GROW SMART

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DEAR GROWSMARTER

Welcome to the second edition of the Growsmart newspaper for 2018. We have filled it with an exciting mix of creative writing, mathematics, science and interesting facts. Everything you need to quench your thirst for knowledge! So find a quiet spot and start reading.

We delve deeper into the art of debating. You will learn how to prepare for a debate with tips on presentation. Practise the motions in front of your classmates or the mirror.

While you might prefer language to science, we encourage you to read every page. Try the activities. Something you learn in science might spark an idea for a story.

If you dream of becoming an inventor, an interest in different subjects will give you a big advantage. Just think of Elon Musk – the man behind SpaceX, Tesla and Solar City. His knowledge of rocket science, engineering, physics, artificial intelligence, solar power and energy has made him a successful inventor. Read the story about inventors to find out how you can become one too.

Until next time,
The Growsmart Team

MATHS 1

CALCULATE THE FOLLOWING. YOU MAY USE ANY STRATEGY.

1. 309 241 – 49 635 = _____
2. 5 432 x 803 = _____
3. 2,34 x 0,2 + 10 = _____
4. 6 x 11 – 19 + 25 ÷ 5 = _____
5. 42 152 + 28 945 + 76 361 = _____
6. 87 546 – 43 968 = _____
7. 3 107 x 35 = _____
8. 7 140 ÷ 15 = _____
9. 4 ⅜ + 2 ⅛ = _____
10. ⅖ of 300 = _____
11. 5 ⅗ - 2 ⅕ = _____
12. 59,5 + 25,5 = _____
13. 7 000 + 456 + 98 734 = _____
14. 78 954 – 4 563 = _____
15. 456 x 64 = _____
16. 3 ⅘ + 5 ⅗ = _____
17. 5 ⅘ - 3 ⅖ = _____
18. 294 ÷ 21 = _____
19. 11 523 + 21 275 + 7 356 = _____
20. 69 157 – 17 339 = _____

Answers: 1. 259 606, 2. 4 361 896, 3. 10,468, 4. 52, 5. 147 458, 6. 43 578, 7. 108 745, 8. 476, 9. 6 ½, 10. 120, 11. 3 ⅖, 12. 86, 13. 106 190, 14. 74 391, 15. 29 184, 16. 9, 17. 2 ⅖, 18. 14, 19. 40 154, 20. 51 818

MATHS 2

CALCULATE THE FOLLOWING. YOU MAY USE ANY STRATEGY.

1. 976 x 54 = _____
2. 7 777 ÷ 7 = _____
3. 6 ⅐ + 2 ⅔ = _____
4. 3 ⅗ - 1 ⅕ = _____
5. 43 489 + 345 987 + 307 = _____
6. 495 089 – 85 847 = _____
7. 3 097 x 249 = _____
8. 4 ⅛ + 3 ⅜ = _____
9. 20% of 400 = _____
10. 11,5 – 1,5 + 10,5 = _____
11. 0 x (18 – 3) + (10 ÷ 2) – 2 = _____
12. 787 – 614 = _____
13. (6 x 10 000) + (8 x 1 000) + (5 x 100) + (3 x 1) = _____
14. 84 509 + 33 095 = _____
15. 96 974 – 5 381 = _____
16. 547 x 42 = _____
17. 738 ÷ 18 = _____
18. 12 470 + 5 300 ÷ 10 = _____
19. 6 - 4 ¾ = _____
20. 17 x 0 + 41 = _____

Answers: 1. 52 704, 2. 1 111, 3. 8 ¾, 4. 2 ⅖, 5. 389 783, 6. 409 242, 7. 771 153, 8. 7 ½, 9. 80, 10. 20,5, 11. 3, 12. 173, 13. 68 503, 14. 117 604, 15. 91 593, 16. 22 974, 17. 41, 18. 13 000, 19. 1 ¼, 20. 41

MATHS 3

ANSWER AS MANY AS POSSIBLE.

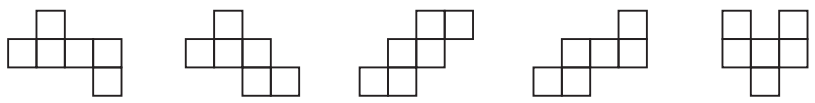
1. 387 x 24 = _____
2. 36 – 24 ÷ 6 = _____
3. 643 189 + 12 387 + 4 230 = _____
4. 976 453 – 68 397 = _____
5. 6 907 x 28 = _____
6. 7,4 + 0,82 = _____
7. 7 ⅗ + 4 ⅘ = _____
8. 4 ⁴⁄₁₁ - 2 ⁷⁄₁₁ = _____
9. ¾ of 120 = _____
10. 1 643 884 + 262 206 = _____
11. 9300 ÷ 30 = _____
12. 315 x 210 = _____
13. 2 500 x 40 + 1 = _____
14. ⅗ x 300 = _____
15. 1,5 ÷ 3 = _____
16. 100 – 12 ÷ (8 + 4) = _____
17. 567,38 – 197,2 = _____
18. 456 954 + 364 637 = _____
19. 520 834 - 634 = _____
20. 2 100 x 25 = _____
21. 3 375 ÷ 125 = _____
22. 3 ¾ + 5 ½ - 3 ⅜ = _____
23. 214 ÷ 2 x (14 – 9) = _____
24. 40 + 200 x 200 = _____
25. ⅘ x 3 = _____
26. 324 + 17,5 – 6,5 _____
27. 0,048 ÷ 8 = _____
28. 1 678 + 8 694 = _____
29. 3 784 – 1 231 = _____
30. 5 234 + 41 423 + 52 312 = _____

Answers: 1. 9 288, 2. 32, 3. 659 806, 4. 908 056, 5. 193 396, 6. 8,22, 7. 12 ⅖, 8. 1 ⁸⁄₁₁, 9. 90, 10. 1 906 090, 11. 310, 12. 65 150, 13. 10 0001, 14. 180 15. 0,5 , 16. 99, 17. 370,18, 18. 821 591, 19. 520 200, 20. 52 500, 21. 27, 22. 5 ⅞, 23. 535, 24. 40 040, 25. ⅘, 26. 335, 27. 0,006, 28. 10 372, 29. 2 553, 30. 98 969

MATHS 4

SEE IF YOU CAN SOLVE EACH PROBLEM.

