

# GROW SMART

GROW  
SMART

An initiative by GROWTH-POINT

PROPERTIES  
In collaboration with

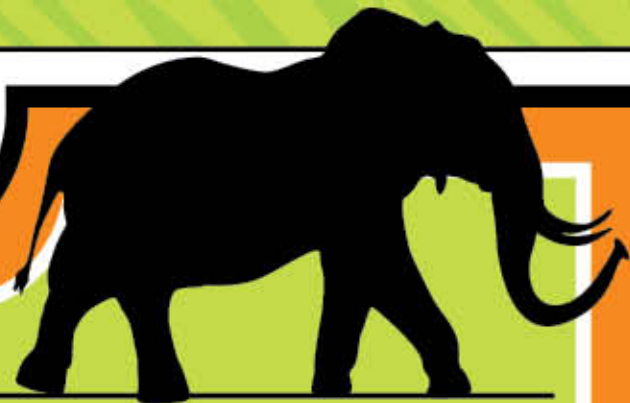


Western Cape  
Government  
Education

Third Edition 2013







# DEAR GROWSMARTER

Welcome to the final edition of Growsmart 2013! We hope you've enjoyed the previous editions as much as we enjoyed creating them for you.

Remember that if you want to improve your reading and writing skills, then you should practice a lot. This Growsmart newspaper is an excellent place to start! Read all the articles and see if you can solve the word puzzles and numeracy problems. In this edition, we explore the natural world and see why it's so important for us to look after our planet.

Keep a diary and write something in it each day. It can be as short as a sentence or two, but it's important that you do it every day. It will help improve your writing skills and handwriting.

Finally, if you see any word in this newspaper that you do not know, then get out the dictionary and look up the definition of the word. Try to learn a brand new word every day. That way you'll steadily increase your vocabulary.

Until next time!  
The Growsmart Team



# WILD WORDS

brave  
shark  
radio  
sauce  
steak  
shade  
prize  
pulse  
pause  
photo  
ocean  
kitten  
kayak  
towel  
bank  
dance  
early  
float  
knead  
Xhosa  
chess  
retina  
entire  
ironed  
region  
donate  
editor  
reason  
aboard  
abseil  
tavern  
target  
tennis  
thirst  
toilet  
travel  
twelve  
galaxy  
gatsby  
gentle  
grease  
prince  
rhythm  
quite  
leisure  
border  
debate  
desert  
edible  
façade  
iconic  
jersey  
mirror  
racket

auction  
biltong  
bonfire  
costume  
dustbin  
gearbox  
goulash  
lasagne  
journal  
mistake  
ostrich  
poverty  
spinach  
sticker  
voucher  
routine  
account  
actress  
bedroom  
cheddar  
daytime  
garbage  
gorilla  
harbour  
learner  
October  
organic  
qualify  
thunder  
theatre  
Tuesday  
uniform  
variety  
rainbow  
whisper  
rickety  
nuisance  
midnight  
magazine  
justice  
feather  
furious  
fashion  
daisies  
crowbar  
awesome  
blemish  
bluster  
luggage  
measure  
absolute  
birdcage  
blackout  
bungalow

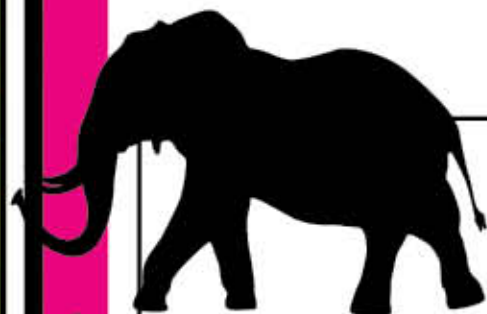
creation  
clarinet  
fraction  
hazelnut  
humanity  
improved  
intercom  
keyboard  
kilogram  
majority  
manicure  
postcard  
saboteur  
scenario  
security  
sunlight  
dynamite  
discover  
question  
envelope  
treasure  
football  
curtains  
internet  
tomorrow  
bathroom  
doughnut  
zucchini  
tourist  
terrible  
mosquito  
lightning  
fragrance  
elephant  
dreadful  
broccoli  
fixation  
Himalayas  
nauseous  
outgoing  
passport  
concerned  
vegetable  
necessary  
infuriating  
happiness  
president  
expensive  
dangerous  
behaviour  
animation  
effective  
identical  
otherwise

