

Educator workbook

CAPS-aligned

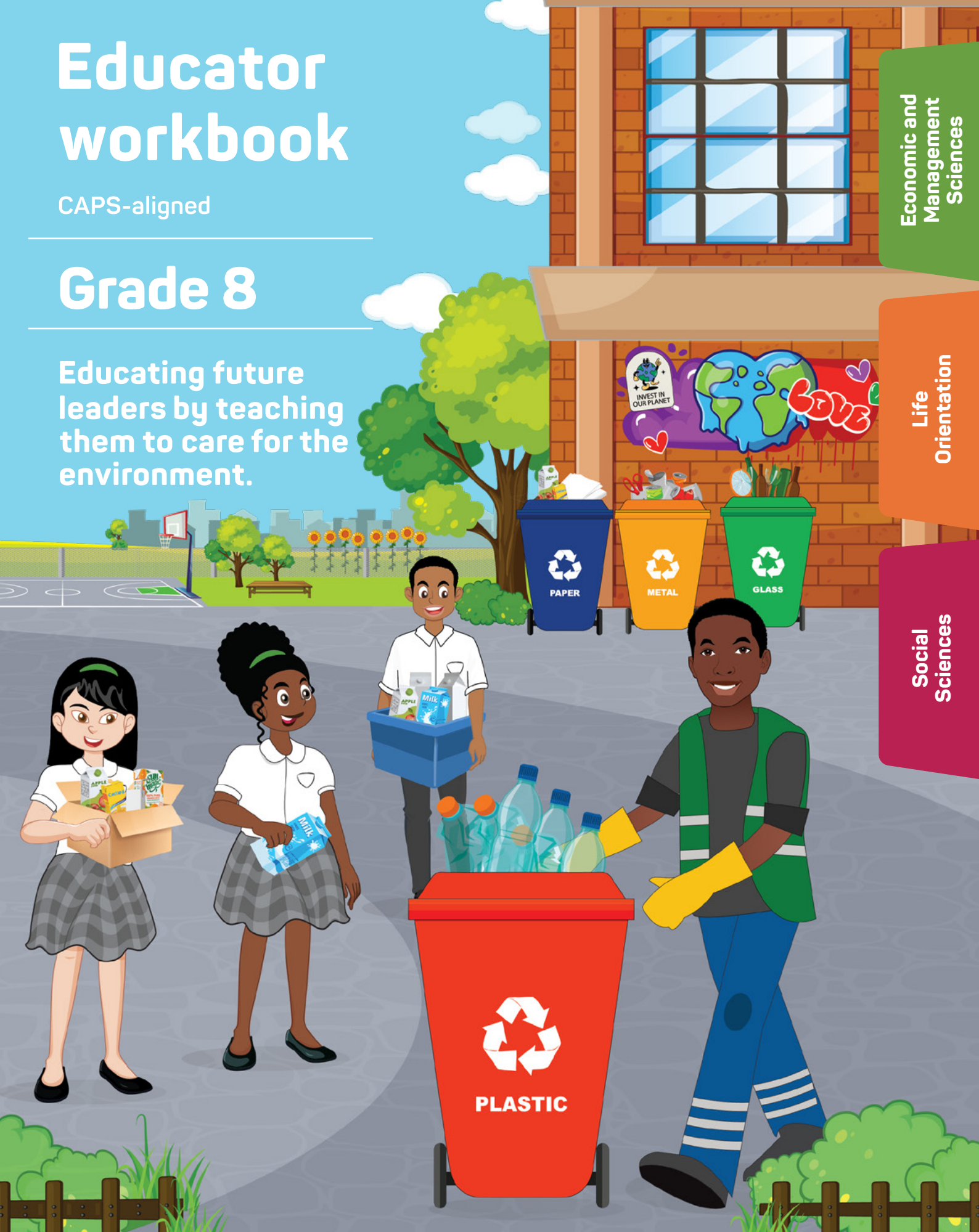
Grade 8

Educating future leaders by teaching them to care for the environment.

Economic and Management Sciences

Life Orientation

Social Sciences



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Section A Introduction

Foreword

Petco Producer Responsibility Organisation NPC is a Producer Responsibility Organisation (PRO), incorporated in 2004, that administers Extended Producer Responsibility (EPR) schemes on behalf of its members for various packaging products in the packaging sector. Petco serves as a national organisation responsible for driving recycling activities, unlocking the collection and recycling value chain, guiding product design, stimulating end-use markets for recycled material, carrying out education and awareness initiatives and building the required local recycling infrastructure and capacity.

