

# IELTS Prep

## Reading Session 2



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## READING PASSAGE 1

### William Kamkwamba

In 2002, William Kamkwamba had to drop out of school, as his father, a maize and tobacco farmer, could no longer afford his school fees. But despite this setback, William was determined to get his education. He began visiting a local library that had just opened in his old primary school, where he discovered a tattered science book. With only a rudimentary grasp of English, he taught himself basic physics - mainly by studying photos and diagrams. Another book he found there featured windmills on the cover and inspired him to try and build his own.

He started by constructing a small model. Then, with the help of a cousin and friend, he spent many weeks searching scrap yards and found old tractor fans, shock absorbers, plastic pipes and bicycle parts, which he used to build the real thing.



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For windmill blades, William cut some bath pipe into two pieces lengthwise, and then heated the pieces over hot coals to press the curled edges flat. To bore holes into the blades, he stuck a nail through half a corncob, heated the metal red and twisted it through the blades. It took three hours to repeatedly heat the nail and bore the holes. He attached the blades to a tractor fan using proper nuts and bolts and then to the back axle of a bicycle. Electricity was generated through the bicycle dynamo. When the wind blew the blades, the bike chain spun the bike wheel, which charged the dynamo and sent a current through wire to his house.

What he had built was a crude machine that produced 12 volts and powered four lights. When it was all done, the windmill's wingspan measured more than eight feet and sat on top of a rickety tower 15 feet tall that swayed violently in strong gales. He eventually replaced the tower with a sturdier one that stood 39 feet, and built a second machine that watered a family garden.



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The windmill brought William Kamkwamba instant local fame, but despite his accomplishment, he was still unable to return to school. However, news of his magetsi a mphepo - electric wind - spread beyond Malawi, and eventually things began to change. An education official, who had heard news of the windmill, came to visit his village and was amazed to learn that William had been out of school for five years. He arranged for him to attend secondary school at the government's expense and brought journalists to the farm to see the windmill. Then a story published in the Malawi Daily Mail caught the attention of bloggers, which in turn caught the attention of organisers for the Technology Entertainment and Design conference.

In 2007, William spoke at the TED Global conference in Tanzania and got a standing ovation. Businessmen stepped forward with offers to fund his education and projects, and with money donated by them, he was able to put his cousin and several friends back into school and pay for some medical needs of his family. With the donation, he also drilled a borehole for a well and water pump in his village and installed drip irrigation in his father's fields.



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The water pump has allowed his family to expand its crops. They have abandoned tobacco and now grow maize, beans, soybeans, potatoes and peanuts. The windmills have also brought big lifestyle and health changes to the other villagers. 'The village has changed a lot,' William says. 'Now, the time that they would have spent going to fetch water, they are using for doing other things. And also the water they are drinking is clean water, so there is less disease.' The villagers have also stopped using kerosene and can use the money previously spent on fuel to buy other things.

William Kamkwamba's example has inspired other children in the village to pursue science. William says they now see that if they put their mind to something, they can achieve it. 'It has changed the way people think,' he says.



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## Questions 1-5

Complete the flow chart below.

Choose **NO MORE THAN TWO WORDS** from the passage for each answer.

### Building the Windmill

William learned some (1) ..... from a library book.

First, he built a (2) ..... of the windmill.

Then he collected materials from (3) ..... with a relative.

He made the windmill blades from pieces of (4) .....

He fixed the blades to a (5) ..... and then to part of a bicycle.

He raised the blades on a tower.



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## Questions 6-10

Do the following statements agree with the information given in the Reading Passage.

**TRUE** if the statement is true according to the passage

**FALSE** if the statement is false according to the passage

**NOT GIVEN** if the information is not given in the passage

6. William used the electricity he created for village transport.
7. At first, William's achievement was ignored by local people.
8. Journalists from other countries visited William's farm.
9. William used money he received to improve water supplies in his village.
10. The health of the villagers has improved since the windmill was built.



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## Questions 11-13

Answer the questions below.

Use **NO MORE THAN ONE WORD** and/or a **NUMBER** from the passage for each answer.

