

Year 9

Reading Magazine
Example test

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Literacy and Numeracy

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Marathon man to trade Kununurra for Big Apple

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The West Australian
15 January 2010



Torrential rain and muddy roads are not enough to deter a young Kununurra man in his bid to run in one of the world's most famous footraces, the New York Marathon.

Joseph Davies, who finished Year 12 at Kununurra District High School last year, has just returned home from selection trials in Alice Springs, where he was coached by Australian running legend Robert de Castella, a four-time Olympian and two-time Commonwealth Games gold medallist.

Davies, 18, was one of 12 hand-picked Indigenous hopefuls who attended the Alice Springs selection trials.

If selected in the final six-person squad, he will travel to the Australian Institute of Sport in Canberra for more training before

flying to the US to compete in the marathon in November.

De Castella said the squad, the brainchild of his not-for-profit organisation, SmartStart, was the first step in establishing a program to develop Indigenous long-distance runners in Australia.

Davies, who is training daily, even in wet season downpours, said he understood training for the marathon would not be easy, but it was a challenge he was ready for.

'I know it's a once in a lifetime opportunity and I really hope I get selected,' he said.

The northern hemisphere cold will drive him to 'just run faster'.

The first day

On his first day at a new school, Michael has been sent to the Principal's office.

'I'm Michael. I'm new here.' I gave her my best shallow smile and hoped she'd take the offer. She had to have better things to be doing with her time.

'I know who you are, Michael, and I know why you're here.' In other words shut up and let me do the talking. Fair enough too. I took the advice. She didn't look all that angry though. If anything she almost seemed amused by me and her tone was friendly. I tried to remind myself who she was, in case it was some sort of trap. She took a deep breath, like I was a small part in a big battle she'd long since stopped trying to win, and smiled at me.

'You're hardly the first person to change schools, Michael, and you're certainly not the first to try to make an impression. And just between you and me, you're not the first to be sent here by Mr Jensen.' She stopped, so I gave a little nod and mumbled my agreement, which seemed to please her. 'Quite. So what do you think we should do about this?'

'Maybe we could just chalk it up to experience,' I tried, heartened by her apparent good humour. She acted as if she hadn't heard me.

'Were you pleased your family decided to move here, Michael?'

'Um, not pleased exactly,' I admitted.

'And how have you found us?' It was bizarre. She was beginning to sound like some old auntie stuck for conversation during a Christmas visit.

'All right, I suppose.'

'Yes, we are.' She smiled at something I couldn't even guess at.

'And you think we should just leave this here do you?' It had to be a trap. I nodded, not trusting myself to say anything useful.

'Let me just tell you this then. You don't want to cross me, Michael. You'll find me a very loyal person to my staff. Do you understand that?' Again I nodded. 'Of course I'll have to ring home, to let them know things haven't started too well for you, but apart from that I think you should just get back to class and concentrate on keeping a low profile, don't you?'

It didn't feel right. She was being reasonable, no doubt about that, but I couldn't quite trust her. There was something about the way she looked at me when she spoke, like she had some private joke going I would never understand. And she was an adult. There had to be something in it for her.

No one is a loser

by Ben Okri

We must not think ourselves victims,
Disadvantaged, held back—
Because of race, colour, creed,
Education, class, gender,
Religion, height, or age.
The world is not made of labels.
The world, from now on,
Will be made through the mind.
Through great dreaming, great loving
And masterly application.
Those who transcend their apparent limitations
Are greater than those who apparently
Have little to transcend.
Our handicaps can be the seed of our glories.
We shouldn't deny them.
We should embrace them,
Embrace our marginalisation,
Our invisibility, our powerlessness.
Embrace our handicaps, and use them,
And go beyond them,
For they could well be the key
To some of the most beautiful energies
That we have been given.
Accept no limitations to our human potential.
We have the power of solar systems
In our minds.
Our rage is powerful. Our love is mighty.
Our desire to survive is awesome.
Our quest for freedom is noble, and great.

Salinity – an environmental emergency

Salinity is one of Australia's greatest environmental problems. It occurs when too much salt rises from under the ground to the surface and ruins the soil. In 2000, there were 2.5 million hectares of salt-affected land in Australia. This may increase to 17 million hectares by 2050.

