

DEAR GROWSMARTER

Welcome to the first edition of the Growsmart Newspaper for 2020. Do you dream about becoming a writer, an engineer, an entrepreneur or a famous scientist? Then read on because inside you'll find practical tips and helpful information to get you on track.

If you love numbers, stay on this page and answer all the questions in one go! Even if you prefer literature to mathematics, complete as many calculations as possible. Ask your teacher for help when you get stuck.

This newspaper might be your first introduction to debating. Awesome! Participate in the fun class activity and discuss one of the topics with your family around the dinner table.

Fancy yourself as the next Patrice Motsepe? Read *How To Be An Entrepreneur* to learn about starting your own business. Also,

check out the female leaders who rule the world for extra inspiration.

If you love reading, learn how to write a story and a book review. Recommended books included!

On the last page, Professor Thandi shows you how to blow up a balloon without using your lungs. Plus, did you know you can move water without using your hands? Check out the experiment on page 10!

Lastly, you don't want to miss out on learning more about the coral reef and life-changing science discoveries. And 10 facts about great white sharks!

As you can see, the year ahead is full of promise and opportunity. We wish you all the best!

Until next time,
The Growsmart Team

Ask your teacher about the inter-class and inter-grade competitions. And remember, you can download all the previous editions of Growsmart from our website: growsmart.org.za

SUDOKU

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

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: www.mathinenglish.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 AS MANY AS POSSIBLE. DO NOT PAUSE IF YOU DO NOT KNOW THE ANSWER IMMEDIATELY.

- $45 + 4 =$ _____
- $46 + 14 =$ _____
- $25 + 7 =$ _____
- _____ = $15 + 12$
- $124 - 6 - 2 =$ _____
- $119 + 12 + 9 =$ _____
- $17 + 14 + 1 =$ _____
- $29 -$ _____ = 11
- $1\ 100 - 600 =$ _____
- $100 - 54 =$ _____
- $45 +$ _____ = 100
- $999 + 2 =$ _____
- $300 +$ _____ = $1\ 000$
- $2\ 500 +$ _____ = $5\ 000$
- $200 - 0 =$ _____
- $144 + 0 =$ _____
- $36 \div 12 =$ _____
- $13 \times 3 =$ _____
- $49 \div 7 =$ _____
- $17 \times 2 =$ _____
- $89 \times 2 =$ _____
- $15 \times 4 =$ _____
- $1\ 000 \times 10 =$ _____
- $24 \div 4 =$ _____
- $150 \div 2 =$ _____
- $28 \times 2 =$ _____
- $28 \div$ _____ = 14
- $63 \div$ _____ = 7
- $500 \div 2 =$ _____
- $1\ 000 \div 2 =$ _____
- $1\ 250 + 1\ 250 =$ _____
- $\frac{1}{2} + \frac{1}{4} =$ _____
- $131 - 19 =$ _____
- $\frac{5}{8} + \frac{3}{8} =$ _____
- $27 + 113 =$ _____
- $13 + 12 + 35 =$ _____
- $77 = 47 +$ _____
- $44 = 14 +$ _____
- $91 -$ _____ = 12
- $13 = 93 -$ _____
- $15 -$ _____ = 10
- $75 \times 2 =$ _____
- $150 \times 3 =$ _____
- $50 \times 30 =$ _____
- $60 \times 0 =$ _____
- $100 \div 0 =$ _____
- $3 \times$ _____ = 300
- $1\ 000 + 1 =$ _____
- $40 \times 8 =$ _____
- $900 \div 30 =$ _____

Answers: 1. 49; 2. 60; 3. 32; 4. 27; 5. 116; 6. 140; 7. 32; 8. 18; 9. 500; 10. 46; 11. 55; 12. 1001; 13. 700; 14. 2500; 15. 200; 16. 144; 17. 3; 18. 39; 19. 7; 20. 34; 21. 178; 22. 60; 23. 10 000; 24. 6; 25. 75; 26. 56; 27. 2; 28. 9; 29. 250; 30. 500; 31. 2 500; 32. $\frac{3}{8}$; 33. 12; 34. 1; 35. 140; 36. 60; 37. 30; 38. 30; 39. 79; 40. 80; 41. 5; 42. 150; 43. 450; 44. 1 500; 45. 0; 46. undefined; 47. 100; 48. 1 001; 49. 320; 50. 30

CALCULATE THE FOLLOWING. YOU MAY USE ANY STRATEGY.

1. $110\,001 + 100 + 10 + 11$

6. $3\,930 \div 30 \div 1$

2. $90 \times (229 + 771)$

7. $3\,200 + 800 - (2\,000 + 500) \times 1$

3. $(350 \frac{1}{2} + 350) \times 2$

8. $35\,347 \times 23 \times 2\,599 \times 0$

4. $(433\,333 + 667) \times 5 \times 2$

9. $88\,888 \div 2 + 128 \times 2$

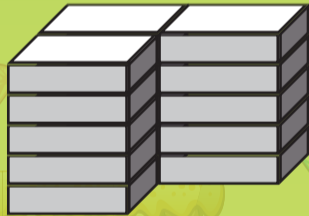
5. $1\,000 \div 25 \times 4 \times 2$

10. $(16\,499 - 499) \div (16\,500 - 500)$

Answers: 1. 110 122; 2. 90 000; 3. 1 401; 4. 4 340 000; 5. 320; 6. 131; 7. 1 500; 8. 0; 9. 44 700; 10. 1

SOLVE THE FOLLOWING PROBLEMS. YOU WILL NEED TO BE ABLE TO EXPLAIN YOUR ANSWER MATHEMATICALLY.

