



## **Classroom Activities**

### **SOUTHERN AFRICA: TROUBLED WATER**

**<Featured Video Clip: FRONTLINE/World: Southern Africa: Troubled Water>**

#### **VIDEO OVERVIEW**

In 2005, FRONTLINE/World featured the PlayPump, a promising new technology that pumped fresh water when children played on a merry-go-round. The story appealed to the good intentions of politicians, celebrities and funders, who gave support to installing thousands of these devices in Africa. When students watch *Southern Africa: Troubled Water*, they will see the problems that happened during the PlayPump rollout and learn important lessons related to the implementation of foreign aid projects.

#### **Getting Started**

For classrooms studying global studies and world history, FRONTLINE provides a set of video themes and discussion questions to help students analyze and understand key current events around the globe. Watch the video chapter and start a discussion about the problems encountered with the large-scale rollout of the PlayPump in Africa. Go further into this topic with the *Southern Africa: Troubled Water Lesson Plan* that asks students to analyze lessons learned from the PlayPump initiative and develop advice for other aid organizations about how to prevent a similar situation in the future.

#### **VIDEO THEMES**

- In 2005, a FRONTLINE/World story profiled South African social entrepreneur Trevor Field's efforts to build and install PlayPumps, a promising new technology that pumped fresh water when children played on a merry-go-round.
- Eager to provide a solution for Africa's water woes, funders, celebrities and politicians gave endorsements and pledged millions of dollars to bring the PlayPump to thousands of African communities.
- Ambitious and arbitrary goals to roll out the PlayPump resulted in an emphasis on quantity over quality of device installations. Site visits and reports to evaluate the PlayPump cited inappropriate site selection, technical malfunctions, poor maintenance, lack of local community support, and children not playing as expected on the pumps.
- Organizations involved in the funding and rollout of the PlayPump were reluctant to take responsibility for the PlayPump's problems and instead blamed each other when issues in the field became public.

- Trevor Field says his organization is addressing maintenance issues and improving the technology. He admits the PlayPump, which is mainly effective at large schools where plenty of children provide “spinning time” throughout the day, will likely never live up to its initial promise.
- The aggressive rollout of PlayPumps ended in fall 2009. The device is now used by charities in Africa as one possible solution to water needs in limited circumstances.

### **DISCUSSION QUESTIONS**

- Why do you think the PlayPump device attracted the endorsements and millions of dollars from celebrities, funders and politicians?
- What challenges were encountered in some of the communities where the PlayPump was installed?
- UNICEF concluded that the PlayPump is not as sustainable as it needs to be to work in rural Africa. What does “sustainable” mean? Why would that characteristic be important when evaluating potential solutions to problems in Africa?
- Why might charities be reluctant to talk to reporters about problems with their aid projects? What risks do they face?
- Who do you think should be responsible for fixing the PlayPumps where the equipment did not work properly?

### **GO FURTHER**

Featured Lesson Plan: “Learning From a Troubled Foreign Aid Project”

Web-exclusive Resource: [Timeline: The PlayPump Trail](http://www.pbs.org/frontlineworld/stories/southernafrica904/timeline_tw.html)

[[http://www.pbs.org/frontlineworld/stories/southernafrica904/timeline\\_tw.html](http://www.pbs.org/frontlineworld/stories/southernafrica904/timeline_tw.html)]

## **SOUTHERN AFRICA: TROUBLED WATER**

### **FEATURED LESSON PLAN: “Learning From a Troubled Foreign Aid Project”**

#### **Overview:**

In this lesson, the class will analyze lessons learned from a troubled foreign aid project and develop advice for other aid organizations about how to prevent a similar situation in the future. The featured aid project is the rapid rollout of the PlayPump device that pumps fresh water when children play on a merry-go-round. For more background information on how the PlayPump works and a timeline of what happened with the PlayPump’s rollout, please see this lesson’s [Related Resources](#).

#### **Grade Level:**

Grades 6-12

#### **Subject Areas:**

Social Studies, Geography, Global Studies, World History

#### **Objectives:**

The student will:

- List problems that occurred in various communities when PlayPumps were implemented
- Outline what lessons were learned from the rapid rollout of PlayPumps
- Develop a piece of advice they would give to other organizations with aid projects about how to prevent situations like this from happening in the future

#### **Estimated Time Needed:**

One 50-minute class period

#### **Materials Needed:**

- Internet access and equipment to show the class an online video clip and to conduct research
- The FRONTLINE/World film *Southern Africa: Troubled Water* (length: 23:41)

**Procedure:**

1. Present the following multiple-choice question to the class: In the year 2000, about how many Africans could not get safe drinking water?

