

The Boy Who Harnessed the Wind (teen & young adult version)
by William Kamkwamba and Bryan Mealer



Chapter 1: When Magic Ruled the World

Vocabulary: maize pg 6, sing'anga pg 7, crude pg 7, eternity pg 10, abounded pg 14, boasted pg 28, mangled pg 31

1. Describe the setting of the story, how is it similar to or different from yours?
 - a. William's home is in the countryside where most people are farmers. There are no computers or video games and they don't even have electricity. Most of their toys are made from scraps.
2. Who are the sing'anga? How does William feel about them?
 - a. William is terrified of the sing'anga, the witch doctors of his village. Most people were too poor to see a real doctor, so these "doctors" were respected in the village for their knowledge of magic and health.
3. Who are William's best friends? How are they similar to or different from your friends?
 - a. Geoffrey and Gilbert- Geoffrey is William's cousin, Gilbert is the son of the village chief
4. Why does William focus on stories about his village and the witch doctors in Chapter 1? Why is this important to know before you read more? (see last paragraphs on pages 34 & 35)
 - a. William wants the reader to understand where he comes from and how his culture and the people around him have impacted his decisions and life.
 - b. William tells many stories about the sing'anga and their magic to show how people thought about healing and the way things worked. Only when he was fooled by one of the witch doctors did he begin to realize their practices were not based on facts and his beliefs started to change.

Chapter 2: Khamba

Vocabulary: tuberculosis pg 36, estate pg 37, lavish pg 38, bait pg 42, skewer pg 43

1. What tragic loss do William and his family experience in Chapter 2? How does this loss impact their family farm and business?
 - a. William's uncle, Uncle John, dies suddenly from tuberculosis, a disease that attacks your lungs. In the U.S. we can get vaccinated against this disease, but in Malawi this was not always available. Losing John meant Williams's father didn't have anyone to help run their farm. He would then need to rely on William and his cousin Geoffrey to help.

2. Who is Khamba and how does William become fond of him?
 - a. Khamba is a black-spotted dog who comes to live with William when William's other uncle, Socrates, loses his job at a tobacco estate.
3. How does William hunt? What does this tell us about his character?
 - a. William finds and creates his own hunting tools. This shows William's inventiveness and creativity. His willingness to use everyday objects to make something important.

Chapter 3: Discovering a Thing Called Science

Vocabulary: strategy pg 45, improvisation pg 47

1. What examples from this chapter show us that William wants to be a scientist? (pg 51)
 - a. William was never happy not knowing how something worked. He was always questioning and thinking about the "why". William and Geoffrey started by experimenting with radios and learning how they work which sparked curiosity about how other things work.
2. What specific instance helped William discover electricity?
 - a. Dynamos-A friend of William's father had a bike with a headlamp shining. William wondered what made the lamp go on and off with no switch. After tinkering with the dynamo and the wires they realized they could power a radio by pedaling the bicycle.
3. What is the difference between DC and AC current?
 - a. DC current only flows in one direction, AC current can change directions.
4. Why do most people in Malawi not have electricity?
 - a. Most do not have enough money to afford it and in order to get electricity there are many hoops to jump through.
5. How does deforestation impact people's access to electricity in Malawi?
 - a. Many people use firewood as their source of light and heat which means they need lots of trees. Tobacco and maize estates also tear down trees to plant their crops. Without trees and forests covering the land, storms can turn into floods, tearing away soil that helps plants grow. This soil and other trash wash into the Shire River which is how Malawi generates its electricity. The turbines get clogged with soil, mud and garbage and have to be turned off to be cleaned. While the turbines are cleaned, the power must be shut off.
6. How is William's education different from your own and how does this impact him?
 - a. Secondary school is not free, so most children do not even attend. At secondary school, you can specialize in certain areas and learn more about science. The learning conditions at the primary school were not conducive to learning. Schools are overcrowded, run-down buildings, and lack resources. Education was not valued.

Chapter 4: The Uncertain Life of an African Farmer

Vocabulary: remnants pg 64, recruits pg 65, luxurious pg 66, scorched pg 68

1. Explain why maize is extremely important to William's family and the people of Malawi?
 - a. It is eaten at every meal and a staple in many homes. People spend all year growing and cultivating it and rely on it heavily for their food source.
2. On page 64, explain what the Malawi saying means, "When you go to see the lake, you also see the hippos"
 - a. Answers will vary
3. When the maize crops are growing and healthy William says, "A whole green field would whisper your fortunes in the wind." (pg 66) What does saying this mean?
 - a. A healthy maize crop represents money and health for the people of Malawi.
4. What environmental factors affect food production in William's town?
 - a. Flooding, droughts and extreme heat

Chapter 5: Malawi Begins to Starve

Vocabulary: famine pg 78, soot pg 80, scorching pg 84, feeble pg 84, latrine pg 94,

