WOOLWORTHS EDUCATIONAL PROGRAMMES

SOCIAL SCIENCES & GEOGRAPHY

GRADE 4 EDUCATOR RESOURCE





Dear Educators,

It is now ten years since we introduced our Woolworths Making the Difference Educational Programme for primary schools. We're pleased to say that this programme is now used in over 2 000 schools around the country, and, through its resource material, interactive classroom activities and teacher training, continues to make a valuable contribution to the education and skills development of South Africa's young people.

Over the past few years, it has become evident that there is a need to extend both the scope and the reach of the programme. While Healthy Living and the Environment remain the focus, the content has now been revised and expanded and the target group broadened to include the entire Intermediate Phase of Grades 4, 5 and 6.

The programme now includes three educator resources: Life Skills for Grades 4 and 5, Social Sciences (Geography) for Grade 4, and Natural Sciences and Technology for Grade 6.

Like the previous modules, the three new resources have been developed in collaboration with the Western Cape Education Department. All the material is curriculum based and designed to meet the requirements of the new Curriculum and Assessment Policy Statement (CAPS) introduced in January 2013.

New material, including valuable case studies from Woolworths, has been added to supplement the curriculum. Theoretical content and experiential learning activities are now more closely linked, with worksheets and posters that complement experiential learning activities now incorporated into the resource material.

The creation of these new resources would not have been possible without the commitment and contribution of the Western Cape Education Department, the Marine Stewardship Council, the Woolworths Good Business Journey team and our in-house and consulting dietitians. We would like to take this opportunity to thank them for their assistance and for their ongoing support.

Healthy living and caring for the environment are both very close to our hearts at Woolworths. We hope that this 2nd edition of The Making the Difference Programme will help your learners gain an understanding of the importance of both to their futures and the future of our country.

Kind regards,

Pieter Twine General Manager: MySchool & Loyalty



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FOOD & FARMING IN SOUTH AFRICA TERM 3

WAYS OF FARMING

TOPIC: FOOD AND FARMING IN SOUTH AFRICA CONTENT AND CONCEPTS: WAYS OF FARMING; CROP AND STOCK FARMING TERM 3

INFORMATION FOR EDUCATORS:

During Term 3, under the topic Food and Farming in South Africa, CAPS requires you to teach learners about the Ways of Farming (page 23). The following content for educators is aligned to CAPS. This section includes information for educators, suggested lessons, a reading activity as required by CAPS, several classroom activities and flash cards.

LESSON 1: WAYS OF FARMING

TO DO: Present the following content to learners:

SUBSISTENCE FARMING

Farming for your family and yourself is called subsistence farming. Subsistence farming usually includes producing small amounts of a variety of crops such as maize, pumpkins, beans, cabbage, spinach, madumbes and marog. It often includes keeping stock as well, such as chickens, goats, cattle, sheep, pigs, turkeys and ducks.

The advantages of subsistence farming include:

- Saving the family money because they don't have to buy all their food
- Producing a variety of fresh vegetables, fruit and animal products that do not have to be transported or packaged
- When possible selling surplus produce and gaining extra income
- More environmentally friendly; farming without the use of pesticides, herbicides and chemical fertilisers
- Less impact on biodiversity as indigenous plants and animals are part of the environment

The main disadvantages of subsistence farming include:

- Producing a smaller quantity of food
- Vulnerability to bad weather conditions
- Vulnerability to pests and diseases
- Vulnerability to food insecurity

COMMERCIAL FARMING

Farming as a business is called commercial farming. There are many different ways to farm commercially. Different ways of commercial farming have different impacts on the environment. Conventional commercial farming usually focuses on producing just one type of crop, such as maize or bananas; or one type of animal product, such as beef or dairy. This is called monoculture. It is intensive farming which means that farmer keeps the maximum number of animals possible or grows the maximum number of crops possible.



The main advantage of commercial farming is that a large quantity of affordable food can be produced.

