

**WILDLIFE WARRIORS:
DEFENDING AFRICA'S ANIMALS
NATIONAL GEOGRAPHIC VIDEO
(#50903, 1995)**

This video provides a basis for the poaching dilemma that has been occurring in Botswana. We recommend using some parts of this videotape to get the main message across and to fit into a 20 – 25 minute portion of a class.

The recommended pieces are as follows:

Counter Approx. 0140 – 0947 (from beginning of tape, 8 minutes)

This is the National Geographic introduction to the video and provides a good background concerning Botswana, poachers and why the army has become involved. You should end shortly after General K. mentions that he now employs 900 army personnel to defend the wilderness.

Counter Approx. 1215 – 1335 (2.5 minutes)

Segment begins with General K. discussing the support he receives especially from the President for wildlife preservation. It also includes the President's message concerning the value of tourism over game hunting and the value in saving their animal heritage.

Counter Approx. 2525 – 3339 (9 minutes)

Final clip begins with the army helicopter flying over Botswana and the discussion of the use of half the army's budget to preserve wildlife. It shows a poacher chase at night and the devastation the poachers leave behind. Concludes with the issue regarding 12 tons of confiscated ivory and the desire by the country to sell it to appropriate funds to preserve the animals. Ends with the skull of an elephant on the plains of Botswana.

The entire 60-minute video may be shown, but the rest of the information involves the training of the Botswana army, desperation of the poachers and some of the techniques poachers use (such as fire) to trap the animals. It might be important to show a balanced view of all stakeholders involved in this controversy.



***“AN ANIMAL’S WORLD –
THE AFRICAN ELEPHANT”
(1999)
A VIEWING GUIDE***

Directions: Please complete this viewing guide as you enjoy the video!

1. Explain what the narrator means by the phrase, "Size is the secret of the elephant's success."
2. What adaptation do elephants possess to help lessen the shock and strain on their feet?
3. What is the reason for the elephant's baggy skin?
4. Give an example from the video that shows how the elephant's trunk tells us something about its mood.
5. Why are elephants thought to have such poor eyesight? List some of the reasons.
6. How is elephant baby care similar to primate baby care? (Hint: primates are critters like chimps, gorillas & us!)
7. What does the elephants' "secret language" consist of?
8. Explain what the narrator means by the phrase, "Elephants are the farmers of the African plains."
9. Explain why genetic tusklessness is on the rise among African elephants.
10. What is it about the bones and tusks of their dead relatives that elephants can apparently sense?



SORTING OUT SOURCES: GUIDELINES FOR EVALUATING WEB-BASED INFORMATION

There are many resources online for helping students learn how to evaluate information found on the Internet. One of the primary challenges of this material from the scientific standpoint is that very few pages are peer-reviewed or have gone through the traditional methods of receiving feedback from a publisher. Therefore, information found online should be subject to additional scrutiny. Listed below are a few select web sites that address this issue.

Valenza, J. (1999) Evaluating Web Pages: A Web Quest (accessed 7/20/02) <http://mciu.org/~spjvweb/evalwebteach.html>. This site provides an excellent, easy to use lesson for 9-12 graders. Students break up into groups of four and evaluate a series of web sites with an eye to content, authority/credibility, bias/purpose, and usability/design. They then rank the web pages and record their observations. The whole class discusses results. Sample web sites to use are included.

Kapoun, J. (1998), Five Criteria for Evaluating Web Pages, Cornell University Library (accessed 7/20/02) <http://www.library.cornell.edu/okuref/webcrit.html> This site provides a straightforward checklist that would be easy for students to use. It includes separate columns for 'Evaluation of Web Documents' and 'How to Interpret the Basics' for the following categories: accuracy, authority, objectivity, currency, and coverage.

November, A. (1998), The Web—Teaching Zack to Think, Educational Renaissance Planners (accessed 7/20/02) <http://www.anovember.com/articles/zack.html> This article is worth reading just for the true example of a high school student who found a web site written by a Professor at Northwestern University denying the existence of the Holocaust. November discusses how to use multi-search engines such as profusion (<http://www.profusion.com>) and meta-web information such as a link command in order to evaluate pages.