1. Which one of the following figures below cannot be folded along the lines to form a cube?



(A) (B) (C) (D) (E)

2. The symbol represents a number. What value of ◊ makes this sentence true?

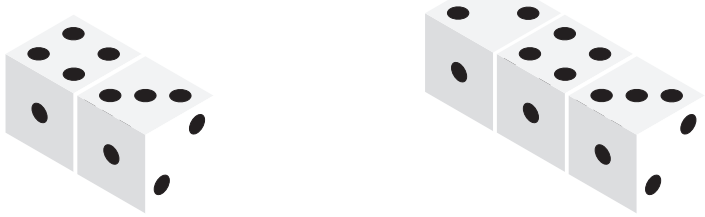
$$\frac{\Diamond}{2} = \frac{32}{\Diamond}$$

(A) 4 (B) 64 (C) 8 (D) 17 (E) 16

3. The numbers in the pattern 2, 7, 12, 17, 22… increase by 5. The numbers in the pattern 3, 10, 17, 24, 31… increase by 7. The number 17 occurs in both patterns. If the two patterns are continued, what is the next number that will be seen in both patterns?

(A) 17 (B) 27 (C) 38 (D) 42 (E) 52

4. If we place dice side by side in a row on a table, only some of the faces are visible: With 2 dice in the row 8 faces are visible; with 3 dice in the row 11 faces are visible, etc. If 75 dice are placed in a row, how many faces will be visible?

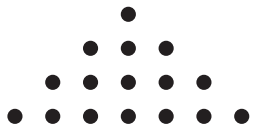


(A) 75 (B) 227 (C) 225 (D) 300 (E) 275

5. A wooden cube, 2 cm long on each side, has a mass of 100 grams. Another cube of the same wood is 6 cm long on each side. What is its mass?

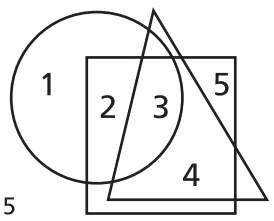
(A) 1 000 g (B) 2 700 g (C) 800 g (D) 900 g (E) 300 g

6. 1st row:
   2nd row:
   3rd row:
   4th row:



How many dots would be in the 7th row?
(A) 7 (B) 10 (C) 11 (D) 13 (E) 15

7. Which number is in the square and the circle but is not in the triangle?



(A) 1 (B) 2 (C) 3 (D) 4 (E) 5

8. The sketch shows the first three patterns in the sequence that John is building with coins. How many coins will he need for the fiftieth pattern in the sequence?

(A) 140 (B) 150 (C) 153 (D) 155 (E) 160

9. Penny has twice as many coins as Alex. If Penny gives Alex four coins, they have the same number of coins. How many coins do they have in the beginning?

(A) 8 (B) 12 (C) 16 (D) 18 (E) 24

10. How many four-digit numbers are there in which the sum of the digits is 4?

(A) 17 (B) 16 (C) 18 (D) 19 (E) 20

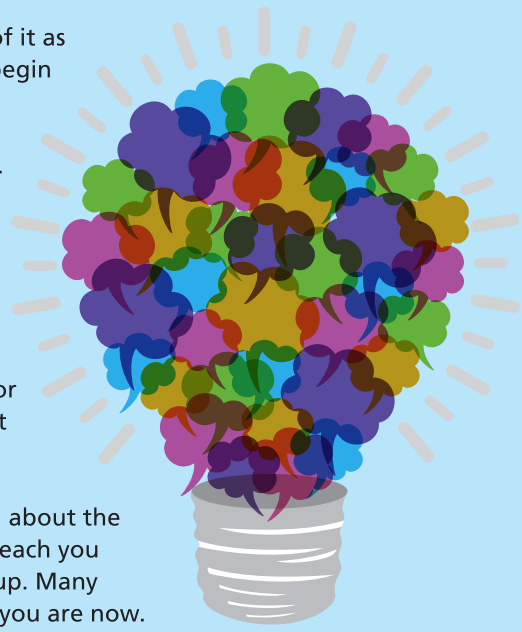
Answers: 1. E, 2. C, 3. E, 4. B, 5. B, 6. D, 7. B, 8. B, 9. E, 10. E

BEFORE YOU SPEAK YOUR MIND

Your first debate can seem scary and intimidating. That's okay! No debater in the history of debating sounded like a professional when they started. It's important to remember the main goal of debating: to learn and understand the world around you. This means that winning or losing is not the end goal.

