

Instructional Recipe

Leading Question: What is the face of the AIDS Pandemic in Africa?

Grade 9-12, Health Education/Biology
ESC Region 20



Online research and information resources available through a partnership between the Texas State Library and Archives Commission, the Texas Education Agency and Education Service Center, Region 20 <http://web.esc20.net/k12databases>

Step 1 – Ask

Objectives: Students will compare the structures and functions of viruses to cells and describe the role of viruses in causing diseases and what can be done to prevent the spread of HIV.

Introduction: Stepping into sub-Saharan Africa, students learn that many countries are facing an HIV epidemic. In some countries over 1/3 of the population is infected with HIV and across the continent nearly 11 million children have been orphaned by AIDS. Currently only approximately 8% of the 4 million people in Sub-Saharan Africa who are in need of anti-retroviral drugs actually have access to those medicines. Stepping into the African AIDS pandemic from an African child's perspective allows students to see the world through the eyes of that child whose life has been shattered by *the big disease*.



The face of the African AIDS pandemic through the eyes of a child.

Photo from: <http://www.worldvisionexperience.org/>

Ask:

- ★ What is HIV?
- ★ Who does HIV affect?
- ★ Why do we need to be concerned about the African AIDS pandemic?

Vocabulary:

- ★ Pandemic
- ★ Epidemic
- ★ HIV
- ★ Anti-retroviral drugs
- ★ Michael Gottlieb
- ★ World Bank

TEKS: Health Education 115.32.2D

(2) Health information. The student is health literate in disease prevention and health promotion throughout the life span.

The student is expected to:
(D) develop and analyze strategies related to the prevention of communicable and non-communicable diseases.

Cross-Curricular Connection:

TEKS: Biology 112.43.4.C,D

(4) Science concepts. The student knows that cells are the basic structures of all living things and have specialized parts that perform specific functions, and that viruses are different from cells and have different properties and functions.

The student is expected to:
(C) compare the structures and functions of viruses to cells and describe the role of viruses in causing diseases and conditions such as acquired immune deficiency syndrome, common colds, smallpox, influenza, and warts; and (D) identify and describe the role of bacteria in maintaining health such as in digestion and in causing diseases such as in streptococcus infections and diphtheria

Technology Application

TEKS: 126.22.(10)

Computer Science I

Communication. The student formats digital information for appropriate and effective communication. The student is expected to (A) define the purpose of the product and identify the specified audience.

Step 2 – Investigate

[Click here for internet links/URLs](#)

(Resources students can use in their research)

Online Subscription Resources:

From EBSCO search: (AIDS pandemic and Africa), (aids and anti-viral therapy), (funding and HIV and pharmaceuticals), (world bank and AIDS), (AIDS life expectancy)

- ★ [Chapter Six: AIDS: THE MODERN PANDEMIC](#). By: Friedlander Jr., Mark P. Outbreak, 2003, p90-97, 7p, 3 color; Reading Level (Lexile): **1010**; (AN: 12036239)
- ★ [Chronicling AIDS as Reporter and Friend](#) News & Notes (NPR), 02/19/2008; (AN 6XN200802190904).
- ★ [Curtains removed from AIDS in Africa: Visitors say virtual village eye-opening](#) By: Yonke, David. Blade, The (OH), 09/01/2007; (AN 2W62W62955614435)

From Britannica search: (AIDS life expectancy and Africa)

- ★ [AIDS Life Expectancy Chart](#)

Additional Websites:

[Center for Disease Control Global](#); [White House Commitment to fight AIDS](#); [UNICEF AIDS Statistics](#); [The Biology of AIDS](#)

Books:

Ellis, Deborah. *Our stories, Our Song: African Children Talk About AIDS*. Markham, Ont.; Allston, Mass.: Fitzhenry and Whiteside, c2005

Step 3 – Create

[Click here for internet links/URLs](#)

- ★ Read the article [AIDS the Modern Pandemic](#) to raise student awareness of the African pandemic in a different way.
- ★ Scan for relevant facts: [The Biology of AIDS](#) web page.
- ★ View [Step into Africa: Watch the Exhibit](#) video. Look at the AIDS crisis link to see statistical evidence of the AIDS pandemic.
- ★ Use statistics and charts to support the impact AIDS is having on Africa and the rest of the world.
- ★ Use one of the [fishbone cause/effect graphic organizers](#) to organize research points with a cause/effect relationship.
- ★ Choose three possible courses of action that can be taken by the developing world to respond to the AIDS pandemic.

