

# GROW

SMART

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PROPERTIES



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EDUCATION

Second Edition 2020



# DEAR GROWSMARTER

Are you ready to grow even smarter while having loads of fun? Yay! Now let's get stuck into the second edition of the Growsmart Newspaper for 2020.

Love numbers? Kick off with more than 50 mathematical questions. Some questions are easy and the rest will give your brain a good workout! Even if mathematics is not your vibe, try and answer all the questions.

In this edition, we also feature young, local entrepreneurs who are making waves. See what lessons you can learn from them. Read *Young Blood* on page 5 to learn more.

Grow your vocabulary with new words waiting to be discovered. Words help you to express thoughts and ideas. The more words you know, the better you can express yourself! Exciting new poets are taking the poetry world by storm and we want to share them with you! Check out page 7.

If you're struggling with writer's block, we've got you covered with a list of creative writing prompts on page 8. Use your improved vocabulary to spice up your story. Or see if you can weave irony into your creative writing. Find the tips on the same page.

Find out what causes bushfires, why chimpanzees are our closest living relatives and how to build a bridge. You could discover a hidden talent for engineering! Professor Thandi's experiment shows that sprinkles know how to boogie on the dancefloor. And if you know nothing about plogging, go to page 12!

And when you've read this from cover to cover, we know you'll want more. That's why you can visit [growsmart.org.za](http://growsmart.org.za) and download all the previous Growsmart newspapers. Have fun!

Until next time,

The Growsmart Team

# SUDOKU

2			3	8			5	1
				5				
6		5	1		2			
7		6					8	
	3	2	8	4				
8		1	7				3	
	6				8		9	4
4	5	9						3
	2			3	4			5

Fill the grid with the numbers 1 to 9 so that each number is only used once in each row across, each column down and every 3 by 3 box. Do not guess the answer. Think logically about which numbers may appear, and especially which numbers may not appear in a block.

Source: [mathineenglish.com](http://mathineenglish.com)  
 Answers per row: 1-4-6-2-7-8-9-3-5; 8-5-7-3-4-9-1-6-2; 2-9-3-6-1-5-8-4-7; 3-7-9-8-2-1-6-5-4; 4-6-1-5-3-7-2-8-9; 5-8-2-9-6-4-3-7-1; 7-3-4-1-9-6-5-2-8; 6-1-8-7-5-2-4-9-3; 9-2-5-4-8-3-7-1-6

# MATHS

ANSWER THE FOLLOWING WITHOUT DOING WRITTEN CALCULATIONS:

- $9 + 91 =$  \_\_\_\_\_
- $16 + 16 =$  \_\_\_\_\_
- $25 - 6 =$  \_\_\_\_\_
- $25 + 15 =$  \_\_\_\_\_
- $124 - 5 =$  \_\_\_\_\_
- $11 + 10 - 1 =$  \_\_\_\_\_
- $27 + 3 - 30 =$  \_\_\_\_\_
- $30 \times 3 =$  \_\_\_\_\_
- $100 \div 20 =$  \_\_\_\_\_
- $45 \times 0 =$  \_\_\_\_\_
- $90 +$  \_\_\_\_\_  $= 100$
- $999 + 2 - 2 =$  \_\_\_\_\_
- $300 \times 3 =$  \_\_\_\_\_
- $2\ 500 \times 2 =$  \_\_\_\_\_
- $144 - 0 =$  \_\_\_\_\_
- $36 \div 4 =$  \_\_\_\_\_
- $13 \times 30 =$  \_\_\_\_\_
- $100 \div 5 =$  \_\_\_\_\_
- $17 \times 20 =$  \_\_\_\_\_
- $90 \times 2 =$  \_\_\_\_\_
- $15 \times 40 =$  \_\_\_\_\_
- $100 \times 10 =$  \_\_\_\_\_
- $44 \div 4 =$  \_\_\_\_\_
- $150 \times 2 =$  \_\_\_\_\_
- $33 \times 3 =$  \_\_\_\_\_
- $280 \div$  \_\_\_\_\_  $= 140$
- $630 \div$  \_\_\_\_\_  $= 70$
- $500 \div 2 =$  \_\_\_\_\_
- $1000 \div 2 =$  \_\_\_\_\_
- $1\ 200 + 1\ 200 =$  \_\_\_\_\_
- $\frac{1}{2} + \frac{1}{2} =$  \_\_\_\_\_
- $103 - 3 =$  \_\_\_\_\_
- $\frac{5}{8} + \frac{4}{8} =$  \_\_\_\_\_
- $7 + 113 =$  \_\_\_\_\_
- $13 + 12 + 15 =$  \_\_\_\_\_
- $177 = 147 +$  \_\_\_\_\_
- $44 = 14 +$  \_\_\_\_\_
- $91 -$  \_\_\_\_\_  $= 10$
- $13 = 113 -$  \_\_\_\_\_
- $15 - 3 - 12 =$  \_\_\_\_\_
- $75 \times 4 =$  \_\_\_\_\_
- $150 \times 20 =$  \_\_\_\_\_
- $150 \times 30 =$  \_\_\_\_\_
- $69 \times 0 =$  \_\_\_\_\_
- $100 \div 100 =$  \_\_\_\_\_
- $30 \times$  \_\_\_\_\_  $= 3000$
- $1\ 000 + 1 - 201 =$  \_\_\_\_\_
- $40 \times 80 =$  \_\_\_\_\_

Answers: 1. 20; 2. 32; 3. 19; 4. 40; 5. 119; 6. 20; 7. 0; 8. 90; 9. 5; 10. 0; 11. 10; 12. 999; 13. 900; 14. 5 000; 15. 144; 16. 9; 17. 390; 18. 20; 19. 340; 20. 180; 21. 600; 22. 1000; 23. 11; 24. 300; 25. 99; 26. 2; 27. 9; 28. 250; 29. 500; 30. 2 400; 31. 1; 32. 100; 33. 1 1/8 or 9/8; 34. 120; 35. 40; 36. 30; 37. 30; 38. 81; 39. 100; 40. 0; 41. 300; 42. 3 000; 43. 4 500; 44. 0; 45. 1; 46. 1 000; 47. 800; 48. 3 200

