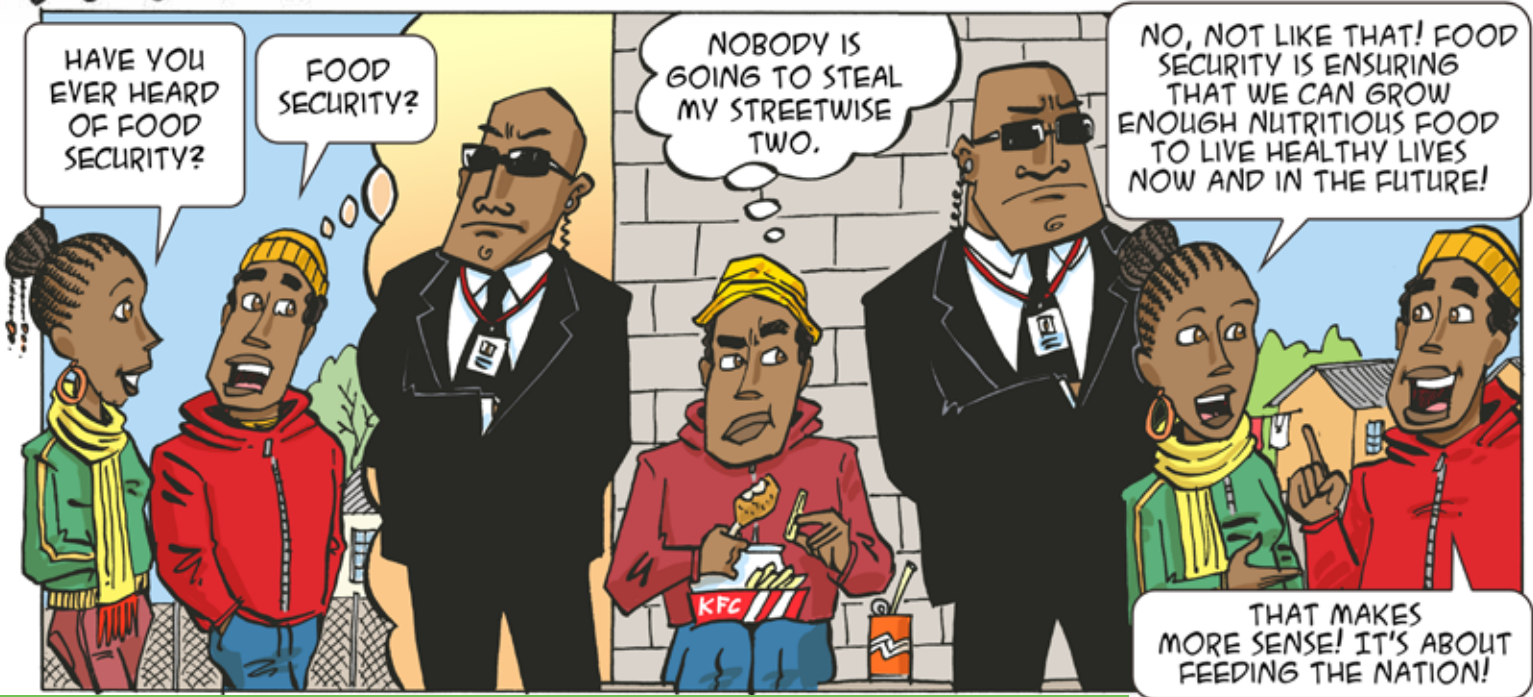




ONE HOME, ONE GARDEN



ACTIVITY: FOOD SECURITY IN YOUR COMMUNITY

IN THIS ACTIVITY YOU WILL DISCOVER WHICH FOODS YOU CAN GROW IN YOUR AREA. YOU WILL NEED PAPER AND A PEN.



- 1** COMPLETE THE ENVIRONMENTAL CHECK LIST. TICK THE BOX THAT BEST DESCRIBES EACH ITEM.
- 2** WALK AROUND YOUR COMMUNITY WITH A PARTNER AND SEE WHAT FOODS PEOPLE ARE GROWING. REPORT YOUR ANSWERS TO THE GROUP.
- 3** CONSULT THE TABLE ON THE NEXT PAGE AND DECIDE WHICH CROPS WILL GROW WELL IN YOUR AREA.