Petco is a collective organisation, set up to fulfil their extended producer responsibility obligations, by taking accountability for their products throughout its entire life cycle, as mandated by Section 18 of the National Environmental Management: Waste Act. Petco is committed to driving change towards a circular economy in South Africa's packaging industry.

Petco has created this user-friendly, fun, and factual Educators' Workbook to help teach learners, in Grade 8 and 9, how to take responsibility for their environment and to mobilise others to do the same. By completing the activities together with your learners, you will teach them lessons that they will remember for life.

The workbook contains three worksheets, for each grade, each of which is CAPS-aligned to a specific learning area. The learner activities also lend themselves to a cross-curricular approach by making connections between the environment and the economy (Life Orientation, EMS and Social Sciences).

Introduction

Grade 8 Recycling for life	Grade 9 Recycling for sustainability
<p>Learner Activity 1: Where do you stand?</p> <ul style="list-style-type: none"> Life Orientation (Honouring Earth Day) <p>Learner Activity 2: Let's recycle together!</p> <ul style="list-style-type: none"> Life Orientation (Develop and implement an environmental health programme) EMS (The economy) <p>Learner Activity 3: Collecting, conserving and earning</p> <ul style="list-style-type: none"> EMS (World of work) 	<p>Learner Activity 1: Preserve our resources</p> <ul style="list-style-type: none"> Social Sciences (Resource use and sustainability) <p>Learner Activity 2: Closing the loop</p> <ul style="list-style-type: none"> EMS (The economy) <p>Learner Activity 3: Volunteer to recycle!</p> <ul style="list-style-type: none"> Life Orientation (Volunteerism)

A vocabulary table is provided which defines words that are frequently used in this guide. You may wish to make a copy of the table for your learners.

The workbook is also accompanied by a poster which shows the learners how PET plastic bottles and jars and Liquid Board Packaging (LBP), otherwise known as carton packages, can be transformed into new products, emphasising the importance of collecting and recycling. Liquid board packaging (LBP), which we call 'carton packages', is made of paper, plastic and aluminium. Tetra Pak® carton packages are an example of LBP. Recycling these carton packages, for example, fruit juice, custard and milk cartons, means we can use each part again. When we recycle carton packages, the paper is separated from the plastic and aluminium layers, and then reprocessed to make new products.

Background and context

Pick n Pay School Club is celebrating its 21st year of providing much-needed educational material, which now reaches 118,300 teachers and 2.53 million learners across South Africa. The Petco learning programme is aligned to the CAPS curriculum, which adheres to the standards set by the Department of Education.

The material is designed to facilitate the learning process and culminates in the assessment of competency levels according to the standards set for each specific grade. The educator is supported by way of research and learning content that is presented clearly and is easy to implement in the classroom.

Acronyms:

CAPS: Curriculum and Assessment Policy Statement

GET: General Education and Training

Section B Senior Phase Grade 8

Name of lesson: Recycling for Life	Time: 6 x 30 minutes	
Grade 8	Subject: Life Orientation Term 3; EMS Term 1 (The economy); EMS Term 2 (World of work)	
<p>Curriculum Standards (CAPS): Learner Activity 1: Where do you stand? Life Orientation Term 3: Health, social and environmental responsibility Environmental health issues:</p> <ul style="list-style-type: none"> · Application of laws and policies to protect environmental health: address an environmental issue · Earth Day: preservation of the environment · Honouring Earth Day: ways of being kinder to Earth <p>Learner Activity 2: Let's recycle together! Life Orientation Term 3: Health, social and environmental responsibility Environmental health issues:</p> <ul style="list-style-type: none"> · Develop and implement an environmental health programme <p>EMS Term 1: The economy: standard of living · Impact of development on the environment; unemployment; productive use of resources to promote a healthy environment</p> <p>Learner Activity 3: Collecting, conserving and earning EMS Term 2: World of work The role of work in relation to South Africa's social and economic needs:</p> <ul style="list-style-type: none"> · Identify needs in the community and country · How work can meet social and economic needs in South Africa 		
Objectives		
<p>The learners will be able to:</p> <ul style="list-style-type: none"> · Appreciate the importance of environmental health · Plan an environmental health initiative (recycling programme) · Consider litter as an environmental issue and the importance of collecting recyclables · Discuss the meaning of "values" in the context of reducing waste, caring for earth and recycling · Read about the beneficial environmental impact of recycling packaging · Look at how recycling can provide employment opportunities · Understand the role of entrepreneurship in both creating employment and conserving resources 		
Content	Skills	Values
<p>Learner Activity 1: Where do you stand?</p> <ul style="list-style-type: none"> · Earth Day · Environmental health · The three R's of waste management · Values <p>Learner Activity 2: Let's recycle together!</p> <ul style="list-style-type: none"> · Environmental health programmes · Collecting and recycling packaging · Recycling programme <p>Learner Activity 3: Collecting, conserving and earning</p> <ul style="list-style-type: none"> · Conservation · Entrepreneurship · Collecting and recycling 	<p>Learner Activity 1: Where do you stand?</p> <ul style="list-style-type: none"> · Comprehending · Critical thinking · Identifying values <p>Learner Activity 2: Let's recycle together!</p> <ul style="list-style-type: none"> · Comprehending · Critical thinking · Cooperating · Planning and executing · Communicating <p>Learner Activity 3: Collecting, conserving and earning</p> <ul style="list-style-type: none"> · Comprehending · Researching · Writing and presenting 	<p>Learners appreciate:</p> <ul style="list-style-type: none"> · The importance of caring for the environment · That the Earth's resources are limited · The value of recycling · That they are responsible for keeping the environment clean · The connection between conserving resources, entrepreneurship and income generation