Technology Link –

[Step into Africa](#): (1) Watch the introduction. (2) Click on the links [AIDS Crisis](#) and [Watch the Exhibit Video](#).

Step 4 – Discuss

[Click here for internet links/URLs](#)

Look at the pandemic through the eyes of a child.

- ★ Students will be assigned the [role](#) of someone who is associated with a child in Sub-Saharan Africa. They may be government officials, AIDS patients, scientists, doctors, etc.
- ★ Students will research their particular roles and write a statement from that person's perspective how it will affect the child.
- ★ Participate in an issues day to discuss the AIDS pandemic.
- ★ Decide on three proposals and choose one as a pragmatic course of action that the developed world should take to respond to the AIDS crisis in African nations.
 1. Divide students into groups. Give students time to read their [roles](#) individually and with their partners.
 2. Allow students to begin formulating their ideas. Remember, the students should approach this from the perspective of their roles and how they relate to the child.
 3. Each statement should contain the components listed on the [debate sheet](#).

🔗 **Technology Link:** -

Video Podcast: Use the video component of [Discovery Atlas](#) to learn about the people and culture of Africa. The video podcasts are presented as full segments in standard format that can be played on any MP3 player that supports video.

Step 5 – Reflect

[Click here for internet links/URLs](#)

Allow students to present their projects to the rest of the class.

(Use the [Inner-Outer Circle Rubric](#) to assess the presentations.)

Make sure that the students are familiar with the [Inner-Outer Circle Rubric](#) *before* they begin creating their project. They should refer to the rubric repeatedly to monitor their progress in creating the project.

🔗 **Technology Link:** You can also create your own rubric with your students at <http://rubistar.4teachers.org/index.php>.

Internet Links/URLs

Articles may be located using either the accession number (AN) or the persistent URL.

Step 2 – Investigate

- **Chapter Six: AIDS: THE MODERN PANDEMIC** (AN 12036239)
<http://web.ebscohost.com/src/detail?vid=1&hid=3&sid=6aa83c75-db4c-4112-b1ed-f3cb9a08ebd5%40sessionmgr11&bdata=JnNpdGU9c3JlWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#db=sch&AN=12036239>
- **Chronicling AIDS as Reporter and Friend** (AN 6XN200802190904)
<http://web.ebscohost.com/src/detail?vid=1&hid=3&sid=d855a3ed-95c0-4f6a-80d8-34f6d41944ab%40sessionmgr10&bdata=JnNpdGU9c3JlWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#db=nfh&AN=6XN200802190904>
- **Curtains removed from AIDS in Africa: Visitors say virtual village eye-opening** (AN 2W62W62955614435)
<http://web.ebscohost.com/src/detail?vid=1&hid=3&sid=404865e7-19b9-4310-a22d-34fb8a49d4dd%40sessionmgr10&bdata=JnNpdGU9c3JlWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#db=nfh&AN=2W62W62955614435>
- **AIDS Life Expectancy Chart**
<http://school.eb.com/eb/art-64907?articleTypeId=33>
- **Center for Disease Control Global**
<http://www.cdc.gov/globalaids/countries/SouthAfrica/moreinfo.html>
- **White House Commitment to fight AIDS**
<http://www.pepfar.gov/>
- **UNICEF AIDS Statistics**
http://www.unicef.org/infobycountry/southafrica_statistics.html
- **The Biology of AIDS**
http://news.bbc.co.uk/2/shared/spl/hi/africa/03/biology_of_aids/html/default.stm

Step 3 – Create

- **AIDS the Modern Pandemic**
<http://web.ebscohost.com/src/detail?vid=1&hid=3&sid=b0e1bfdb-21d5-40dd-a885-57cb4bbf3312%40sessionmgr10&bdata=JnNpdGU9c3JlWxpdmUmc2NvcGU9c2l0ZQ%3d%3d#db=sch&AN=12036239>
- **The Biology of AIDS**
http://news.bbc.co.uk/2/shared/spl/hi/africa/03/biology_of_aids/html/default.stm
- [Cause/effect graphic organizers](#) (Organizer is located on page 5 of instructional recipe.)
- **Step into Africa**
<http://www.worldvisionexperience.org/>