1. Page 62 highlights the lessons of supply and demand. Explain why the decision of William's family to sell all their food was a smart one.
 - a. When the supply of something is low, demand is high and prices soar. William's family was able to use the little food they had to make his mother's zigumu cakes and sell them at a high price in order to get money for their own food.
2. Describe how you would feel if you were William when he went to get maize at the government store?
 - a. Answers will vary: Scared, terrified, finally see the realities of their situation and the many people starving
3. How does hunger transform William's town?
 - a. People are selling their furniture, kitchen items, and anything they can sell for food. Everyone is weak, tired and living day-by-day

Chapter 6: My School Assignment

Vocabulary: descended pg 102, punctual pg 106, meager 109

1. Explain the following quote as William describes the relationship between the villagers and businessmen: "With no money in their pockets, they (villagers) had no power." pg 102
 - a. The businessman can charge as much as they want for goods and/or cheat people on what they are purchasing because no one has any power to stop them since the villagers are all starving and desperate for any food
2. Describe Williams new school conditions (real picture of school in book to show students)

- a. They are no better than his primary school. It has leaking water, no resources, dirty, etc.
- 3. How would you feel if you were William at the end of chapter 6?
 - a. William is feeling defeated like he has no future not being able to attend school on top of being hungry. He thinks his future is looking dim.

Chapter 7: A Time of Dying

Vocabulary: sifted pg 114, converged pg 116, anguish pg 118

1. Explain the meaning of the following quote, "Anguish was expressed mostly in silence since few had the energy to cry." (pg 116)
 - a. William's town is like a ghost town, people are so weak they wander about in silence looking for any scrap of food.
2. Listen for 1-2 figures of speech (simile, metaphor, etc) as you read pages 116 and 117 and write them down as you hear them. Explain their meaning.
 - a. Lunging like a wolf pack whenever a kernel fell to the ground.
 - b. Crowds gathered around... as if watching a dream in heaven.
3. Do you agree or disagree with how William dealt with Khamba? Explain your reasoning.
 - a. Answers will vary

Chapter 8: Twenty Days

Vocabulary: cholera pg 128, prosper pg 136

1. Describe how hunger is physically impacting William and his family.
 - a. Geoffrey and William's father lose their vision at times, everyone is skin and bones or swollen due to lack of nutrients. William's heart is weakening.
2. Explain why this chapter is titled "Twenty Days". What happens to William and his family in March?
 - a. Their crop of maize is doing well and will be ready to eat in twenty days. If the family can make it that long, they will be able to eat again.
3. What connections do you see between the environment, sanitation, health, and nourishment/starvation? Make a cause-effect map with a tree stem and branches for each.
 - a. Example: floods -->poor harvest

Chapter 9: The Library

Vocabulary: reclaimed pg 137, stimulated pg 138, dynamo pg 145, transmit pg 145, battery terminals pg 145, AC & DC current pg 145, rotor pg 159, pristine pg 161

1. Why does William first start visiting the library?

- a. Because he has nothing else to do during the day when he would normally be at school and is getting bored.
2. William describes the library as a place where he could “escape without going anywhere.” What is something you do to escape and why is it important?
 - a. Answers will vary
3. What does William find in the library that inspires him to put his dreams of becoming a scientist into action?
 - a. 2 books: *Explaining Physics* teaches him how to make electromagnets with everyday objects. *Using Energy* introduces him to the windmill and how it can make electricity.
4. Think of how hard William works to learn to read English and study physics and science at the library. What's something that you have had to work hard for and how did your hard work pay off?
 - a. Answers will vary
5. Explain how a simple electric motor works. You could have students draw this as you read pg 144.
 - a. A coil of wire on a shaft sits inside a magnetic casing, when the coil of the wire is attached to a battery and becomes magnetized it gets charged up and wants to resist the surrounding magnet. This push and pull between opposite charges make the shaft spin, producing electricity.
6. How does a windmill represent freedom for William? What symbolizes freedom for you?
 - a. A windmill could pump water to the family's crops allowing them to harvest two times a year rather than one. This water could also help them grow their own garden to eat and sell fruits and vegetables at the market. With the windmill, they could also have electricity!

Chapter 10: Harvest Time

Vocabulary: laden pg 169, forbade pg 170 and 175, significant pg 172, resemble pg 175, welded pg 180, glum pg 184

1. William feels helpless when he returns to school but then must stop attending again when his family can't pay the fees. Explain William's worst fear. What is your worst fear?
 - a. William's worst fear is being another Malawian farmer like his father where his life would always be controlled by the rain, price of fertilizer, and seeds.
2. As William goes to harvest their crop he says, “The maize rows appeared like the bars of my own prison. I would enter their shadows and the gates would lock behind me.” (pg 171). Explain the meaning of this simile and create your own simile to represent this experience for William.
 - a. Not being able to go to school meant he would be a maize farmer, something he didn't wish for himself.
3. How does the scrapyard begin to replace school for William?
 - a. He spends most of his days there, learning, questioning and being curious about all of the things there

4. Explain how the community reacts to William as he goes about getting all the parts together for his windmill? What is his reaction to them?
 - a. They call him “misala” (crazy). William says they will see once his plan is in place.
5. What does Gilbert do to show his support for William and help him get all the supplies he needs?
 - a. Gilbert pays for a dynamo, the last piece to the puzzle for William’s windmill.