Section B

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Grade 8

Resources needed
<p>Petco poster; photocopies of the Learner Activities.</p> <p>Learner Activity 1: Pencil crayons; Learner Activity 2: Recycling bins, collection bags, gloves, materials for communicating the initiative; Learner Activity 3: Access to a library or the internet.</p>
Teacher preparation before starting
<p>Study the lesson plans prior to the lessons and ensure you have all the resources required for the lessons. Familiarise yourself with the content for the three lessons before the lessons start. Print sufficient Learner Activity worksheets for all learners.</p>
Teaching the Learner Activities
<p>Learner Activity 1: Where do you stand?</p> <p>Ask:</p> <ul style="list-style-type: none"> • Why do we need to keep our environment healthy? • What can we do to keep our environment healthy? <p>Explain:</p> <ul style="list-style-type: none"> • The Earth's resources are limited, and many of them are not renewable. This means that we will eventually run out of these resources if we don't manage them carefully. • A lot of the things we use are contained in packaging some of which is made of non-renewable resources. • This packaging usually ends up as litter or waste. That is why it is important that each of us tries to reduce, reuse or recycle as much waste as possible. • "Taking a stand" refers to expressing one's position or viewpoint on a particular issue. • Taking a stand is a public declaration of your values (the things that matter to you). It reflects a commitment to the principles that we hold as important. For example, you might take a stand on environmental issues if you value the Earth and recognise that we need it in order to live. <p>Say:</p> <ul style="list-style-type: none"> • "There is no such thing as 'away'. When we throw anything away it must go somewhere." Annie Leonard, Proponent of Sustainability <p>Ask:</p> <ul style="list-style-type: none"> • What do you think this quote means? <p>Explain:</p> <ul style="list-style-type: none"> • "Throwing away" means that our waste still goes somewhere, whether it's the environment, a dump or landfill. • We need to be more conscious of this e.g. throwing something out the car window or throwing a sweet wrapper on the ground is littering. Rather than throwing things away, we can reduce, reuse or recycle. • Hand out the Learner Activity 1 worksheets. Read through the worksheet with learners before they begin their group activity, as outlined below: • Let each learner decide where s/he stands in relation to each of the statements (Question 1). • In groups, let learners discuss each of the statements and let them consider whether they wish to change their mind on their "stand" (Question 2). • After the discussion, let learners write a paragraph, in their workbooks, outlining what they have learned in this activity about the importance of environmental health, the impact of litter and the value of collecting recyclables. <p>Explain:</p> <ul style="list-style-type: none"> • A value statement is a short and clear message that says what a person or a group believes is really important to them. It's a way of saying, "This is what matters to us!" It helps people understand the guiding principles or ideas that are most meaningful to someone or a community. It's a little reminder of the things that are considered good, honest and important in how someone wants to live or work together with others. <p>Complete the Learner Activity:</p> <ul style="list-style-type: none"> • Learners complete question 3 by writing their own three value statements about the importance of environmental health, the impact of litter and the value of collecting recyclables. Let learners illustrate their statements with images that show their understanding of how they can care for the environment. <p>Learner Activity 2: Let's recycle together!</p> <p>Explain:</p> <ul style="list-style-type: none"> • An environmental health programme is a plan to make sure our environment, like the air we breathe and the water we drink, stays clean and safe. It's about taking care of nature so that it can take care of us. • Environmental health programmes help us to use resources wisely, not waste things and to show respect for the planet. They help us to understand that what we do affects the environment, and how we can all undertake activities to keep our environment, including the people, animals and plants who live in it, healthy. • Let learners read the introduction to Learner Activity 2 and complete question 1 as a group discussion. • Let learners report back on their discussions. • Read the information in question 2 with learners in preparation for setting up a recycling programme at school (Question 5 & 6).