When you debate, you get the chance to speak to other debaters about topics that are interesting and relevant to you. Use these opportunities to learn new ways of thinking. Of course, everyone prefers to be a winner. But you can often learn more by losing than you can by winning. If you lose, you can always try again. Here are some tips to prepare you for your first debate:

1. Read or speak to people about the topic. If you can understand the idea behind the topic, you can speak and debate about it with more confidence.
2. Make sure everyone in the team understands the topic in the same way. Not only will this make your team seem clearer, but it will also help you understand the topic better.
3. Practise your speech. When you know what you are going to say, you will be more confident.
4. Understand the order of your arguments. It's important to present your arguments in a way that makes sense (we share more on this in the article below). Think of it as telling a story. You can't begin with the end.
5. Remember that debating is not only about winning. It's all right to lose your first debate but whether you win or lose, make sure to talk to your opponents afterwards. Not only will you understand why you lost or won better, but you might even make a new friend!



Debating is a fun way to learn about the world around you and it will teach you valuable lessons as you grow up. Many good debaters started where you are now. If you work hard and try your best, you could become one of the best debaters!

WHAT IS YOUR PLAN OF ACTION?

In debating, the **strategy** is your plan of action. It involves two things:

1. The structure and timing of your speech;
2. Understanding your argument and your opposition's argument.

STRUCTURE AND TIMING

During your debate, you have 5 minutes to present your argument to the judges and audience (no pressure!). For the reply speech, you have only 3 minutes. Structure your speech in such a way that it makes sense and that you mention your most important points first. Also make sure that you don't have too much to say or not enough.

UNDERSTANDING BOTH SIDES OF THE ARGUMENT

If you understand your opposition's argument, you can prepare for the right response. Think of the important things the other team has to prove in their argument. How will you respond?

"If you can't explain it simply, you don't understand it well enough."
Albert Einstein

REMEMBER THESE WORDS?

MOTION: The motion refers to the topic of the debate. Motions can start with the words: "This house believes that…" or "This house would…"

REBUTTAL: A reply that intends to ask questions about the opposing team's argument.

PROPOSITION: This team has to agree with the topic and argue for it.

OPPOSITION: This team has to disagree with the topic and argue against it.

IT IS ALL ABOUT WHAT YOU SAY...

In a debate, **content** is about what arguments you use and how reasonable, relevant and realistic they are. Content is also about the quality of your rebuttal and your ability to defeat the arguments from the opposing team. Your content should show that you understand the main issues in the debate.

When you understand the main issues, you can provide the strongest arguments in support of these issues or against them. Good content means your arguments are persuasive and your speech is compelling.

When you prepare for your speech, think about the different groups of people the motion will affect. How will it affect your school, your community or the country? Does the motion solve a problem? If not, why? Let these questions guide your content.

Remember, your argument must always be logical. Use clear explanations and examples. Start your speech with the strongest and most relevant arguments.

Writing a speech is almost like writing a story – your speech should also have a beginning, middle and end.

In the beginning, briefly tell the judge what your argument is about. In the middle, explain the key points of your argument. Make use of examples. The end is a conclusion of what the point of the argument is.

Keep your argument as short as possible with a focus on your most important points. After every argument in your speech, tell the judge what you are trying to prove with the argument.

Your explanation should show why your arguments are the strongest in the debate. Remember not to contradict your arguments. That means don't say one thing and then say the complete opposite.

...AND HOW YOU SAY IT

Style in a debate refers to the way you speak. There are many different ways to have a good style. This means not one style is considered the best or most appropriate.

When speaking, it's important that you feel comfortable with the way you speak and that you can explain yourself in such a way that your fellow debaters and the judges can understand.

You won't lose points for things such as having an accent or speaking impairment. Just make sure you deliver your arguments persuasively in whichever way you choose. There are a few general ideas to keep in mind if you want to improve the impact of your speech.

GOOD STYLE INVOLVES THREE THINGS:

1. good use of your voice;
2. good use of gestures or hand movements;
3. your ability to engage with your audience.

Use these three elements to successfully improve your speech and the debate as a whole. If you've found a way of speaking that allows you to speak confidently in front of other people, you've already made big steps towards better style! To get even better, practise in front of a mirror or your friends and family.

A DEBATE IS MADE UP OF THREE IMPORTANT ELEMENTS: STRATEGY, CONTENT AND STYLE.

REMEMBER TO HAVE FUN WHEN YOU DEBATE! AND ALWAYS RESPECT YOUR TEAMMATES, OPPONENTS AND JUDGES.

ANYONE CAN BE AN INVENTOR – YOU TOO!

An inventor is someone who comes up with innovative ideas that solve problems or simply make life easier. For instance, before Alexander Graham Bell invented the telephone in 1876, people had to communicate over long distances by sending a telegram through a device called the telegraph (which was invented by Samuel Morse).

Was that like sending an email, you ask? Not quite! The telegraph used electricity to send coded messages through wires. But these coded messages, called Morse code, were complicated to use and it still took a long time for the message to reach its intended recipient.

Inventions have the power to change the world and make it a better place to live. Just think about all the things you use daily. They were invented by someone. Can you imagine life without the World Wide Web? Thanks to Tim Berners-Lee you don't have to. He is a British engineer and computer scientist who created the internet as we know it today.

Kids can be inventors too! Earmuffs were 13-year-old Chester Greenwood's solution to cold ears while ice skating. He used a piece of wire and padded the ends. At first, he faced laughter from his friends. But this didn't bother Chester. He could stay outside to ski long after his friends had to go inside freezing. Soon they were all wearing earmuffs made by Chester. He applied for a patent – which means only he could make or sell earmuffs for a certain period – and for the next 60 years that is what he did. This simple solution to a problem made Chester a very wealthy man.

How can you use your imagination to change the world? Here are a few tips to get your creative juices flowing:

- Find a problem that your invention will solve.
- Carry a notebook with you to write down ideas as they come to you.
- Do an online search to make sure your invention doesn't already exist.
- Be inspired by other inventors – read books about them and learn how they approached problem-solving.