uncertain  
courageous  
suspicious  
peppercorn  
production  
perfection  
population  
ambassador  
blackberry  
blackboard  
bottomless  
cheesecake  
contagious  
everywhere  
friendship  
motorcycle  
newsletter  
playground  
honourable  
frightened  
dissimilar  
wanderer  
comfortable  
opportunity  
fascinating  
acquisition  
concoction  
affirmation  
scorekeeper  
spectacular  
speedometer  
babysitting  
bodybuilder  
calligraphy  
perseverance  
jurisdiction  
anticipation  
ostentatious  
jeopardising  
tranquilliser  
encyclopaedia  
disappointed  
chronological  
international  
hallucination  
autobiography  
investigation  
accomplishment  
identification  
recommendation





# FAST & TALL, BIG & SMALL



The largest land animal is the African elephant. They are slightly bigger than Asian elephants and they have larger ears. An elephant's trunk contains about 100 000 muscles! It is like a long nose which the elephant uses for breathing, smelling and trumpeting. It also uses its trunk to suck up water which it pours into its mouth, and for picking up food for eating. Adult elephants can eat up to 136 kg of grass, roots, fruit and bark in a single day. A female elephant is called a cow and a male is called a bull. A female elephant will be pregnant for 22 months (almost two years!) before giving birth. A baby elephant is called a calf.



The fastest land animal is the cheetah. A cheetah can go from 0 to 96 km an hour in less than three seconds – that's much faster than an average car – and can reach speeds of up to 120 km an hour, which is the speed limit on our national roads! It is said that cheetahs spend more time in the air than on the ground when running at full speed. Cheetahs are built for speed – they are smaller than other big cats such as lions and leopards; they are slender, with long legs and a long tail which they use to steer and change direction quickly when they are running. Cheetahs cannot roar, but they can purr just like your cat at home.



The smallest bird in the world is the bee hummingbird. This tiny bird is 5 to 6 cm long and is found only on the island of Cuba between North and South America. Its weight is about the same as two paper clips. Despite its small size, the bee hummingbird is a strong and fast flier, and it can hover in one spot just like a helicopter. It can even fly sideways and backwards! The bee hummingbird beats its wings approximately 80 times per second, which is so fast that the wings look like a blur to our eyes. Its main source of food is nectar, which it gets from flowers. This tiny bird needs a tremendous amount of energy, so it has to feed almost continuously. Just like a growing child!



The tallest land animal is the giraffe. They have very long legs and necks. A giraffe can grow up to 6 metres, which is about three times as tall as an average human adult. The giraffe's incredibly long neck allows it to reach high into the tops of trees to feed on leaves that few other animals can reach. It seems that almost everything about a giraffe is long, even its tongue, which is approximately 53 cm long (that's almost two 30 cm rulers placed end to end). When a female giraffe gives birth, the calf falls about 1,5 metres to the ground. Ouch! Amazingly, the newborn is able to stand on its legs within 30 minutes and can already run after just 10 hours.

## CLASSROOM ACTIVITY

- Use a ruler to measure out the length of a bee hummingbird and the tongue of a giraffe.
- How far can you run in three seconds?
- How many times can you clap your hands in one second?
- Can you trumpet through your nose?



## HIDDEN ANIMALS

Find and circle the names of the animals that are hidden in the grid. The words may be hidden in any direction.