Explain:

- The slogan “Reduce, Reuse, and Recycle” is a simple and memorable phrase that encourages environmentally friendly practices.

Ask:

- Why do you think the slogan is catchy? (Question 3).

Explain:

- **Reduce:** This part of the slogan encourages using fewer resources and creating less waste. It suggests that if we don't need something, or if there's a way to use less of it, we should do that. It's about trying not to make too much waste in the first place. The word “reduce” is short and straightforward, making it easy to remember. The idea of using less is simple and appeals to the common sense of using things wisely.
- **Reuse:** Reusing means finding new ways to use things instead of throwing them away. It's about giving items a second life and not being too quick to throw them away if they can still be useful. “Reuse” is catchy because it implies a sense of resourcefulness and creativity. It suggests that things don't always have to be used for just one purpose, and this idea resonates well with people.
- **Recycle:** Recycling is the process of turning used materials into new products. Instead of letting things end up as waste, they can be transformed into something new. “Recycle” is catchy because it sounds like a positive action. It gives the sense that we can do something good with our waste by giving it a chance to be reborn as something else. The idea of a continuous cycle of use and reuse is captured in this term.
- The catchiness of the slogan lies in its simplicity and the clear, three-step action plan it provides. Each word represents a different but interconnected way of being mindful of our impact on the environment. The repetition of the ‘r’ sound in “Reduce, Reuse, Recycle” makes it easy to remember and even fun to say. As a result, it is more likely to stick in people's minds and encourage them to adopt more sustainable habits.

Let learners come up with their own slogans for recycling (Question 4).

Show:

- Look at the Petco poster and examine all the things that can be made using used PET plastic bottles and jars and LBP (cartons).

Explain:

- Liquid Board Packaging (LBP) is often referred to as carton packages. An example of LBP is Tetra Pak® carton packages. LBP is used to package products such as fruit juice, custard and milk. According to Tetra Pak®, each carton package comprises more than 70% paperboard from FSC™ certified and sustainably managed forests, making it a renewable form of packaging. The remaining 25% is made up of 20% polyethylene (plastic) and 5% aluminium, which serve to protect the carton's contents from light, oxygen and moisture. LBP is lightweight and cost-effective to transport, making it a safe and convenient packaging option.
- LBP needs to be placed in the paper recycling bin or mixed recycling bin.
- You have learned about the benefits of recycling PET plastic bottles and jars. When you place the bottles in a bin, it is important that nothing is placed inside them. When you put things inside the bottle, like a chip packet, it has metal in it and the machinery will identify the metal and throw the whole bottle out as it will contaminate the PET plastic pellets. When it comes to paint or cigarettes, these will also contaminate the pellets and will clog the machinery – leading to delays or leading to murky PET plastic which doesn't meet the standards for many new products.
- We are going to set up a recycling programme at our school! Our class will be in charge of organising the programme.

Set up your class's recycling programme as follows:

- Divide learners into groups and let each group be responsible for an aspect of the programme, as indicated in the table in Learner Activity 2.
- Make sure that each group understands its main tasks:
 - 1. Research & Partnerships:** Getting the school management team on board. Finding a collection business or SMME (Small-, Medium- and Micro-Enterprise) to collect.
 - 2. Administration & Organisation:** Ensuring regular collection of recyclables and ensuring proper sorting and storing.
 - 3. Education & Awareness:** Creating educational materials, like posters, and organising awareness campaigns or presentations.
- Let each group appoint two leaders who will represent the group at the 'steering committee'. The main task of the steering committee is to coordinate and oversee the planning, implementation and ongoing management of the recycling initiative. Groups may be sub-divided to take care of specific responsibilities, as per the table in Learner Activity 2.
- Encourage collaboration among the groups and stress the importance of everyone's role in making the recycling programme a success. This approach not only distributes responsibilities but also fosters a sense of shared ownership and commitment among the learners.

Learner Activity 3: Collecting, conserving and earning

Let learners read the information in Learner Activity 3 before completing the activities (Questions 1 – 4).

Answers to Question 1: A-2; B-4; C-1; D-6; E-5; F-3

Conduct a class discussion on questions 2 and 3. Use these additional questions to ensure learners have understood the text.

Ask:

- What is the relationship between conservation and recycling?
- How does recycling contribute to income opportunities for individuals in communities?

Section B

Senior Phase

Grade 8

- What is the role of entrepreneurs in the context of recycling, and how do they contribute to job creation and environmentally friendly practices?
- Who are waste pickers, and what role do they play in keeping the environment clean?
- What is a “wastepreneur”?
- What assistance did Petco provide to Nokubonga Mnyango, and how did it contribute to her success as a “wastepreneur”?
- How does Nokubonga’s story demonstrate the potential impact of entrepreneurship in waste management and recycling on both the environment and the economy?

