

FLEYDO ENGLISH SCHOOL

Reading Challenge

The Boy Who Built a Windmill

How a fourteen-year-old in Malawi used a library book and a scrapyard to bring electricity to his village.

Level: B1

Skill: Reading

Duration: ~20 min

Age: Teens (11-16)

Topic: True Stories

Person: William Kamkwamba

The Article

In 2001, in a small farming village called Wimbe in central Malawi, a fourteen-year-old boy named William Kamkwamba was forced to drop out of school. The reason was simple and devastating: his family could not afford the **tuition** fees. In Malawi, secondary school was not free. It cost approximately eighty US dollars per year — a sum that, in one of the poorest countries in the world, was beyond the reach of most farming families. And in 2001, it was beyond the reach of the Kamkwamba family for a reason that went far beyond ordinary poverty. Malawi was in the grip of a **famine**.

The Famine

The harvest of 2000 had failed. A severe **drought** — followed by devastating floods — had destroyed the maize crop that most Malawian families depended on for food. By early 2001, millions of people were going hungry. The Kamkwamba family — William, his parents Trywell and Agnes, and his six sisters — went from eating three meals a day to two, then one, then a few mouthfuls of nsima, the thick maize porridge that was the staple food of the country. William's father, a farmer who had worked the same land his entire life, watched his fields turn to dust and his family grow thin. "We were not living," William later wrote. "We were just trying not to die."

When the school term began in January 2001, Trywell told William he could not pay the fees. William walked to school anyway and sat in the classroom, hoping nobody would notice. After two weeks, the headmaster called him to his office. "Where is your **tuition**?" he asked. William had no answer. He was sent home. At fourteen, his formal education was over. He would not return to a classroom for five years.

The Library

But William did not stop learning. Wimbe had a small community library — a single room with a few hundred donated books, most of them in English, which William could read only slowly. He went there every day, working through the books one page at a time, looking at diagrams and photographs, teaching himself subjects that his school had never offered. He read about geography, biology, and physics. He read about famous scientists and inventors. And one day, on a dusty shelf near the back of the room, he found a book that would change his life. It was an American textbook called *Using Energy*, and on the cover was a photograph of a row of wind **turbines** — tall white towers with spinning blades, generating electricity from the wind.

William stared at the photograph for a long time. He knew what electricity was — the trading centre in the nearest town had it, and he had seen electric lights, radios, and water pumps. But his village had none. Only two percent of Malawians had access to electricity. Without it, there was no light after dark, no way to pump water for **irrigation**, no way to charge a phone, no way to power the radio that was the village's only connection to the outside world. William looked at the photograph and had a thought that was either brilliant or

insane: "I can build one of those."

The Scrapyard

He had no money. He had no tools. He had no training. He had a library book with diagrams he could barely read and a **scrapyard** on the edge of town where broken tractors, rusted bicycles, and abandoned vehicles were slowly returning to the earth. He began collecting materials. A tractor fan blade for the rotor. A bicycle frame and chain for the drive mechanism. PVC pipes, flattened and shaped into blades. A small **dynamo** from a broken radio. Nuts, bolts, and wire scavenged from the **scrapyard**. And for the tower itself — the structure that would hold the windmill five metres above the ground — he cut down blue gum trees from the family's small plantation.

The villagers thought he had lost his mind. A teenage boy, a school dropout, building a machine from rubbish? They called him *misala* — the Chichewa word for crazy. His mother worried. His friends laughed. Even his father, who loved William and believed in hard work, was **sceptical**. "What are you doing with these things?" Trywell asked, watching William drag a tractor fan across the yard. "I am building a windmill," William said. "A what?" "A machine that makes electricity from the wind." Trywell looked at the pile of scrap metal, the library book open on the ground, and his skinny, determined son. He did not understand. But he did not stop him.

Building the Machine

William worked for two months. He had no **blueprint** — only the diagrams in *Using Energy* and his own instinct for how mechanical things worked. He made mistakes constantly. The first blade design was too heavy and would not spin. The chain mechanism jammed. The tower collapsed twice. He burned his hands welding with a homemade blowtorch. He cut his fingers on sheet metal. He was hungry — the **famine** was still gripping the country, and working on the windmill meant burning calories he could not replace.

But William had something that no amount of money or education could provide: **perseverance**. He failed, adjusted, and tried again. He used the scientific method without knowing it had a name — observing, hypothesising, testing, revising. When the blades did not spin fast enough, he experimented with different angles. When the **dynamo** did not produce enough current, he rewound the copper coils by hand. When the tower was not stable, he added cross-braces made from eucalyptus branches. Each failure taught him something. Each mistake brought him closer.

Light

In June 2002, William connected the final wire. The windmill stood five metres tall in his family's yard — a rough, handmade tower of blue gum logs, topped with a rotor made from a tractor fan and PVC pipes, connected by bicycle chain to a small **generator** salvaged from a broken machine. It looked, by any professional standard, ridiculous. It looked like exactly what it was: a machine built by a hungry teenager from a scrapyard. And it worked.