ALLIGATOR  
BAT  
ELEPHANT  
FLAMINGO  
GIANT PANDA  
GIRAFFE  
GORILLA

IGUANA  
LION  
ORANGUTAN  
OSTRICH  
PEACOCK  
POLAR BEAR  
PUMA

PYTHON  
STORK  
TIGER  
TORTOISE  
ZEBRA

G	A	M	U	P	O	I	E	H	A	Z	R	A	R	F
A	A	Z	G	R	T	G	E	L	G	O	L	N	I	I
N	R	I	E	B	A	S	N	I	E	I	Y	A	D	A
O	S	A	I	B	I	L	A	N	O	P	T	T	N	O
H	O	A	E	O	R	N	D	N	S	R	H	A	U	N
T	N	T	T	B	T	A	N	P	T	C	U	A	O	R
Y	T	R	A	P	R	T	E	N	R	G	G	U	N	O
P	O	L	A	B	R	A	L	L	I	R	O	G	P	T
T	T	N	R	E	C	C	L	N	C	G	A	S	I	A
T	D	O	O	O	F	A	I	O	H	R	E	O	I	G
A	C	R	C	C	G	F	C	S	P	Y	A	G	T	I
O	Y	K	G	A	F	L	A	M	I	N	G	O	I	L
T	S	G	O	A	R	A	E	R	P	R	L	R	G	L
N	A	T	U	G	N	A	R	O	I	N	T	B	E	A
O	O	R	O	S	T	O	R	K	I	G	O	B	R	T





## VUYO AND GEMMA

VISIT THE

# MUSEUM

Have you ever been to a natural history museum? If you have not visited one yet, then you should ask your parents to take you during the school holidays or on a weekend. Vuyo and Gemma took the quadruplets to the South African Museum in the Company's Garden in Cape Town during the holidays and they had such an amazing time!

When they arrived at the museum, Vuyo learned that tickets for adults were R30 each and tickets for children were R15 each. How much did Vuyo have to pay in total for two tickets for the adults and four tickets for the quadruplets?

The first thing they discovered was that the museum had been in that same building since 1897. Since then, millions of mice have passed through its doors and learned more about the natural world, its history, people and cultures.

For the quadruplets, the most wonderful thing about the museum was the life-size models of all sorts of creatures. There were elephants, lions, bears, camels, dolphins, birds, turtles and many kinds of animals the quadruplets had never even seen before. They all looked so real! There were also strange insects, colourful butterflies and dangerous-looking snakes. In a large room they saw the enormous skeleton of a blue whale hanging from the ceiling.

The quadruplets were astounded when they saw the jaws of a shark big enough to swallow a whole human being in a single gulp. Gemma explained that this kind of shark was extinct, which means that there are none of its kind

living today. Gemma then took the quadruplets to the dinosaur room, where they saw models and skeletons of dinosaurs with names that could tie your tongue into a knot, like *Carcharodontosaurus*. Another very interesting dinosaur they saw was called *Nqwebausaurus thwazi* – its remains were found in the Eastern Cape and it's the first dinosaur to be given a Xhosa name.

One of the quadruplets said, "Wow! I'm very glad dinosaurs are extinct, because they look very big and dangerous and scary. I'm sure they would have eaten all of us if they were still alive today."

"You may be right," said Vuyo. "But extinction is not good, because we will never be able to see those animals with our own eyes, except in pictures and at museums. Many harmless animals have also become extinct, like the quagga and the dodo. We must look after our planet and protect the wildlife, especially those which are in danger of extinction."

There was so much to learn at the museum, but it was already time for the family to make their way home. They realised that there were still whole sections of the museum they had not seen.

That night the quadruplets all had similar dreams. They dreamed that they were saving dinosaurs from extinction.

## CAN YOU SOLVE THESE PROBLEMS?

### CHOCOLATE BAR

Mary buys a bar of chocolate and decides to share it with Peter and Susan. Peter gets  $\frac{1}{4}$  of the bar, Susan gets  $\frac{2}{8}$  of the bar, and Mary is left with  $\frac{1}{2}$  of the bar.

Who has the largest piece of chocolate?

### PIANO PRACTICE

Thembi's music teacher asked Thembi to practice the piano for 15 minutes a day from Monday to Friday.

How many days will it take Thembi to complete 3 hours of practice in total?