11. How tall was the final tower that William built?
12. What did the villagers use for fuel before the windmill was built?
13. What school subject has become more popular in William's village?





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## READING PASSAGE 2

### Climate change and the Inuit

- A. Unusual incidents are being reported across the Arctic. Inuit families going off on snowmobiles to prepare their summer hunting camps have found themselves cut off from home by a sea of mud, following early thaws. There are reports of igloos losing their insulating properties as the snow drips and refreezes, of lakes draining into the sea as permafrost melts, and sea ice breaking up earlier than usual, carrying seals beyond the reach of hunters. Climate change may still be a rather abstract idea to most of us, but in the Arctic it is already having dramatic effects - if summertime ice continues to shrink at its present rate, the Arctic Ocean could soon become virtually ice-free in summer. The knock-on effects are likely to include more warming, cloudier skies, increased precipitation and higher sea levels. Scientists are increasingly keen to find out what's going on because they consider the Arctic the 'canary in the mine' for global warming - a warning of what's in store for the rest of the world.



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- B. For the Inuit the problem is urgent. They live in a sort of precarious balance with one of the toughest environments on earth. Climate change, whatever its causes, is a direct threat to their way of life. Nobody knows the Arctic as well as the locals, which is why they are not content simply to stand back and let outside experts tell them what's happening. In Canada, where the Inuit people are jealously guarding their hard-won autonomy in the country's newest territory, Nunavut, they believe their best hope of survival in this changing environment lies in combining their ancestral knowledge with the best of modern science. This is a challenge in itself.
- C. The Canadian Arctic is a vast, treeless polar desert that's covered with snow for most of the year. Venture into this terrain and you get some idea of the hardships facing anyone who calls this home. Farming is out of the question and nature offers meagre pickings. Humans first settled in the Arctic a mere 4,500 years ago, surviving by exploiting sea mammals and fish. The environment tested them to the limits: sometimes the colonists were successful, sometimes they failed and vanished. But around a thousand years ago, one group emerged that was uniquely well adapted to cope with the Arctic environment. These Thule people moved in from Alaska, bringing kayaks, sleds, dogs, pottery and iron tools. They are the ancestors of today's Inuit people.



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- D. Life for the descendants of the Thule people is still harsh. Nunavut is 1.9 million square kilometres of rock and ice, and a handful of islands around the North Pole. It's currently home to 2,500 people, all but a handful of them indigenous Inuit. Over the past 40 years, most have abandoned their nomadic ways and settled in the territory's 28 isolated communities, but they still rely heavily on nature to provide food and clothing.

Provisions available in local shops have to be flown into Nunavut on one of the costliest air networks in the world, or brought by supply ship during the few ice-free weeks of summer. It would cost a family around £7,000 a year to replace meat they obtained themselves through hunting with imported meat. Economic opportunities are scarce, and for many people state benefits are their only income.

- E. While the Inuit may not actually starve if hunting and trapping are curtailed by climate change, there has certainly been an impact on people's health. Obesity, heart disease and diabetes are beginning to appear in people for whom these have never been problems before. There has been a crisis of identity as the traditional skills of hunting, trapping and preparing skins have begun to disappear. In Nunavut's 'igloo and email' society, where adults who were born in igloos have children who may never have been out on the land, there's a high incidence of depression.



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- F. With so much at stake, the Inuit is determined to play a key role in teasing out the mysteries of climate change in the Arctic. Having survived there for centuries, they believe their wealth of traditional knowledge is vital to the task and Western scientists are starting to draw on this wisdom, increasingly referred to as ‘Inuit Qaujimatugangit’, or IQ. ‘In the early days’ scientists ignored us when they came up here to study anything. They just figured these people don't know very much so we won't ask them,’ says John Amagoalik, an Inuit leader and politician. ‘But in recent years IQ has had much more credibility and weight.’ In fact, it is now a requirement for anyone hoping to get permission to do research that they consult the communities, who are helping to set the research agenda to reflect their most important concerns. They can turn down applications from scientists they believe will work against their interests, or research projects that will impinge too much on their daily lives and traditional activities.
- G. Some scientists doubt the value of traditional knowledge because the occupation of the Arctic doesn't go back far enough. Others, however, point out that the first weather stations in the far north date back just 50 years. There are still huge gaps in our environmental knowledge, and despite the scientific onslaught, many predictions are no more than best guesses. IQ could help to bridge the gap and resolve the tremendous uncertainty about how much of what we're seeing is natural capriciousness and how much is the consequence of human activity.