Step 4 – Discuss

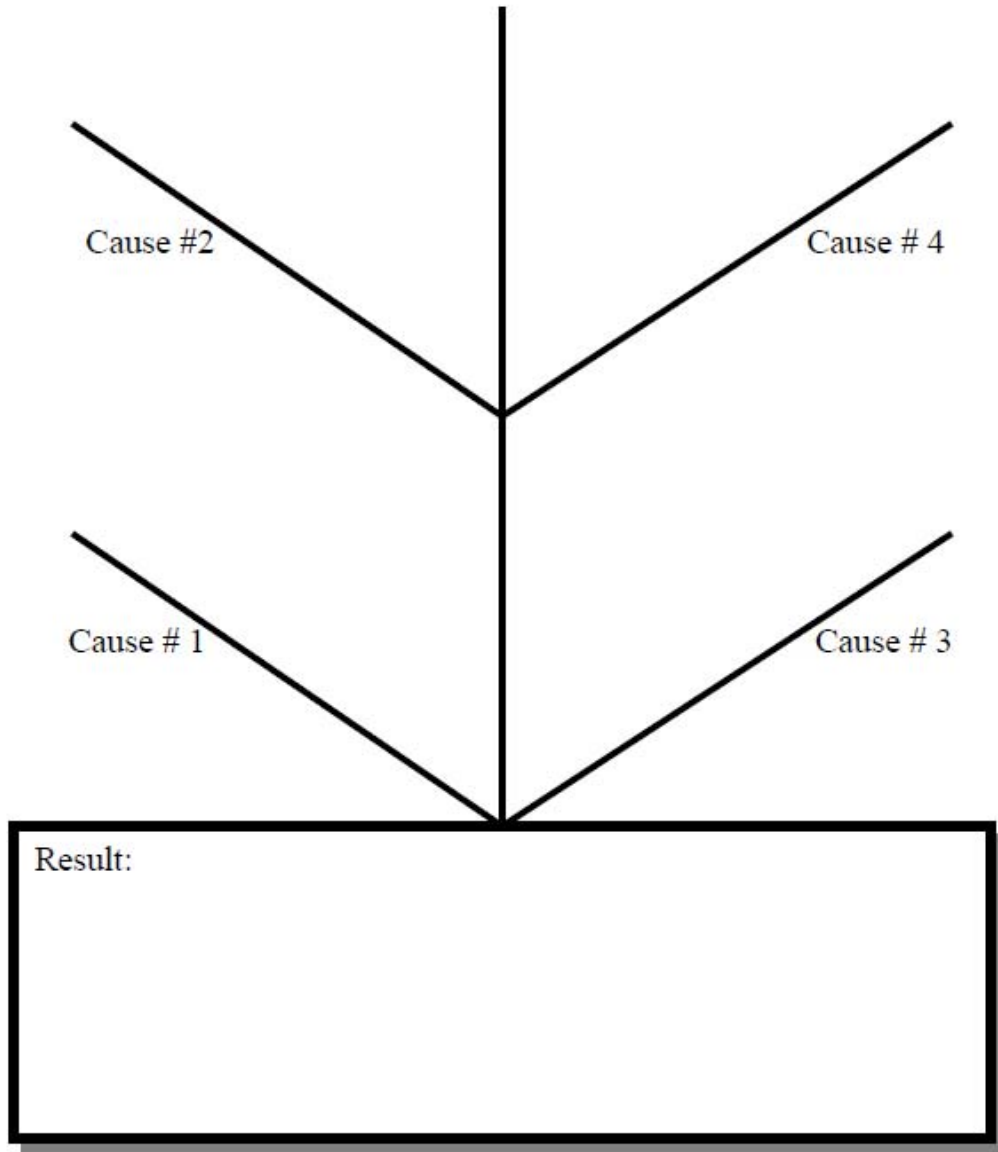
- **Discovery Atlas**
<http://dsc.discovery.com/convergence/atlas/podcast/podcast.html>

Step 5 – Reflect

- <http://rubistar.4teachers.org/index.php>

FISHBONE MAP

Name: _____ Date: _____



Instructions for Issues Day Debate

Preparations:

1. **Teacher assigned roles:** (randomly or not) to groups of students. Requirements for each role.
 - ✓ Your role should tell us who you are.
 - ✓ Your role should explain to us your unique perspective on the AIDS crisis in Africa (remember: this should be from the perspective of your character!)
 - ✓ Your role should tell us which proposal you support and why.
2. **Roles:** (As students receive their roles, have them try to imagine some of the conversations that may occur between the child and his mother, his dying father, and his grandmother. What discussion might occur between the scientist and the African doctor with regard to the child?)
 - **8-year-old boy:** from Kenya (Give him a name.)
 - **Boy's mother:** who is ill with HIV (Give her a name. His father is dead)
 - **Boy's grandmother:** Sophia owns a modest restaurant at a truck stop on the "AIDS highway," a road that stretches from Mombasa to southern Uganda. (Ambient sounds of an African village can be heard in the background. Prostitutes can be seen working at the truck stop, earning less than \$2 per customer.)
 - **Scientist** (highly respected) who has invented several anti-HIV drugs which, if taken correctly in a "cocktail", can greatly reduce the likelihood that HIV will develop into AIDS. You want to share your expertise.
 - **African doctor:** who has treated many HIV patients, has seen hundreds of people die from AIDS. The caseload is so large that the doctor is tempted to quit. However, if he quits, no one else will be there to take care of the HIV patients. The doctor often gets frustrated by the fact that there isn't enough HIV medication. When he does have access to the medication, the patients are so poor and sick, they often can't finish the regimented doses required.
 - **Head of the World Bank:** an organization that lends money to developing countries to help them build industry and infrastructure. As these countries develop, they pay back the loans that they borrowed from the World Bank (plus LOTS of interest, of course).
 - **Large pharmaceutical company:** who produces several anti-AIDS drugs. Because of the company's success with these drugs and others the company has grown into a large corporation with thousands and

thousands of shareholders. In order to keep the shareholders happy, it must continue to make a lot of profit.

3. **Debate Process:** Explain the Issues Day [Debate process](#) to students and give students time to read their roles. Individually and with their partners. (Remind students of the three proposals for change which the class decided upon earlier, and how those proposals will be formulated into one course of action. Review the three proposals.)
4. **Idea Formulation:** Allow students to begin formulating their ideas. Remember, the students should approach this from the perspective of their roles!
5. **Written Statements:** Statements should be written and submitted to the teacher after they are presented at the Issues Day Debate. A rough guide for statement length is 1-2 pages.
6. Make sure students know exactly what their statements should contain.

The Inner Outer Circle Debate

1. Arrange the room as though a conference were being held.
2. Each role should read their statement to the group and then entertain questions.
3. After all students have presented their statements, discussion of the three proposals should begin.
4. A group of panelists will be selected to vote upon the most logical process for dealing with the AIDS pandemic. (Remember to keep the child as the center-piece for the discussion.)
5. Discussion ends with the panelists voting on which proposal they support (or perhaps a hybrid proposal of their design!)
6. Use the Inner [Outer Circle Debate Rubric](#)

INNER-OUTER CIRCLE DEBATE SHEET

- 1. Purpose.** The purpose of this seminar is to understand new knowledge by thinking out loud and sharing your ideas openly with other students. Cooperation can lead to greater understanding. Back up your ideas with evidence from the assigned reading(s).
- 2. Questions.** Write and answer _____ questions based on the reading(s). Ask questions that require thought. Questions should reflect your curiosity, and your questions might not have right or wrong answers. Do not write questions on the “knowledge” level. Do not write questions that can be answered in just a few words.
- 3. Grading.** This graded seminar will be worth _____ points: one-third for your written questions and answers, one-third for your discussion in the inner circle, and one-third for your notes in the outer circle.

Earn positive points for:	Avoid negative points for:
-Good thought questions (5)	-Not paying attention (-2)
-Each relevant comment (1)	-Distracting others (-2)
-Evidence from the reading (2)	-Interrupting (-2)
-Bringing others into the conversation (2)	-Irrelevant comments (-2)
-Recognizing contradictions (2)	-Monopolizing the conversation (-3)
-Asking clarifying questions (1)	-Personal attacks (-3)

KEYS TO A SUCCESSFUL SEMINAR

1. Be prepared. Read the assigned reading carefully, probably more than once. Try your best to fully understand it.
2. Write thought-provoking questions. Remember to write both questions and answers. Your questions and answers will be checked at the beginning of class.
3. Keep an open mind during the discussion. Look for the strengths in other people’s ideas. Be prepared to change your point-of-view based on what you learn.
4. If several people wish to talk, raise your hand and wait quietly to be called upon. Do not raise your hand while another student is speaking.
5. Speak loudly enough for everyone in the room to hear you. Look at other students when talking. Bring the assigned reading to the discussion; you may wish to refer to it.
6. If you don’t understand something, ask clarifying questions.
7. If you don’t have something to say, it is OK to “pass” when asked to contribute.
8. When in the outer circle, pay close attention to the discussion, and take notes.
from: www.studentsfriend.com