1. How many blocks did Tacia use to build this shape?



- (A) 11 (B) 13 (C) 10 (D) 15 (E) 20

2. Which one of the following numbers will appear in the sequence 7; 14; 21; 28; ...?

- (A) 4236 (B) 4224 (C) 4235 (D) 4253 (E) 2442

3. Halima is reading a book. Chapter 7 begins on page 246 and ends on page 274. How many pages are there in chapter 7?

- (A) 274 (B) 28 (C) 15 (D) 29 (E) 30

4. It is now the month of September. What month will it be 100 calendar months from now?

- (A) September (B) October (C) November (D) December (E) January

5. If my watch now shows 10:00, what will the time be 100 hours from now?

- (A) 10:00 (B) 11:00 (C) 12:00 (D) 13:00 (E) 14:00

6. A rectangular bathroom wall measures 3 m by 2 m. It is covered with square tiles measuring 20 cm by 20 cm. How many tiles are there altogether?

- (A) 300 (B) 30 (C) 150 (D) 200 (E) 400

7. What is the only whole number between one and ten which does not divide exactly into 360?

- (A) 4 (B) 6 (C) 7 (D) 8 (E) 9

8. Which square is the same as the one below?



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

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



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

10. The symbol \diamond represents a number. What value of \diamond makes this sentence true?

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

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

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

HOW TO BE AN ENTREPRENEUR

Do you want to be independent and successful one day? Do you want to find a job you love, so you never have to work a day in your life? Then you should consider becoming an entrepreneur, like George Sombonos who founded Chicken Licken or Marnus Broodryk who became a self-made millionaire at 24. But where do you start?

MAKE A LIST

Write down everything you're passionate about. You don't have to think about it in terms of a business, just list any thing you enjoy doing. For example, reading, spending time with your grandma, helping Mom with supper or creating art.



TURN YOUR PASSION INTO A PRODUCT OR SERVICE TO SELL

Look at your list and think of ways you can make money from the things you enjoy doing. For example, if you love reading, you can collect second-hand books from neighbours and resell them. If you're more into painting, you can create artwork and sell your pieces at a local market.



GET THE SUPPLIES YOU'LL NEED

Make a list of all the equipment you'll need for your business. You can start small and build up your material as the business grows. If you need expensive tools, like a computer, consider a cheaper option like using the desktop at school or the library.



CREATE AN ONLINE PRESENCE

Ask an adult to help you set up a social media account for your business. This way you can advertise your product or service without spending any money. For example, if you did your aunt's hair for a party, ask if you can share a photo of the end result.

SET UP A BUDGET AND FIND INVESTORS

Make a list of all the supplies you have to buy, including any potential future costs once your business is up and running. Pitch your idea to friends and family. Ask if they would like to invest in your startup.

Now go out and hustle!

A FEW FAST TIPS

- Get good reviews from your customers and share them on your social media page.
- If you're selling food items, provide allergy warnings.
- Ask your parents to help you set up a bank account for your business.
- Make sure you charge more for your product than the cost of producing it.

Source: wikihow.com



FIND YOUR TARGET MARKET

As an entrepreneur, you don't want to waste your time and money going after consumers who will never become customers. You need to establish your **target market** – a specific group of customers that you aim your products or services to. Here are a few questions to help you select your target market:

- Whose problem does your business solve?
Your business should solve someone's problem or fulfil a need.
- Who is most likely to purchase from you?
Choose the type of person who is able and willing to buy from you. Let's say you want to become a dog walker. Your friends may have a dog, but their parents will probably have to pay you.
- Who could you reach with your business?
It doesn't help to choose people who are impossible to reach. Let's say you know some dog owners, but they live far away. Are you able to reach them?

The more you know about your target market, the easier it will be to determine who would be interested in what you offer. What is their gender, age, location, hobby or family status? What would convince them to use your business? Answer these questions:

- Where do they live?
Decide which neighbourhoods would be eager to use your business and make them aware of what you offer.
- Where do they work?
Consider which businesses in your area could benefit from your product or service.
- Where do they shop?
This will help you to understand what they are willing to spend money on. For instance, to find consumers for your dog walking business, you could ask a veterinary shop if you may put up a poster in their store. The people that shop there must have pets, and fall in your target market.

juniorbiz.com

THE 4 PS OF MARKETING YOUR BUSINESS

Do you have a brilliant business idea? A product or service you know customers will love? Awesome! The next step is to invest time and effort into marketing. This means you have to make your product or service attractive enough to the right people to convince them to buy into what you're selling. You can do this by focusing on the four Ps.

1. PRODUCT

Let's start with the product or service you're going to sell. What are the features that make your offering so unique? How can your product or service improve people's lives? This will give you a good idea of why customers would be interested in your business.

2. PRICE

Now you need to decide on a selling price. Look at your competitors' pricing. Are you going to sell your product or service for more or less? Keep the following in mind: If you sell too high, your customers won't be able to afford it and if you sell too low, you won't make a profit. Try to find the sweet spot in the middle.

3. PROMOTION

There's no point in having an amazing offering that nobody knows about. You can use social media and WhatsApp to spread the word. It's relatively easy and cost-effective. You can also consider more traditional methods, like posters and flyers.

4. PLACE

Lastly, you need to figure out where you're going to sell. Will customers have to find you or will you bring the product or service to them? For example, you can sell your artwork online or you can go door-to-door in your neighbourhood with an adult to accompany you.

Source: bizkids.com



DO YOU KNOW WHAT THESE WORDS MEAN?