Let learners discuss the actions they could take in pairs (Question 3).

Explain:

- Conservation is about taking care of our resources, while recycling is giving used things a new life.
- Entrepreneurs can create businesses that focus on effective and sustainable ways to collect, process and use recyclable materials. In this way, they can contribute positively to conservation and recycling efforts while earning a living.
- Let each pair complete their research using the questions to guide them (Question 4).

Assessment

Refer to the Resource Section for the Assessment Rubric.

Teacher reflection

Is there anything you would do differently if you taught this unit again?

Where do you stand?

Name:..... Date:.....

Every year, on April 22, people all over the world celebrate Earth Day. It is a day dedicated to reminding us that we all need to take action to protect our planet. But, we shouldn't have to wait for Earth Day to think about our role in preserving the environmental health of our planet.

Environmental health is about the safety of the Earth and its ecosystems. An ecosystem is a community or group of living organisms that live in, and interact with each other, in a specific environment. It includes everything from the air we breathe to the water we drink and the soil that plants grow in. A healthy environment ensures the wellbeing of all living organisms, including humans. Clean air, water, and soil contribute to the overall health and balance of ecosystems.

Humans can play a very important role in keeping our environment healthy and clean. One of the ways we can do this is by practising the 3R's: Reduce, Reuse and Recycle.

Reduce means lowering the amount of items we use and therefore waste. For example, you can pack your school lunch in a reusable lunch box instead of single use packaging.

Reuse means using materials repeatedly (again and again). For example, you can reuse a plastic peanut butter jar to store rice or dried fruit or you could refill your plastic bottle with water.

Recycle means turning used materials into new products, e.g. cartons being recycled into roof tiles or new cardboard packaging or a PET plastic bottle becoming a new PET plastic bottle.

1. Where do you stand?

Read the statements below and decide whether you agree or disagree with each statement.
Draw an X over the number that corresponds to your opinion for each statement:

1	2	3	4	5
Strongly disagree	Disagree	No opinion	Agree	Strongly agree

a. It is better to ask for a plastic packet than take my own bag when I'm shopping.

1	2	3	4	5
---	---	---	---	---

b. Recycling takes too much time and it's easier to just throw everything in the rubbish bin.

1	2	3	4	5
---	---	---	---	---

c. It is important to separate recyclable materials from ordinary rubbish to help protect the environment.

1	2	3	4	5
---	---	---	---	---

d. Recycling is not my responsibility, and individuals don't need to worry about it.

1	2	3	4	5
---	---	---	---	---

e. I feel bad when I use packaging once and throw it away because I know it's not good for the Earth.

1	2	3	4	5
---	---	---	---	---

f. I can make a big impact on environmental health by recycling.

1	2	3	4	5
---	---	---	---	---

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Litter, or waste that has not been thrown away properly, is a big environmental problem that affects the health of our planet. Even when we throw things away, they don't just disappear. They actually end up somewhere else. The things we throw away either go to places like landfills or recycling centres. So, it's important to think about where our litter goes and try to make choices that are good for the environment. When we litter, by throwing things out of a car or onto the ground, we contribute to pollution, which harms wildlife and ecosystems. It is important to understand that our actions have consequences. The proper disposal of (throwing away) our waste can make a huge difference.

Collecting and sorting recyclables is an important part of protecting the environment. Recycling involves making used materials into new products. This reduces the need for using more natural resources. By collecting recyclables such as paper, plastic, cartons, glass and metal, we help to preserve natural resources and reduce the amount of waste that ends up in dumps, landfills and the environment. When we recycle, we have a positive impact on the environment and on creating a sustainable future for our planet.

Earth Day reminds us that our actions matter. By recognising the importance of environmental health, understanding that litter is an environmental issue, and actively participating in recycling, we can make a positive impact on our planet.

Values are the principles and beliefs that guide how we behave and the decisions we make. Values are very important when it comes to caring for the Earth, reducing litter and recycling. Respect for the environment, responsibility for our actions, and consideration for future generations are essential values that should guide us in wanting to protect the planet. When we have these values, we are more likely to make choices that support sustainability and environmental health.

2. In your groups, reread each of the statements in question 1.
 - a. Discuss your answers in your group.
 - b. Have your opinions changed after reading the information above, and discussing the statements with your group? If so, why? If not, why not?
 - c. Write a paragraph explaining your answers in your workbook.