Rising watertable

Land clearing is the major cause of Australia's dryland salinity problem. Trees act as pumps, removing water from the soil and keeping the water level in the ground well below the surface. This level is called the watertable. Water absorbed by the roots travels through the trunk and out through the leaves into the air. In a day, over 700 litres of water may pass through the leaves of a fully grown river red gum.

Beneath the ground across much of Australia there are large deposits of salt laid down by ancient seas. The salt is harmless underground, but when it comes to the surface it does damage. When trees are removed the watertable rises, bringing the salt with it.

Costs

The cost of salinity to Australia's farming production is over \$250 million a year, and the cost is increasing. The CSIRO estimates that salinity will cause the extinction of 1000 species of Australian plants and animals. Salinity also damages water pipes, roads, houses and parks. In the city of Wagga Wagga, this type of damage costs over \$3 million each year. The level of salt in the Murray River is also increasing, and by 2020 the water in Adelaide piped from the Murray may be too salty to drink.

Halting the salt

Replanting native trees is a very effective method of lowering the watertable. Native grasses have long roots that prevent water from rising to the surface, unlike many introduced grasses that have shallow roots.

Slow change

For many years, the practices that led to today's salinity problems went on without anyone knowing the consequences. This was because the effects of land clearing on watertables were not immediately obvious. Similarly, the effects of changing these practices will not become noticeable for decades, because it will take that long for seedlings planted now to become trees and restore watertables to their natural levels.