- | | | | | |
|----------------|---------------|---------------|----------------|---------------|
| hesitate | traditional | chaperone | gradual | encyclopaedia |
| accomplishment | utensil | carpenter | grievance | entrepreneur |
| improvement | vaporise | choreograph | hibernate | facetious |
| ingredient | visualise | commotion | hippopotamus | exhort |
| language | columnist | culprit | immensely | fungicide |
| anticipation | adenoids | deforest | impeachment | gargantuan |
| curriculum | advocate | demonstrative | infomercial | gregarious |
| maximum | ambivalent | discharge | insecticide | iguanodon |
| modest | conference | differentiate | unequivocally | halitosis |
| anniversary | approximately | dismissal | bureaucracy | incessant |
| descriptive | architecture | enthusiasm | circumnavigate | indomitable |
| motivation | beneficiary | electrify | claustrophobia | kleptomania |
| organisation | atmosphere | embodiment | apocalypse | languor |
| opponent | adolescent | environment | assonance | mannequin |
| engineer | autobiography | exquisite | callisthenics | mausoleum |
| population | consciousness | gauge | consonance | miscellaneous |
| soprano | brainstorm | extraordinary | contortionist | obsequious |
| settlement | accessible | feasible | demystify | obtuse |
| subtraction | catastrophe | fiancée | defeasance | paraphernalia |
| syndicate | considerable | fundamental | effervescent | patriarchy |

UNSCRAMBLE THE FOLLOWING WORDS.

- iprshew _____
- iirlblant _____
- rdelac _____
- itcsubi _____
- visdea _____
- abaome _____
- mozo _____
- wddieng _____
- aestymj _____
- rcelteba _____
- beraveeg _____
- rntgiipn _____
- tlouegaac _____
- iloueagd _____
- cainotu _____

Answers: 1. whisper; 2. brilliant; 3. cradle; 4. biscuit; 5. advise; 6. amoeba; 7. zoom; 8. wedding; 9. majesty; 10. bracelet; 11. beverage; 12. printing; 13. catalogue; 14. dialogue; 15. caution

RIDDLE ME THIS

Can you solve these fun riddles? Write your answer in the space below.

- I start with 'P' and end with 'E'. But I have thousands of letters. Who am I?

- I have 28 days in a month. Which month am I?

- What word is spelt incorrectly in all dictionaries?

- Every time someone speaks, I break. What am I?

- A boy and an engineer are fishing. The boy is the son of the engineer, but the engineer is not the father of the boy. Who is the engineer?

- I come once in a minute, twice in a moment and never in a thousand years. What am I?

Answers: 1. Post office; 2. All months have 28 days; 3. Incorrectly; 4. Silence; 5. The boy's mother; 6. The letter 'm'

MISSING BODY PARTS

Fill in the missing word to complete the idiom. If you get stuck, use the meaning as a clue.

- Idiom:** Cross your _____
Meaning: For good luck
- Idiom:** Fall on deaf _____
Meaning: Not listening to something
- Idiom:** Get cold _____
Meaning: Be nervous
- Idiom:** Give someone the cold _____
Meaning: To ignore someone
- Idiom:** Have a change of _____
Meaning: To change your mind
- Idiom:** I'm all _____
Meaning: You have my full attention
- Idiom:** It slipped my _____
Meaning: I forgot about something
- Idiom:** We see _____ to _____
Meaning: To agree on something
- Idiom:** Play it by _____
Meaning: To improvise
- Idiom:** It cost an _____ and a _____
Meaning: It was expensive

Answers: 1. fingers; 2. ears; 3. feet; 4. shoulder; 5. heart; 6. ears; 7. mind; 8. eye, eye; 9. ear; 10. arm, leg

HOW TO OUTARGUE THE OPPOSITION

During a debate, you will receive points for your content, style and strategy. But what exactly are the judges looking for? Here's the lowdown:

KNOWLEDGE AND UNDERSTANDING OF THE SUBJECT

Can you rattle off a bunch of facts about the refugee crisis in Syria without reading up on it? Or share deep insight on the matter without knowing anything about it? Probably not. In preparation for your debate, research is your friend. Don't try to wing it! The judges will know if you don't know or understand what you are talking about.

RELEVANCE TO THE MOTION

Your arguments have to be relevant to the motion. For example, when talking about the importance of getting young adults involved in the fight against climate change, you'll lose points if you build your argument around the negative effects of violent video games on teens. Also, make sure your facts are up to date!

USE OF SOURCES

Talking about facts, they are super important in a debate. Use statistics or quotes to give weight to your argument and show the judges

that what you're saying isn't just a personal opinion. For example, you can support an argument by saying: "According to researchers at the University of Cape Town..."

ABILITY TO PERSUADE, COMMUNICATE AND ENGAGE

A few pointers to remember while speaking:

make eye contact with your audience; use your hands to emphasise a point; vary the tone of your voice; speak with enthusiasm about your subject matter and use humour where appropriate. Also keep in mind, though, that sarcasm and offensive humour will lose you points.

STRUCTURE OF ARGUMENT

The judges will look at three things:

- Are you well prepared?
- Is your argument structured logically?
- Is your argument easy to understand?

REFUTATION AND REBUTTAL

This is where you get the opportunity to challenge your opponent's argument. And to use those listening skills your parents and teachers are forever trying to instil in you! The judges will want to see that you can answer or address any points raised by your opponents.

WATCH THIS

Hungry for more information on debating? Watch the videos on <https://sadebating.org/videos/>

Source: sadebating.org

CLASS ACTIVITY:

COMPLETE THE SENTENCE

This activity is a fun way to flex those quick and critical thinking muscles. Great for a debate! Your teacher must write an incomplete statement on the blackboard. You can either work in groups or alone to fill in the remainder of the sentence. Use the examples below to get started:

- Boys are more complicated than girls because...
- It's better to be famous on Instagram than on Twitter because...
- Bananas should not be allowed on pizzas because...
- Teachers should also wear a uniform at school because...
- A dog person is better than a cat person because....

There is no right or wrong answer, so don't hesitate to share your ideas!

WHAT DO YOU THINK?

Here are a few interesting topics to spark debate around the dinner table:

- Should children be allowed to choose their own bedtime?
- Should violent video games be banned?
- Should children be paid for doing household chores?
- Can computers replace teachers?
- Should all parents be required to attend parenting classes before having a child?