## CALCULATE THE FOLLOWING USING ANY CALCULATION STRATEGY. BE MINDFUL OF BODMAS.

1.  $250 + 750 + 999$

\_\_\_\_\_

2.  $40\ 000 \div 2 + 20\ 000$

\_\_\_\_\_

3.  $39\ 999 \times 1 + 2$

\_\_\_\_\_

4.  $23\ 550 \times 1\ 000 \times 10$

\_\_\_\_\_

5.  $625 \div 25 \times 2$

\_\_\_\_\_

6.  $1\ 833 + 670 \times 100$

\_\_\_\_\_

7.  $15\ 200 + (1\ 800 - 1\ 200)$

\_\_\_\_\_

8.  $5\ 200 \times 40 \div 4$

\_\_\_\_\_

9.  $36\ 144 \div 12 + 2\ 599$

\_\_\_\_\_

10.  $(23\ 000 - 230) \div 2 + 3\ 458$

\_\_\_\_\_

11.  $1\ 000 \div 25 \times 4 \times 2$

\_\_\_\_\_

12.  $3\ 930 \div 30 \div 1$

\_\_\_\_\_

13.  $3\ 200 + 800 - (2\ 000 + 500) \times 1$

\_\_\_\_\_

14.  $35\ 347 \times 23 \times 2\ 599 \times 0$

\_\_\_\_\_

15.  $88\ 888 \div 2 + 128 \times 2$

\_\_\_\_\_

16.  $(16\ 499 - 499) \div (16\ 500 - 500)$

\_\_\_\_\_

## SOLVE EACH PROBLEM. YOU MAY USE ANY STRATEGY.

1. Find the 6<sup>th</sup> number in the sequence: 8; 16; 32; 64; ...

- A) 128      B) 258      C) 256      D) 126      E) 136
- \_\_\_\_\_

2. Which is the closest fraction to 0,4 from the choices below?

- A)  $\frac{3}{4}$       B)  $\frac{1}{2}$       C)  $\frac{4}{6}$       D)  $\frac{1}{3}$       E)  $\frac{2}{5}$
- \_\_\_\_\_

3. A club has 93 members. If  $\frac{2}{3}$  of the club are girls, how many boys are in the club?

- A)  $\frac{1}{4}$       B)  $\frac{1}{3}$       C) 31      D) 186      E) 62
- \_\_\_\_\_

4. A fence is constructed around a square garden with a length of one side of 20 metres. How many fencing posts are required if there has to be a fencing post every 2 metres?

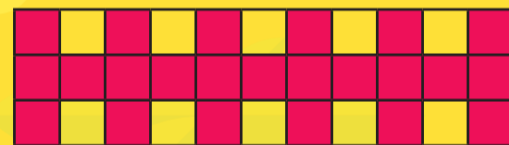
\_\_\_\_\_

5. If the pattern in this table is continued, what number should replace Z?

1	2	3	4	5	6
1	4	9	16	25	Z

\_\_\_\_\_

6. What fraction of the figure below is not shaded in?



7. 0,8 kg tomatoes costs R8,60. How much will 0,2 kg cost?

\_\_\_\_\_

8. A watercan can take  $3\frac{1}{2}$  litres of water. There is  $2\frac{3}{4}$  litres of water in the can. How much water can be added?

\_\_\_\_\_

9. The chef at the restaurant feeds birds with old bread. If the birds eat  $\frac{1}{3}$  of a loaf of bread per day, how long will it take to eat  $5\frac{1}{3}$  loaves of bread?

\_\_\_\_\_

10. A kilogram mutton costs R79,99. How much does 2,5kg mutton cost?

\_\_\_\_\_

Answers: 1. C; 2. E; 3. C; 4. 39; 5. 36; 6. 10/33; 7. R2,15; 8.  $\frac{3}{4}$ ; 9. 16; 10. R199,98

Answers: 1. 1 999; 2. 40 000; 3. 40 000; 4. 235 500 000; 5. 50; 6. 68 833; 7. 15 800; 8. 52 000; 9. 5 611; 10. 14 843; 11. 320; 12. 131; 13. 1 500; 14. 0; 15. 44 700; 16. 1

You or your teacher can download even more maths worksheets to practise on:  
[www.amesa.org.za/Challenge/Wiskunde.html](http://www.amesa.org.za/Challenge/Wiskunde.html)

# DO YOU KNOW WHAT THESE WORDS MEAN?

resuscitate  
aborigine  
ministration  
abrasive  
connotation  
indefatigable  
abstention  
uncanny  
bureaucrat  
demonstrative  
architect  
bacterium  
acquaintance  
camaraderie  
beneficiary  
acquittal  
bibliography  
abhorrence  
choreograph  
defenceless

effervescent  
cessation  
decapitate  
boundary  
decathlon  
cantankerous  
adolescent  
bruschetta  
encyclopaedia  
dexterity  
chrysanthemum  
debutante  
bankrupt  
circumlocution  
deficiency  
electrify  
abominable  
deplorable  
egregious  
delinquency

chronological  
acquisition  
circumnavigate  
entourage  
flamboyant  
derogatory  
adulation  
egocentric  
feasible  
descendant  
balaclava  
eloquent  
fatigue  
deterioration  
benevolence  
emaciated  
factious  
defeasible  
fermentation  
endorsement

factorise  
genuine  
enquiry  
facsimile  
detrimental  
fascinate  
garniture  
emulsify  
facetious  
gallant  
freudian  
endeavour  
gradual  
haughty  
feuilleton  
entrepreneur  
hiatus  
gargantuan  
fortification  
garrulous

frequency  
heroine  
genetics  
flammable  
harass  
incoherent  
generosity  
fortuitous  
hazardous  
incinerate  
gestation  
fiefdom  
haphazard  
gesticulate  
hierarchy  
incarcerate  
formidable  
harbour  
grammarian  
impeachment

haulage  
gregarious  
imminent  
hullabaloo  
idiosyncrasy  
gratuitous  
frenetic  
ignominious  
hibernate  
maelstrom  
inauspicious  
hallucinate  
incessant  
gerrymandering  
malnutrition  
inconvenience  
magnanimous  
jurisdiction  
incorporate

juxtapose  
malicious  
incongruous  
jeopardise  
languor  
manipulate  
jouissance  
lineage  
malfeasance  
juvenile  
liquescent  
manoeuvre  
judgement  
luxuriant  
manure  
narcissism  
inanimate  
listeriosis  
indigenous  
admonition