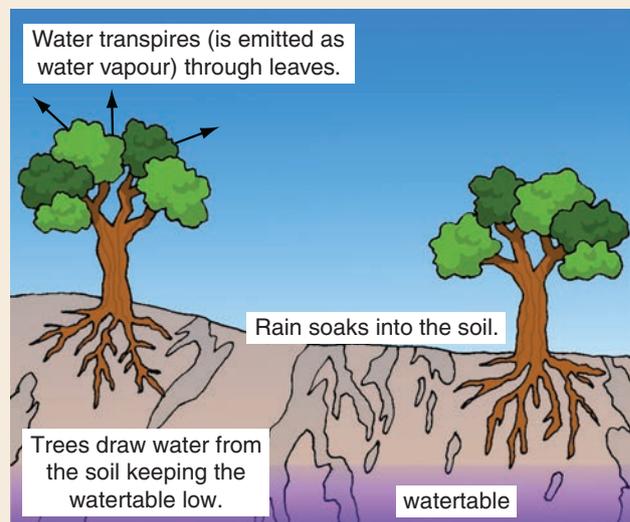


Figure 1 *Uncleared landscape*

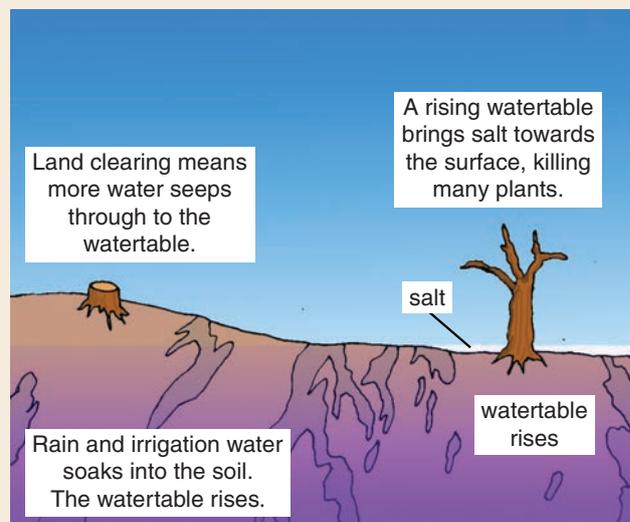


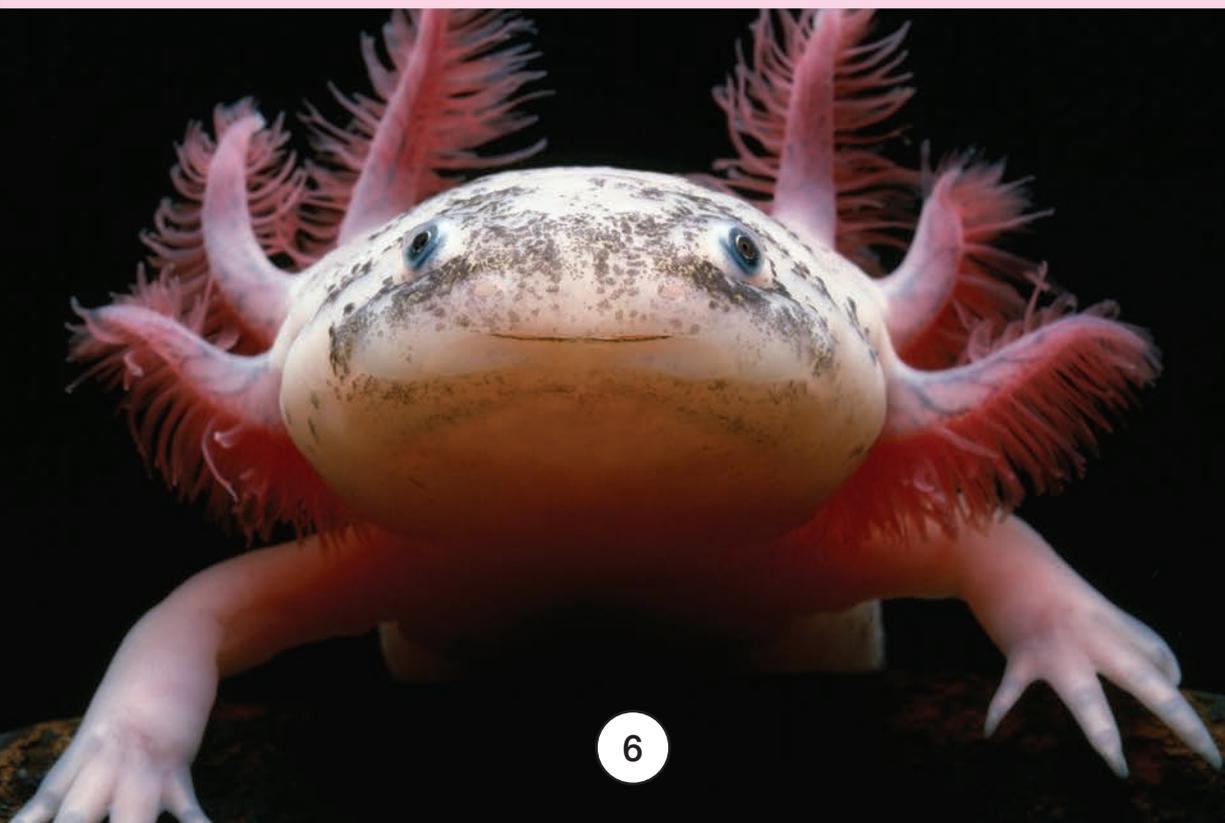
Figure 2 *Cleared landscape*

The double life of a slippery axolotl

In 1865 scientists were surprised when some of the Mexican axolotls at an exhibition in Paris turned into yellow-spotted, brown salamanders. Very surprised, in fact, because scientists had thought that the axolotl and salamander were different species, not different life stages of the same animal. What they had observed was an axolotl metamorphosing into a salamander. They had not seen this occur when the axolotl was in its natural habitat.

So why don't axolotls always metamorphose into salamanders? Well, the lakes in Mexico where axolotls are found are surrounded by barren, dry country which is an unsuitable environment for amphibians like salamanders to survive in. The lakes, however, are full of food and good water, the perfect place for an axolotl to survive. This environmental pressure has caused the axolotl to adapt and retain the aquatic, larval (immature) form of the salamander. At the same time it has developed the ability to increase in size and reach sexual maturity. This is called neoteny. The axolotl never has to change into the adult salamander form to grow and reproduce. But this does not mean it cannot do so.

If an axolotl is taken out of water it will most probably die. But if its lake or pond slowly dries up it may metamorphose into a salamander. Other changes in environmental conditions such as temperature and day length can have a similar effect. The change in environment affects a part of the brain called the hypothalamus which controls the release of a hormone called thyroxin. Thyroxin is essential for metamorphosis in amphibians. In its natural state the axolotl has adapted to switch off this biological signal so it can remain in its watery paradise.