Alexander, J., and Tate, M. (1999) Evaluating Web Resources, Widener University, Wolfgram Memorial Library (accessed 7/20/02) <http://www2.widener.edu/Wolfgram-Memorial-Library/webeval.htm>. This site contains a teaching module with supporting materials (evaluation checklists, power point presentations, and web page examples). A suggested method for teaching the module is provided.

Kirk, E. (2000) Evaluating Information Found on the Internet, (accessed 7/20/02) <http://milton.mse.jhu.edu/research/education/net.html>. This page provides a comprehensive discussion of the basic criteria for evaluating all forms of information, including the Internet. It discusses authorship, publishing body, point of view, referral to and/or knowledge of the literature (context), accuracy or verifiability of details, currency, and the importance of understanding how search engines work.

Ormondroyd, J., Engle, M., and Cosgrave, T. (1999) How to Critically Analyze Information Sources, Cornell University Libraries (accessed 7/20/02) <http://www.library.cornell.edu/okuref/research/skill26.htm>. This resource is similar to the one above. Separates description into initial appraisal (author, date, edition, publisher, title) and content analysis (intended audience, objective reasoning, coverage, writing style, and evaluative reviews).

Contributed by Jeanne Chowning, Washington Association for Biomedical Research.



WEBSEARCH: ELEPHANT LAWS, ELEPHANT ETHICS TEACHER GUIDE

Internet research on laws governing the ivory trade (Part I) will be necessary to some extent in order to determine the culpability of the traveler bringing ivory into the US. Internet research on bioethical issues (Part II) is more complex and therefore more time-consuming. The teacher might choose to address bioethical issues without the Internet component.

The teacher may choose to do the research for Part I alone, to enlist every student to research every question, or to assign a single question to a group of students to research at home or in class. Expect that at least two or three days of lead time may be needed for students to acquire the necessary information from home and a full class period to find the information using school computers.

Internet research for Part I can be assigned at the beginning of the unit or as the electrophoresis data emerge later in the unit. Results from Part I should be ready for the discussion of the ivory's source and culpability of the traveler.

Worksheets are designed to have students record search terms and Internet citations. The teacher might also want students to provide a brief annotation of each citation.

Grading criteria (page 24) was provided by Sue Black of Inglemoor HS. These can be duplicated, cut into sections, and a copy handed out to each student.

The following information on Internet citations is attributed to Beyond the MLA Handbook: Documenting Electronic Sources on the Internet, by Andrew Harnack and Gene Kleppinger, Eastern Kentucky University, Richmond, KY. See <http://www.bk.psu.edu/faculty/newnham/MLAWeb.html> for more information.

World Wide Web (WWW) Sites

To cite files available for viewing/downloading via the World Wide Web by means of Web browsers, provide the following information:

- the author's name (if known)
- the full title of the document in quotation marks
- the title of the complete work if applicable in italics
- the date of publication or last revision (if available)
- the full http address (URL) enclosed within angle brackets
- the date of visit in parentheses

Example 1:

Burka, Lauren P. "A Hypertext History of Multi-User Dimensions." *MUD History*. 1993. <<http://www.ccs.neu.edu/home/1pb/mud-history.html>> (5 Dec. 1994).

(Note that this is similar to an article in a magazine, where the article title is put in quotes, and the magazine title is put in italics or underlined.)

Example 2:

The citation for the document from which the information above was taken is as follows:

Harnack, Andrew and Gene Kleppinger. *Beyond the MLA Handbook: Documenting Electronic Sources on the Internet*. 25 November 1996. <<http://falcon.eku.edu/honors/beyond-mla/>> (17 Dec. 1997).



(Note that this example is similar to a book, which is not part of a larger work, so its title is put in italics or underlined.)

Part I. Elephant Laws

Using web sources, students should find out which countries currently have bans against elephant ivory, which countries allow the sale of stockpiled ivory from culled elephants, and which countries permit the sale of ivory from newly killed elephants. Countries in these categories may change from year to year. Students would do well to check out sites that discuss the Convention on International Trade in Endangered Species (CITES) for an overview of the current law and issues related to the ivory trade.