LET'S TALK ABOUT TOLERANCE

In debating, you have to be open to new ideas and new thinking. And even though you don't have to agree with the opposition, you have to respect their opinions. This boils down to tolerance, which is the ability to accept someone else's opinion or behaviour, even if you don't like it. Here are a few tips to become more tolerant:

LEARN ABOUT DIFFERENT CULTURES

We tend to spend time with people who are most like us. As the saying goes: birds of a feather, flock together! It feels safe and familiar to hang out with friends who look similar to us and have the same interests. But we live in a rainbow nation where you can meet people from many different cultures. Diversity makes the world a colourful place to live in! The best way to better understand someone who is different from you, is to learn about this person's culture. Attend a religious

festival, join in on a tradition, try some of their food or learn a song.

DON'T GET PERSONAL

It's natural to disagree with people. Remember, everyone is unique! But you can stand your ground and disagree without being disrespectful. This means avoiding any personal attack. For instance, if someone in your class does something that upsets you, say: 'I'm sad because you laughed at me' instead of 'You're horrible and have no friends'.

READ A BOOK

Reading about people who are different from you is a good way to learn how to identify with others. Check your local library for any of these books:

- *Journey to the Beginning of the World* by Virginia McLean and Irvin Chu
- *They All Saw a Cat* by Brendan Wenzel
- *The Sneetches* by Dr Seuss

- *The BFG* by Roald Dahl
- *The Secret Garden* by Frances Hodgson Burnett
- *Charlotte's Web* by EB White
- *Noughts and Crosses* by Malorie Blackman

START YOUR OWN DEBATING TEAM!

Source: theschoolrun.com

CLASS ACTIVITY: YOU ARE SPECIAL

Divide into groups of four to six learners. Give each learner a piece of paper to write down three things that make them or their family unique. Everyone then gets an opportunity to share with the group what makes them special.



WOMEN LEADERS AROUND THE WORLD

Compassionate. Resilient. Smart. Brave. Bold. These are just a few words that describe the formidable women who have put their stamp on history and changed our world for the better.

Thuli Madonsela is an advocate and professor of law. While serving as South Africa's Public Protector, she stood her ground in the fight against corruption and held leaders accountable for their actions. As a student, she worked hard, determined to make a positive contribution to society. Today, she is widely regarded as an icon of our democracy. *"When you know the truth is on your side, don't ever worry. Simply make friends with time."*

At only 16 years old, **Greta Thunberg** is an influential climate activist. The young Swede started a school strike outside the Swedish parliament to demand stricter laws to combat climate change. Since then, she has addressed world leaders and urged them to take action before it's too late. Greta keeps her carbon footprint small – she avoids flying and eats vegan, which means she doesn't

consume any animal products. *"I don't want you to be hopeful. I want you to panic and act as if the house was on fire."*

Angela Merkel has been the Chancellor of Germany since 2005. This makes her the head of government. She's considered to be one of the most powerful women in the world and has been described as the 'leader of the free world'. Angela is not afraid to stand up for what she believes in. She welcomed more than a million refugees in Germany, even though many fellow Europeans were against her decision. *"Always be more than you appear and never appear to be more than what you are."*

Respected lawyer, author and devoted mother, **Michelle Obama** is an inspiration to young people everywhere. While serving as First Lady (her husband, Barack Obama is the 44th President of the United States), she advocated for poverty awareness, education, nutrition, exercise and healthy eating. *"Success isn't about how much money you make, it's about the difference you make in other people's lives."*

can you guess?

Write down an idiom for each of the clues below:

1. Medicine _____
2. Butterflies _____
3. Wolf _____
4. Cloud _____
5. Haystack _____
6. Mile _____
7. Marbles _____
8. Iceberg _____

Answers: 1. Taste of your own medicine; 2. Butterflies in your stomach; 3. Cry wolf; 4. Every cloud has a silver lining; 5. Finding a needle in a haystack; 6. Go the extra mile; 7. Lose your marbles; 8. Tip of the iceberg

THE SECRET

"Yippee! I can't wait to get to school," Emma shrieks. Michael and Jonah exchange a glance and roll their eyes. "Why? Are you starting a new geeky science project?" Michael snorts. Emma ignores her brother's snarky remark. A new girl is joining the school today and Emma loves making friends.

When Mrs Jansen introduces Sandy to the class, Emma immediately puts up her paw. "Teacher! Teacher! Sandy can sit next to me. I'll show her around the school," she says. Sandy winks at Emma and says, "You're cool," before she plonks herself down next to her. Emma is intrigued. Who is this mysterious girl oozing with confidence? They become fast friends.

But soon after the friendship blossomed, Emma's grades start to drop. She missed the deadline for an important science assignment because she and Sandy were too busy making funny videos to post on their Instagram Stories.

One afternoon after school, the two friends go to Mister Moosa's Cafeteria to get a packet of Cheesenaks. It's Sandy's favourite chips. Emma is about to take out the pocket money she has saved up for treats like this when Sandy grabs her by the paw and whispers: "Let's go. Last

one out gets caught!" Emma is so bewildered that she scrambles after Sandy without thinking. And without paying for her chips.

That evening at the dinner table, Emma hardly touches her cheesy macaroni. It's as if a dark cloud is hanging over her head. Sandy asked her to keep their afternoon antics a secret, but Emma knows that what they did was wrong. She didn't want to get her friend into trouble, though. So she goes to bed with a heavy heart without saying a word.

The next day, Sandy suggests they get ice cream after school. This was Emma's favourite treat. But the thought of going back to Mr Moosa's Cafeteria made her feel sick in her tummy. She feels scared and confused. If she goes with Sandy, she might steal again. And if she doesn't, Sandy will think Emma's going to split on her. She decides to go with her friend. But this time, she leaves without a treat.