Now that we understand the significance of Earth Day, the importance of environmental health, the impact of litter and the value of collecting recyclables, we must ask ourselves: Where do we stand? Each of us has a role to play in preserving the health of our planet. By holding the values of respect, responsibility and consideration, we can contribute to a greener and more sustainable future for all. We can start by making environmentally friendly choices in our daily lives, choosing packaging that contains recycled content and that is recyclable, reducing waste, and participating in recycling activities. Remember your actions, no matter how small, matter!

3. A value statement is a sentence describing what matters to you and how you want to behave. It is like your own special rule that helps you decide what's right. For example, if your value is to care for the Earth, your statement might be, "I will treat all humans, animals and other living things with love and compassion." In your workbook, write your own 3 value statements about the importance of environmental health, the impact of litter, and the value of collecting recyclables. Illustrate your statements with images that show your understanding of how we can care for the environment.

Learner Activity 1

Let's recycle together!

Name:..... Date:.....

Environmental health programmes are organised efforts to protect and improve the health of our planet, and the organisms that live in it. They help to ensure that human activities and nature can exist together in harmony by raising awareness about how we can take better care of the environment. The more people know, the better we can all work together to take care of our planet. Collecting, sorting and recycling is a big part of many environmental health programmes. "Reduce, reuse, and recycle" is a slogan that encourages us to care for the environment by using less, reusing things and managing waste responsibly.

1. Answer these questions in your workbook and then discuss your answers in your group.
 - a. What would happen if everyone stopped recycling?
 - b. What would happen if everyone recycled everything that could be recycled?
 - c. How would you convince someone who doesn't think recycling is important to start?
 - d. If you were in charge of your school's recycling, what would you change?
2. Read about why collecting and recycling packaging is important, as well as how recycling PET plastic bottles and liquid board cartons, like Tetra Pak®, helps the environment, before completing the activities below.

Recycling helps us to save important natural materials such as trees and oil. Instead of making new things from scratch, we use old materials again. Recycling reduces the amount of rubbish that goes to landfills (the places where rubbish goes) so that we don't fill them up too quickly. If we reduce, reuse and recycle more, we won't need to build as many new landfills. Some of the materials in rubbish can be harmful to the environment. For example, chemicals from electronic waste can harm the soil and water. Recycling electronics helps to reduce pollution that would be generated when manufacturing new products and it also means that we do not need to use new valuable and limited natural resources.

Plastic is made from natural resources such as coal, natural gas, salt and crude oil. If we keep using new plastic, we use up more of these natural resources. Recycling plastic saves these resources. We don't need as many new raw materials to make new things when we use old plastic. Polyethylene terephthalate, commonly known as PET, is a type of plastic that is used for packaging, like bottles for water and cooldrink and jars for things like peanut butter. When we recycle PET packaging, we help to keep it out of the environment where it does not belong. The recycling process of PET packaging involves sorting and shredding the plastic, and using them to create new products. This cycle reduces the need to use new plastic and stops plastic waste from ending up in landfills, rubbish dumps or the environment. PET plastic bottles and jars can be recycled into new bottles and jars and food containers. Liquid board packaging (LBP), which we call 'cartons', is made of paper, plastic and aluminium. Tetra Pak® is an example of LBP. Recycling these milk, juice and custard cartons means we can use each part again. When we recycle cartons, the paper is separated from the plastic and aluminium layers, and then reprocessed to make new products. This helps us to avoid using new materials and promotes a sustainable way of using resources. "Sustainable" means finding ways to meet our present needs without compromising the ability of future generations to meet their own needs.

3. What makes the slogan 'Reduce, Reuse, and Recycle' catchy?
4. In your groups, use the information above to make up your own slogan for recycling.

Learner Activity 2

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5. One of the ways that you can help the environment is to start a recycling programme in your school.

This is a great example of an environmental health programme that promotes sustainability.

Discuss these questions before launching your programme:

- What are the overall goals of your programme?
- Who will collect the recyclables? When? Where will they be stored?
- Who will manage the area and keep it clean?
- What type of materials will you focus on (e.g. paper, plastic, metal, glass etc.)?
- Where will you get the bins?
- Where will you put the bins and how will they be labelled?
- What instructions do you need to give the learners so that they will recycle properly?

6. Your teacher will divide your class into three groups: Research, Administration & Organisation, Education & Awareness.

Discuss your group's key questions and then work with your teacher to set up your recycling programme.