The main disadvantages of commercial farming include:

- Monoculture on a farm destroys and replaces the natural ecosystem which would have included many different species of plants and animals
- Monocultures and the lack of biodiversity on the land can cause infestations of pests, weeds and diseases that adversely affect crops
- Conventional commercial farmers have to use many pesticides and herbicides to protect their crops because there are no natural predators in their unbalanced farm ecosystem
- Conventional commercial farmers have to use large quantities of chemical fertilisers for their crops to grow
- Conventional commercial farmers use substances such as growth hormones to make their animals grow bigger more quickly and routine antibiotics to keep their animals healthier
- Pesticides, herbicides and chemical fertilisers pollute land and water
- Of all our industries, commercial farming uses the most fresh water in South Africa

READ OUT LOUD: Farming for the Future – Woolworths Case Study

TEACHER NOTE: You can read the following short story out loud to your learners to inform them that there are better ways to farm. Discuss the story with them afterwards.

Informal assessment: Guiding the class discussion

- Do learners think that Farming for the Future is a good idea?
- If so, why? If not, why?
- What long-term advantages are there to Farming for the Future?
- Do learners think that consumers can play a role in a solution like this? If so, what positive impact can consumers make?





WOOLWORTHS CASE STUDY FARMING FOR THE FUTURE

My name is Themba, and I love being out on our farm with my dad. We grow vegetables and herbs for Woolworths, and I'm proud of my dad because he is 'Farming for the Future'. That means we look at our whole farm as an ecosystem where we use the best practices of conventional and organic farming to grow good quality food in a responsible way. 'Farming for the Future' is part of the Woolworths Good Business Journey that helps farmers produce food in more sustainable ways.

When you farm for the future, you start with healthy, balanced soil that supports plenty of micro-life and contains lots of good minerals that our crops need to grow well. We use lots of compost and worm droppings to build the fertility of our soils so that there's less need for artificial fertilisers. Everything is interconnected – because we have healthy soil and healthy plants, we have fewer problems with pests. Often we can use clever, nature-friendly ways to control pests so that we use less pesticides.

One of the great things about 'Farming for the Future' is that we save water. This is important, because water is a scarce resource in South Africa and agriculture uses up to 80% of the available fresh water. On some 'Farming for the Future' farms, water usage has been cut by 30% by using scientific methods to work out how much water the crops actually need, then watering using a drip irrigation system so that there's no water being wasted. We also manage our waste water properly to ensure that we don't pollute the river that runs through our farm.

Because my dad has created a healthier, sustainable farm environment, we have lots of biodiversity on our farm. There are plenty of indigenous plants and trees so that lots of birds, mammals, insects, reptiles and frogs can live on our farm again. The best thing about my dad farming sustainably is that when I grow up and start farming too, there will still be healthy soil, enough clean water and lots of biodiversity for me, my children and my grandchildren.





TO DO: Make a copy of the following worksheet for each learner and ask them to complete it individually. Guide a class discussion when they have finished.

(Refer to worksheet 1 on pages 27-29.) (The worksheet can be used as an informal assessment.)

Informal assessment: Guiding the class discussion

- Which farm or farms would you like to buy your food from? Why?
- Which farm looks like a healthy environment? Why?



TO DO: Present the following content to learners:

THE WELFARE OF FARM ANIMALS

Many people believe that it is important to treat farm animals well and that they should live a good life. This is known as caring about animal welfare.

Conventional farming of animal products including milk, eggs, chicken, beef, pork and lamb involves keeping as many animals as possible in the production facilities. The animals are kept in cages or in pens so that they take up as little space as possible and can be more easily managed. It is often called factory farming because these animal production facilities do not look like farms where animals roam in fields. Most animals in these production facilities spend their whole lives caged or penned, and never go outside in the sunshine.

TO DO: Show your learners the following flash cards.

(Refer to flash cards on opposite page.)

Informal assessment: Guiding the class discussion

- If you were a chicken that laid eggs, which farm would you like to live on? Why?
- Which farm looks like a healthy environment? Why?
- Do you think caring for animal welfare is important? Why
- Which farm would you like to buy your eggs from?



FLASH CARD 1:

CONVENTIONAL EGG FARMING



FLASH CARD 2:







READ OUT LOUD: Free Range – Woolworths Case Study

TEACHER NOTE:

You can read the following case study out loud to your learners to inform them that there are better ways to farm. Discuss the story with them afterwards.