That afternoon when Emma arrives at home, she feels so ill that she goes straight to bed. Gemma is very worried. When she goes to check up on Emma, she notices a wet patch of tears on her pillow. "What's the matter, dear?" Gemma asks. But Emma is too afraid

to share her terrible secret. Gemma hugs little Emma lovingly. She holds her face in her hands and looks deep into her big, sad eyes. "There's nothing you can't tell me," she says. "Nothing at all. Remember, it's okay to share a secret if it makes you feel uncomfortable."

Poor little Emma is so confused. She doesn't know whether to tell her mother or not. What if she blames Emma for stealing? What if Sandy gets expelled from school? Finally, after many tears and warm hugs, Emma decides to be brave and spill the beans. Once she begins, her words tumble down like a waterfall. There is no stopping her now.

She tells Gemma that Sandy stole from Mr Moosa and asked Emma to keep it a secret. And that if she told anyone, Sandy would get into trouble and they wouldn't be friends anymore and it would be all her fault. Gemma hugs Emma very tightly and rocks her gently back and forth. At last, she wipes away Emma's tears.

"You are the bravest little mouse I have ever known. And what Sandy is doing is very wrong. You were right to tell me. And I'm very proud of you. Sandy is fortunate to have a friend like you." Gemma promises to speak to Mister Whiskers, the headmaster at Mouseville Primary.

The next day at school, Sandy is furious with Emma. "How could you betray me like this? They've put me in detention! And I have to apologise to stupid Mister Moosa! I hate you! And you're not my friend anymore."

Lying in bed that evening, Emma felt at peace. She was proud of herself because she found the courage to tell her mother. And even though that meant she had lost her new friend, she knew that she saved Sandy from getting into bigger trouble. And that secrets that make you feel scared and uncomfortable, are secrets that should not be kept.



HOW TO WRITE A BOOK REVIEW

Do you read book reviews? Why or why not? Here at Growsmart we love to see what other readers thought of a book. It usually gives us a good idea of whether we'll like the story or not. Follow these steps to write your first book review:

1. Choose a book from the suggestions on the right or any other book you want to read.
2. Read the book thoroughly.
3. Think about the readers of your review. Are you writing for your friends? Teachers? A blog? The audience will determine your style of writing. For instance, a review for your friends will be more informal than a review for marks.
4. After reading your book, write down the answers to the following questions:

- What is the essence of the story without giving away the climax?
 - What is the genre of the book?
 - What is your favourite part of the story and why do you like it?
 - Who are the main characters and what happens to them?
 - Why do you like or dislike the story? Were there any funny or sad parts? What happened?
 - Who would you recommend this book to?
5. Use your notes from the questions above to create your review. You might have to add or omit some of the details.
 6. Grab the reader's attention with your first sentence. It could be a question or an interesting fact.
 7. Read your review aloud and check for spelling and grammar.

READ THIS

Try to get your hands on these local favourites and write a review on the book you've read. Then, write a letter to the author to share your thoughts on the story and ask any questions if there is something you didn't understand.

- *The Hare and Mr Mandela* by Chris van Wyk
- *Refilwe* by Zukiswa Wanner
- *The Powers of the Knife* by Bontle Senne
- *The Midnight Gang* by David Williams

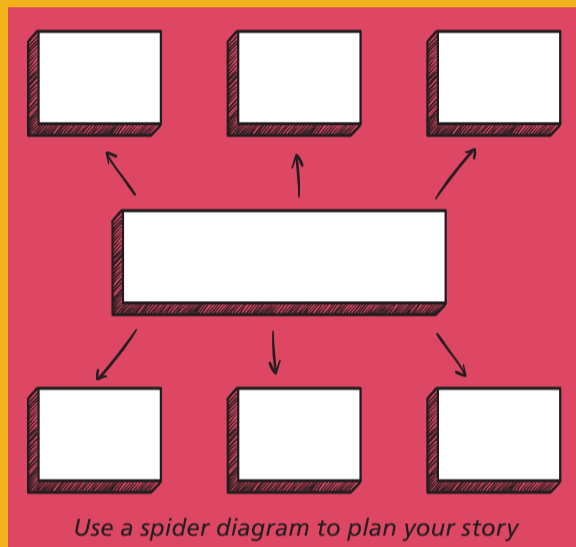
Source: thebookchook.com

HOW TO WRITE YOUR FIRST STORY

You have pen and paper ready. Your brain is bubbling with story ideas. And while it's important to give yourself the freedom to write your first draft without worrying too much about sentence structure and punctuation (this is what revisions are for!) there are a few story basics to consider before you start.

PLAN YOUR PLOT

First decide where you want your story to take place. It could be anywhere. Best of all? It doesn't even have to be a real place. The setting could be a new planet nobody has ever heard of! Next up you can decide when your story is taking place. It could be now, the future or the past.



Lastly, what is going to happen in your story? Your plot doesn't have to be set in stone, which means it can change as your story develops. But it's a good idea to start with the end in mind. If you have an idea of where you want your story to go, you can build plot lines around this.

Use this as a guide to create your outline:

1. First...
2. Next...
3. Then...
4. And finally...

CREATE YOUR CHARACTERS

Who is going to be in your story? Who is going to be the main character? Who will play supporting roles? While developing your characters, think about how you want your readers to feel about each one. For instance, do you want your reader to like the protagonist (the leading character) or to feel sorry for him?

Write down ideas for each character using the following:

- Name of character
- Relationship to other characters
- Physical features
- Behaviour

Now it's over to you! But before you get cracking on your first draft, here are a few tips to start your story with a bang (because what's the point if you can't get your reader past the first sentence?).



START MYSTERIOUSLY

If only Lucy knew how this day was going to end.