Your Environment Checklist ✓

Tick one box for each item:


Water access (Taps, JoJo)	<input type="checkbox"/> Plenty	<input type="checkbox"/> Medium	<input type="checkbox"/> Not much
Space	<input type="checkbox"/> Plenty	<input type="checkbox"/> Medium	<input type="checkbox"/> Not much
Sunlight	<input type="checkbox"/> Plenty	<input type="checkbox"/> Medium	<input type="checkbox"/> Not much
Soil type	<input type="checkbox"/> Loamy (deep, rich)	<input type="checkbox"/> Mixture	<input type="checkbox"/> Sandy/dusty
Average temperature	<input type="checkbox"/> Hot	<input type="checkbox"/> Cool	<input type="checkbox"/> Cold





NOW THAT YOU HAVE AN IDEA OF WHAT YOUR AREA OFFERS TAKE A LOOK AT THE VEGETABLES BELOW AND SEE WHICH ONES YOU COULD GROW. REMEMBER IF YOUR AREA DOESN'T HAVE ALL THE NECESSARY REQUIREMENTS FOR A VEGETABLE TO GROW IT DOESN'T MEAN THAT YOU CAN'T GROW IT, IT JUST MEANS YOU NEED TO FIND A WAY TO GET YOUR CROP WHAT IT NEEDS.

POTATOES



SUNLIGHT: PLENTY


CLIMATE: WARM/COOL

WATERING: KEEP SOIL MOIST BUT DO NOT OVERWATER

SOIL TYPE: SANDY-LOAMY (BUT NO CLAY)

PLANTING DEPTH: 10 - 100MM

ONIONS



SUNLIGHT: PLENTY


CLIMATE: COOL

WATERING: OCCASIONALLY, MORE DURING DRY PERIODS

SOIL TYPE: RICH AND WELL DRAINED (WATER CAN EASILY FLOW THROUGH IT)

PLANTING DEPTH: 9 - 12MM

CARROTS



SUNLIGHT: PLENTY


CLIMATE: COOL AND MOIST (SO HUMIDITY IS GOOD)

WATERING: REGULARLY

SOIL TYPE: DEEP RICH, WELL DRAINED

PLANTING DEPTH: 6 - 8MM

CABBAGE



SUNLIGHT: PLENTY


CLIMATE: COOL AND MOIST

WATERING: REGULARLY

SOIL TYPE: WELL DRAINED, RICH

PLANTING DEPTH: 6 - 7MM

BEANS



SUNLIGHT: PLENTY (BUT CAN SURVIVE ON A BIT)


CLIMATE: MOIST

WATERING: REGULARLY

SOIL TYPE: WELL DRAINED, DAMP RICH (AVOID DRY SAND)

PLANTING DEPTH: 25 - 40MM

SPINACH



SUNLIGHT: PLENTY

CLIMATE: HOT AND MOIST

WATERING: WATER DURING DRY WEATHER

SOIL TYPE: RICH, WELL DRAINED

PLANTING DEPTH: 8 - 10MM

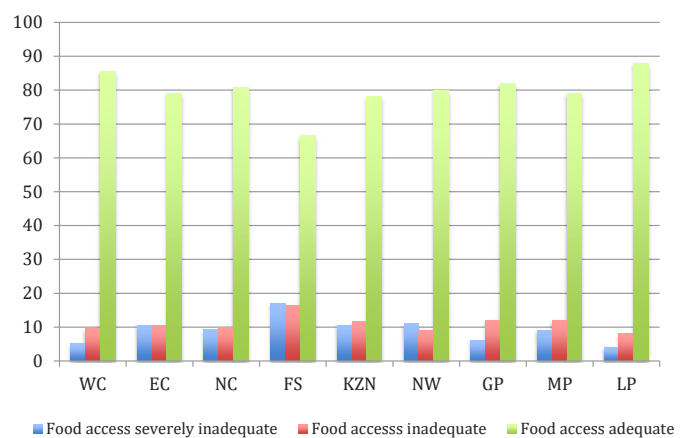
FOOD SECURITY IN SOUTH AFRICA

The three major aspects of Food security are: having *enough Food*, that the Food *Fulfills all our nutritional requirements* and that the Food is *available all year round*.