Learner Activity 2

Group	Responsibility	Key Questions
1. Research & Partnerships	<ul style="list-style-type: none"> • Get your school management team on board. • Find out if there is a collection company, waste picker or co-operative in the area to collect the recyclables. • Petco can help to link your school with a collector. • Work with Group 2 to manage the collection of recyclables. 	<ul style="list-style-type: none"> a. How can we encourage everyone to actively participate in recycling? b. What materials do we want to collect? c. What materials will the collector collect? d. How often will the recyclables be collected? e. How will the waste be collected (e.g. in bags)?
2. Administration & Organisation	<ul style="list-style-type: none"> • Work with your teacher to source and organise for bins to be delivered to your school. • Work with Group 1 to ensure that collected recyclables are properly sorted before being sent for recycling. • Appoint recycling monitors and make arrangements for the recyclables to be collected at regular intervals. 	<ul style="list-style-type: none"> a. How can we make sure that all recyclables are rinsed and separated correctly? b. From whom, and how, will we get bins? c. Where will we place them? d. Who will manage and clean the storage area? e. How will we secure the storage area? f. How will we ensure that no rats and bees get to it? (Hint: You will need to rinse out the recyclables to ensure that no food or sticky things are left behind).
3. Education & Awareness	<ul style="list-style-type: none"> • Inform learners and staff about the recycling programme and the importance of recycling. • Make posters, presentations and social media posts to teach your classmates about recycling. • Keep the school community informed about the progress of the recycling programme. • Recognise learners (through prizes or points) who actively participate in the recycling programme. 	<ul style="list-style-type: none"> a. What are the most effective ways to communicate the benefits of recycling to our school community? b. How can we ensure that everyone in the school stays well informed about the recycling programme?

Collecting, conserving and earning

Name:..... Date:.....

Conservation means taking care of our Earth and making sure we use natural resources wisely so that we don't run out of them. Recycling is a big part of conservation because it helps us use materials again instead of making brand new things, like packaging, all the time. Recycling also helps to create income opportunities for people in our communities. People are needed to collect, sort, and process the recyclable materials. Truck drivers are also needed to transport these materials to the recycling centres. Recycling also encourages the growth of new industries that use recycled materials to make new products. This leads to more jobs in manufacturing and production. So, when we recycle, we not only keep our planet clean, but also help provide jobs for people in various parts of the economy.

Entrepreneurship plays an important role in creating jobs and conserving resources. Entrepreneurs are people who identify opportunities to create new businesses or improve existing ones. When it comes to recycling, entrepreneurs can create businesses that focus on effective and sustainable ways to collect, process and use recycled materials. These entrepreneurs contribute to job creation and encourage the development of environmentally friendly ('eco-friendly') practices. Entrepreneurs may introduce technologies that improve the recycling process or find clever new uses for recycled materials. These businesses often inspire other businesses to adopt eco-friendly practices. This creates a ripple effect that benefits both the economy and the environment.

Collectors play an important role in our economy. These people and groups are 'environmental heroes' because they help gather and sort recyclable materials, making sure they don't end up in landfills or rubbish dumps.

Collectors – waste pickers, buy-back centres, co-operatives, SMMEs and waste management companies - are not just individuals. There are also co-operative groups who work together and businesses that specialise in recycling and waste management.

Co-operatives are groups of people who work together, and sometimes create a small business. Recycling co-operatives can be formed by waste pickers who join forces to collect, sort and manage recyclables more efficiently. Working together allows them to share resources, such as transportation and sorting facilities, making their efforts more effective.

Waste pickers are people who collect recyclables directly from households, rubbish bins and landfills and sort them. They play an essential role in keeping our environment clean by collecting items like paper, plastic, glass, carton packages and metal that can be recycled. By doing this, waste pickers help reduce the amount of waste that goes to landfills and rubbish dumps.

SMMEs (Small-, Medium- and Micro-Enterprises) are businesses, started by entrepreneurs, that play an important role in our economy. SMMEs that perform collection and recycling activities can be hired by, for example, workplaces or apartment blocks to collect their recyclables. This process involves the workplace working with a business to regularly pick up recyclable materials like paper and plastic from the office. By hiring an SMME, a workplace supports local businesses and ensures that recyclables are properly collected and sent to recycling facilities.

Entrepreneurship is a driving force behind the recycling revolution. Entrepreneurs in the recycling sector are continually identifying new and effective methods to process recyclables, create new products, and contribute to the economy. Entrepreneurs not only create jobs but show that it is possible to run a successful business through collecting recyclables.

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Grade 8

Learner Activity 3

Wastepreneur Nokubonga's hard work recognised.

In 2014, Nokubonga Mnyango left her job at a wood chipping mill to start collecting recyclables in her community. Now, she owns two successful buy-back centres in Empangeni, employing 22 staff and supporting 100 waste pickers. Nokubonga is a proud "wastepreneur", a business person who is involved in activities related to waste management and recycling. Petco recognised Nokubonga's efforts and supported her journey. Through Petco's assistance, Nokubonga's centres collect about 202 tonnes of recyclables monthly, contributing to a litter-free environment. "My love and passion for the environment drive me.