ACTIVITY: Can you think of a problem that needs solving?

Source: harveymackay.com

A Vuyo and Gemma story

MICHAEL GETS CHEESED OFF

One bright Monday morning there was a flurry of activity in Number 3 Gouda Street. The quadruplets were getting ready for school. While making four double cheese sandwiches (with extra mayo for Jonah), Gemma heard a squeaky squabble upstairs.

"We're going to be late! And it's your fault… again!" Michael gave a sharp peep. "But I can't find my science project! It's… it's due today!" Emma replied with wide eyes. Science is Emma's favourite subject. She worked very hard last week to build a volcano that erupts.

But Michael had no time for Emma's troubles. He loved punctuality as much as she loved science. That means he hated being late. He grabbed his backpack and stormed off. The front door slammed behind him.

As Michael turned the street corner, he saw the exhaust fumes of the bus in the distance. His tail started bouncing like a rubber ball. His cheeks flared. He will never be on time now! This. Was. His. Worst. Nightmare. He kicked a nearby trash can with such might that it went flying in the air, leaving a trail of Simba packets and empty Coke bottles behind. As he looked up, he saw a discarded lettuce leaf land on the prettiest furry face in school. It belonged to Violetta. A splash of tomato sauce has turned her pink bow into crimson.

Michael hung his head in shame. Could the day get any worse? "One, two, three, four, five…" Violetta said softly. "That's what I do when I get angry. I count to ten. And think happy thoughts," she said as she flicked the piece of lettuce aside.

Michael looked away and mumbled an apology. How can she even talk to him after what he did? Violetta continued: "It's okay. I used to lose my cool too. But taking a deep breath and counting really helps. You should try it."

Together they picked up the remnants of Michael's fit of rage. His mood started to lift. As they made their way towards school, he thought for once it's not so bad to miss the bus. And he realised all his anger was actually over nothing.

DO YOU KNOW WHAT THESE WORDS MEAN?

nervous
censure
suspicion
interrupt
nursery
orthodox
survivor
venture
prediction
routine
unanimous
offensive
realism
perforate
foreigner
liability
revival
tradition
volunteer
deprive
stereotype
glimpse
impulse
reputation
paradox
colleague
sustain
butterfly

assertive
reduction
witness
challenge
initial
fascinate
despise
concede
abolish
surgeon
horizon
applaud
mainstream
appetite
pursuit
exemption
adventure
abundant
breathe
acquaintance
gesture
passage
suggest
absence
invasion
consensus
recycle
address

evaluate
judicial
shelter
collection
posture
quarrel
network
science
anticipation
hesitate
neighbourhood
reconcile
workshop
impress
restless
cooperation
dilemma
collect
strength
dominant
abnormal
serious
colourful
assembly
productive
extinct
reckless
autonomy

vigorous
marathon
emergency
diplomat
equation
faithful
obstacle
presence
discount
complex
disappoint
publish
employee
dialogue
transform
shortage
multimedia
ancestor
emphasis
umbrella
curriculum
organise
convenience
tolerant
conversation
biography
contempt
resident

champion
momentum
literature
preference
opponent
wardrobe
combination
convince
evolution
breakdown
expertise
community
conductor
isolation
magnitude
undermine
deteriorate
quotation
gregarious
authorise
reservoir
rehearsal
eliminate
elaborate
orchestra
attention
inspector
criticism

DO YOU PRONOUNCE THESE WORDS CORRECTLY?

If not, don't worry. You're not alone! The list below contains some of the most mispronounced words in the English language. But with a bit of practise, you will have these pronunciations (pro-nun-see-a-shuns) under control.

Jewellery **jew-el-ree**
Necklaces, rings or bracelets

Anemone **uh-nem-uh-knee**
A brightly coloured flower that forms part of the buttercup family

Choir **kwai-er**
An organised group of singers

Antarctic **ant-ahrk-tic**
Referring to the southern pole region

Library **libe-rare-ee**
A building or room containing a collection of books, films and music

Phenomenon **fi-nom-uh-non**
A remarkable person or thing

Mischievous **miss-che-vus**
Causing trouble in a playful way

What other words do you struggle to pronounce? Write them down and ask your teacher to spell them out for you.

FRUITY IDIOMS

Idiom: The apple of one's eye.
Meaning: A favourite or well-liked person.

Idiom: To go bananas.
Meaning: To become extremely angry or excited.

Idiom: To hear something through the grapevine.
Meaning: To hear news from someone who heard the news from someone else.

Idiom: The apple never falls far from the tree.
Meaning: A person's personality traits are close to those of the person's parents.

Idiom: Go pear-shaped.
Meaning: A plan has gone wrong or it failed.

Idiom: Compare apples and oranges.
Meaning: To compare things that are very different.

Idiom: To bear fruit.
Meaning: Something has turned out successful.

Idiom: One bad apple spoils the whole bunch.
Meaning: It only takes one bad person to ruin the entire group.

Idiom: The cherry on the cake.
Meaning: The final thing that makes something perfect.

Idiom: To polish one's apple.
Meaning: To flatter someone.

Idiom: To cherry-pick.
Meaning: To pick the best of something.

Idiom: To have sour grapes.
Meaning: Someone is angry because they have not achieved what they wanted.

Idiom: The fruits of your labour.
Meaning: The benefits of your hard work.

THE AMAZING ADVENTURES OF LEWIS PUGH (1969–)

British-South African endurance swimmer and ocean advocate, Lewis Pugh (you pronounce it: loo-is pew), is the only person to complete a long-distance swim in every ocean in the world. He is often called the "Human Polar Bear" because he swims in sub-zero temperatures to create awareness for climate change.