USE A LANGUAGE TRICK, LIKE ALLITERATION

Cold, cranky and close to tears, Emma arrived at school.

START WITH SUSPENSE

As she entered the deep, dark dungeon, she thought: "Is this it?".

GO STRAIGHT INTO DIALOGUE

"No! Not again!" Thabo exclaimed.

Source: theschoolrun.com

THE REBEL VERB

Ever heard of an irregular verb? She's a rule breaker, which makes her a tricky one to identify. But have no fear! Let's start with a definition:

An irregular verb is a verb that doesn't follow the general rule of adding -ed at the end to form the past tense.

Here are a few examples:

awake → awoke → awoken
 bite → bit → bitten
 draw → drew → drawn

Now it's your turn! Fill in the correct form of the irregular verbs below:

1. Katie's heart was (break) _____ after she lost her cat.
2. I have (eat) _____ way too much cake!
3. Julius (hang) _____ up his coat after entering the class room.
4. The bell has (ring) _____.
5. I have never been (sting) _____ by a bee.

Answers: 1. broken; 2. eaten; 3. hung; 4. rung; 5. stung

LET'S EAT GRANDPA!

What's missing in the headline? A comma! Unless you're part of a cannibal tribe and Grandpa seems rather tasty... Let's see how punctuation can change the meaning of the sentence:

Let's eat, grandpa!

As you can see, punctuation is very important to convey the right message to your readers. Commas, exclamation marks, dashes and question marks show the reader when to pause, take a breath, slow down and raise a voice. Here are a few more examples of how incorrect punctuation can give the wrong message!

I'm sorry, I love you! VS I'm sorry I love you!

A panda eats shoots and leaves. VS A panda eats, shoots and leaves.

There's a man eating chicken. VS There's a man-eating chicken!

Write down three of your own examples in the space below.

5 ELEMENTS OF A GOOD SCIENCE PROJECT

Hello there, young scientist! Are you ready to kick off with your first science project? No pressure! Just make sure you tick all the boxes in the list below and you should end with a 'eureka'!

1. YOUR IDEA IS FRESH

Judges look for original projects that show fresh thinking. This does NOT include experiments copied from the internet or your Growsmart newspaper! So what do we mean by 'original'? Your science project must show that you've discovered a new scientific concept or a new solution to an old problem.

2. YOUR OBJECTIVE IS SIMPLE

What scientific concept are you trying to prove or disprove with your experiment? Make sure that your goal or objective is clear enough for the judges to understand. If it can pass the 'huh-test', it's good to go!

3. YOU HAVE A CLEAR UNDERSTANDING OF YOUR PROJECT

There's no point in trying to score marks

by entering a project completed by your parents. The judges will know. And they aren't expecting a project at university level. What they will expect is for you to understand all aspects of your project, including the methodologies, techniques, theory and terms you've presented.

4. YOU'VE PROVEN YOUR POINT

It's great to have a fresh idea, but you'll need evidence to support your scientific claims. Your project has to include any data or results that address your hypothesis and any other questions that came up during experimentation.

5. YOU'VE PUT TIME INTO YOUR PROJECT AND HAD FUN DOING IT

The amount of time you spend on your project will probably correlate the enthusiasm you have for the subject. So when picking a topic for your science project, choose one that you feel passionate about. The judges will consider the time and effort you put into your project. So make it count!

Source: factmonster.com

THE GREAT ESCAPE

How can you move water from one full glass into an empty glass without using your hands? With an interesting scientific process called capillary action.

YOU WILL NEED

- A glass of water
- A few paper towels
- An empty glass

INSTRUCTIONS

1. Take your paper towels and twist them together to form a rope-like structure.
2. Place one end of the paper towels in the glass filled with water and the other end in the empty glass.
3. Now be patient!

RESULTS

What happens to the empty glass? As your rope-like paper towel gets wet, watch how the glass starts to fill with water. After a few minutes, you'll notice an equal amount of water in both glasses.

Using 'capillary action', the water moves along the tiny gaps in the fibre of the paper towels. Here we are dealing with two different forces: the adhesive force between the water and the towel and the cohesive force inside the water.

Which force do you think is stronger? The adhesive force, because this enables the water to be transferred from one glass to the other. This same force is responsible for moisture travelling from the roots of a plant to the rest of the plant.

Source: sciencekids.co.nz

BRAIN BUSTERS

1. Which is the least populated country in the world?

2. What is the currency of Japan?

3. What type of animal is Bambi?

4. What game features the terms love, deuce, match and volley?

5. Who wrote the Harry Potter series?

6. What is the standard measure of distance in the metric system?

7. What chemical element is diamond made of?

8. What part of the body produces insulin?

9. What is the name of the tool used to play pool?

10. Which planet did Superman come from?

11. What is the official language of Brazil?

12. What is the real name of the fictional MI6 agent known as 007?

13. What is the head of the Roman Catholic Church called?

14. What fruit inspired Newton to describe the theory of gravity?

15. Who was the original 'King of Rock 'n Roll'?

Answers: 1. Vatican City; 2. Yen; 3. Deer; 4. Tennis; 5. JK Rowling; 6. Metre; 7. Carbon; 8. Pancreas; 9. Cue; 10. Krypton; 11. Portuguese; 12. James Bond; 13. Pope; 14. Apple; 15. Elvis Presley

EXPLORING CORAL REEFS

The ocean is home to about 409 543 known species and scientists believe there are an estimated 2 million more that is yet to be discovered! Although it's quite small, 25% of marine plants and animals live in the coral reef. This makes the coral reef one of the biggest biomes in the ocean.

IS IT DEAD OR ALIVE?

Coral reefs might look like the most beautiful and colourful rock formations you've ever seen, but they are tiny organisms called polyps. These little animals grow on the outside of the reef. They become hard when they die, and as new polyps grow on top of them, the reef grows. Polyps stay alive by eating plankton and algae.

