

Lesson Title: AIDS in Africa: The Scope of the Problem	Grade: 11	Subject: Social Studies 20	Unit: 2: Population 3: Environment	Topic: HIV/AIDS, Malaria, and other Diseases	Cross-Curricular Components: Geography, mathematics, biology, computer science
URL: http://www.nationalgeographic.com/xpeditions/lessons/01/g912/africaaidsI.html					
Lesson Description: As part of the lesson, students will learn about how water becomes impure with parasites and other contaminants; they will read personal accounts of unsafe water; and they'll work together to brainstorm solutions to the water problems of communities in Africa. The lesson plan covers eight class periods, but teachers may find that they will be able to cover the material more quickly.			Curriculum Outcomes: → Know that the rate of natural increase in a population is the difference between the birth rate and the death rate. → Know that population growth rates vary from region to region and that regions with different population compositions make different demands on social policy. → Know that population density can be calculated in several different ways.		
Materials: <ul style="list-style-type: none"> Computers with Internet access (or copies of relevant data from Web sites listed below) Blank Xpeditions outline maps of the world and Africa (one copy of each for each student) Calculators (optional) Pencils and Paper 			Assessment: The document titled "AIDS in Numbers" has a graph that focuses on orphans. Ask students to find and discuss those numbers and the ramifications such numbers would have if experienced in the United States.		

Procedure:

Before:

Explain to the students that the impact of HIV/AIDS on African populations is significant, and that the statistics they will review in this lesson show how much more the population of Africa is affected by this disease than is the population of the United States. Note that in drawing conclusions about AIDS and other diseases based on quantitative data, organizations such as the Centers for Disease Control and Prevention (CDC), and the World Health Organization (WHO), have to "start from scratch." Similarly, students will be seeking basic information about AIDS in Africa from online sources without being given any introductory statistics by you. Ask them to keep track of the numbers (the quantitative data), but also to note evidence of responses to the disease (the qualitative evidence), as they do their research.

During:

Give each student a copy of a blank Xpeditions outline map of the world and Africa. Next, explain that in order to maintain consistent data, the lesson will use a comprehensive section on AIDS in Africa, which was prepared in 2001 by the *Washington Post*.

In the boxes on the right side of the page, ask students to find links to pages titled, "AIDS in Numbers" and "AIDS in Numbers II." Also have them explore statistics about the death rates from AIDS in Africa and the United States, at a site such as [AVERT.org](http://www.avert.org). Ask students to use information in these documents to determine the answers to the following questions:

- Using the graphs, calculate how many people, worldwide, suffer from HIV/AIDS. How many people in sub-Saharan Africa suffer from HIV/AIDS? Determine what percentage of persons worldwide who suffer from HIV/AIDS live in sub-Saharan Africa.
- By how many years is the life expectancy of persons living in Botswana projected to be cut short by the year 2010 because of AIDS?
- What percent of the number of persons who died on September 11, 2001 (approximately 3,000) were dying every day in sub-Saharan Africa when this *Washington Post* report was prepared? If projections are correct, what will that percentage be by 2010?

- Find how many persons in the U.S. died of AIDS between the first recorded death in 1982 and 1999. How many died of AIDS in Africa between 1982 and 2000?
- What percentage of children under 15 who suffer from HIV/AIDS live in Africa?

After:

Option A

If you plan to continue with Lesson II: More Than Sympathy, then in pairs, small groups, or as a class, have the students discuss their reaction to these numbers. For example, which surprised them most? Which angered them most?

Option B

If you do not plan to continue with Lesson II: More Than Sympathy, then do the following:

1. In pairs, small groups, or as a class, have the students discuss their reaction to these numbers. Which surprised them most? Which angered them most?
2. Using descriptive information found on these graphs, identify and discuss sociological, cultural, and economic reasons that explain the greater number of infections and deaths among Africans than among those who live in the United States.
3. Find evidence of what is being done to ease the AIDS crisis in Africa, and suggest further steps that need to be taken.

Extending the Lesson:

- The *Washington Post* site used here was compiled in 2001. Have students search for more updated statistical information on AIDS and numbers, and see if the math yields different conclusions than the 2001 data suggests. See, for example, "The World Health Report 2004," of the World Health Organization (WHO).
- Use the information from this lesson in interdisciplinary assignments in English, music, art, etc., asking students to express their reaction to the data on AIDS in Africa in media such as poetry, painting, sketches, or performance art.

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