At a national level, scientists have found that South Africa produces enough Food to meet the needs of all of the people. Unfortunately this does not mean that all households are able to get enough Food. Many people are unemployed and living in poverty. This results in *Food insecurity* for their household. The lack of healthy, nutritious Food means that people are more likely to get sick. It also prevents children from doing well at school, resulting in an ongoing cycle of poverty.

A Household Survey done in 2009 (Statistics South Africa) reported that about 20% of South African households do not have enough Food.

Percentage of food access levels in each province



It is therefore very important for people in South Africa to learn how to grow their own nutritious Food, and to know which plants in their area are edible.



STEPS FOR BUILDING A VEGETABLE GARDEN

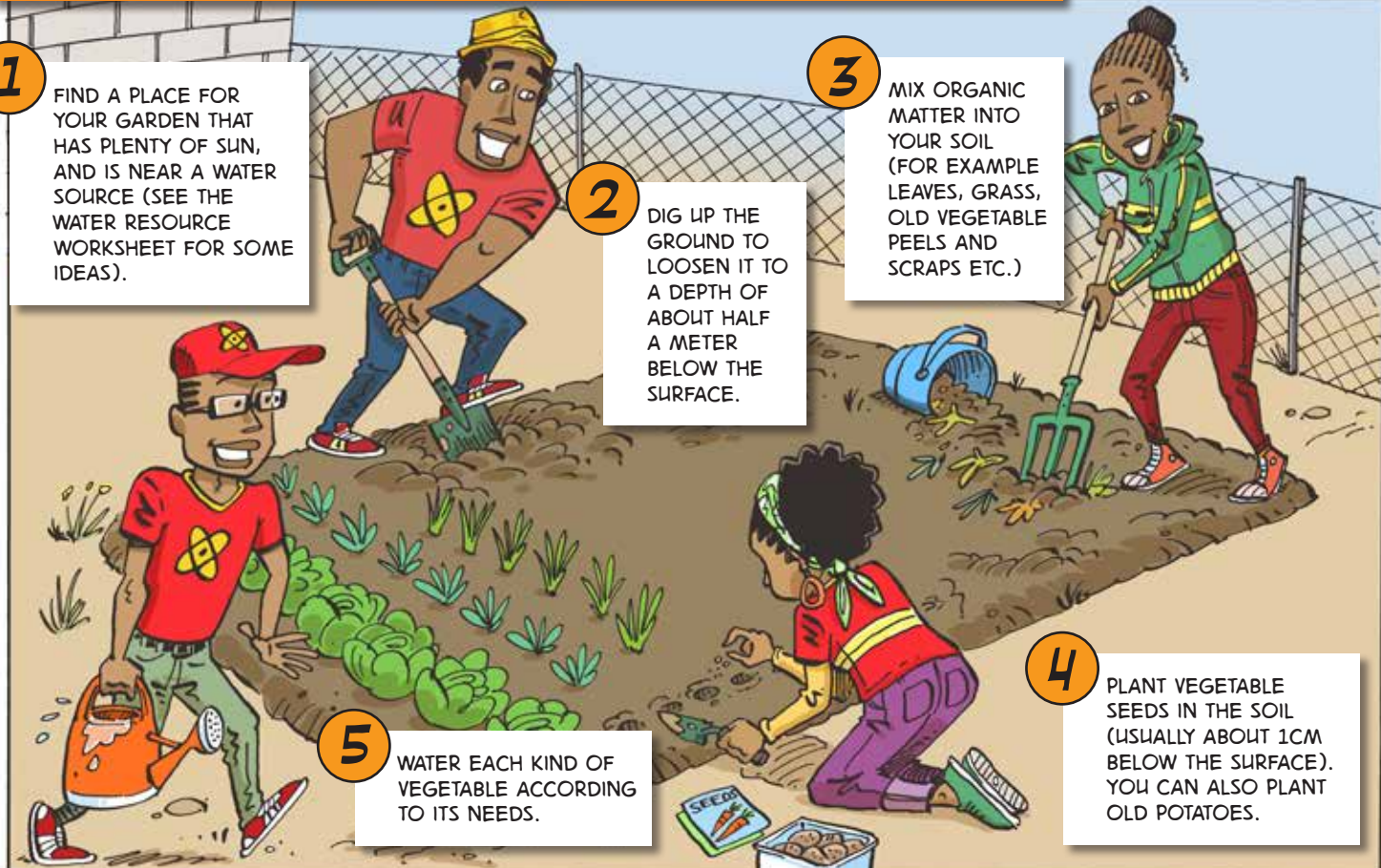
1 FIND A PLACE FOR YOUR GARDEN THAT HAS PLENTY OF SUN, AND IS NEAR A WATER SOURCE (SEE THE WATER RESOURCE WORKSHEET FOR SOME IDEAS).