# HOW TO BE MONEY SMART IN BUSINESS

Having your own business is hard work! In between schoolwork and housework, we know it can be challenging to find time to pursue your passion. But once you've followed your heart, there's no turning back! Especially when the money starts to roll in. Just make sure you're as smart with your money as you are with your ideas. Follow these guidelines to stay on track to financial freedom!

## Startup costs

Now that you have your Big Idea, how much money do you need to get your business up and running? You might need supplies like ingredients or fabric. Maybe you need equipment to make your product or software to deliver your service. Work out how much each item will cost. The total amount is your startup cost. The next step is to figure out how you're going to fund your business. Perhaps you have money saved up or a family member who would like to invest in your new venture. Don't let a lack of funds get you down. Start with what you have and use the profits to grow your business.

## Cost per unit

To make sure you ask the right price for your product, you need to know how much it costs to produce each item. This is called the cost per unit. List all your expenses. Divide the total amount by the number of products you can make to sell:

$$\text{total expenses} / \text{number of products you can make} = \text{cost per unit}$$

## Pricing

Now that you have a good idea of how much your product will cost to produce, you can decide on an appropriate price. Research your competitors. How much are they charging for the same product? Should you charge more or less? Make sure your final pricing is more than the cost per unit.

## Profit

For your business to be successful, you need to make a profit. This means you have to charge more for your product than the cost of producing it. Use the following formula:

$$\text{selling price} - \text{cost price} = \text{gross profit}$$

## Budget

Use a budget to plan for future expenses, like new equipment, emergency repairs or product improvements. In the budget, record the expected income and expenses of your business during a specific period, e.g. December. Create two columns. Under

income, record all the money you anticipate to receive for the selling of your product or service. Under expenditure, write down all your expected expenses, such as telephone costs, ingredients and advertising. Subtract the expenditure from the income. Do you have a surplus (money left over) or a deficit (a negative balance)? If there is no difference, it means you are breaking even – not losing money but also not making any.

## Finally

Open a bank account to keep your money safe. Now you can write down your financial goals and make a plan to spend, save and share your money wisely. You work hard for your money. Make sure your money works hard for you!



# GET GOING!

The entrepreneurial journey is paved with pot holes and mountains to climb. Whether you've just started your own business or you're considering to give it a go, it's worthwhile to learn from the mistakes of others. Here are seven lessons you can take to heart:

## 1. DON'T LET A LACK OF FUNDS HOLD YOU BACK

Get your start-up off the ground with the least amount of capital required. Need more money to grow your business? Let this serve as motivation to work even harder and be more innovative.

## 2. LEAVE THE BIG-PICTURE THINKING FOR LATER

When you start your business, don't get bogged down in thinking about the future. Focus on achieving smaller, daily goals and celebrate your mini-wins as you edge towards bigger dreams.

## 3. LEARN HOW TO PRIORITISE

Write down your top three priorities. If your business is not on the list, chances are it's not getting the attention it needs to be successful.

## 4. BUILD AN A-TEAM

If you want your business to grow, you will need a solid team to support you. Look for people with skills and qualities that will complement your own.

## 5. TAKE ACTION

A great idea means nothing if you don't follow through. The best time is NOW! And when you start, don't give up.

## 6. PAY IT FORWARD

As the old proverb goes, 'you will reap what you sow'. Treat your fellow entrepreneurs with kindness and respect. Be generous with your knowledge. Karma can be a wonderful thing in the world of business.

## 7. BELIEVE IN YOUR BUSINESS

If you don't believe in your product or service, nobody else will. If you love what you do, success is sure to follow. Enjoy the journey!

Source: [teenentrepreneur.co.za](http://teenentrepreneur.co.za)



# YOUNG BLOOD

The late Mr Richard Maponya was a proudly South African entrepreneur who left an incredible legacy behind. Amongst others, he was a property developer and developed the first shopping mall in Soweto. While we can all learn from him and other big business icons who have been closing deals for many years, these young local entrepreneurs prove that age is just a number!

## SIZWE NZIMA – IYEZA EXPRESS

Inspired to make his community in Khayelitsha a better place, 21-year old Sizwe Nzima started a bicycle courier company that collects and delivers chronic medication to people's homes. The solution was simple, cost-effective and eco-friendly. Starting with just one customer in 2013 (Sizwe's grandmother), Iyeza Express now delivers medication to more than 1 000 homes, creating jobs and saving lives.

## MARNUS BROODRYK – THE BEANCOUNTER

Raised by a single mom who had to scrape money together for school fees, Marnus Broodryk comes from humble beginnings. His entrepreneurial spirit was evident from a young age. He washed cars and cut grass to help pay for his education. By the age of 24, he was a self-made millionaire. His accounting firm, The

Beancounter, is highly successful in helping small business owners make smart decisions.

## EZLYN BARENS – DREAMGIRLS ACADEMY

After leaving the events industry, Ezlyn Barends turned her passion for helping people into a job she loves. DreamGirls Academy empowers teens and young women through mentorship programmes, workshops and outreach projects.

## ALEX FOURIE – WEFIX

While studying BComm at Stellenbosch University in 2006, Alex Fourie's iPod broke. Music was his life, so he was devastated when he heard it could not be fixed. He decided to solve the problem himself.