One such expedition took him to the icy waters of the North Pole where he achieved what no human has ever attempted: swimming for 80 minutes and 50 seconds in water of minus 1.7°C.

In 2006, he swam the length of the River Thames in England. This journey took him 21 days and he got very sick from the polluted water.

Braving the waters in only a Speedo, swimming cap and goggles, he devotes his life to highlighting environmental issues facing the world's oceans.

Source: lewispugh.com

TIPS FOR WRITING DIALOGUE

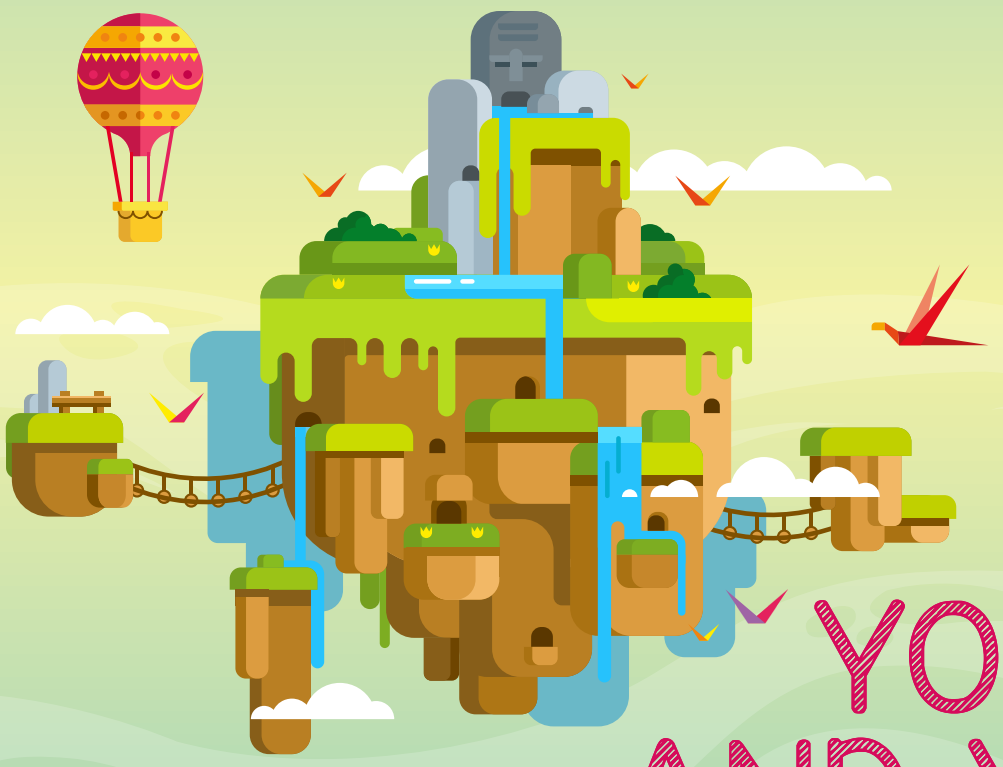
You have conversations with your friends, parents and teachers all the time, so writing dialogue should come easy, right? But it's often the part of the story writers struggle with the most. It can be difficult to make a fictional person sound real. Fortunately, we have a few tricks up our sleeves to help you write dialogue like a boss!

1. LISTEN

Yes, we give you permission to eavesdrop (gasp!). When you ride in the bus, eat your sarmie during break time or wait for your turn to bat, listen to the conversations taking place around you. Do you hear full sentences or people interrupting each other? (Sure, it's rude but we all do it!) Is the correct grammar being used? The secret about dialogue is to write it as it sounds.

2. READ IT ALOUD

Once you've written down your dialogue, read it aloud. Does it sound natural? Does it flow or do you detect a bump or two? Rewrite it until you can hear your character speaking. Avoid long, formal sentences. Nobody speaks like that!



3. RELAX

Remember, conversations aren't perfect. Listen to your character. Does he stutter? Is he nervous? Excited? Let your character steer the dialogue.

4. USE SLANG (IF APPROPRIATE)

These words and phrases are not suitable for formal writing, but they are most welcome in dialogue. Slang forms part of everyday conversations. It's typically restricted to a particular context or group of people. It includes words like "ag", "aikona" and "hoezit". The words you choose will help shape your character.

5. DON'T GO OTT

Don't go over the top (like we just did with the headline). Too much broken English and misspelt words will confuse your reader and make the text difficult to read.

"Have something to say, and say it as clearly as you can." - **Michael Arnold**

Source: creativekidstales.com.au

YOU'RE A POET AND YOU KNOW IT

Have you ever written a poem? You don't have to be a William Shakespeare or Maya Angelou to call yourself a poet. If you believe your poems aren't particularly good (at least not good enough to win a prize) don't despair. Even famous poets have written a few terrible poems.

The good news is that you are writing and you can always get better with practise. By learning a few techniques you can improve your writing and enjoyment of the process.

2 TYPES OF POETRY

Although there are many different types of poetry, they are divided into two groups: structured poetry and free verse. While structured poetry follows a particular rhythm and rhyme, free verse usually has no regular rhythm or rhyme. Experiment with both types of poetry to see which one you prefer.

TOOLS OF THE TRADE

You don't need much more than a pencil, paper and your imagination to start writing poetry. But adding a few tools to your kit will make it easier. A pocket notebook is like your cellphone – don't leave the house without it. You never know when an idea might strike and if you don't write it down, you won't remember it.