Note: All URL citations were active as of June 2002.

URLs: <http://international.fws.gov/global/cites/cites.html>
<http://www.wildnetafrica.com/cites/issues.html>
<http://www.cites.org>

Part II. Elephant Ethics

Students are asked to conduct web-based research on several topics related to the trade in ivory from African elephants. The following list provides suggested search terms and useful URLs for each question, as well as selected text that is relevant to the question. The teacher might leave the web searching entirely to the students or offer some of this information, depending on the accessibility of the Internet, the web surfing skill of students, and time.

All web sites are active as of June 2002.

Suggested URLs for Researching Ethics Questions on the Web

1. Why would a person choose to kill elephants for ivory? How do you think a person justifies his/her poaching or legal killing of elephants?

Search: elephant ivory Africa price

URL: <http://www.american.edu/TED/ELEPHANT.HTM>

"In the 1960s, raw ivory prices remained between \$3 and \$10 per pound. In 1975, the price reached \$50 because ivory was perceived as a valuable hedge against rising inflation. By 1987, the price was \$125 per pound. New manufacturing techniques, which enabled the mass production of ivory carvings, along with rising demand in East Asia led to increased elephant kills."

URL: <http://whyfiles.org/043elephant/main3.html>

"As a result of the ivory ban and effective conservation work, elephants populations have boomed in southern Africa, and the big beasts have been trampling crops and harassing villagers."

2. Should elephant culling be legalized in countries with an abundance of elephants? Should it be legal for the ivory from culled elephants to be sold on the open market? Do you think elephants should be killed for their ivory in order to pay for maintaining elephant habitat?

Search: cull Africa elephant

URL: <http://www.wildnetafrica.com/news/elephantculling/newsmessages/1.html>

"Southern Africa's national parks have no option but to cull. This is the recently reported conviction of wildlife expert Ron Thomson, someone who has gained his



extensive knowledge of African elephants during 28 years of working with wildlife in parks across the sub-continent.”

URL: <http://www.chebucto.ns.ca/CommunitySupport/CUSO/cruel.html>

“Cruel to be kind? Saving Africa’s Elephants.” By Allison Auld (Fall ’97)

“Is ‘culling’ – killing some animals to achieve ecological balance and peaceful co-existence with humans – the best way to protect Africa’s majestic elephant herds? Is it moral?”

3. If the hunting and killing of elephants is a cultural tradition, should it be allowed to occur for certain groups of people? Should it be banned? If elephants compete with humans for agricultural or forest resources, should those elephants be removed?

Search: culture ivory Africa elephant forest agriculture

URL: <http://www.artsednet.getty.edu/ArtsEdNet/Resources/Look/Animals/ntan.html>

“The physical body of the elephant can also communicate some of the same messages as visual representations of the animal. The ivory, hide, hair, bone, and callus of the animal provide raw material for many objects, from the ceremonial to the utilitarian. These materials are likely to be used in a leadership context, for they often connote status and power. Ivory, admired for its luster, durability, and strength, remains a desired medium for prestige objects. In its rarity, it communicates messages of power, status, and wealth.”

URL: <http://www.panda.org/resources/publications/species/elephant/elephant4.html>

“The extent to which elephants and humans can live side-by-side depends very much on such factors as human and elephant population density, human land-use patterns, and elephant foraging habits. These factors in turn depend on ecological variables such as climate and vegetation that affect human and elephant habitats alike.”

4. Can an international group make policy decisions for individual countries and be responsible for enforcing them? Should scientific data alone be used to determine international policy decisions?

Search: international enforcement ivory elephant opposition

URL: <http://www.traffic.org/cop11/briefingroom/etis.html>

“While trade in elephant products, particularly ivory, is just one of many threats to the long-term survival of the species, it is the threat that provokes the most contentious global debate. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is the international policy arena where much of this debate takes place. Many vital questions need to be addressed. Did the CITES ban on international trade in ivory work? Should all elephant populations be totally protected or can a limited, well-regulated and sustainable trade in elephant products be allowed? Was the one-off sale of ivory from three southern African countries ill-advised or a great success? Is illegal ivory trade increasing or decreasing? Are more elephants being poached now than ever before?”