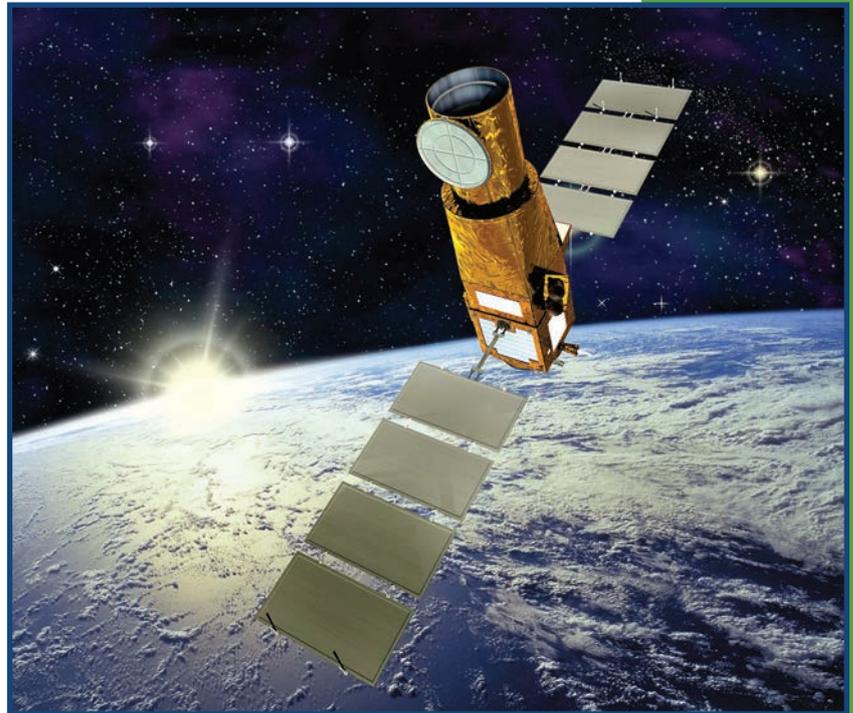
Where on Earth are you?

Twenty years ago the Global Positioning System (GPS) was for the use of military personnel only, a network of orbiting satellites designed to guide missiles and pilotless drones anywhere on the planet to the accuracy of a metre. Today, it's on car dashboards, virtually all new mobile phones and personal computers. Nearly a million satellite navigation devices have been sold in Australia alone.

In 2000, United States President Bill Clinton switched off the system's 'selective' control by the military, releasing it for commercial purposes. However, it took some time for the wider potential of GPS to be realised. Now it's popping up on so many devices that privacy concerns are being raised. Some mobile phones can show you the nearest supermarket, hotel or dry cleaner. Some Internet services act like a beacon, showing friends – and potentially anyone else using the application – where you are at a particular time. Some retailers offer smart-phone applications that can tell users the location of their nearest store, wherever they might be at that time.

But that's just the first step. Marketers are particularly excited about being able to target advertisements at particular consumers based on their geographic location. Imagine finding an advertisement on your phone from a retailer offering \$10 off your favourite brand of T-shirt as you're walking past their store. A handy service? Probably – but privacy advocates worry that location-based services are ripe for abuse by companies.

And then there are the risks for personal security. A robber could know precisely when a person is withdrawing money from a bank or a burglar could work out when to break into people's homes. Those scenarios may seem far-fetched, but the epidemic of identity theft and security breaches in recent years should raise some concerns about how well marketers will protect location information.



The living night

A guide is taking tourists to an isolated Australian beach where turtles are laying their eggs.

The party of twelve stood around murmuring solemnly and casting shadows. The sky amazed them. A woman exclaimed at a shooting star. They were in awe of constellations and geography, impressed by the blazing night and the encircling silence. The tourists were pleased with themselves just being in this yawning nightscape, especially knowing that where they presently stood would soon be deep ocean.

It was almost eleven o'clock but the moon on the white sand, the absence of any interfering artificial light – nothing along the silent breadth of land or sea or in the air – gave the night a stark clarity. Stars fizzed like fireworks. The sky was bright enough to read by. Grace could make out individual ghost crabs now resurfacing and regrouping, as well as their whorling sand patterns, as ordered and ornamental as Maori facial tattoos.