When I quit my job for 'scratching in dirty dustbins' people laughed at me. But I knew that this passion would lead me somewhere. The same people who laughed later asked me for jobs," says Mnyango.

[Source: <https://petco.co.za/?latest-news=Nokubonga>]

1. Match these words to their definitions. Write the letter next to the correct definition.

A. Collectors		1. Identify opportunities to create new businesses or improve existing ones.
B. SMMEs		2. Help gather and sort recyclable materials.
C. Entrepreneurs		3. People who start businesses that make money from waste management.
D. Co-operatives		4. Small-, medium- and micro-enterprises.
E. Conservation		5. Taking care of the environment and using materials wisely.
F. Wastepreneur		6. Groups of people who work together.

2. How can small businesses help to encourage us all to recycle while also creating job opportunities?

3. In what ways does Nokubonga's story inspire you to get involved in either recycling, entrepreneurship or both? What actions could you take?

4. Use the internet or library to complete a research project on the connections between entrepreneurship, recycling and environmental health. Answer these questions in your workbook to guide you in your research:

- Why is recycling important for the environment?
- What is entrepreneurship, and how can it be connected to recycling?
- Explain how recycling can create jobs in a community.
- What happens to materials like paper, plastic, and metal after we put them in a recycling bin?
- How does using recycled materials help to conserve natural resources?
- Can you think of any products in your home that include recycled materials?
- How can recycling contribute to both employment and environmental conservation on a larger scale in your home, school and community?
- Do you think it's important for businesses to use recycled materials? Why or why not?

Section C

Resource Section

Assessment	
Rating code	Description of competence
7	Outstanding achievement
6	Meritorious achievement
5	Substantial achievement
4	Adequate achievement
3	Moderate achievement
2	Elementary achievement
1	Not achieved

Vocabulary:

Waste:	Unwanted things that are thrown away after we have used them.
Litter:	Waste such as paper, cans, and plastic left lying in an open place.
Disposal:	The act of getting rid of something, unwanted or no longer needed items, in an appropriate and often environmentally friendly manner.
Reduce:	To make smaller or use less of. To cut back on what we buy and the waste we make.
Reuse:	To find many new ways to use waste, so that we don't throw it away.
Recycle:	To use waste to remake new goods that can be sold and used again.
Rubbish dump:	A rubbish dump is a place where waste is left in one place on top of the ground.
Landfill:	A landfill is a place where waste is taken to be buried in a big hole in the ground.
Collector:	A collector collects recyclable materials from homes and public areas. The collector sorts and separates the material into piles of metal, glass, plastic, and paper.
Waste pickers:	People who collect recyclables directly from rubbish bins and landfills.
Buy-back centres:	Collectors take recyclable materials to a buy-back centre and get paid for what they have collected. The buy-back centre sells the materials to a recycling plant. Buy-back centres are also called depots or drop-off sites.
Recycling plant:	A company that buys the recyclable materials from the buy-back centre. Then they make new and useful things from the materials.
Packaging:	The material used to enclose, protect, transport, and even promote things that are for sale. Packaging is usually made from paper or plastic e.g. a mug would be packaged in a box to be delivered.
Conservation:	Taking care of our Earth and making sure we use natural resources wisely so that we don't run out of them.
Entrepreneurs:	People who identify opportunities to create new businesses or improve existing ones.
Wastepreneur:	A business person who is involved in activities related to waste management and recycling.

SUPERHEROES OF SUSTAINABILITY!



New PET plastic packaging



Car seat covers



Bedding



Jackets



Rugs



Broom bristles



Crates



Cardboard boxes



Tissues



Paper towels



Pallets



Roof tiles

PET plastic packaging

PET plastic bottles and jars can be transformed into cool new things through recycling! Imagine your old water bottle turning into a brand new bottle or jar, or a warm jacket or carpet! It's like a superhero power for plastic – instead of becoming waste, it gets a chance to be useful again. So, next time you toss a plastic bottle into the recycling bin, think about the adventures it might have as a new and exciting item!

Liquid Board Packaging (LBP)

LBP, commonly known as carton packages, refers to the carton packages that some of your milk, custard and juice comes in. An example of LBP is Tetra Pak® carton packages. LBP carton packages can be like superheroes too! When you collect and recycle them, they get a chance to become something totally different. Your empty carton packages might transform into paper towels or even the tiles on the roof of your house. It's like a magical makeover! So, when you toss a carton package into the recycling bin, you're giving it a ticket to a whole new life of exciting possibilities!



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