After watching a YouTube video and buying parts online, Fourie fixed his iPod. And then his friend's and friends of friends. That's when he realised the potential for a business. Today, weFix has 12 branches nationwide and they fix phones, tablets and laptops.

## THATO KGATLHANYE & REA NGWANE – REPURPOSE SCHOOLBAGS

When Thato Kgatlhanye and Rea Ngwane stumbled upon an idea that could change the lives of children in their community, they simply had to forge ahead. And so Repurpose Schoolbags was born. Made from recycled plastic, the schoolbags are fitted with a solar panel and LED light, which means children can study at night even when they don't have electricity.

Source: [experthub.info](http://experthub.info)



# BURDEN OF PROOF

**DEFINITION:** the responsibility to provide proof for something

In a debate, both the proposition and the opposition team have the burden of proof. This means each team has to provide evidence to support any claims made in a motion.

For example, if your team proposes that artificial intelligence is dangerous, you cannot base your argument on a personal fear of robots (although we agree, they can be scary!). Instead, you can prove your claim by referring to a number of credible news sources, like TED Talks or any Elon Musk interview where he talks about AI.

If you don't give a reason for your statement, you can easily end up with a weak argument. For example, by simply saying South Africa should ban alcohol because it is bad. Why is it bad? Who is it bad for? What is the meaning of 'bad' in this context? You will have a much stronger argument if you say alcohol should be banned because it damages the user's health.

Visit [sadebating.org](http://sadebating.org) to watch videos of local and international debating tournaments.



## CLASS ACTIVITY: LET'S DEBATE!

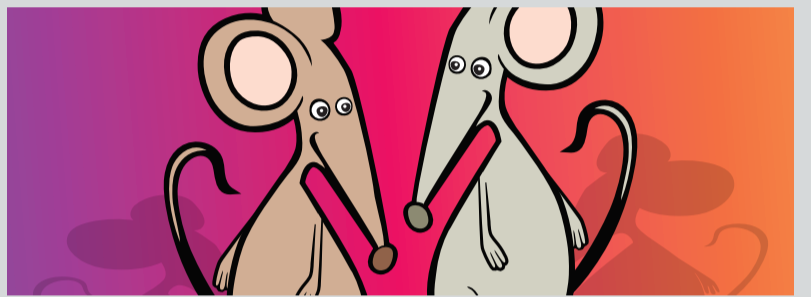
Divide the class into teams of three learners. Choose one of the following topics for an impromptu debate:

- Owning a pet should be mandatory
- Androids are better than iPhones
- South Africa should have a king instead of a president
- Artificial intelligence is dangerous
- Beauty pageants should be banned
- Rap music is the best kind of music
- The Kardashians have a positive impact on society
- Unpaid internships should be against the law
- Gaming should be an Olympic sport
- Sodas should have an age restriction of 18 years and older

# HOW NOT TO BE FAMOUS



VUYO AND GEMMA ...



Petra's big brown eyes were wet with tears. Her lips trembled as she hurled her phone against the bedroom wall with such might the screen shattered. She broke down. Her life was OVER.

Just last week she was dubbed the 'Queen of Instastories'. Petra loved to share snippets of her day with her more than 3 000 followers. It was such a fun way to connect with her friends and make new ones. She was so popular! Everyone adored her.

But there was one particular mouse that Petra adored. She thought he was gorgeous! Fur kind of messy, grin kind of cheeky, all kinds of lovely. In Science class, she tapped her best friend Louisa on the shoulder. 'So... Trevor is kinda cute, don't you think?' she whispered. 'Mmmm... not my type,' her friend replied with a shrug.

Unbeknownst to Petra, Tuli overheard their conversation. She also had a crush on the new boy in class. And Trevor was definitely her type. There was no way she was going to let 'silly Petra with her silly stories' snap him up before her eyes. She had a plan.

During break, Tuli smuggled Petra's phone out of her bag, opened Instagram and posted a series of stories to Petra's page. She slipped the phone back in the bag and went to class with a snigger.

When the bell rang, Petra couldn't get home fast enough. Her phone has been beeping non-stop. Oh, how she loves her little (but not so little) Instagram community. This afternoon she's going to do a story on this new fur product she discovered. It's a... Wait. What? Petra looked on in horror at the mean comments growing by the second.

@cool\_cat Wow you're so vain. Unfollow.

@trish123 Always liked your stories and thought you were actually nice in real life! Oh well, thanks for showing your true colours!

@im\_cara noooooooo she didn't! @nettanow you see this, girl? I'm done ha ha ha

@leboGang You're the reason I hate Instagram

Petra was crushed. How was she supposed to show her face at school again? And what must Trevor think? Will she ever survive this utter humiliation?

What do you think Petra should do? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



# IS IT A POEM? IS IT A RAP SONG? CAN IT BE BOTH?

Poems have come a long way since Shakespeare's sonnets in the Elizabethan era. Today, Instapoetry, free verse and spoken word poetry, like rap songs, are paving the way for more experimental work and budding young poets like you!

Modern poems are often shorter than traditional poems – perfect to share on social media – and they are written in a language we can relate to. Once you dive into the depths of poetry, you will discover emotions you didn't even know existed.

Still unsure whether poetry makes your heart sing? You might have a change of heart after reading the work of these contemporary poets!

## KOLEKA PUTUMA

Koleka is a homegrown poet from Cape Town. Her debut collection of poetry, *Collective Amnesia*, has won a number of awards. She challenges the status quo with her writing, which means she identifies new and better ways of doing things in the social and political realm. Koleka is also a theatre director and playwright.

*Fixed gaze and clenched breath,  
stapling your thoughts together  
rehearsing how to say  
I'm fine  
Just in case someone calls to ask  
How are you?*

Instagram: @kolekaputuma

## BOTHLALE BOIKANYO

In 2012, at only 11 years old, Bothlale won SA's Got Talent with a powerful performance of her spoken word poetry. It was no overnight success for her. She started writing poetry at the age of 6! Today, Bothlale is a successful artist and actress who continues to surprise her audience with her inspirational work.