Inner Outer Circle Debate Rubric

Criteria	Mastery	Above Standard	Standard	Approaches Standard	Below Standard
Opening & Closing Statements	<ul style="list-style-type: none"> - Extremely thorough, well-organized presentation of arguments and evidence - Opening statement engages the interest of audience; closing statement leaves no unanswered issues and resonates with the audience 	<ul style="list-style-type: none"> - Well-organized and complete presentation of arguments and evidence - Opening statement successfully frames the issues; closing statement summarizes many arguments made in the debate 	<ul style="list-style-type: none"> -Organized and generally complete presentation of arguments and evidence - Opening statement outlines or lists arguments and evidence but does not generate interest; closing statement does not reflect remarks made during debate. 	<ul style="list-style-type: none"> -Somewhat organized presentation of arguments and evidence -Opening statement minimally outlines arguments; closing argument briefly restates the ideas offered in the opening statement 	<ul style="list-style-type: none"> -Arguments are unorganized, incomplete, or completely lacking in evidence -Opening statement and closing statements do little more than state the position of the team
Rebuttals	<ul style="list-style-type: none"> - Responds to issues raised by opponents with concise, accurate, logical answers - Effectively challenges the arguments made by opponents with argument and evidence 	<ul style="list-style-type: none"> - Responds to issues raised by opponents with accurate and generally concise answers - Challenges the arguments made by opponents; challenges are generally effective 	<ul style="list-style-type: none"> - Responds to most of the issues raised by opponents with generally accurate answers - Offers arguments, but no evidence, to counter the arguments made by opponents 	<ul style="list-style-type: none"> -Seems to be caught off-guard by opponents; offers tentative, somewhat accurate, but possibly vague or illogical responses -Attempts to challenge arguments of opponents 	<ul style="list-style-type: none"> -Is unable to respond to issues raised by opponents in a meaningful or accurate way
Effective use of historical evidence / content knowledge	<ul style="list-style-type: none"> -Demonstrates a sophisticated understanding of the issues, events and facts relevant to the topic -Demonstrates thorough and accurate understanding of details as well as the ability to make original connections and interpretations 	<ul style="list-style-type: none"> - Demonstrates a sophisticated understanding of the issues, events and facts relevant to the topic -Demonstrates thorough and accurate understanding of details as well as the ability to make original connections and interpretations 	<ul style="list-style-type: none"> -Demonstrates an basic and accurate understanding of the issues, events and facts relevant to the topic. -Demonstrates the ability to make basic connections between facts and concepts 	<ul style="list-style-type: none"> -Demonstrates a generally accurate understanding of relevant issues, events and facts, but may exhibit minor confusion or misunderstandings seem to understand general ideas, but do not support their ideas with relevant facts; OR, seem to understand facts but are unable to connect them into coherent arguments 	<ul style="list-style-type: none"> -Demonstrates an inadequate understanding of the history content relevant to the topic -Supports statements with vague or irrelevant information, or no information at all
Use of persuasive appeals	<ul style="list-style-type: none"> -Makes deliberate and effective use of logical, emotional and ethical appeals in order to persuade justices 	<ul style="list-style-type: none"> -Uses logical, emotional and ethical appeals to enhance effectiveness of argument 	<ul style="list-style-type: none"> -Uses some appeals to make argument more persuasive, but may not include a mix of logical, emotional and ethical appeals 	<ul style="list-style-type: none"> -Makes minimal use of persuasive appeals 	<ul style="list-style-type: none"> -Does not use persuasive rhetoric
Language Use	<ul style="list-style-type: none"> - Uses language that is stylistically sophisticated and appropriate for the court - Uses literary devices to enhance the argument 	<ul style="list-style-type: none"> - Uses language that is appropriate to the court - Uses literary devices to add interest 	<ul style="list-style-type: none"> - Uses language that is appropriate to the court - Attempts to use literary devices to add interest 	<ul style="list-style-type: none"> -Generally uses language that is appropriate to the court -Uses basic but clear language 	<ul style="list-style-type: none"> -Uses colloquial, overly simplistic language -Uses language and syntax that is unclear
Performance	<ul style="list-style-type: none"> Exhibits confidence, energy, and passion in the course of the hearing - Maintains respectful tone - Accesses preparation materials with ease 	<ul style="list-style-type: none"> - Exhibits confidence and energy in the course of the hearing -Maintains respectful tone - Uses preparation materials effectively 	<ul style="list-style-type: none"> - Appears nervous, yet somewhat confident, - Maintains respectful tone - Use of preparation materials does not distract 	<ul style="list-style-type: none"> -Lacks confidence -Maintains respectful tone - Use of preparation materials distracts from quality of performance 	<ul style="list-style-type: none"> -Demonstrates little or no preparation -Fails to maintain respectful tone