. Group work is especially helpful for shy students. It is much easier to speak in a small group than it is to speak in front of a large class. So make sure that you regularly use pair work and small-group work so that shy students will have more chances to speak English.

If you want to have a whole class discussion or activity, it is a good idea to start with small-group work. Get students to discuss the topic in pairs or small groups first. This way, they have a chance to try out their ideas before speaking in front of the whole class. You can do this at two levels if necessary. Start first with pair work or groups of three, then move to groups of about six and then move to a whole class discussion.

How do I get students to work well together in a group?

You need to make sure that the group activity is well structured. Every student should have a role in the activity and the success of the group should depend on each student making a contribution. The students need to clearly understand their academic task. You should also be clear about what social behaviours you expect. Tell students what the behaviour will look like, for example, if you want students to work together on a drawing, explain that each person will do part of the drawing and that the group needs first to agree on who will do what. Make sure you are clear with students about whether they can use mother tongue in the group or whether you want them to work in English only.

Make sure you give students positive feedback for working well together as well as for completing their tasks successfully.

Teachers need to make sure students with special needs are catered for in their groups. Those students with visual impairments need to be seated closer to the blackboard, poster, flashcards, etc. In an activity where the students go out outside to the school compound, students can be encouraged to support peers with moving difficulties as well as to take actions to remove pebbles, and make their path more accessible.

How do I know if a group is working well?

For most group work, you will be moving around the classroom keeping an eye on what is happening and helping where necessary. There are a number of things you should watch for:

- Are all the students actively engaged in the task? All the students should be busy. They should not be looking bored, or be doing something other than the set task.
- Are all the students participating in the group interaction? You can tell this by their eye contact with each other and the flow of their conversation. Students usually enjoy group work and there should be a happy hum of conversation and activity.
- Is one student dominating the group? If the same student is talking each time you glance at a group, it is worth moving closer to monitor what is happening. If necessary, you may intervene to remind students of their task and of the need for everyone to have their say. If you find one student often dominates a group, then you need to think carefully about the group in which you place this student.

Is group work too noisy?

Experienced teachers who use group work are well organised. Their classes are busy and productive. There is certainly more talking from students than in a teacher-led class, but this is a healthy sign.



When working together, children can achieve great things!

Encourage students to develop their own set of rules for group work. You can do this in the mother tongue so that students understand the process and can participate. Agree on some simple rules, such as talking one at a time, allowing each student to have a say and moving quietly if they shift from one place to another. If the classroom is getting noisy, remind the students of their rules.

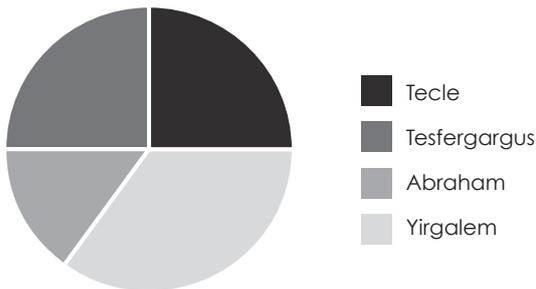
Activities

The Environmental Education Curriculum Companion for English has lots of suggestions for group work. Once you have tried some of these, start designing your own group-work activities. Your students will be more motivated, make better progress and both you, and they, will enjoy classes more.

Activity: Reflection on group work

Students could record their responses to the following questions in their exercise books.

1. How well did you group share the responsibilities for completing the task?
As a group, fill in a pie chart to show the contributions of individuals in the group. You must all agree on the final chart.



2. Now think about the way you worked as a group and give yourself a score out of ten for each of the following areas:

Taking turns	/10
Listening to others	/10
Giving each other feedback	/10
Keeping to time	/10
Sharing the responsibility	/10
Solving problems	/10
Producing good work	/10

Activity: Self-reflection

Students could record their responses to the following questions.

1. Three things I have learned about _____ are:
*
*
*
2. The most important thing I have learned about _____ is:
3. During the unit I felt _____ because _____.
4. Something I have learned about myself as a learner is:

5. The best activity we did was _____ because _____.
6. Something I need to improve on is _____.
7. I would like to find out more about _____.

Monitoring student progress

One of the most important tasks of a teacher is to monitor student progress. When you are teaching Environmental Education in the English Language classroom, you will want to know several things:

- How well are students progressing with English in the four skill areas of speaking, listening, reading and writing?
- Do students understand the Environmental Education concepts you are teaching?
- Are students developing environmentally friendly attitudes and behaviours?
- How are student progressing in relation to the Expected Learning Outcomes for the grade they are in?

Formal assessment of learning

You will be formally assessing student learning in relation to Expected Learning Outcomes when you conduct exams each semester. This assessment process provides formal feedback to parents, students and the School Director about student progress. Exam results will identify both individual and class problems in understanding. They will also help you to monitor your own success as a teacher.

Environmental Education in English is assessed as an overall part of the curriculum. When you examine students on the topics in the curriculum you will be covering the environmental content as well as the English language. **You will not need to make any separate formal assessment of Environmental Education.**

Using assessment to guide learning

In order to know how well students are learning, teachers are constantly monitoring their students. In order to plan your classes you need to know how individual students



are progressing and also how the class overall is progressing. Monitoring student progress on the Environmental Education topics in the curriculum is no different. You will want to monitor both content and language progress. You can do this by observing students' participation in class, marking written work including home work and by giving regular quizzes and exercises in class.