*Africa my roots  
Africa my pride  
Oh Africa, my mother land  
I fly so rich and gifted  
Our nation filled with diversity of cultures  
Cultures of bana ba mmala wa sebilo  
Oh Africa. Hear me cry.  
Crying for the spirit of ubuntu  
What happened to those days when  
human knew their place  
And children respecting their elders  
When no man could be found  
walking on the streets drunk  
Oh Africa. What happened to our roots.*

Instagram: @bothlaleboikanyo

## ATTICUS

The mystery man behind Instagram poet Atticus is a Canadian native. At his first public reading he wore a mask to keep his identity under wraps. He found fame on Instagram with short, free verse poems that turned out to be popular tattoos. Atticus is a fan of epigrams (clever

and amusing sayings) and aphorisms (a pithy saying that contains a truth).

*She was afraid of heights  
but she was  
much more afraid  
of never flying.*

Instagram: @atticuspoetry

## CHRISTOPHER POINDEXTER

This Florida-based poet is a keen observer of humanity. His short form poems are typed on an old typewriter and sprinkled with honest musings about life. With his poems scattered across Instagram and Tumblr, he is truly a poet for Generation Z.

*I will love  
you  
with the dust of  
who I was,  
with the skin that  
I am now,  
and with the bones  
that will one day  
decorate  
my tomb*

Instagram: @christopherpoindexter

## RUPI KAUR

Rupi, born in Canada, combines powerful words with simple line drawings. Her debut collection of poems, *Milk and Honey*, takes the

reader on a journey through painful experiences that ends in victory. She doesn't shy away from controversy. In 2015, Instagram banned one of her photos!

*you ask  
if we can still be friends  
i explain how a honeybee  
does not dream of kissing  
the mouth of a flower  
and then settle for its leaves*

Instagram: @rupikaur\_

## SARAH KAY

Despite her age, Sarah is only 31 years old, her spoken word poetry bares an old soul with more mature insights than your average granny. She has performed her poetry on the TED stage and platforms around the world. Her message of inspiration offers viewers an escape from their daily lives.

*They can give us all they got  
But they won't destroy us not as  
long as I'm still here  
I've walked these shoes until they're thin  
I've wandered halfway round the  
world and wandered back again  
The road is long the night is cold  
when I'm out there on my own  
Your face lit by the hallway lamp is  
how I know I'm home  
Still here, still here*

Facebook: @SarahKay

## YOUR TURN!

Write a poem about your favourite hobby.

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## WORD PLAY

Can you morph one word into another by changing one letter at a time? Each of the steps should form a word.

1. WORK	RACER	TOAD
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. MAKE	SOCKS	POND

Answers: 1. work, wore, woke, wake, make; 2. racer, races, racks, rocks, socks; 3. toad, told, bold, bond, pond

# CURL UP WITH A BOOK

When the weather refuses to play along for a game of soccer or Three Tins, don't despair. Rather visit your nearest library and escape to a world of fun and adventure with one (or both!) of these bestsellers:

## The Beast of Buckingham Palace by David Williams

Set in futuristic London, young Prince Alfred must venture beyond the gates of Bucking Palace to rescue his mother, the Queen, and the entire city. His once quiet, comfortable life turns upside down as he battles monsters and other fantastical creatures. Will he become a knight in shining armour?

Read this if you love action and adventure.

## Sulwe by Lupita Nyong'o

Sulwe, with skin as dark as the night sky, desperately wants to be bright and beautiful like her mother and sister. She hates being darker than her whole family and everyone at school. But on a magical journey through the midnight sky, she discovers the meaning of true beauty and this changes everything.

Read this if you love a heartwarming story.

Source: [exclusivebooks.co.za](http://exclusivebooks.co.za)

# SPARK A STORY

Are you stuck for a story? Choose one of the following idioms to inspire your creative writing:

**Idiom:** A bitter pill  
**Meaning:** A situation that is unpleasant but must be accepted

**Idiom:** All ears  
**Meaning:** Listening intently

**Idiom:** Beat around the bush  
**Meaning:** Avoiding the main issue

**Idiom:** Bite off more than you can chew  
**Meaning:** To take on a task that is too big to handle

**Idiom:** Curiosity killed the cat  
**Meaning:** Being inquisitive can lead to an unpleasant situation

**Idiom:** Burn the midnight oil  
**Meaning:** To work late into the night

**Idiom:** Bite the bullet  
**Meaning:** To finish something you don't want to do because you will have to do it eventually

**Idiom:** By the skin of your teeth  
**Meaning:** Just barely making it

**Idiom:** Devil's advocate  
**Meaning:** To offer an alternative point of view

**Idiom:** No pain, no gain  
**Meaning:** You have to work hard to get results

# SCRAMBLED

Unscramble the following words and write down your answers.

1. vrtnoinocesa \_\_\_\_\_
2. netudts \_\_\_\_\_
3. tmornvnenie \_\_\_\_\_
4. ayevh \_\_\_\_\_
5. rualnta \_\_\_\_\_
6. kacgpea \_\_\_\_\_
7. lisgibn \_\_\_\_\_
8. aplnrose \_\_\_\_\_
9. tmniuoa \_\_\_\_\_
10. cekslser \_\_\_\_\_

**Answers:** 1. conversation; 2. student; 3. environment; 4. heavy; 5. natural; 6. package; 7. sibling; 8. personal; 9. mountain; 10. reckless



Can you connect the idiom with its meaning?