Dictionaries can give you ideas for a poem and also help you pick the best words for your poem's structure. The rhyming dictionary will be most helpful. It lists words that rhyme with the end sounds of other words. You should also write with a standard dictionary and thesaurus by your side.

START WRITING

Now that you have all the tools you need, you can start with the fun part: writing! This is also the hardest part, but once you get going, it will be difficult to stop. At first, forget about finding the perfect word or rhyming pattern. Just let your thoughts move freely and write. If you get stuck, move on to the next verse. You can always go back and polish it later. This includes worrying about spelling and punctuation. Check that once you are finished writing your poem.

Lastly, but most importantly, don't be your own worst critic. Rather give yourself a high five every time you complete a new poem. The more poetry you write, the more poems you'll get right!

Source: poetry4kids.com

YOU'RE SWEET ENOUGH!

Doughnuts dripping in chocolate icing, warm gooey cookies, ice cream covered in Jelly Tots… Is your mouth watering yet? Just like most kids, you probably find sugary foods hard to resist. When sugar hits your tongue, it sends signals to your cerebral cortex (the largest part of your brain) where it activates your brain's reward system. This causes that warm fuzzy feeling you get when you take a bite of Grandma's koeksisters.

BUT WHAT IS SUGAR?

Sugar is a carbohydrate called sucrose, which is made up of two smaller carbohydrates: fructose and glucose. Once in your body, fructose turns into glucose. This becomes energy your body uses to function. When your body has used all the energy it needs, the leftover glucose is stored as fat.

SPOT THE SUGAR (IT'S EVERYWHERE!)

The white or brown sugar you add to your tea and cereal is called refined sugar. It is made in a factory by refining the sugar beet plant or sugar cane. Those cakes and cookies you love to eat? They taste sweet because of refined sugar. The tomato sauce you drown your chips in also contains sugar, along with many other savoury products you can buy in the shops. This type of sugar has no nutritional value, which means it contains no protein, vitamins, minerals or fibre.

Although your body needs carbohydrates to create energy, it doesn't mean you have to finish all the birthday treats at Tammy's party. Natural sugar is found in fruits, vegetables and milk products. Not only do you get energy from these foods, but you also get valuable nutrients.

SUGAR OVERLOAD

Too much sugar can have a big impact on your health. Sugary foods can make you feel full, so you might skip lunch or dinner and miss out on all the good stuff like protein and minerals. Here are just a few problems caused by a diet too high in sugar:

- Tooth decay
- Obesity
- Diabetes (your body can't use glucose normally)

If you eat a balanced diet of fruit, vegetables and milk products, you will get enough sugar to keep your body happy.

HEALTHIER SWAPS

Sweetened yoghurt →	Plain yoghurt with honey
Ice cream →	Frozen yoghurt
Sugary cereal →	Oats with banana or strawberries
Orange juice →	An orange

Source: cyh.com

ARE YOU EATING TOO MUCH SUGAR?

To keep your body healthy, you should eat no more than 6 teaspoons of sugar per day. One soft drink contains up to 15 teaspoons of sugar!

POETRY IN ACTION

WRITE A FUNNY POEM

Ready to have everyone in stitches? Grab your poetry toolkit and let's get funny! Write a funny poem (or three) and share them with your friends.

TIP:

Most funny poetry has rhyme and meter, which help to add a playful nature to the poem.

DID YOU KNOW?

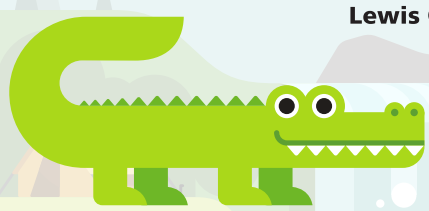
There is no word that rhymes with poem!

THE CROCODILE

How doth the little crocodile
Improve his shining tail,
And pour the waters of the Nile
On every golden scale!

How cheerfully he seems to grin!
How neatly spread his claws,
And welcomes little fishes in
With gently smiling jaws!

Lewis Carroll



MATCH THE WORDS THAT RHYME

Words that rhyme sound the same, but they don't necessarily look the same. See if you can match the rhyming words. Draw a line to connect the two words.

night	feather
fly	shine
pine	height
leather	hours
dress	coarse
flowers	pie
horse	guess

NATURAL DISASTERS

HOW TO SURVIVE A DROUGHT

Natural disasters can be scary. But the more you know about them, the better you can deal with them. In South Africa, we have had earthquakes, floods, storms and wildfires. At the moment, the Western Cape is experiencing severe water shortages, so we are going to focus on how to survive a drought.

WHAT IS A DROUGHT?

Droughts occur when a region has not had enough rainfall for more than one season. Even during normal rainfall, if people use too much water, a drought can occur. We need water to live. So do animals and plants. If we don't have enough water, it can affect our community and environment in many different ways. Saving as much water as possible is the key to surviving a drought.

5 WAYS TO SAVE WATER

Don't leave the tap running while you're washing your hands and face. (Or make your own water-wise tap.)

Close all taps properly.

When you brush your teeth, use a cup of water.

Fill a basin or bucket with a bit of water and use this to wash.

Instead of pouring water down the sink, pour it into a bucket and use the water to flush your toilet.