- Half
- 300 million
- More than the entire population of the United States

(source: The World Bank

[<http://youthink.worldbank.org/4teachers/pdf/environment/water-quiz.pdf>])

Explain to students that all of the answers are correct, and that the water many Africans have actually causes sicknesses, including malaria and dengue fever.

2. Tell the class that a South African social entrepreneur named Trevor Field wanted to do something about this important issue, so he worked to have devices called PlayPumps installed at rural schools. Then show the class *Southern Africa: Troubled Water* (length 23:41) and ask students to take notes on what problems came up when the installation of PlayPumps was ramped up too quickly.

3. Discuss why so many people put their support behind the PlayPumps device. How would students summarize what went wrong? Under what circumstances would the PlayPump be an effective way to meet water needs?

4. Have student pairs read an interview with journalist Amy Costello, who reported on the PlayPumps. Ask the pairs to list what lessons were learned from the rapid PlayPump rollout and what one piece of advice they would give to other organizations with aid projects about how to prevent something like this from happening in the future.

5. If time permits, ask student pairs to share with the rest of the class what advice they would give.

**Credits:**

This teacher's guide was written by Cari Ladd.

### **Extensions:**

- Social entrepreneur Trevor Field began working with communities to install the PlayPump because he wanted to address an important social problem. Break students into teams of two or three. Challenge each team to identify and research a problem facing members of your local community. Teams should brainstorm innovative approaches to solving that problem, decide on the most viable solution, and then present their problem and solution to the other students. If class time allows, have students vote on their favorite solution and work to implement it as a class, keeping in mind the lessons learned from the PlayPump initiative.
- Investigate the effectiveness of other projects aimed at solving community water issues. FRONTLINE/World provides [links](http://www.pbs.org/frontlineworld/stories/southernafrica904/timeline_tw.html#links) [http://www.pbs.org/frontlineworld/stories/southernafrica904/timeline\_tw.html#links] to the websites of a variety of aid organizations' working in water-stressed regions and using a diversity of water programs. Challenge students to choose an organization and try to monitor where donations to it go by reading annual reports, the organization's website, blogs by staffers, media reports about the project (often available online), and other sources of information. They should then write a paper that recommends whether or not they would donate to that organization and why or why not.
- Connect the lessons learned during the PlayPump rollout to those being learned by other foreign aid initiatives. Show the class the FRONTLINE/World story *Haiti: The Aid Dilemma* [http://www.pbs.org/wgbh/pages/frontline/haiti-aid/] and/or POV's *Good Fortune* [http://www.pbs.org/pov/goodfortune/] and discuss what steps aid organizations should take to protect the long-term needs of the local communities being served.

### **Related Resources:**

#### **“Africa’s not-so-magic roundabout”**

<http://www.guardian.co.uk/commentisfree/2009/nov/24/africa-charity-water-pumps-roundabouts>

This Nov. 24, 2009, *Guardian* article by Andrew Chambers provides a bruising critique of the PlayPump and what it says about public-private partnerships in the aid industry.

#### **The PlayPump**

[http://www.roundabout.co.za/main\\_the\\_playpump.htm](http://www.roundabout.co.za/main_the_playpump.htm)

The website for Trevor Field's organization explains how the PlayPump device works.

### **Timeline: The PlayPump Trail**

[http://www.pbs.org/frontlineworld/stories/southernafrica904/timeline\\_tw.htm](http://www.pbs.org/frontlineworld/stories/southernafrica904/timeline_tw.htm)

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Follow what happened with the PlayPump in this step-by-step timeline that features key events along with links to videos and documents.

### **South Africa: The PlayPump**

[http://www.pbs.org/frontlineworld/rough/2005/10/south\\_africa\\_th.html](http://www.pbs.org/frontlineworld/rough/2005/10/south_africa_th.html)

Watch Amy Costello's original story about the PlayPump online.

### **Related Standards**

These standards are drawn from "Content Knowledge," a compilation of content standards and benchmarks for K-12 curriculum by McRel (Mid-continent Research for Education and Learning) at <http://www.mcrel.org/standards-benchmarks/>.

Behavioral Studies, Standard 4: Understands conflict, cooperation and interdependence among individuals, groups and institutions

Language Arts, Standard 9: Uses viewing skills and strategies to understand and interpret visual media

Technology, Standard 6: Understands the nature and uses of different forms of technology

World History, Standard 44: Understands the search for community, stability and peace in an interdependent world

World History, Standard 45: Understands major global trends since World War II