WOOLWORTHS CASE STUDY

FREE RANGE

FREE RANGE: What does it mean?

On the farms that supply Woolworths with free range products, the animals have the space to roam freely and express their normal animal behaviour. They are not kept in cages or crowded into pens for their whole lives. For example, on the farm that supplies Woolworths with free range eggs, the hens are free to roam in- and outside the barn. They can enjoy being out in the sunshine, and also take shelter in the shade of the barn whenever they want to. They have plenty of good food and clean water available to eat and drink when they need to. They can peck and scratch around in the earth, and take a dust bath, as chickens like to do. These free range hens are not treated with routine antibiotics as caged hens are. They are never fed any animal by-products, but only eat a grain-based diet.

Why are some farms free range?

Many people believe that it is important to treat farm animals well and that they should live a good life. This is known as caring about animal welfare. Free range farming is one of the ways of rearing and keeping farm animals that ensures a good standard of animal welfare. Woolworths works with free range farmers in South Africa and Namibia so that we can provide our customers with free range animal products such as eggs, chicken, lamb and beef. Woolworths has an animal welfare code of practice that our farmers must adhere to. For a product to be labelled 'free range' the farmer must stick to the free range rules and pass certain independent checks called audits.

ANIMAL WELFARE

Woolworths only works with free range farmers who follow the Five Freedoms that are recommended by the Farm Animal Welfare Council.

This means that the animals on their farm must have:

- 1. Freedom from hunger and thirst
- 2. Freedom from discomfort
- 3. Freedom from pain, injury and disease
- 4. Freedom to express normal behaviour
- 5. Freedom from fear and distress.

Did you know? Woolworths was the first, and is still the only big retailer* in South Africa to only sell free range whole eggs in our stores. Woolworths also sells free range beef, lamb and chicken.

Informal assessment: Guiding the class discussion

- Do learners think that free range farming is a good idea?
- If so, why? If not, why?
- Do learners think that consumers can play a role in a solution like this? If so, what positive impact can consumers make?
- * Correct at the time of going to print.

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CLASSROOM ACTIVITY 1: FARMING FOR THE FUTURE

You can enhance these lessons by booking a Woolworths Educational Programme Class Lesson for your class. Contact your Woolworths Educational Programme Regional Coordinator to book the **Class Lesson – Farming for the Future**. A trained presenter will come to your school to present a fun and interactive lesson that uses rhyme, movement, storytelling, games and group participation to convey key information about farming in more sustainable ways. This class lesson will reinforce your teaching about the ways of farming in South Africa.

(The worksheet provided when booking the lesson, can be used as an informal assessment.)

OUTING: A WOOLIES STORE TOUR

Contact your Woolworths Educational Programme Regional Coordinator to book a Grade 4 Woolies Store Tour that focuses on where our food come from and includes a worksheet.





WATER IN SOUTH AFRICA TERM 4

IDENTIFYING PLANT, ANIMAL AND HUMAN NEEDS FOR WATER

TOPIC: WATER IN SOUTH AFRICA

CONTENT AND CONCEPTS: USES OF WATER; WATER AS A RESOURCE; POLLUTION AND WASTE WATER TERM 4

INFORMATION FOR EDUCATORS:

During Term 3, under the topic Water in South Africa, CAPS requires you to teach learners about the uses of water, water as a resource and pollution (page 24). The following content for educators is aligned to CAPS. It includes notes for educators, suggested lessons, a reading activity as required by CAPS, several classroom activities and flash cards.

TEACHER NOTES:

All life on earth depends on fresh water – plants, animals and people cannot live without it. The South African Constitution states that everyone has the right to have access to sufficient water. We rely on water each and every day for our very lives and well-being. But, the fresh water we have on earth is finite; and the amount of water that is available for human consumption is actually reducing due to many wasteful or polluting practices. Approximately 97% of the water on earth is salt water, and only 3% is fresh water. Of this 3%, three-quarters is frozen, which means that less than 1% of the earth's water can be used by humans, animals and plants, all of which need fresh water to survive. This means that we have to save our water by using it sparingly and keeping it clean.