- |  |  |
|--|--|
| 1. Barking up the wrong tree                         | A. Choosing between two unpleasant choices   |
| 2. Out of the woods                                  | B. Little or no chance of success  |
| 3. Caught between a rock and a hard place            | C. Things always get worse before they get better  |
| 4. Stealing someone's thunder                        | D. To emerge from a dangerous situation  |
| 5. Can't make an omelette without breaking some eggs | E. A pact whereby you trade something of supreme moral importance for a material benefit |
| 6. It's always darkest before the dawn               | F. The expected outcome from a specific situation  |
| 7. Burning bridges                                   | G. You can't make everyone happy   |
| 8. Par for the course                                | H. To misunderstand someone  |
| 9. A Faustian bargain                                | I. Damaging a relationship beyond repair   |
| 10. A snowball's chance in hell                      | J. Taking credit for someone else's achievement  |

**Answers:** 1. H; 2. D; 3. A; 4. J; 5. G; 6. C; 7. I; 8. F; 9. E; 10. B



# ADJECTIVES

Complete the sentences by using the correct form of the comparative adjective.

- Cyril's dog is \_\_\_\_\_ than Jenna's dog. (small)
- Knitting is \_\_\_\_\_ than sewing. (boring)
- My dad is \_\_\_\_\_ than yours. (funny)
- Jonathan's test result was \_\_\_\_\_ than Jessica's. (good)
- Soccer is \_\_\_\_\_ than rugby. (popular)
- I have \_\_\_\_\_ food than you on my plate. (little)
- This year the weather is \_\_\_\_\_ than last winter. (bad)
- Jack's car was \_\_\_\_\_ than the previous one he bought. (cheap)
- Thembisa is \_\_\_\_\_ than her brother. (clever)
- My house is \_\_\_\_\_ than yours. (far)

Answers: 1. smaller; 2. more boring; 3. funnier; 4. better; 5. more popular; 6. less; 7. worse; 8. cheaper; 9. cleverer; 10. further

# FIGURE OF SPEECH: IRONY

Irony is a literary technique used to convey the opposite of what is expected. An example of irony is when a fire station burns down. One would expect a fire chief to keep his building safe from fire!

In creative writing, irony can be used to create an amusing situation that illicit an emotional response from the reader. This is a great way to add an authentic layer to your story, since our real-life experiences are often the opposite of our expectations.

The best way to practise this writing technique is to look for every-day situations around you in which your ordinary expectations are contradicted, like when a friend posts a selfie on Instagram to complain about how much she hates selfies.

Explain the irony in each sentence:

A marriage counsellor files for divorce.

The animal activist owns a leather handbag.

An ambulance on its way to an accident scene is in an accident.

A traffic cop gets arrested for unpaid traffic fines.

The teacher fails an exam.

# COMPLETE THE SENTENCE

Choose a word below to complete each sentence.

plateau	scapegoat	repartee	unscrupulous
quartzite	seizure	squitters	reconciliation
succedaneum	reincarnation	inflation	abjudicator
pneumonia	quadrant	commemorate	revelation

- After a week of fevers and coughing, Jeffrey ended up in the hospital with \_\_\_\_\_.
- \_\_\_\_\_ is a belief that you return to Earth in a different form following death.
- Our new house is built on a \_\_\_\_\_.
- Thandi's sense of humour and gift of \_\_\_\_\_ charmed her guests.
- Tina used Renée as a \_\_\_\_\_ to cover her mistakes.
- Lebo has a tumour in the upper left \_\_\_\_\_ of his kidney.
- Last week's chicken soup gave Julie the \_\_\_\_\_ for three days.
- An unprovoked \_\_\_\_\_ is a symptom of epilepsy.
- My father ordered roses for Valentine's Day, but the florist sent a \_\_\_\_\_ of lilies instead.
- I picked up a \_\_\_\_\_ today on my daily walk.

Answers: 1. pneumonia; 2. reincarnation; 3. plateau; 4. repartee; 5. scapegoat; 6. quadrant; 7. squitters; 8. seizure; 9. succedaneum; 10. quartzite

# GENERAL KNOWLEDGE

- Which is the principal source of energy for the Earth? \_\_\_\_\_
- Which instrument is used to view objects underwater from a submarine? \_\_\_\_\_
- Which is the only metal that is in liquid form at room temperature? \_\_\_\_\_
- What is the capital of Sweden? \_\_\_\_\_
- What is the name of the substance that gives skin and hair its pigment? \_\_\_\_\_
- What are the two chambers at the bottom of your heart called? \_\_\_\_\_
- What is the hottest planet in our solar system? \_\_\_\_\_
- Botany is the study of? \_\_\_\_\_
- What are the young of frogs and toads called? \_\_\_\_\_
- Name the street in South Africa where two Nobel Prize winners once lived. \_\_\_\_\_

Answers: 1. Sun; 2. Periscope; 3. Mercury; 4. Stockholm; 5. Melanin; 6. Ventricles; 7. Venus; 8. Plants; 9. Tadpoles; 10. Vilakazi Street

# CHILLING WITH CHIMPS

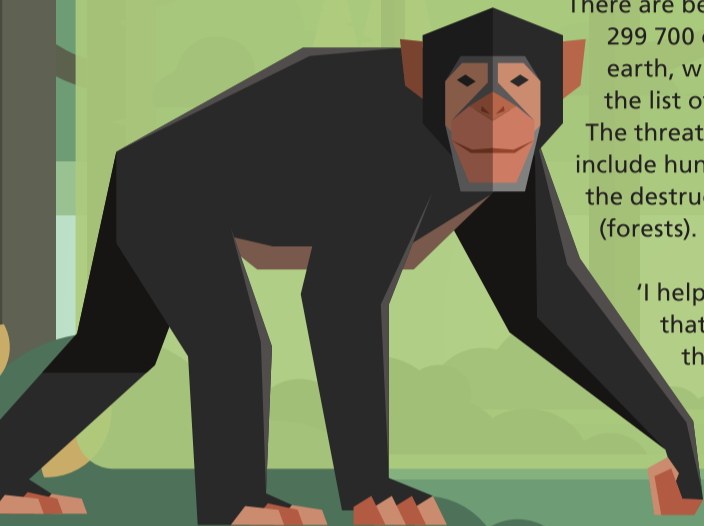
Did you know that chimpanzees, along with bonobos, could be our cousins? They have more in common with humans than with gorillas! Chimps are classified as great apes, not monkeys. How do you tell the difference? Unlike monkeys, apes do not have a tail. Gorillas and orangutans are also part of the ape family.