### CLASS TEACHER

Mrs Jones has 35 learners in her class. She buys 35 rulers for them. When Mrs Jones hands out the rulers to the class, she discovers that 17 learners don't need her rulers, because they already have their own.

How many rulers does Mrs Jones have left?

1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50



# NATURAL WONDERS OF THE WORLD

## PUERTO PRINCESA UNDERGROUND RIVER

The Puerto Princesa Underground River is a major tourist attraction. It is located in the city of Puerto Princesa, on an island in the Philippines. The island is well known for its white beaches and unspoiled natural beauty, and contains one of the most amazing cave systems in the world. The Underground River Cave is 24 km long. An underground river flows through the cave for 8,2 km before emerging directly into the sea. The cave where the river meets the sea is so large that you can enter it by boat and continue going for up to 4 km! The island was made a national park to protect the many different species of plants, bats, reptiles and other animals.

## KOMODO ISLAND

Indonesia has more than 17 000 islands! One of these is Komodo Island, home to the largest lizard on earth, the Komodo dragon. The island is also home to about 2 000 people. They are descended from criminals who, a long time ago, were sent to the island as punishment for their crimes. Komodo Island is one of only seven places in the world with a beach that has pink sand. The sand appears pink because it is a mixture of white and red sand. The island became a national park in 1980 in order to protect the Komodo dragon.

## THE AMAZON RAINFOREST

The Amazon rainforest in South America is also known as the Amazon Jungle or Amazonia, and it is the largest rainforest in the world. The Amazon River, which is the second longest river in the world, flows through the Amazon rainforest. More than half of the rainforest is in Brazil. The Amazon rainforest is home to all kinds of interesting plants, birds, insects and animals. Rainforests are an important part of the water cycle because they are found in areas where there is a lot of rainfall each year.

## IGUAZU FALLS

The Iguazu Falls, on the border between Brazil and Argentina in South America, is one of the most spectacular waterfalls in the world. The name means 'big water' in the language of one of the original Indian tribes living in the area. The Iguazu Falls covers an area that is almost 3 km long and consists of many waterfalls, but most of the river flows over an area called the 'Devil's Throat' which is U-shaped and is 82 m high.

## JEJU ISLAND

Jeju Island, also known as Jejudo, is the largest volcanic island in Korea. It is the site of the tallest mountain in Korea, which happens to be a dormant volcano. There are 360 smaller volcanoes that surround the main one. The island has some of the largest caves in the world – the caves started out as tubes through which lava flowed when the volcano was still active. The island contains many different kinds of plants that can be found nowhere else. Although Jeju Island attracts lots of tourists, it is protected as a nature reserve.

## HA LONG BAY

Ha Long Bay is in Vietnam, which is to the south of China. The name means 'descending dragon' in the Vietnamese language. It is an absolutely beautiful place which attracts many tourists from around the world. Ha Long Bay has a coastline that is 120 km long. The bay itself is full of small islands – 1 969 of them! Many of the islands are hollow and have huge caves. Other islands have their own lakes.

## TABLE MOUNTAIN

Table Mountain, with Devil's Peak on one side and Lion's Head on the other, is Cape Town's most famous landmark. This flat-topped mountain is 1 085 metres high (which is just more than 1 km), offering magnificent views of the city, the Atlantic Ocean and Robben Island. There are many paths and trails if you feel like a four hour hike to the top of the mountain, but most people choose to take a five minute ride in the cable car to get there. More than 1 500 species of plants can be found on the mountain alone, which is more plant species than you will find in the whole of England. Many of these plant species, such as fynbos, are very delicate, and the whole area became a nature reserve in order to protect them. The top of the mountain is often covered in clouds when the Cape's famous south easterly wind blows. Lions and leopards once roamed the mountain, but the last lion was shot two hundred years ago and the last leopard was seen ninety years ago.

## DID YOU KNOW?

Table Mountain is one of the new Seven Wonders of Nature. Millions of people from all over the world voted for their favourite Wonders of Nature between 2007 and 2011, and Table Mountain made it onto the final list!

