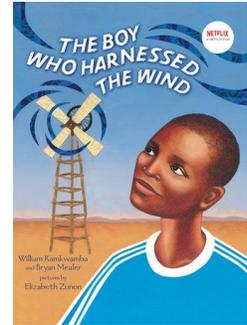


The Boy Who Harnessed the Wind

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This true story is about a boy in Malawi that is faced with multiple problems: drought, lack of technology. access to education and governmental corruption and he solves the problems through creation of a windmill that brings water and electrical power made from spare parts ala MacGyver.

Subject Area: Social Studies

Grade Level: 6-8 (with alterations the lesson could be moved to 3-5 or high school)

Unit Title: Cultural Awareness, Problem Solving

Lesson Title: The Boy who Harnessed the Wind

Overview: The Jr. High students at Holy Name School will develop their cultural awareness and problem solving abilities by studying how a young man from East Africa used his intelligence and mechanical ability to surmount unbelievable odds and make it possible for the people of his village to get water pumped out of the ground and also create electricity.

Connection to the Curriculum: History, Geography, Social Studies, Technology, Literature (cross curricular)

Connection to Nebraska Social Studies Standards: (June 2019 ed.)

SS 8.1.2 Demonstrate the roles, responsibilities, and rights as local, state, national, and international citizens.

SS 8.2.6.b Understand tools, strategies, and systems used to maintain, monitor, control, and plan the use of financial resources.

SS 8.3.2.a Evaluate physical and human characteristics of places and regions.

SS 8.3.2.b Determine the impact of land and water features on human decisions.

SS 8.4.3.a Analyze how differing experiences can lead to the development of perspectives.

SS 8.4.3.b Interpret how and why marginalized and underrepresented groups and/or individuals might understand historical events similarly or differently.

Time: 2 days, more if you use the young readers book

Materials/Equipment Required:

Tablets or Computers

Presentation program such as Powerpoint or Google slides.

Copies of the Boy Who Harnessed the Wind book

Kamkwamba, William & Bryan Mealer. *The Boy Who Harnessed the Wind*. New York: Scholastic, Inc. 2012. (3-5 gr. level) or

Kamkwamba, William, 1987-. *The Boy Who Harnessed the Wind : Creating Currents of Electricity and Hope*. New York :Harper Perennial, 2010. (junior high level)

Objectives:

The student will learn how one young man in Malawi found a way out of crushing poverty and access to education by developing a windmill from spare parts that created electricity and made it easier to access water. This is one true story about how one person, a teenager, can make a difference and solve a problem that threatens his entire village.

Suggested Procedure:

Opening: Students will be asked about where the African country of Malawi is. When fourteen-year-old William Kamkwamba's Malawi village was hit by a drought, everyone's crops began to fail. Without enough money for food, let alone school, William spent his days in the library . . . and figured out how to bring electricity to his village. Persevering against the odds, William built a functioning windmill out of junkyard scraps, and thus became the local hero who harnessed the wind.

Development:

Students will read one of the book versions for an overview of the situation. The children will be shown a TED Talks presentation by William Kamkwamba as well as a video on how windmills or wind turbines work.

https://www.ted.com/talks/william_kamkwamba_how_i_harnessed_the_wind?language=en

<https://www.energy.gov/maps/how-does-wind-turbine-work>

Watch a teaser trailer for the Netflix movie.

<https://www.youtube.com/watch?v=BbsB2iYHDMM>

Use the following lesson plan by Sue Frankel (parts 1-3):

1. Scenario: Life without electricity

Divide the class into groups. Ask them to think about what would happen to their lives if electricity were not out for a few days, rather it did not exist. No electronics, no refrigeration, no cell phones, no hot water, no lights, no electricity at all. Can they picture what life would be like. What would their challenges be? Might there also be some benefits? They may consider these and lots of other questions:

- How would they communicate with their friends?
- What would they do for entertainment?
- What would meals be like?
- How would they do their homework?

2. Very short research project (20 minutes perhaps): to gain insight into Malawi

Because students are likely to know nothing about Malawi, the setting for *The Boy Who Harnessed the Wind*, this short exercise will help the students gain some insight into the country, its problems and its culture.

Ask students to locate information about Malawi and be prepared to report what they find to the rest of the class. Students should choose one of the items on the list below. Their objective is to find a reliable article, skim it, and be ready to orally report what they learn.

- Where is Malawi located? What countries border it?
- What foods are most popular?
- What is the predominant race?
- What problems do the citizens face?
- What kind of music is popular?
- How do most Malawi citizens earn a living?
- What kind of government rules Malawi?
- What is the climate like?
- What sports are popular?
- What crops are grown?
- What religions are prevalent in Malawi?
- What are the health problems affecting Malawians?
- What level of education do most Malawians achieve?

3. Scenario: Dealing with starvation

Divide the class into groups, and ask each group to consider the following scenario.

You are all living in a small, remote village that is 100 miles away from the nearest city. You are friends with most of the villagers and related to many of them. The village is largely self-sustaining. Villagers grow their own fruits and vegetables. A local school educates the children, and though they are poor and life is not easy, the villagers are happy and mostly healthy.

All that changes when the area is hit by a devastating drought. The once fertile land is completely dry; crops cannot grow, and the people can no longer feed themselves. Since the village relies almost entirely on the money they make from selling their crops, the villagers are facing a desperate situation. There is no food; there is no money to buy food, and the villagers are starving and dying. What are their options? How can they help themselves?

Closing/Day 2:

The students will have to do a presentation for their classmates about how an average person, even a kid, can define a problem, locally, nationally, or even internationally and do something to solve the problem or at least make it better. The student can be by themselves or in a group of 2-3 people. The presentation can be a poem, song, powerpoint, google slides, or a graphic novel/comic book. It should last 2-5 minutes.

Student Assessment: See Oral Presentation Rubric

Extending the Lesson:

·A STEM lesson could be used to investigate how to build a wind turbine which we see covering Iowa and Nebraska

<https://stem.northeastern.edu/programs/ayp/fieldtrips/activities/turbines/>

https://net.pbslearningmedia.org/resource/phy03.sci.engin.design.lp_windmill/windmills-putting-wind-energy-to-work/#.XVBsheNKiws

Additional lesson ideas:

<https://howardcc.instructure.com/courses/301957/pages/the-boy-who-harnessed-the-wind-teaching-resources>

<https://www.rif.org/literacy-central/book/boy-who-harnessed-wind>

<https://achieve.lausd.net/cms/lib/CA01000043/Centricity/Domain/217/3rd%20Grade%20The%20Boy%20Who%20Harnessed%20the%20Wind.docx>

<https://support.thinkcerca.com/hc/en-us/articles/230542867-Differentiated-Lessons-for-Teaching-The-Boy-Who-Harnessed-the-Wind-by-William-Kamkwamba-and-Bryan-Mealer>

<http://www.theclassroombookshelf.com/2012/09/the-boy-who-harnessed-the-wind/>

Additional Resources:

Sue Frankel lessons:

<https://howardcc.instructure.com/courses/301957/files/19774363/download?wrap=1>

<https://howardcc.instructure.com/courses/301957/files/19774444/download?wrap=1>

Jon Stewart interview:

<http://www.cc.com/video-clips/wv1nbv/the-daily-show-with-jon-stewart-william-kamkwamba>

William's web presence: <http://www.williamkamkwamba.com/>

Consider watching the Netflix movie: <https://www.netflix.com/title/80200047>

(TV-PG. 1 hour 53 min.)