A great deal of our knowledge about chimpanzees comes from the groundbreaking work conducted by Dr Jane Goodall. She is a primatologist, a person who studies primates. For many years, she lived amongst the chimpanzees in Tanzania, observing and imitating their behaviour.

She discovered that, just like humans, chimps have emotions, use tools and enjoy a diet of fruit, plants and meat, which makes them omnivores. While they show love and affection through hugging, kissing and caring for each other, they can also be violent and aggressive.

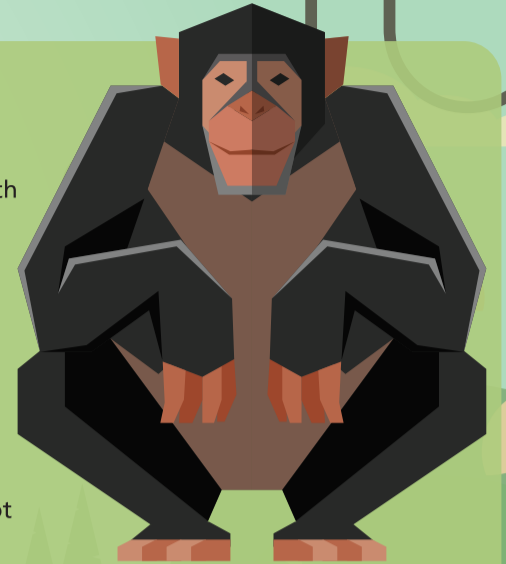
There are between 172 700 and 299 700 chimpanzees left on earth, which puts them on the list of endangered species. The threats to their survival include hunting, disease and the destruction of their habitat (forests).

'I helped people understand that humans are part of the animal kingdom, not separate from it.'  
Jane Goodall



## CHIMP STATS

- We share 98% of our DNA with chimpanzees.
- Chimps are social beings that live in large groups of up to 120 apes.
- Just like us, chimpanzees experience a wide range of emotions like joy, anger, grief, sorrow and depression.
- While they often live near water, these great apes cannot swim.
- They are native to the African continent.
- People like to adopt chimpanzees as exotic pets, but this is a bad idea. A large male chimp can weigh up to 90 kilograms and stand 1.7 metres tall. They also tend to become more aggressive with age.



## PROF THANDI SAYS

If you are passionate about wild animals and conservation, you could become a primatologist like Dr Goodall. You can study environmental science, zoology or geography.

Source: [savethechimps.org](http://savethechimps.org)

## BUILD A BRIDGE

Bridges are marvels of engineering. Spanning over long distances and short ones, these human-made structures are designed to carry people, cars, large trucks and trains across mountains and over water. They have to withstand the forces of nature.

Bridge engineers, also known as civil engineers, have to ensure that these structures are safe for us to use. This experiment will help you understand the physics of bridges and which shapes create structures strong enough to support these heavy loads.

### YOU WILL NEED

- Wooden lolly sticks
- Spaghetti
- Items of equal weight to test the strength of the bridge (cans of baked beans, wooden blocks, text books, etc.)
- Notebook
- Toothpicks
- Glue

### INSTRUCTIONS

1. In your notebook, draw a picture of the bridge you want to build.
2. Build three versions of your bridge design, each time using one of the materials from the list above.
3. Take note of the following: how much material you use for each bridge, any challenges you came across and which bridge you think will work best.
4. Make sure all three bridges span the same distance.
5. Use two chairs to suspend your bridge.
6. Now add the weights one by one to test the strength of each bridge. Add weights until the bridges break.
7. In your notebook, write down how much weight each bridge could hold.

Was your hypotheses correct? Give an explanation for your answer.

Source: [education.com](http://education.com)

## WANT TO BUILD COOL STUFF?



Become an engineer! Engineers use scientific thinking to build things we use every day. For example, buildings, cars, computers and aeroplanes. If you like to take an object apart, only to put it back together again to understand how it works, then you will love engineering.

Depending on your interests, you can specialise in any one of these fields:

- Civil – Design and build roads, bridges, airports, buildings, tunnels and dams.
- Electrical – Design and develop anything electronic from smartphones to electrical cars.
- Mechanical – Design power-producing machines like elevators and refrigerators.
- Chemical – Solve problems involving chemicals, fuel, food or drugs.
- Biomechanical – Design and build machines used in the medical field, like X-rays.

Whichever field you choose, you can bet your socks that there will be lots of problem-solving involved!

Source: [nationalgeographic.org](http://nationalgeographic.org)

# NATURAL DISASTERS: BUSHFIRES

Australia is no stranger to bushfires. Every year the country down under has to fight flames at some point during their dry, hot summer. But their most recent spate of bushfires raged for weeks on end, damaging more than 11 million hectares of bush, forest and parks. People lost their lives and many animals too. Even in South Africa, bushfires are as common as the Christmas beetle in December.

## WHAT IS A BUSHFIRE?

A bushfire is a type of wildfire that burns through wild vegetation, usually when the weather is hot and dry. Spurred on by strong winds, these fires can spread at a rapid pace of 10.8 kilometres per hour in forests and 22 kilometres per hour in grasslands. Since bushfires can smoulder for days, they are unpredictable and difficult to control.

## WHAT CAUSES BUSHFIRES?

A bushfire can start naturally, for example when lightning strikes dry

vegetation, or it can be caused by humans, either accidentally or on purpose. Although we can't blame climate change for bushfires, the warming planet does play a role in making them more destructive. A severe drought creates the perfect breeding ground for a spark.