THE GREAT BARRIER REEF

Since polyps need algae to survive, and algae need sunlight to photosynthesise, coral reefs form in warm water close to the ocean's surface. The Great Barrier Reef in Australia is the largest coral reef – it's more than 4 000 kilometres

long and home to 1 500 species of fish and 400 species of coral!

WHAT WILL YOU FIND?

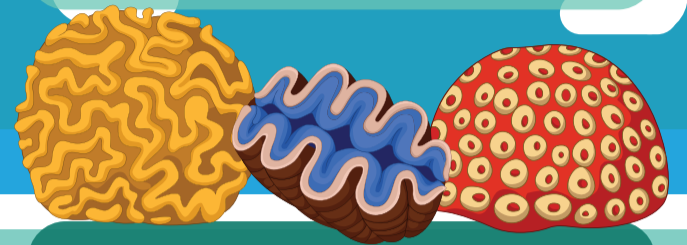
The coral reef is a popular abode for many of the ocean's most interesting characters. These creatures attach themselves to the outside of the reef. You'll find starfish, sponges, cucumbers (not the type you eat in your salad!), snails and anemones (pronounced a-ne-me-ni). Various fish also love swimming around the coral reef, like sharks, eels, pufferfish and clownfish (like Nemo in *Finding Nemo*!)

DANGER AHEAD

Unfortunately, these beautiful clusters of colourful organisms are slowly dying. It takes one year for a large coral reef to grow up to two centimetres. And they are being damaged faster than they can be repaired. Humans are mostly responsible for the disintegration of our coral reefs. Pollution, overfishing and tourism are to blame.

FAST FACTS

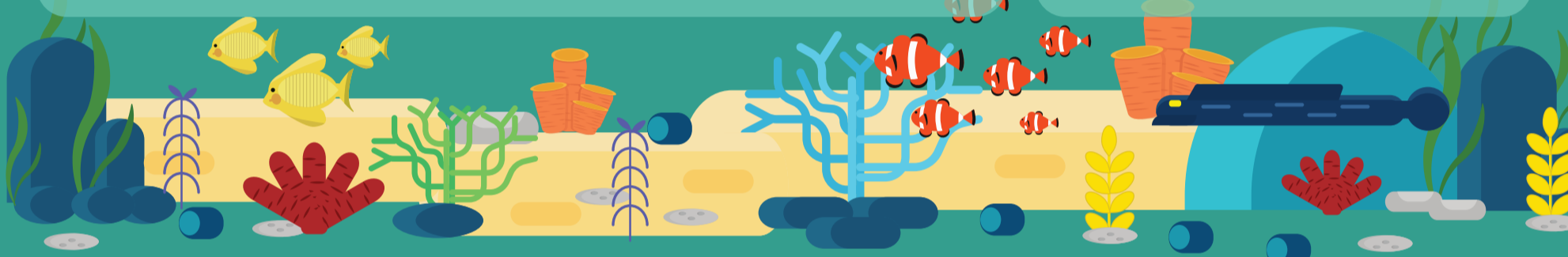
- Medicines for cancer have been discovered in coral reefs.
- The Great Barrier Reef can be seen from outer space – it's that big!
- Corals grow in many different shapes. Some even look like brains or mushrooms.



PROFESSOR THANDI SAYS

Plants and animals that have similar characteristics and share an environment are called a biome.

Source: ducksters.com



DISCOVERIES THAT CHANGED YOUR LIFE

Imagine a world with no Google... How did the ancient folk survive without cat gifs and funny memes? Well, they did. Albeit with a shorter life expectancy than modern times. And yes, the internet is the best thing since sliced bread, but wait until you learn about the discoveries that truly changed our lives.

GRAVITY

In 1664, **Isaac Newton** sat underneath an apple tree, thinking about the universe. Suddenly, an apple hit his head. In this moment, the young scientist and mathematician made a brilliant discovery. The force that caused the apple to fall on his head is the same force that causes the earth to orbit the sun. Today, the law of universal gravitation forms the basis of modern physics.

ELECTRICITY

In South Africa, you might find yourself trying to do homework by candlelight (thank you, load shedding!). But electricity remains one of the greatest inventions of all time. In 1831, **Michael Faraday** invented the first generator when he created an electric current by moving a wire through an electric field.

PENICILLIN

Have you ever taken antibiotics to recover from an illness? You can thank **Alexander Fleming** for saving your life. He discovered penicillin, the first antibiotic, in 1928. In his lab, he realised that a combination of mould and fungi can kill dangerous bacteria that could lead to death.

Source: factmonster.com

WORLD TRIVIA

See if you can answer all the questions about the world around you!

1. Which country has the longest coastline in the world?
2. What is the world's most populated country?
3. What is the capital of the Philippines?
4. In which country is the Great Barrier Reef situated?
5. What country has the most active volcanoes?
6. Where was the hottest temperature ever recorded?
7. The island of Madagascar is situated in which ocean?
8. How many stars are there on China's flag?
9. Lesotho is surrounded by which country?
10. Which city is situated on two continents?

Answers: 1. Canada; 2. China; 3. Manila; 4. Australia; 5. Indonesia; 6. Libya; 7. India; 8. 5; 9. South Africa; 10. Istanbul

PROFESSOR THANDI'S FUN SCIENCE EXPERIMENT

BLOW UP A BALLOON WITH CO₂

In this fun experiment, you can spare your lungs and blow up a balloon using a chemical reaction instead!

YOU WILL NEED

- Balloon
- Plastic straw
- 40 ml of water
- Juice from a lemon
- Soft drink bottle
- 1 teaspoon of baking soda

INSTRUCTIONS

1. Stretch out the balloon to ensure it is easy to inflate.
2. Pour the water into the soft drink bottle.
3. Add the baking soda and stir the mixture with the straw until the baking soda has dissolved.
4. Pour the lemon juice in and place the open end of the balloon over the mouth of the bottle. Be quick!