## SOLVE THE PROBLEM

PROBLEM	ANSWER
$56 + 15 - 12$	
$7 \times 3$	
$36 \div 6$	
$4 \times 7$	
$99 \div 9$	
$15 \times 10$	
$20 + 13 + 2 - 15$	
$6 \times 3 \times 2$	
$5 \times 8$	

Which numbers are missing in the following sequence?

8; 15; 22; ; 36; ; 50

Which numbers are missing in the following sequence?

121; 111; 101; ; 81; ; 61

Which number is larger:

$\frac{1}{2}$  or 0,3?



# INTERESTING CAREERS

## STUDYING DINOSAURS

Have you seen dinosaur skeletons at a museum? Those skeletons are there today, because someone was digging in the ground one day and discovered dinosaur bones. Actually, they found stone fossils of dinosaur bones. The word 'fossil' comes from the Latin language and literally means 'dug up'. Fossils are formed when a creature is buried quickly before the body decays. Over time, the bones are replaced by mud and sand, forming the exact same shape as the bones. The shape hardens into stone and remains there until someone digs it up. The scientists who study fossils are called palaeontologists. Palaeontology is the study of the history of life-forms on Earth, especially learning about dinosaurs and other creatures that have become extinct.

## PROTECTING WILDLIFE

Wildlife conservationists are like the wildlife police. They make sure that endangered plants and animals are protected, especially from poachers. Poaching is when hunters kill animals illegally, and it's a big problem in South Africa. Other dangers to wildlife include the loss of habitat (the places where they live), pollution, poisons, other dangerous chemicals and climate change.

## STUDYING PLACES & CULTURES

Another kind of scientist who goes about digging things up is an archaeologist. Like Indiana Jones in the movies, archaeologists try to understand and make sense of human history and cultures, especially those in the distant past. Over time, deserted places where people once lived get covered up and buried by dust and dirt. An archaeologist's job is to find these places and uncover them.

## STUDYING ANIMALS



If you love animals and want to study them, then you should think about becoming a zoologist. Zoology is a part of biology. It is the study of animal life, including whales, birds, fish, reptiles, insects and many others. One of the things a zoologist does is to study animal habits, food and behaviour, and to figure out why they do what they do. Is it true that sharks are mindless killers? Do dolphins really help swimmers who are drowning? Understanding more about animals also helps us to find ways to protect them.

## ! CLASSROOM ACTIVITY !

### SYNONYMS

Synonyms are words that have a similar, or the same, meaning. Below you have two choices of words, Choice 1 and Choice 2. Choose the word that is the correct synonym for the word in the left column.

MATCH THIS WORD	CHOICE 1	CHOICE 2
Thorough	Partial	Meticulous
Mix	Blend	Repair
Tattered	Worn	New
Trivial	Important	Unimportant
Vanish	Disappear	Appear
Unruly	Obedient	Disobedient
Dependable	Reliable	Unreliable
Forbid	Allow	Prohibit
Diminish	Decrease	Increase
Creative	Unimaginative	Imaginative

### ANTONYMS

Antonyms are words that are opposite in meaning to each other. Can you match the following words with their antonyms?

Drought	Keep
Amused	Bored
Agony	Flood
Absorb	Comfort
Young	Old
Shorten	Lengthen
Discourage	Reveal
Hide	Encourage
Abandon	Leak





# ANIMALS IN DANGER

There are many different types of animals, insects, birds, fish and plants that live and grow on our planet. Another word for these different types of creatures is 'species', so we can say there are many different species of animals and plants that live and grow on our planet. However, there were many more species that once lived on Earth, but unfortunately they do not exist anymore. When the last animal or plant of a species dies and there are none of its kind left, we say the species has become extinct.

Dinosaurs are a perfect example of creatures that have become extinct. A long time ago dinosaurs roamed the planet, but there are none left today. Nobody seems to know exactly why dinosaurs became extinct, but scientists have some ideas about what could have happened to them. One popular idea is that an enormous meteor struck the earth and the explosion caused all sorts of changes to the weather and to the earth's atmosphere by blocking out sunlight for a long time. These changes were harmful to the dinosaurs and they all died because of it.