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## Questions 1-6

Reading Passage has seven paragraphs, **A-G**.

Choose the correct heading for paragraphs **B-G** from the list of headings below.

### *Example*

Paragraph **A** Answer **viii**

1. Paragraph B
2. Paragraph C
3. Paragraph D
4. Paragraph E
5. Paragraph F
6. Paragraph G

### List of Headings

- i** The reaction of the Inuit community to climate change
- ii** Understanding of climate change remains limited
- iii** Alternative sources of essential supplies
- iv** Respect for Inuit opinion grows
- v** A healthier choice of food
- vi** A difficult landscape
- vii** Negative effects on well-being
- viii** Alarm caused by unprecedented events in the Arctic
- ix** The benefits of an easier existence



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## Questions 7-14

Complete the summary of paragraphs **C** and **D** below.

Choose **NO MORE THAN TWO WORDS** from paragraphs **C** and **D** for each answer.

If you visit the Canadian Arctic, you immediately appreciate the problems faced by people for whom this is home. It would clearly be impossible for the people to engage in **7** \_\_\_\_\_ as a means of supporting themselves. For thousands of years they have had to rely on catching **8** \_\_\_\_\_ and **9** \_\_\_\_\_ as a means of sustenance. The harsh surroundings saw many who tried to settle there pushed to their limits, although some were successful. The **10** \_\_\_\_\_ people were an example of the latter and for them the environment did not prove unmanageable for the present inhabitants, life continues to be a struggle. The territory of Nunavut consists of little more than ice, rock and a few **11** \_\_\_\_\_. In recent years, many of them have been obliged to give up their **12** \_\_\_\_\_ lifestyle, but they continue to depend mainly on **13** \_\_\_\_\_ for their food and clothes. **14** \_\_\_\_\_ produce is particularly expensive.

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## READING PASSAGE 3

### Snake oil

- A. Back in the days of America's Wild West, when cowboys roamed the range and people were getting themselves caught up in gunfights, a new phrase - 'snake oil' – entered the language. It was a dismissive term for the patent medicines, often useless, sold by travelling traders who always claimed miraculous cures for everything from baldness to snakebite.

Selling 'snake oil' was almost as risky a business as cattle stealing; you might be run out of town if your particular medicine, as you realised it would, failed to live up to its claims. Consequently, the smarter - 'snake oil' sellers left town before their customers had much chance to evaluate the 'cure' they had just bought.



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- B. The remarkable thing about many of the medicines dismissed then as 'snake oil' is not so much that they failed to live up to the outrageous claims made for them - those that weren't harmless coloured water could be positively dangerous. What's remarkable is that so many of the claims made for some of these remedies, or at least their ingredients, most of them, plant based, have since been found to have at least some basis in fact.

One, Echinacea, eventually turned out to be far more potent than even its original promoter claimed. Echinacea first appeared in 'Meyer's Blood Purifier', promoted as a cure-all by a Dr H.C.F. Meyer - a lay doctor with no medical qualifications. 'Meyer's Blood Purifier' claimed not only to cure snakebite, but also to eliminate a host of other ailments.

- C. Native to North America, the roots of Echinacea, or purple coneflower, had been used by the Plains Indians for all kinds of ailments long before Meyer came along. They applied poultices of it to wounds and stings, used it for teeth and gum disease and made a tea from it to treat everything from colds and measles to arthritis. They even used it for snakebite.





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D. Settlers quickly picked up on the plant's usefulness but until Meyer sent samples of his 'blood purifier' to John Lloyd, a pharmacist, it remained a folk remedy. Initially dismissing Meyer's claims as nonsense, Lloyd was eventually converted after a colleague, John King, tested the herb and successfully used it to treat bee stings and nasal congestion.