Using assessment as a form of learning

Assessment activities can actually help students learn. Giving students feedback on their work is an important part of their learning. You do this when you correct student work, for example, marking their homework. You also give students immediate feedback when you praise them for something they have done well or when you correct their mistakes in class.

One of the most difficult challenges for students is learning the amount of vocabulary they need to master at each grade. Frequent assessment of vocabulary helps students to learn. You can easily prepare a variety of oral and written vocabulary quizzes about environmental topics. These can be activities that students enjoy, such as team

competitions, or there can be more formal written quizzes or exercises. Students have word lists in their text books. This is the core vocabulary they need to know by the time they complete a grade. Encourage students to check the words they get wrong in their word lists rather than simply correcting them yourself. You want your students to be independent learners and helping them to use the word lists is an important strategy for independent learning.

Assessing environmentally friendly attitudes and behaviours

It is not possible to directly assess attitudes, but we can work out what students' attitudes are by the way they behave. To take an example: if students throw their rubbish on the ground in the schoolyard, then you can work out that they do not have an environmentally sustainable attitude to waste. Changing behaviour is a difficult process. Students first need to be informed about an issue such as waste. Then they need to understand why it is important for them to behave in a certain way. Then they need to take the step of acting differently.

In the case of students who throw away rubbish in the school grounds, they may not have enough information on the consequences of their action, or they may not be acting on the information they have.

Some of the things that encourage students to change behaviours are:

- *Good role models.* It is important that teachers demonstrate environmentally sustainable attitudes and behaviour themselves.
- *Peer groups.* Students are more likely to change their behaviour if other students are also changing their behaviour.
- *Participating in practical activities with an environmental theme.* Activities which students enjoy and learn from will have more success than just talking to students. Life Skills Education also focuses on behaviour change. Make sure you talk to the teachers trained in Life Skills Education to see what strategies they are using to develop positive behaviours in students.



Students at Fithi Junior school have made a scarecrow, named 'John', to protect their vegetable garden from predators. This is a good example of student involvement.



The Toolbox contains nylon rope and pegs to hang up student's work in the classroom. This can help reinforce lessons and also it is important to celebrate the students' work.

A Framework for teaching Environmental Education

Note: a more detailed version of this section is available in Mother Tongue in the Environmental Education Curriculum Companions for Social Studies and Science.

A popular framework for organizing Environmental Education is to think about three aspects of your teaching

Teaching *about* the environment

- This is teaching students facts and ideas about the environment.

Teaching *in* the environment

- This is making sure that your students directly experience the environment by taking them outside the classroom. Children need to learn directly from nature and from the real world around them.

Teaching *for* the environment

- This is helping children to develop attitudes and behaviours which are environmentally friendly. Teaching *for* the environment helps children to develop the motivation and skills to work for environmental improvement.

As you can see from this framework, teaching Environmental Education is much more than just teaching children facts about nature. Your teaching needs to:

- Encourage children to think about environmental issues and to ask questions about the world around them.
- Give children the skills to identify environmental problems, investigate these problems and take action to resolve the problems
- Encourage children to think about a sustainable future, and to develop skills to move from the present towards that better future.

More about Environmental Education

Note: a more detailed version of this section is available in Mother Tongue in the Environmental Education Curriculum Companions for Social Studies and Science.

Environmental Education is not just about nature or about gardens. It is also about how people live, how communities work, how people earn a living and how they relate to nature. In order to solve environmental problems, we need to think about all these factors. So when you are teaching Environmental Education, you need to help children to understand how the environmental problems about which they learn, relate to other social, economic and community issues.

The school is the starting point for Environmental Education. It works best if the whole school is involved in Environmental Education. If this is the case, then the school operations, the teaching and learning, the relationships with the community and even the school grounds can contribute to Environmental Education. The design of the schools itself can help children to learn about effective environmental management. Children can learn about water harvesting and about managing scarce water resources. They can learn good health and hygiene practices if the school has clean toilets and water for hand and face washing.

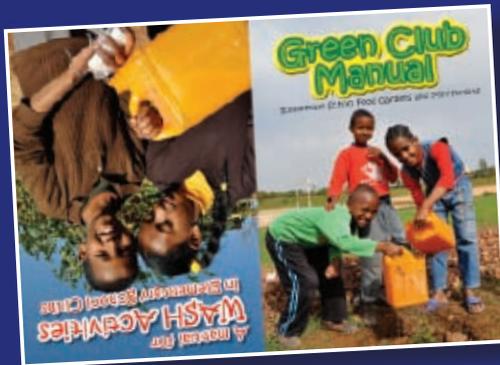


Overview of the Resources



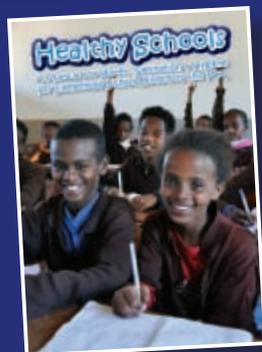
The Environmental Education Curriculum Companions for elementary schools provide practical examples of how Environmental Education can be integrated across the subject areas of:

- English
- Science
- Social Studies



A manual has been developed to provide teachers with practical ideas for extra-curricular activities, including suggested activities for Green Clubs and Health Clubs.

A resource has also been developed to support the School Directors, School Staff and PTA about ways in which they can contribute to ensuring their school operates as a sustainable school environment.



There are additional resources provided in the Toolbox which includes posters, information cards and reference materials.