Chapter 11: The Windmill Comes to Life

Vocabulary: assembling pg 187, compound pg 189, cumbersome pg 189 and 197, voltage pg 193, transformer pg 193

1. As you read about William assembling the windmill, have students draw what they think the windmill will look like.
2. How does William follow the engineering design process as he builds his windmill?
 - a. William asks questions and is curious to identify the need for a windmill. He researches at the library, develops plans for a windmill, collects materials, plans out his design, builds a prototype, tests, and fixes any issues before testing again to improve his design.
3. Define voltage. Explain why William broke his father’s radio when he plugged it into his windmill?
 - a. Voltage is how you measure electrical pressure, think of it like the water pressure coming out of a hose. William’s windmill created a power surge that increased the voltage and fried his father’s radio, there was too much power going into the radio.
4. How does William get the radio to work?
 - a. He decreases the voltage by attaching an extra long wire to the radio, as the electricity traveled some of its energy was lost on its way to the radio
5. What metaphor does William use for his tower after it is built?
 - a. A wobbly giraffe (metaphor) pg 195
6. On page 205, when William goes to connect the windmill to make electricity in his room, what safety precautions does he take? What are other insulators you know of?
 - a. Wears plastic which does not conduct electricity to prevent him from getting electrocuted

Chapter 12: Bigger and Brighter

Vocabulary: diode pg 212, DC and AC power pg 212, nonconductive pg 214, ferocious pg 216, circuit breaker pg 220

1. What is one problem with William’s windmill and how does he solve it?
 - a. If there is no wind there is no light. William needs a large battery to store power for when it is not windy so he begins searching for a car battery.

2. Explain what a transformer does.
 - a. Transformers “boost” power as it travels long distances across the grid.
3. Explain the difference between a series and parallel circuit
 - a. Series circuits only have one path for electrons to flow. If one bulb goes out, the rest of the lights do too. Parallel circuits have multiple paths for electricity to flow. If one bulb burns out, the others can stay lit.
4. How does life change for William and his family in Chapter 12?
 - a. They have lights at night, people line up to use their electricity to charge their phones.
5. What is one character vs. nature conflict William has to address in this chapter? How would you feel if you had to deal with this?
 - a. Termites!
6. What is one problem William encounters after inventing the windmill? How does he use curiosity and ingenuity to solve it?
 - a. He figures out how to make a circuit breaker to prevent fires.

Chapter 13: The Restless Inventor

Vocabulary: loitered pg 227, transmitter pg 229, amplifier pg 230, piston pg 231, irrigation pg 232, corrupt pg 238

1. William doesn't stop experimenting once his windmill is successful. What else does he try to create?
 - a. He tinkers with creating his own radio, water pump, and biogas.
2. In Chapter 13, William explains the connection between superstition, magic, and science. Why do you think people in his community relied on magic to explain what they didn't understand?
 - a. People like to have explanations for why good or bad things happen. When you don't have the knowledge to explain things you sometimes make up information or look for someone to place the blame to help make sense of the unknown (fear).

Chapter 14: The World Discovers Wimbe

Vocabulary: innovation pg 243, eloquent pg 245, flocked pg 247

1. What stroke of luck does William encounter that makes his dreams start to become reality?
 - a. Dr. Hartford Mchazime from the Malawi Teacher Training Activity happened to be inspecting the Wimbe Library when he discovers William's windmills and is curious about who created them.
2. Why did Dr. Mchazime bring reporters to see William's creations?
 - a. He wanted people to see that the country was losing smart, talented people because they couldn't attend school due to poverty and even if they could go

back to school they weren't getting a good education due to the school's lack of resources. He wanted the world to see and to help William.

3. Compare and contrast William's new school in Madisi with your own.
 - a. Answers will vary
4. What "every day" things does William not understand having never traveled before? (pg 257) How must he be feeling?
 - a. William is feeling overwhelmed and excited about attending the TED talk. He doesn't know things like how to travel on an airplane or that a red light meant the bathroom was occupied; socially acceptable things we take for granted knowing.

Chapter 15: Meeting Ted and Tom

Vocabulary: lorry pg 260, voltmeter pg 269,

1. At the TED conference, how does William's world expand? Explain.
 - a. William learns many new things and meets many scientists and people like him. He learns about the internet and Google; he cannot believe it! He learns about mobile phones and many other technologies that greatly expand his view of the world.
2. Learning so many new things, what does William consider to be the greatest part about the TED conference?
 - a. Seeing all the other Africans sharing their vision of how to make the world a better place.
3. William is a unique and special person. Explain two qualities you believe were most important to his success. Then think about what makes you special and unique. Explain how these qualities can help make the world a better place?
 - a. Answers will vary
4. (Epilogue) What does William begin to dream or imagine as a result of meeting new people, seeing new places, and furthering his education?
 - a. William wants to rebuild schools in Malawi and provide all homes with electricity.