When the wind blew, the blades spun. The chain turned the generator. And a small light bulb — connected by wire to the dynamo — flickered, glowed, and held steady. Electric light, produced from wind, in a village that had never had electricity. William's mother came out of the house. His sisters gathered around. Neighbours appeared, drawn by the sight of the spinning blades and the impossible glow of a light bulb powered by nothing but air. "Electric wind!" someone shouted. The crowd grew. People touched the light bulb, felt the warmth, stared at the spinning blades, and looked at the boy they had called crazy with expressions that had changed from mockery to wonder. William connected a radio. Music played. The village had electricity.

The World Notices

The story might have ended there — a remarkable achievement, but a local one, known only to the people of Wimbe. It did not end there because of a journalist. In 2006, a reporter from the Malawi Daily Times heard about the windmill and visited the village. His article was picked up by bloggers, then by international media. In 2007, William — now twenty — was invited to speak at the TED conference in Arusha, Tanzania. He walked onto the stage in front of an audience of some of the world's most influential thinkers, entrepreneurs, and scientists. He was wearing the nicest clothes he owned. He spoke English haltingly, having taught himself mostly from books. And he told his story.

"I tried and I made it," he said simply, standing in front of a photograph of his windmill. The audience — people who ran billion-dollar companies and advised governments — gave him a standing ovation. His five-minute talk was watched by millions online. Offers of help flooded in. A **scholarship** was arranged for him to attend the African Leadership Academy in South Africa, and then Dartmouth College in the United States, one of the most prestigious universities in the world. The boy who had dropped out of school at fourteen graduated from an Ivy League university at twenty-seven.

What William Built Next

But William did not stay in America. He went home. He returned to Wimbe and built a better windmill — then another, and another. He installed a solar-powered water pump that provided clean drinking water and **irrigation** for the village's crops. He helped design **sustainable** energy systems for rural communities across Malawi. He founded an **innovation** centre that trained young Malawians in engineering, science, and technology — giving them the education and resources he had not had.

His story became a bestselling book — *The Boy Who Harnessed the Wind* — and in 2019, a Netflix film directed by the actor Chiwetel Ejiofor. William became an international spokesperson for education, renewable energy, and the idea that **innovation** does not require wealth, privilege, or a degree. It requires curiosity, **perseverance**, and access to information. "Where I come from," William told an interviewer, "the wind has always been free. It blows across every village, every field, every country. All you need is the knowledge to use it. I found that knowledge in a library book. Imagine what would happen if every child in the world had access to a library."

William Kamkwamba's story is not just about a windmill. It is about what happens when a curious mind meets a desperate situation and refuses to accept that nothing can be done. It is about a boy who was too poor for school but not too poor to learn. A boy who was called crazy and turned out to be **resourceful**. A boy who looked at the wind — the most ordinary, invisible, overlooked force in nature — and saw electricity, water, food, and a future. The wind is still blowing. The question is: what will you build with it?

Vocabulary Cards

Comprehension Quiz

Key Vocabulary

Term	Definition
Famine	An extreme shortage of food in a region, causing widespread hunger and death
Drought	A long period with no rain, causing crops to fail and water supplies to dry up
Turbine	A machine with blades that spin when pushed by wind, water, or steam to generate power
Generator	A machine that converts movement into electricity
Scrapyard	A place where old, broken vehicles and machines are taken apart for reusable parts
Irrigation	A system of channels or pipes used to bring water to crops
Dynamo	A small generator that produces electricity through spinning magnets and wire coils
Blueprint	A detailed technical drawing or plan for building something
Tuition	The money paid for education, especially at a school or university
Sceptical	Having doubts about whether something is true or will work
Resourceful	Good at finding clever ways to solve problems with limited materials
Sustainable	Able to continue over time without causing damage to the environment
Innovation	A new idea, method, or invention that improves on existing solutions
Scholarship	Money given to a student to pay for their education, usually based on ability
Perseverance	The quality of continuing to try despite difficulties and setbacks

Comprehension Quiz

1. Why did William Kamkwamba drop out of school at the age of fourteen?

- A) He did not enjoy studying
- B) His family could not afford the \$80 annual tuition fees after a devastating famine destroyed their crops
- C) The school was closed by the government
- D) He wanted to work in the city

2. Where did William find the information to build his windmill?

- A) From a university professor who visited his village
- B) From a library book called 'Using Energy' that showed photographs of windmills
- C) From a YouTube tutorial
- D) From his father, who was an engineer

3. What materials did William use to build his first windmill?

- A) Professional engineering equipment bought online
- B) Blue gum tree trunks, bicycle parts, a tractor fan blade, and other scrap materials
- C) Steel beams and industrial generators
- D) Plastic bottles and cardboard

4. How did the villagers react when William was building the windmill?

- A) They immediately supported him and helped
- B) Most people thought he was crazy and mocked him, calling him 'misala' (madman)
- C) They reported him to the police
- D) They completely ignored him

5. What is the main message of William Kamkwamba's story?

- A) That windmills are the best source of energy in Africa
- B) That curiosity, determination, and a library book can change a life, a village, and inspire the world
- C) That school is not important for success
- D) That Malawi has better technology than other countries

Answer Key

#	Ans	Question
1	B	Why did William Kamkwamba drop out of school at the age of fourteen?
2	B	Where did William find the information to build his windmill?
3	B	What materials did William use to build his first windmill?
4	B	How did the villagers react when William was building the windmill?
5	B	What is the main message of William Kamkwamba's story?

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