



Classroom Activities

TANZANIA: HERO RATS

VIDEO OVERVIEW

Every year, leftover land mines from past conflicts kill or maim an estimated 15,000 to 20,000 people worldwide. While most techniques to clear minefields are slow and expensive, Bart Weetjens found a cheaper and more efficient strategy to detect mines—trained rats! When students watch *Tanzania: Hero Rats*, they will meet Weetjens and his rats, see how they are trained, and watch them in action in the minefields.

GETTING STARTED

For classrooms studying global studies and world history, FRONTLINE/World 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 innovative idea of training rats to help humans with a major problem like detecting land mines. Go further into this topic with the *Tanzania: Hero Rats* Lesson Plan that asks students to evaluate whether the U.S. policy on land mines sufficiently addresses the world's land mine problem.

VIDEO THEMES

- Every hour, somewhere in the world, a person is maimed or killed by a land mine. Although the physical damage land mines cause is substantial, their threat is potentially more harmful, stunting development, preventing land cultivation and disrupting essential transportation.
- Recognizing that African giant pouched rats have an incredible sense of smell, Bart Weetjens established a lab in Tanzania to train these rats to detect land mines.
- Although dogs have traditionally been used to help humans detect mines, Weetjens realized that rats are lighter, cheaper to maintain, and less susceptible to tropical disease.
- After about a year's worth of training, rats are sent to help clear minefields. When they smell explosives, they begin to scratch the ground to indicate the presence of a mine. A demining team then carefully digs up and defuses the mine.

DISCUSSION QUESTIONS

- What characteristics of African giant pouched rats make them suited to detecting land mines?
- What techniques are used to train the rats?
- Why does Weetjens think rats are a better choice than dogs for detecting land mines?
- In what ways do these rats provide social and economic benefits to the people of Mozambique?
- The film shows how the rats, with their powerful sense of smell, might be used in other ways to save lives, such as by helping doctors to diagnose tuberculosis. Can students think of other problems that the rats could potentially help to solve?

GO FURTHER

Featured Lesson Plan: "[Addressing the Problem of Land Mines](#)"

Web-exclusive Resource: [Land Mines Map: An Enduring Danger](#)

http://www.pbs.org/frontlineworld/stories/tanzania605/landmine_map.html

Featured Lesson Plan: Addressing the Problem of Land Mines

Overview:

In this lesson, the class will examine the worldwide land mine problem and watch a video that shows an innovative way to help clear land in Africa of these explosive devices. Students will then evaluate how well the U.S. policy on land mines addresses land mine issues. For more background information on Tanzania, Mozambique, land mines, U.S. Landmine Policy, and the Hero Rats organization, 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:

- Identify areas of the world where land mines pose the biggest threat
- Describe how land mines affect people's lives long after military conflicts have ended
- Examine an innovative strategy for using rats to detect land mines
- Analyze U.S. policy on land mines and assess whether it sufficiently addresses the world's land mine problem

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 *Tanzania: Hero Rats* (length: 11:12)
- Map showing the location of Tanzania and Mozambique

Procedure:

1. Ask students to imagine that the land around their school contains land mines left over from a past military conflict. No one knows how many there are or where they are buried. Now and then, students are killed or lose legs in land mine explosions. Discuss how that situation would change the way they live their lives.

2. Display the FRONTLINE/World interactive map, [Land Mines: An Enduring Danger](#)

[http://www.pbs.org/frontlineworld/stories/tanzania605/landmine_map.html]. Have students identify the areas of the world where land mines pose the biggest threat. Drawing from prior knowledge, what specific conflicts brought about the use of land mines in these areas? How do these land mines continue to affect people long after wars end?

3. Show students where Tanzania and Mozambique are on a map. Tell the class that a Belgian man working in Tanzania, Bart Weetjens, has come up with a novel way to address the issue of clearing minefields in that area of the world. Then show them *Tanzania: Hero Rats* (length: 11:12). Focus student viewing by asking them to take notes on what makes his strategy so effective.

4. After the video, tell students that Weetjens' organization, APOPO, has returned more than 1 million square meters of land to local populations after clearing it of mines. Discuss the impact that cleared land could have on a community's economy and overall quality of life.

5. Ask the class to evaluate the position of the U.S. government on land mines by having student pairs analyze the U.S. State Department fact sheet [U.S. Landmine Policy](http://www.state.gov/t/pm/wra/c11735.htm) <http://www.state.gov/t/pm/wra/c11735.htm> Judge whether this policy sufficiently addresses the world's land mine problem, and explain their reasoning.

CREDITS:

This teacher's guide was written by Cari Ladd.

EXTENSIONS:

- Find out about other animals that could help with mine detection. Have students read the FRONTLINE/World feature "[More Hero Animals](http://www.pbs.org/frontlineworld/stories/tanzania605/hero.html)" [<http://www.pbs.org/frontlineworld/stories/tanzania605/hero.html>] and discuss what characteristics of dolphins and honeybees make them suited to detecting mines.
- Help students recognize how Bart Weetjens' early interest in rodents eventually turned into his life's work and a strategy to address a serious global issue. Read FRONTLINE/World's interview with Bart Weetjens and highlight the events that led Weetjens to found his organization, APOPO. Ask students to list their interests in a journal and consider whether any of these interests have the potential to help solve a local or global problem.

RELATED RESOURCES:

Country Profiles: Tanzania and Mozambique

<http://www.pbs.org/frontlineworld/stories/tanzania605/profile.html>

FRONTLINE/World provides a map of these two countries, lists related resources, and describes their history, politics, culture and the legacy of land mines in the region.

Hero Rat

<http://www.herorat.org>

This is the official website of APOPO, Weetjens' organization featured in the video. The site explains how the group got started, the services it provides, the impact it has made, and how others can get involved.

How Landmines Work

<http://science.howstuffworks.com/landmine.htm>

This feature provides information on how land mines work, different kinds of mines, the vocabulary of land mines, traditional techniques for detecting them, and military mine-clearing machines.

Interview with Bart Weetjens

http://www.pbs.org/frontlineworld/stories/tanzania605/interview_weetjens.html

In this FRONTLINE/World interview, the director of the Belgian APOPO demining organization featured in the film discusses the unique abilities of the African pouched rat and the lasting effect that land mines can have on communities.

U.S. Land Mine Policy Is Shameful

http://host.madison.com/ct/news/opinion/column/article_fcab8de9-7a20-58ea-9420-e7ba8e39294d.html

This article by the founding coordinator of the International Campaign to Ban Land Mines criticizes the Obama administration's decision not to sign the International Mine Ban Treaty.

U.S. Land Mine Policy Surpasses Ottawa Treaty, State Says

<http://www.america.gov/st/washfile-english/2006/September/20060922153943adynned0.8831903.html>

This article from the U.S. State Department defends the U.S. Landmine Policy, saying that its principles exceed those of the Ottawa Treaty.

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/>.

Business Education, Standard 15: Knows unique characteristics of an entrepreneur

Geography, Standard 14: Understands how human actions modify the physical environment

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

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