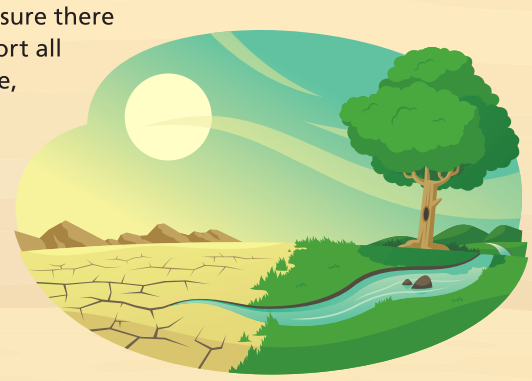
MAKE YOUR OWN WATER-WISE TAP

1. Find an empty 2-litre plastic bottle with a bottle cap.
2. Use a screw to make a tiny hole at the bottom end of the bottle.
3. Fill the bottle with water and seal it with the bottle cap.
4. When you have to wash your hands or face, gently press the bottle or unscrew the cap to release the water.

WORK WITH WATER: BECOME A HYDROLOGIST

If you are passionate about water and preserving it for future generations, make a career of it!

As a hydrologist, you will study everything about water. Including its properties, distribution and movement through the atmosphere. It will be your job to make sure there is enough water to support all life on earth. For instance, you will look at ways to minimise erosion and environmental pollution, use technology to forecast water supplies, floods, the spread of pollution and other events.



GROW YOUR OWN VEGETABLES

Imagine biting into a ripe tomato bursting with flavour. One you just plucked from your very own tomato plant! Growing your own vegetables is a rewarding experience. You will know exactly where your veggies come from and have healthy food to share with your family and friends.

STEP 1: BUY THE SEEDS

First, decide what vegetables you want to plant. Have a look at our seasonal guide for ideas. You can buy the seeds from your local nursery or supermarket. You can also get seeds from the vegetables you eat at home! Simply dry the seeds found in tomatoes, peppers or eggplant before you plant them. Some plants can be grown without seeds, such as potatoes. Place a few potatoes in egg boxes on the window sill. Wait for the eyes to sprout leaves before you plant the potatoes in soil.

STEP 2: PLANT THE SEEDS

Read the packet instructions to see if your vegetables need lots of sunshine or more shade. Find a suitable spot in your garden and add compost. If you don't have a garden, you can fill a container with soil and compost. Follow the instructions to know how deep to plant your seeds.

STEP 3: WATER YOUR SEEDLINGS

During a drought, it's best to plant vegetables that don't need a lot of water. For example corn, spinach, cucumber, eggplant, melon, sweet potato and tomato. By planting your vegetables close together, you can also save on water. The leaves of the plants create a canopy that covers the soil and prevents the water from evaporating.

SEASONAL VEGGIES

To give your vegetables the best chance of survival, plant them in season. Follow the guide below.

Spring: Lettuce, peas, radishes, spinach, beetroot, onions and garlic
Summer: Tomatoes, beans, sweetcorn, sweet peppers and summer squash
Autumn: Broccoli, cabbage and carrots

Source: uno-zwei-tutu.com

SAVE THE RAINFORESTS

In the heart of South America lies a tall, dense jungle alive with squirrel monkeys, brightly-coloured macaw parrots and beautiful butterflies. The Amazon is the world's largest tropical rainforest and home to millions of different species. Along with smaller rainforests around the world, it covers only 6% of the Earth's surface. But these rainforests contain more than half of the planet's plant and animal species.

Unfortunately, **deforestation** is causing large parts of rainforests to disappear. This has a negative impact on our environment because rainforests help regulate Earth's temperature and weather patterns. Here are four more reasons why saving the rainforests is so important:

1. Millions of different species live in the rainforests. If we destroy their home, they will become extinct.
2. As humans, we release harmful carbon dioxide into the atmosphere. For example, every time you exhale or when we burn fossil fuels to produce electricity. Trees absorb this and provide us with the oxygen we need to breathe. The Amazon alone produces 20% of our oxygen!
3. Rainforest plants have excellent medicinal properties. Over 25% of the medicines we use today have their origins in the rainforests. For example, quinine that treats malaria and cortisone that treats many different conditions, such as eczema and arthritis.
4. Many indigenous tribes live in the rainforests. If we continue to destroy them, they will be left homeless.

WHAT CAN YOU DO?

You can help save the rainforests by reducing your use of paper. Only print something from the computer if it's really necessary. If you have to print, use both sides of the paper. Make notes on scrap paper and recycle any paper you can't use anymore.

Source: theworldcounts.com

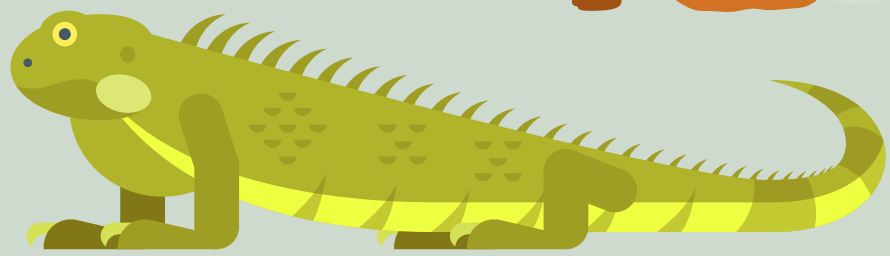
PROFESSOR THANDI SAYS:

Deforestation is the cutting down of trees in forests. Humans remove trees to create pastures for farm animals or space for houses. The wood from the trees are used to make products, such as paper and furniture.

A RUMBLE IN THE JUNGLE

We weren't joking when we said millions of different species call the Amazon jungle their home.
This rich ecosystem includes
40 000 plant species, 1 300 bird species,
3 000 types of fish, 430 mammals and
2,5 million different insects!