MySchool MyVillage MyPlane

LESSON 1: IDENTIFYING PLANT, ANIMAL AND HUMAN NEEDS FOR WATER

READ OUT LOUD: WATER AS AN IMPORTANT BASIC NEED

TEACHER NOTE:

You can read the following poem about the importance of water to plants, animals and humans out loud to your class, and then discuss.

WE ALL NEED WATER!

I am a bean seed Tucked up in good soil But I cannot grow yet Because I don't have all that I need Only when the rains come Can I send out a green shoot Only when I have water Can I put down my first root

I am a tuna fish Swimming in the wide blue sea I could not exist at all Without the water that is home to me

I am a dairy cow And giving milk is my way But to make enough good milk I have to drink lots of water every day

I am a person... And when I am thirsty I drink water Water keeps my body so healthy When I am grubby I use water to wash Water is so good for me Clothes, pets, cars and homes I use water to keep them all clean



TO DO: Ask learners the following questions that enable them to recall and relate information from the poem that has been read out loud.

1. Why do plants, like the bean, need water?

Answer: To grow and develop, to live

2. In the poem, which animal needs water as a habitat?

Answer: The tuna fish

3. Can they think of other living things that need water as a habitat?

Answers: Algae, kelp, seaweed, dolphins and whales, jellyfish and turtles, barracuda and sharks, hippopotamus and crocodiles

4. In the poem, which plant, animal and animal product that people eat need water to live?

Answers: the bean, the tuna fish, the dairy cow

5. Why do we need water?

Answers: To drink, we need water to keep clean; for bathing, showering and brushing our teeth. We need water to keep our environment clean and we use it in our homes to wash our clothes, dishes, cars, toilets and pets.

6. Can they think of other uses we have for water?

Answers: Water plays an important role in every industry that supports our modern way of life. We need water for our food production – to irrigate crops, to sustain farm animals and for fishing. We need water for the mining industry, the manufacturing industries and to generate the power that provides energy for our homes, schools and communities. We need water to fight fires. Water also plays an important role in our leisure activities and in the tourism industry.

CLASSROOM ACTIVITY 2: THE RIPPLE EFFECT

This activity demonstrates to learners that all living things in an ecosystem are connected, and that water is at the centre of that connectedness. Just as water makes ripples that follow one another when a stone is dropped into it, so do the living things and non-living things impact on each other. Divide the learners into small groups of 2 to 5 each. Draw at least 3 ripple effect illustrations on the board to show the ripple effect.

Ask the groups to develop and draw their own ripple effects. Each ripple effect must have at least four ripples. Always start with water in the middle. The group with the highest number of correct ripples are the winners.

(Refer to ripple effect examples on the next page.)





TO DO: Make a copy of worksheet 2 for each learner and ask them to complete it individually. When they have finished, guide a class discussion around their answers.

(Refer to worksheet 2 on pages 30 & 31.) (The worksheet provided can be used as an informal assessment.)



TO DO: Use the following content and flash cards provided to teach your class about the water cycle in a step-by-step manner.

(Refer to flash cards over the next few pages.)

THE WATER CYCLE

Only 3% of the water on earth is fresh water. Of this 3%, three-quarters is frozen, which means that less than 1% of the earth's water can be used by humans, animals and plants, who all need fresh water to survive. This means that we have to preserve our water by using it sparingly and keeping it clean. Water is reusable but is not a renewable resource.

The Age of Water

Did you know that it is possible to drink water today that was here in the dinosaur era?

The earth has a limited amount of fresh water which keeps going round in a big circle called the water cycle. Water takes various forms in different stages of the water cycle – it could be a solid – or in liquid form in rivers, lakes, dams and the ocean; or it can be in the form of a gas – steam or vapour. Temperature is what determines the form that water takes in the different stages of the water cycle. The water that falls from the sky today as rain is as old as the earth itself, and has been going round the water cycle in different forms for billions of years.

Five Stages of the Water Cycle

The water cycles consists of five stages:

Evaporation

This occurs when the sun heats the water in rivers, lakes, dams, icebergs and the ocean and turns it into vapour or steam which floats in the air.