## ARE BUSHFIRES ALL BAD?

Surprisingly not! Low-intensity fires can save trees from disease and harmful insects. In the Western Cape, our fynbos thrives after a fire. This is because the high temperatures help to germinate new seeds stored in the soil. Farmers and people who take care of nature reserves often use controlled fires to clear dry vegetation to prevent massive bushfires that can't be controlled.

Source: natgeokids.com



## NATURE-LOVING IDIOMS

Fill in the correct words to complete the nature idioms below:

- Idiom:** A late \_\_\_\_\_  
**Meaning:** A person who develops slower than his peers.
- Idiom:** As fresh as a \_\_\_\_\_  
**Meaning:** Being healthy and upbeat.
- Idiom:** A shrinking \_\_\_\_\_  
**Meaning:** A painfully shy person.
- Idiom:** To come up smelling \_\_\_\_\_  
**Meaning:** To be in an advantageous position.
- Idiom:** Someone with \_\_\_\_\_ fingers.  
**Meaning:** A person with excellent gardening skills.
- Idiom:** To hold out an \_\_\_\_\_ branch.  
**Meaning:** To offer peace in a situation.
- Idiom:** To let the \_\_\_\_\_ grow under your feet.  
**Meaning:** A delayed reaction to an opportunity.
- Idiom:** To hit the \_\_\_\_\_  
**Meaning:** To go to bed.
- Idiom:** To lead someone up the \_\_\_\_\_ path.  
**Meaning:** To deceive someone with misleading information.
- Idiom:** To let something run to \_\_\_\_\_  
**Meaning:** To allow the deterioration of something.

Answers: 1. bloomer; 2. daisy; 3. violet; 4. roses; 5. green; 6. olive; 7. grass; 8. hay; 9. garden; 10. seed

## BRAIN BUSTERS

- What is another name for your voice box?  
\_\_\_\_\_
- What is the only continent on which you won't find any bees?  
\_\_\_\_\_
- What is a female deer called?  
\_\_\_\_\_
- Which animal is the largest primate in the world?  
\_\_\_\_\_
- Which planet is famous for its big red spot?  
\_\_\_\_\_
- Butterflies are classified as which type of species?  
\_\_\_\_\_
- The muscles found at the front of your thighs are known as what?  
\_\_\_\_\_
- Your ears help to keep you balanced. True or false?  
\_\_\_\_\_
- Which American civil rights activist became famous for refusing to give up her seat on a bus?  
\_\_\_\_\_
- Who was the original King of Rock 'n Roll?  
\_\_\_\_\_

Answers: 1. Larynx; 2. Antarctica; 3. Doe; 4. Gorilla; 5. Jupiter; 6. Insects; 7. Quadriceps; 8. True; 9. Rosa Parks; 10. Elvis Presley

# PROFESSOR THANDI'S FUN SCIENCE EXPERIMENT

## HOW TO MAKE SPRINKLES DANCE

This experiment is all about good vibrations! See how you can make sprinkles move by using only sound.

Source: [kiwico.com](http://kiwico.com)

### YOU WILL NEED

- Bluetooth speaker
- Cell phone
- 6 x wooden lolly sticks
- Tape
- Clear plastic wrap
- Rubber band
- Sprinkles

### INSTRUCTIONS

1. Tape all 6 lolly sticks around the outside of the speaker facing up. Make sure the bottom ends of the sticks are level with the speaker and the top ends stick out above the speaker.
2. Cover the speaker and sticks in plastic wrap. Make sure the wrap stretches tightly over the top of the sticks.
3. Secure the wrap with a rubber band.
4. Place the sprinkles onto the plastic wrap and switch on the music.

### RESULTS

The sprinkles should be bouncing up and down to the sound of the music.

As the sound waves move, the air particles vibrate, which causes the sprinkles to move.

## BECOME AN ECO-WARRIOR

Want to be an eco-warrior that fights to keep our planet happy and healthy? Then check out these earth-friendly tips and share them with your family!

### RECYCLE AND UPCYCLE

Before you chuck a plastic packet in the bin, check if it can be recycled. Look for the recycling sign on the label. If it can be recycled, place it in an appropriate bag along with your empty glass bottles. Upcycling is a way to turn your household waste into something you can use. What can you create with egg cartons and milk bottles? Look around your house for anything that could be used for an art project.

### SAVE EVERY DROP

Don't keep the taps running while you are brushing your teeth. Instead, use a glass of water to rinse your mouth and toothbrush. And you probably know the drill by now, but here's a reminder: If it's yellow, let it mellow. If it's brown, flush it down.

### AVOID PLASTIC BAGS

Think of all the lives you could be saving – from little turtles to big whales – just by reusing your shopping bags. Ask your parents to invest in a canvas shopping bag that can be used for every trip to the shops.

### SWITCH OFF WHAT YOU DON'T USE

To save electricity, make a habit of turning off the power at the wall socket

when you're not using your television, kettle or any other electronic gadget. If you don't do this, the device goes into standby mode, which means it still uses electricity even if it is switched off.

### BECOME A PLOGGER

Already a runner? Great! Now you can combine your running with plogging. Say what? On your next run, simply put on a pair of latex gloves, grab a recycling bag and collect stray plastic on your route. Once the bag is full, drop it in a recycling bin – killing two birds with one stone!

### JOIN THE SPEKBOOM CHALLENGE

This is a fun project for the whole family and you don't need a big garden to take part. Simply plant a spekboom or a spekboom cutting anywhere with soil and voila! You have a greenhouse-gas-fighting super plant. Spekboom has the amazing ability to absorb more carbon dioxide than any other plant. How cool is that! It's also low maintenance and thrives in any environment.

### SAY NO TO PRODUCTS WITH PALM OIL

Many of your favourite products probably contain palm oil. Think biscuits, chocolate, bread and peanut butter. While palm oil isn't great for your health, it's really bad for the planet. The production of palm oil is largely responsible for deforestation, which leaves endangered species like the orangutan and pygmies without a home. Next time you feel like a treat, first check the label!

Source: [natgeokids.com](http://natgeokids.com)