2 DIG UP THE GROUND TO LOOSEN IT TO A DEPTH OF ABOUT HALF A METER BELOW THE SURFACE.

3 MIX ORGANIC MATTER INTO YOUR SOIL (FOR EXAMPLE LEAVES, GRASS, OLD VEGETABLE PEELS AND SCRAPS ETC.)

4 PLANT VEGETABLE SEEDS IN THE SOIL (USUALLY ABOUT 1CM BELOW THE SURFACE). YOU CAN ALSO PLANT OLD POTATOES.

5 WATER EACH KIND OF VEGETABLE ACCORDING TO ITS NEEDS.



IN SOUTH AFRICA THERE ARE A NUMBER OF PLANTS THAT GROW VERY EASILY, AND CAN PROVIDE NUTRITIOUS FOOD. SOME OF THESE ARE PICTURED HERE.



Black jacks
(Also known as wild spinach). The fresh green leaves can be cooked like spinach.



Wood sorrel
This can be used in salads.



Acacia
Its young leaves, flowers, and pods can be eaten, raw or cooked.



Dandelion
Every part of this plant can be eaten, raw or cooked. The roots can be boiled as a vegetable.



Num Num Berry
The berries are high in vitamin C and can be eaten as fruit or used to make jam.



Lambsquarter
The leaves can be cooked like spinach.

CAREERS:

THERE ARE GREAT JOB OPPORTUNITIES, SUCH AS:

- AGRICULTURE DEVELOPMENT
- NUTRITION / DIETICIAN
- LAND RIGHTS



Mbalenhle Gwacela completed her Masters degree in Agriculture, majoring in Food Security, after a Bachelor's degree in Geography and Environmental Studies and a postgraduate qualification in Policy and Development Studies. She is currently pursuing her Doctorate in Agriculture, also majoring in food security. She is a lecturer at the University of KwaZulu-Natal, as well as Cedara College of Agriculture.

CURRICULUM LINKS

- GR 6 **LIFE & LIVING** (NUTRIENTS IN FOOD)
- GR 8 **LIFE & LIVING** (PHOTOSYNTHESIS AND RESPIRATION)
- GR 9 **LIFE & LIVING** (THE DIGESTIVE SYSTEM)

DST-NRF CENTRE OF EXCELLENCE IN FOOD SECURITY



The Department of Science and Technology - National Research Foundation has launched a Centre of Excellence in Food Security. Hosted by the University of the Western Cape and the University of Pretoria, the initiative brings together numerous researchers and institutions from around the world to help combat food insecurity in South Africa. The research will look at ways of addressing the ecological, social, economic and physical challenges we face with food insecurity.



START YOUR OWN SCIENCE SPAZA

Name of school: _____

Municipality: _____

Province: _____

Name of your science club:

Name of contact person: _____

Telephone number: _____

Email address: _____

Postal address: _____

To be filled in by responsible adult (parent/teacher)

Name: _____

Surname: _____

Position: _____

ID Number: _____

Signature (parent/teacher):

Date: _____

Send to PO Box 22106, Mayor's Walk, 3208 Fax to 086 610 5453 email: info@sciencespaza.org or submit your application online at www.sciencespaza.org

This Science Spaza resource was produced for the National Science Week celebrations of Science for Sustainable Development and Improved Quality of Life. National Science Week is an initiative of the Department of Science and Technology (DST). It is implemented by the South African Agency for Science and Technology Advancement (SAASTA), a business unit of the National Research Foundation. For more information visit www.saasta.ac.za



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