Transpiration

This occurs when plants make their own food and release water vapour into the air.

Condensation

This occurs when the vapour in the air gets so cold that it turns back to liquid, forming clouds.

Precipitation

This occurs when so much water has turned back into liquid that it becomes too heavy to stay up in the air and it falls back to earth in the form of rain, hail, sleet or snow.

Collection

This occurs when water has fallen back to earth and collects in rivers, lakes, dams and the ocean. Some of it also sinks into the earth and becomes part of what we call ground water.







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CLASSROOM ACTIVITY 3: WATER CHARADES

This activity encourages your learners to enact the water cycle using their imagination, drama, visual stimulation and learner interaction through a game of charades.

STEPS:

- Divide the class into two main teams. Then divide each main team into smaller groups of 2 to 5 learners
- Each small group will have the chance to enact a water cycle word allocated to them and the rest of their main team have to guess what water cycle word they represent
- Learners may use their bodies, facial expressions and sounds when acting, but no words
- A team will have one minute to guess the correct answer and score one point. If they do not guess the correct answer, then the other main team can guess the answer in one minute for a half a point
- Each learner should get the opportunity to participate both in the acting and the guessing
- Use the following words associated with the water cycle:

- ocean	- snow	- tree	- clouds	- animal	- rain
- hail	- sun	- plant	- human	- iceberg	- river

LESSON 3: SAVING AND PROTECTING WATER

TO DO: Present the following content to learners:

SAVING AND PROTECTING WATER

Why do we have to look after our water resources?

Fresh water is a limited, finite resource. The availability of fresh clean water is being reduced by water pollution. We have to use water sparingly and keep it clean, because all life on earth, and our modern way of life is completely dependent on there being enough fresh, clean water available.

Water Usage

Years ago, most people had to carry water from a river, well or tap near their homes. This is still the case in some countries and in certain areas of South Africa. However, most people today can get water by simply turning on a tap. Using water has become much easier and we use much more of it for the following reasons:

- Water is piped into our homes and schools
- We wash more often and have lots of warm water
- Toilets, washing machines and dishwashers use more water
- We water our gardens and school fields with sprinklers
- We use water to clean in and around our houses and to wash cars and pets



Keeping Water Clean

Polluted water can harm, and even kill plants, animals and humans. Water becomes polluted for the following reasons:

- Dirty storm water and urban run-off flows into the storm drains in our communities and flows into rivers, wetlands and the ocean
- Chemicals, soaps and cleaning products run down the drains from our homes
- Pesticides, herbicides and chemical fertilisers run off farms into rivers, wetlands and the ocean
- Animal and human waste can be deposited in rivers and streams
- People throw rubbish into rivers, lakes, dams and the ocean
- Oil spills from ships sailing on the oceans
- Fishing industry waste is dumped in the oceans

HOMEWORK ACTIVITY 1: WATER-SAVING AND WATER PROTECTION

Print a copy of worksheet 3 for each learner. They will need to use two different coloured pencils or pens. Ask them to use one colour to tick off all the water-saving actions that they already take as a family. Ask them to use the other colour to tick off other water-saving actions they think they can take at home.

(Refer to worksheet 3 on pages 34 and 35.)

CLASSROOM ACTIVITY 4:

SAVE OUR WATER EXHIBITION

MATERIALS: POSTER SIZE SHEETS OF PAPER OR CARDBOARD, CRAYONS, PAINT, COLOURED PENS OR PENCILS

Divide learners into groups of five. Ask learners to create a "Save Our Water" poster campaign focusing on sharing water-saving actions with your school community. Organise a "Save Our Water" exhibition and invite other classes, teachers and parents to attend. Ask your learners to stand near their work and explain it to visitors.







WORKSHEET 1: WAYS OF FARMING

SUBSISTENCE FARMING WHAT KINDS OF PLANTS ARE GROWING? WHAT KINDS OF ANIMALS CAN YOU SEE? **DESCRIBE THE PEOPLE**











WORKSHEET 2:

CLASSROM ACTIVITY 2 - IDENTIFYING PLANT, ANIMAL AND HUMAN NEEDS FOR WATER

LIVING ORGANISM	NEEDS WATER FOR
Plant	What would happen to this plant if it couldn't get water?
ANIMAL	What would happen to this animal if it couldn't get water?