In fact, he went much further in his claims than Meyer ever did and by the 1890s a bottle of **tincture**<sup>(1)</sup> of Echinacea could be found in almost every American home, incidentally making a fortune for Lloyd's company, Lloyd Brothers Pharmacy.

E. As modern antibiotics became available, the use of Echinacea products declined and from the 1940s to the 1970s it was pretty much forgotten in the USA. It was a different story in Europe, where both French and German herbalists and homeopaths continued to make extensive use of it.

It had been introduced there by Gerhard Madaus, who travelled from Germany to America in 1937, returning with seed to establish commercial plots of Echinacea. His firm conducted extensive research on echinacin, a concentrate they made from the juice of flowering tops of the plants he had brought back. It was put into ointments, liquids for internal and external use, and into products for injections.



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F. There is no evidence that Echinacea is effective against snakebite, but Dr Meyer – who genuinely believed in Echinacea - would probably be quite amused if he could come back and see the uses to which modern science has put 'his' herb. He might not be surprised that science has confirmed Echinacea's role as a treatment for wounds, or that it has been found to be helpful in relieving arthritis, both claims Meyer made for the herb.

He might though be surprised to learn how Echinacea is proving to be an effective weapon against all sorts of disease, particularly infections. German researchers had used it successfully to treat a range of infections and found it to be effective against bacteria and **protozoa** <sup>(2)</sup>.

There are many other intriguing medical possibilities for extracts from the herb, but its apparent ability to help with our more common ailments has seen thousands of people become enthusiastic converts. Dozens of packaged products containing extracts of Echinacea can now be found amongst the many herbal remedies and supplements on the shelves of health stores and pharmacies. Many of those might be the modern equivalents of 'snake oil', but Echinacea at least does seem to have some practical value.



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- G. Echinacea is a dry prairie plant, drought-resistant and pretty tolerant of most soils, although it does best in good soil with plenty of sun. Plants are usually grown from seed but they are sometimes available from nurseries. Echinacea is a distinctive perennial with erect, hairy, spotted stems up to a meter tall. Flower heads look like daisies, with purple rayed florets and a dark brown central cone. The leaves are hairy; the lower leaves are oval to lance-shaped and coarsely and irregularly toothed.



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H. There are nine species of Echinacea in all but only three are generally grown for medicinal use. All have similar medicinal properties. Most European studies have used liquid concentrates extracted from the tops of plants, whereas extraction in the USA has usually been from the roots. Today most manufacturers blend both, sometimes adding flowers and seeds to improve the quality.

For the home grower, the roots of all species seem equally effective. Dig them up in autumn after the tops have died back after the first frost. Wash and dry them carefully and store them in glass containers. You can harvest the tops throughout the summer and even eat small amounts of leaf straight from the plant.

Even if you don't make your fortune from this herb, there are few sights more attractive than a field of purple coneflowers in all their glory. And with a few Echinacea plants nearby, you'll never go short of a cure.

*(1) a liquid containing a special ingredient*

*(2) a type of micro-organism*



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## List of Headings

- i. Where to buy the best Echinacea
- ii. What 'snake oil' contained
- iii. Growing Echinacea
- iv. How to use the Echinacea plant
- v. Earlier applications of Echinacea
- vi. The origins of the term 'snake oil' **A**
- vii. Early research into the effectiveness of Echinacea
- viii. How 'snake oil' was first invented
- ix. The use of Echinacea in new locations
- x. Modern evidence of the effectiveness of Echinacea
- xi. Early kinds of 'snake oil' **B**



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## Questions 7-13

Do the following statements agree with the information given in the text?

In boxes 7-13 on your answer sheet, write:

**TRUE** if the statement agrees with the information

**FALSE** if the statement contradicts the information

**NOT GIVEN** if there is no information on this

7. 'Snake oil' sellers believed their product was effective.
8. Most people in the Wild West mistrusted 'snake oil'.
9. Some 'snake oils' were mostly water.
10. All 'snake oils' contained Echinacea.
11. Echinacea has been proven to kill microbes.
12. The highest quality Echinacea is grown in America.
13. More than one part of the Echinacea plant has a medicinal use.





*Thank you*