Several turtle species chose to lay their eggs on this slope of coast. Green turtles, loggerheads, olive ridleys, leatherbacks, hawksbills, flatbacks. The beach was sheltered and gently shelving, with few outcrops and obstacles to hamper the females' laboured passage up from the sea.

'Okay,' she called out. 'We're looking for semicircular marks in the sand.'

Almost immediately they saw tracks – the intuitive dragging scrape of the flippers. The imperative haul of the body. She handed out torches. 'Use these if you need to. I'd prefer not to use the headlights. We don't want to make the old girl's big night even more uncomfortable.'

The green turtle sprawled and gasped beside a pile of sandy, pulpy-looking eggs. Its straining face was eaten by the light of the torches. The front flippers, as automatic as a wind-up toy's, constantly flicked sand on the eggs. When the people came nearer, the turtle heaved a phlegmy sigh, as if something important had suddenly registered, and closed its eyes. It gave another shuddering sigh and two final eggs dribbled in quick succession onto the sand. Mechanically the flippers flicked sand on them.

The onlookers stood reverently by. In its dazed convalescent state, the turtle ignored them and their dotting cameras. Neither its pained expression nor the rhythmic flippers seemed to indicate sufficient resistance to the large sand goanna that emerged then from the cliffs and snatched the last egg, still mucoid and dripping, from under it.

'Oh!' the shocked people shouted, as one. 'No!'



Inventing daylight saving



Daylight saving involves putting clocks forward, usually by one hour, in summer.

In 1895, the New Zealand naturalist and astronomer, G.V. Hudson, submitted a proposal for daylight saving (which he called 'seasonal time'). Here, in an address to the Wellington Philosophical Society in 1898, he responds to some criticisms of his idea.

Amongst the objections which have been urged against the adoption of my scheme, I shall only briefly deal with those of more serious importance. A number of minor objections have been raised, which have simply arisen through the objectors not having taken the trouble to make themselves conversant with the subject. For instance, it has been urged that this scheme, if carried out, would deprive people of their long winter evenings, those raising this objection evidently having overlooked the fact that, during the seven months of the year which include the winter, the time would remain precisely as it is at present.

A more reasonable objection is that regarding the alteration of the clocks, some contending that it would be better for us to alter our habits during the summer, and leave the clocks alone. The reply to this is that such an alteration in habits would be wholly impracticable, as it would involve endless adjustment throughout the whole of the society, which could never be carried out in all its detail. Meal times, arrivals and departures of trains, steamers etc, opening of places of business, theatres etc, would all have to be simultaneously altered, whereas, by moving the hands of the clock in the middle of the night, all these adjustments could be effected quite automatically, without disturbing in any way the existing state of things.

It has also been urged that by lengthening the hours of daylight at the end of the day shopkeepers and others might be tempted to extend the hours of labour for their employees. This, it may be remarked, is really a side question which has already been specially dealt with by legislation, and although there are at present nearly two hours' daylight after closing-time in summer, I am not aware that any systematic attempt has been made to lengthen the hours of labour in summer on this account. The milkmen, and other persons who have to begin their work very early in the morning, would undoubtedly suffer under my scheme, as they would have to start their duties in the dark of early morning almost the entire year through. As these persons, however, constitute a very small minority in the social community, it is not to be expected that their personal comfort or convenience would be allowed to interfere with the adoption of the scheme if it were found to be beneficial to the large majority.

ACKNOWLEDGEMENTS

Marathon man to trade Kununurra for Big Apple

Image and adapted extract from 'Marathon man to trade Kununurra for Big Apple' by Nathan Dyer, *The West Australian*, 15 January 2010. Image by Nathan Dyer. Courtesy: *The West Australian*.

The first day

Extract from *Lester* by Bernard Beckett, Longacre Press, 1999. Reproduced with permission of Random House New Zealand.

No one is a loser

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Salinity – an environmental emergency

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The double life of a slippery axolotl

Adapted text from 'Of teeth and axolotls' which appeared in *The Helix*, No. 46 February / March 1996, published by CSIRO Education. Reproduced courtesy of *The Helix* / CSIRO Education. Image: Stephen Dalton / Animals Animals – Earth Scenes.

Where on Earth are you?

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The stowaway

Extract from *A Bridge to Wiseman's Cove* by James Moloney, University of Queensland Press, 2007.

Inventing daylight saving

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