Source: natgeokids.com



IDIOM QUIZ

Fill in the missing word to complete the following foodie idioms:

1. (Very easy to do) A piece of _____
2. (Basic things you need to survive) Bread and _____
3. (To earn money to live) Bring home the _____
4. (Very cheap) Cheap as _____
5. (Upset or sad over something in the past) Cry over spilt _____
6. (Not to your interest/taste) Not your cup of _____
7. (Involved in many activities) Finger in every _____
8. (You should not completely believe something) Take with a pinch of _____
9. (Very important person) A big _____
10. (Very relaxed) Cool as a _____
11. (Life is easy) Life is a bowl of _____
12. (Crazy or eccentric person) This person is a _____

Answers: 1. Cake, 2. Butter, 3. Bacon, 4. Chips, 5. Milk, 6. Tea, 7. Pie, 8. Salt, 9. Cheese, 10. Cucumber 11. Cherries 12. Fruitcake

GENERAL KNOWLEDGE

1. What does a Giant Panda's diet consist of? _____
2. What is the first element on the periodic table? _____
3. What is the name of the largest ocean on Earth? _____
4. What do you call molten rock after it has erupted? _____
5. Which ship sank on her maiden voyage in 1912? _____
6. Who is the founder of Virgin Records and Virgin Airlines? _____
7. Which planet is known as the "Red Planet"? _____
8. Crawl, backstroke and butterfly are different methods of which sport? _____
9. Who painted the Mona Lisa? _____
10. How many sides does a hexagon have? _____
11. What is the name of the phobia that involves an abnormal fear of spiders? _____
12. Which year did the last male northern white rhino die? _____

Answers: 1. Bamboo, 2. Hydrogen, 3. The Pacific Ocean, 4. Lava 5. Titanic, 6. Sir Richard Branson, 7. Mars, 8. Swimming 9. Leonardo da Vinci, 10. 6 11. Arachnophobia 12. 2018

PROFESSOR THANDI'S FUN SCIENCE EXPERIMENT

INVISIBLE INK!

Put your secret agent cap on and get ready to send secret messages to your fellow agents. We're making invisible ink!

YOU WILL NEED

- Half a lemon
- Spoon
- Cotton bud
- A lamp
- Water
- Bowl
- White paper

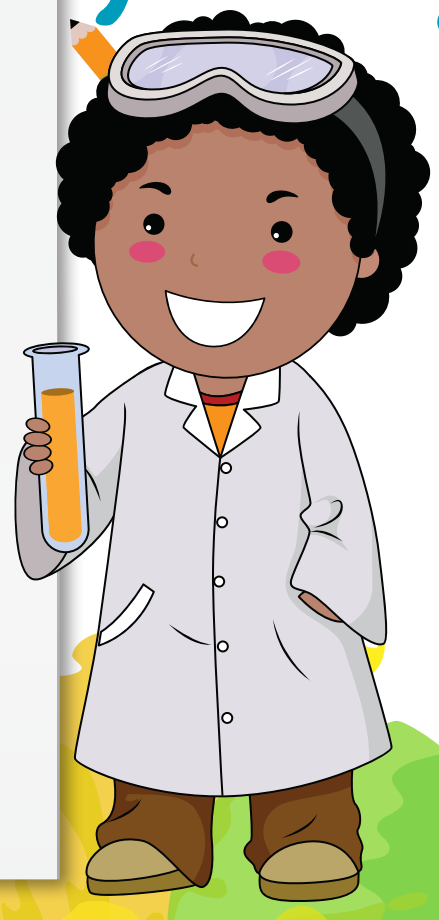
INSTRUCTIONS

1. Squeeze a few drops of lemon juice into your bowl.
2. Add a bit of water and mix with the spoon.
3. Dip the cotton bud into the mixture.
4. Write your secret message on the white paper using the cotton bud.
5. Wait for the message to dry. It will become completely invisible.
6. Pass the message on to your secret agent, who has to heat the paper by holding it close to the switched-on lamp.

RESULTS

During the heating process, the lemon juice is exposed to oxygen. This produces a chemical reaction called oxidation, which causes the lemon juice to turn brown. When you dilute the lemon juice with water, it becomes invisible when applied to a white paper. Therefore the secret message is only revealed when the paper is heated by a lamp. You can also try this experiment with orange juice, honey, milk and vinegar.

Source: sciencekids.co.nz



DOES THE SURFACE AFFECT THE SPEED OF A TOY CAR?

Do you think a toy car will move faster on a rough or smooth surface? Or will the surface make no difference to the speed of the car? In this experiment, we look at the different variables that will help you reach your conclusion.

YOU WILL NEED

- Sandpaper
- Flat surface like a board
- Stop watch
- Floor tile
- Modeling clay
- Bare wood
- Toy car

INSTRUCTIONS

1. Take the board and make a ramp with sides to ensure the car stays on the ramp. Use the modeling clay to create the guard rails.
2. Place the sand paper on the ramp.
3. Measure the time it takes for the toy car to travel from the top of the ramp to the bottom. Write down the result in your notebook.
4. Repeat the process using the floor tile and the bare wood.

THE VARIABLES

- Independent variable: The different surfaces used on the ramp
- Dependent variable: The speed of the car, measured over a length of time
- Controlled variable: Using the same car and the same ramp at the same angle and the same starting point without pushing the car

THE RESULT

Did the surface affect the speed of the car? YES NO

Source: sciencing.com

PROFESSOR THANDI SAYS:

Every science experiment has variables – those factors or elements that are expected to change.

- The **independent variable** is something you change or vary on purpose during your experiment.
- The **dependent variable** is the one that you observe and expect to change as a result of the independent variable.
- The **control variable** is the one you keep the same for all the conditions of your experiment.