RESULTS

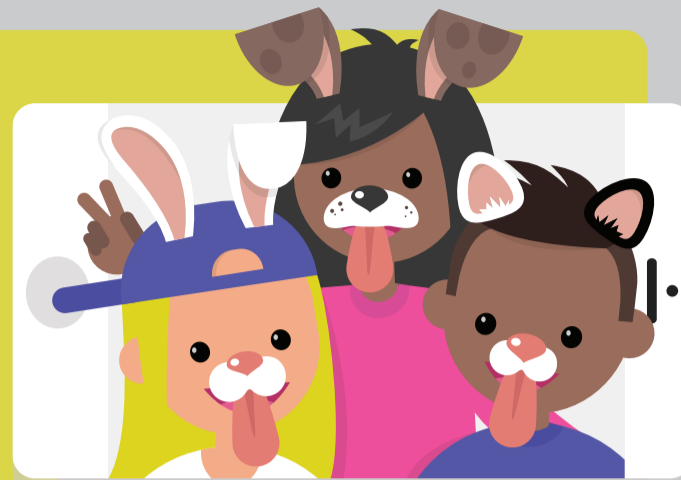
Is your balloon blowing up? This is the result of a chemical reaction caused when you combine lemon juice with baking soda. The lemon juice is an acid and the baking soda is a base. Together they form carbon dioxide or CO₂. While the gas rises and escapes through the soft drink bottle, it fills up the balloon.

Source: sciencekids.co.nz

TOP TIP: You can substitute the lemon juice with vinegar.

ARE YOU A GOOD FRIEND?

A true friend is more than just a Facebook connection. It's someone with whom you can share the good times and the bad times. It's someone who encourages you to be the best version



of yourself. With a true friend, you are safe to share your deepest thoughts without fear of judgement. But friendship is a two-way street. Check to see if you can be a better friend:

- I stay up-to-date with the latest in sport, music, TV and shared interests so I can talk about this with my friends.
- I give my friends a chance to speak too.
- I listen to my friends and ask questions to show I'm interested in what they have to say.
- I am always willing to help my friends.
- If I borrow something from a friend, I make sure I return the item in the same condition.
- I treat my friends with respect and say please and thank you.
- I praise my friends when they do something well.
- I spend time with my friends.
- I am honest about my feelings.
- I try to understand my friend's point of view.
- I think before I say something that could hurt my friends' feelings.
- I smile and use kind words when I speak to my friends.

Source: cyh.com

10 GREAT WHITE SHARK FACTS

Deadly killer or fascinating fish? Fear not, dear friend! Put on your goggles and let's dive deep to discover if the great white shark is a man-eating monster or just a fish with super scary teeth.

1. Great whites prefer to swim in cool water close to the coastline. They can be found in oceans all over the world, even in South Africa.
2. As the largest fish that eats other animals (also called a predatory fish), these super swimmers can grow to 6 metres long. That's the height of a giraffe!
3. Forget about trying to outswim these beasts. Built like a torpedo with a powerful tail, they can move as fast as 60 kilometres per hour.
4. If you ever find yourself trapped in the jaws of a great white, know this: you're up against 300 sharp, triangular teeth arranged in seven rows. Now that's a mouthful!

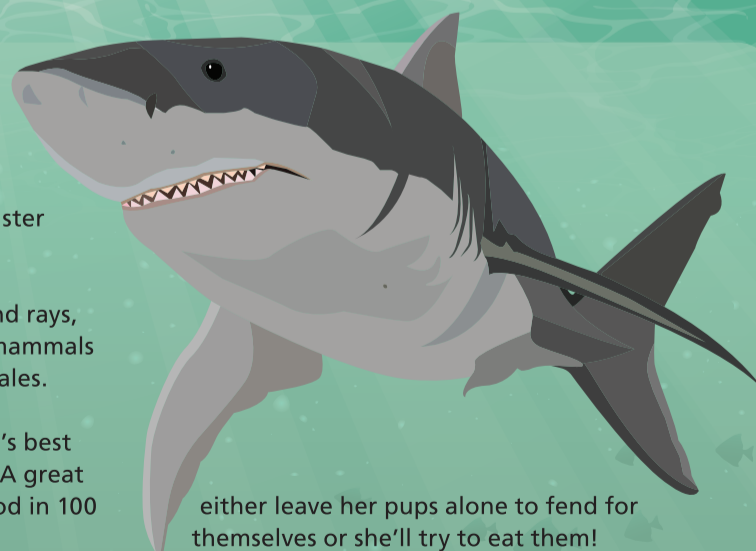
5. Fortunately, you're not number one on the great white's menu. While sharks do attack humans (roughly six times per year), researchers believe it's more out of curiosity than Mister Sharky trying to grab a bite to eat.

6. Baby sharks prey on small fish and rays, while adult sharks feast on big mammals like seals, sea lions and small whales.

7. If you have a bleeding wound, it's best to get out of the water. Pronto! A great white can smell one drop of blood in 100 litres of water!

8. As sly as a fox, these underwater creatures like to launch surprise attacks on their unsuspecting prey. They get the upper hand by swimming underneath the victim before speeding upwards for a chomp!

9. This may come as no surprise, but the great white is not exactly the maternal type. After giving birth, the mother will



either leave her pups alone to fend for themselves or she'll try to eat them!

10. Although the great white shark is at the top of the food chain, which means no other animals are likely to kill them, there is one creature that trumps these beautiful beasts. Humans. Illegal hunting and overfishing have made great whites a vulnerable species. If we don't take action, they could become endangered.

Source: natgeokids.com