There are some other species that are alive today, but are in danger of becoming extinct because there are so few of them left. We call these 'endangered species'. Species can become endangered for various reasons. Sometimes it is because their natural habitat (the place where they live) is destroyed, like when all the trees in a rainforest are cut down and the animals that live there can no longer survive. Hunting is another reason why animals become endangered. An example is the rhino. Over the last three years alone, almost two thousand rhinos were killed by poachers in South Africa. Poachers are people who hunt and kill animals illegally. The poachers have been killing these animals for their horns, which they sell to people who believe the rhino horn is valuable as an ingredient in medicines.

Some animal species that are endangered include black rhinos, gorillas, tigers, whales, chimpanzees, giant pandas, orangutans, snow leopards, Asian elephants and many more.

Countries around the world work hard to protect and save their endangered species by creating national parks and reserves where the animals can live safely and freely.

## FIND THE MISSING LETTERS

Look at the letters in the circle. Some letters of the alphabet are missing. See if you can work out which letters are missing. Then use the missing letters to spell the name of a very famous South African flower.

X G L S W  
D C J F V  
K I U Q Z  
N  
H M B  
Y



# PROFESSOR THANDI'S FUN SCIENCE EXPERIMENT

## DO PLANTS BREATHE?

Plants and animals have a very important relationship. Human beings and other animals need to breathe oxygen in order to live. We use our lungs to breathe in oxygen and breathe out a gas called carbon dioxide. Luckily for us, plants take in carbon dioxide and give off the oxygen we need, and that's one of the reasons why plants and trees are so important to us. Plants don't have lungs and they don't really breathe like we do, but they can exchange gases through thousands of tiny openings on the surface of their leaves. In our experiment, we will see what happens to a plant's leaves if we block these tiny openings.

## WHAT WILL YOU NEED

- A leafy plant (geraniums work well)
- Vaseline

## INSTRUCTIONS

1. Choose two leaves and coat the top and bottom surfaces with Vaseline.
2. Place the plant in a sunny location for a week and water it as normal.
3. Check the plant each day and see what happens to the leaves.

## RESULTS

The Vaseline has blocked the tiny openings on the leaves and there is no way for air to enter, so the leaves that were coated with Vaseline will wilt and begin to die.



# PET VS WILD DOGS

Most of us know our pet dogs to be gentle, caring and loving animals. That's why people say that a dog is a man's best friend. But is this the case with African wild dogs?

Well, to begin with, wild dogs are not just someone's domestic dog that ran away a long time ago and didn't come back. Domestic dogs can be trained to do tricks and rely on humans to feed them, because they are tame and do not have a hunter's instinct. Wild dogs are actually Africa's 'wolves', which means they are born wild and would not make good pets. They hunt in packs, eat meat from animals like wildebeest and travel many kilometres in search of prey.

Domestic dogs usually sleep outside in a shed or sometimes in the house if it is very cold outside. Wild dogs live in Africa on the open plains of the Sahara desert. They never sleep outside and never stay in the same place for long. They are always on the move and excellent at hunting.

Compared to domestic dogs that have five toes, wild dogs only have four. You'd think that this makes them slower than ordinary dogs, when in fact it's just the opposite. Being pack hunting animals, which means that they hunt in groups, wild dogs can run up to 75 km per hour.

To most people, wild dogs all look the same. But each wild dog has a unique spotted pattern on its coat. This makes it easy to tell them apart.

African wild dogs are very smart and sociable, just like pet dogs. They like to play, enjoy each other's company and travel in big families, or packs. One pack of wild dogs can contain up to 20 dogs. That's a rather large family of wild dogs – one that no wildebeest, buck or human would like to run into!

There are countless domestic dogs that live on the planet, but only about 6 000 African wild dogs. Lions and hyenas hunt them. Most of all, African wild dogs are hunted by people in Africa who also destroy their home or habitat. That is why we need more people to fight for them, help them survive and protect their home so that they will not become extinct.