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LIVING ORGANISM	NEEDS WATER FOR
	What would happen to this person if they couldn't get water?
<section-header></section-header>	What would happen to these industries if they couldn't get water?

Answers to WORKSHEET 2: IDENTIFYING PLANT, ANIMAL AND HUMAN NEEDS FOR WATER

LIVING ORGANISM	NEEDS WATER FOR
<image/>	 Growth Maintaining structure Absorbing nutrients from the soil Maintaining health What would happen to this plant if it couldn't get water? It would die
<section-header></section-header>	 Growth Healthy bodies Shelter What would happen to this animal if it couldn't get water? It would die



LIVING ORGANISM	NEEDS WATER FOR
HUMAN – PERSONAL	 Growth Healthy bodies Washing our bodies Brushing our teeth Flushing the toilet Cleaning our house Washing clothes Washing dishes Washing pets Washing cars What would happen to this person if they couldn't get water? They would die
	 Farming – irrigating crops and watering farm animals Mining Manufacturing Construction Power What would happen to these industries if they couldn't get water? They would close down, and there would be no food, no materials, no buildings and no power for people



WORKSHEET 3: HOMEWORK ACTIVITY 1 - WATER-SAVING AND WATER PROTECTION

Water is an Important Basic Need for All Life on Earth

We need to preserve and protect water because:

- There is a limited amount of fresh water available on earth. Water is a finite resource
- Human activities such as mining, agriculture, fishing, leisure and manufacturing pollute our available fresh water sources

How to use this worksheet: Here is a list of water-saving actions. Go through this list with your family and highlight the actions that you and your family can take to save and protect water.

ACTIONS	ALREADY DOING	CAN DO
General water saving:		
 Turn-off the tap while brushing teeth, shaving or soaping hands 		
 Take shorter showers and use less water when you bath 		
 Sweep outside areas instead of hosing with water 		
 Use eco-friendly soaps and cleaning products 		
• Fix leaks at home and report water leaks at school and in your community		
 Don't just run the tap; always use the plug in the sink or a bowl 		
 Install water-saving devices on taps, toilets, showers and sprinklers 		
Install a water meter and monitor your use		
Car:		
Wash your car with a bucket and sponge only		
Use a commercial car wash that recycles water		
Bathroom:		
• Shower rather than bath		
 If you have to bath, use less water in the bath 		
• Use eco-friendly soap in your bath		
• If you use only eco-friendly soap you can use your cooled bathwater to water the garden		
Bathe young children together		
• Flush the toilet only when odours make it necessary		
• Put a brick in your cistern to reduce the amount of water it takes to fill it		
Install a low-flow showerhead		-



ACTIONS	ALREADY DOING	CAN DO
Laundry:		
Wash your towels and linen less often		
Match the size of your laundry load with water volume		
• Buy an eco-friendly wash ball		
Buy a water-efficient washing machine		
Kitchen:		
 If you have a dishwasher only use it when it is full 		
 Use a plugged sink to wash dishes instead of a running tap 		
 Use less dish-washing liquid to reduce the need for rinsing 		
 Use a plugged sink or bowl to rinse vegetables instead of a running tap 		
 Use the water you used to rinse fruit and veggies to water plants 		
• Keep a bottle of tap water in the fridge to avoid running the tap until the water		
is cold		
 Don't use running water to defrost food 		
Purchase water-efficient appliances and water-saving devices		
Plants & Garden:		
Learn about water-wise gardening and choose local indigenous water-wise		
plants for your home and garden		
Water plants at the coolest part of the day		
 Group plants together that have the same water requirements 		
• Water plants with the water you used in the kitchen to rinse fruit and veggies		
 Adjust sprinklers to water plants and not the pavement 		
 If you have a swimming pool, cover it so the water doesn't evaporate 		
Check your pool for leaks		
 Put self-closing spray nozzles on hosepipes 		
 Use natural and organic garden products 		



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