URL: <http://www.idsnet.org/Papers/Essays-1998/Garforth/page5.html>

“When CITES was first agreed upon by the international community in 1973 it was believed that international trade was the main cause of the extinction of various species. Perceptions change, and it is now recognized that other factors (such as habitat loss and introduced species) contribute to the process of endangerment and extinction (Hutton). Unfortunately, CITES has not changed and some now believe that the Convention has become a tool for the developed world’s booming animal protection industry to pursue an agenda fundamentally at odds with that of the Convention: the prohibition of trade ... For animal protection NGOs, an Appendix I listing for their preferred species has



become a Holy Grail that can be sold to donors as a major victory for conservation. Meanwhile, voting governments with no vested interest in a species find it politically expedient to concede to NGOs' demands in return for cheap green points that can be cashed in when it comes to tackling real issues, such as pollution (Hutton)."

URL: http://www.wildnetafrica.com/cites/info/iss_014_debate.html

"CITES Debate. The articles featured here comprise a debate on the role and relevance of CITES. The articles first appeared in *Ecoforum* magazine."



Evidence of individual research for websearch, "Elephant Laws, Elephant Ethics."

Novice 6.5 pts.	In Progress 7.5 pts.	On Standard 8.5 pts.	Above Standard 10 pts.
Article may not be relevant. There may be no highlighting; no evidence student has read article. There is a citation w/o text, or, article text w/o the citation. Text and citation may not even match.	Appropriateness of article may be difficult to judge (rushed print out, for example). Key part(s) may be missing. Highlighting may be haphazard, insufficient. More than one element omitted from citation. If notes, too sketchy.	Appropriate article, in its entirety. Highlighting indicates comprehension. One element omitted from citation.	Interesting, appropriate article, in its entirety. Highlighting indicates comprehension. Citation has <u>all</u> necessary elements and may be professionally displayed.

NOTE: if there was more than one source submitted, I tried to evaluate your highest-scoring source.

Evidence of individual research for websearch, "Elephant Laws, Elephant Ethics."

Novice 6.5 pts.	In Progress 7.5 pts.	On Standard 8.5 pts.	Above Standard 10 pts.
Article may not be relevant. There may be no highlighting; no evidence student has read article. There is a citation w/o text, or, article text w/o the citation. Text and citation may not even match.	Appropriateness of article may be difficult to judge (rushed print out, for example). Key part(s) may be missing. Highlighting may be haphazard, insufficient. More than one element omitted from citation. If notes, too sketchy.	Appropriate article, in its entirety. Highlighting indicates comprehension. One element omitted from citation.	Interesting, appropriate article, in its entirety. Highlighting indicates comprehension. Citation has <u>all</u> necessary elements and may be professionally displayed.

NOTE: if there was more than one source submitted, I tried to evaluate your highest-scoring source.

Evidence of individual research for websearch, "Elephant Laws, Elephant Ethics."

Novice 6.5 pts.	In Progress 7.5 pts.	On Standard 8.5 pts.	Above Standard 10 pts.
Article may not be relevant. There may be no highlighting; no evidence student has read article. There is a citation w/o text, or, article text w/o the citation. Text and citation may not even match.	Appropriateness of article may be difficult to judge (rushed print out, for example). Key part(s) may be missing. Highlighting may be haphazard, insufficient. More than one element omitted from citation. If notes, too sketchy.	Appropriate article, in its entirety. Highlighting indicates comprehension. One element omitted from citation.	Interesting, appropriate article, in its entirety. Highlighting indicates comprehension. Citation has <u>all</u> necessary elements and may be professionally displayed.

NOTE: if there was more than one source submitted, I tried to evaluate your highest-scoring source.

ELEPHANT LAWS, ELEPHANT ETHICS: A WEBSEARCH

Your mission: to find current information on the Web about laws that govern the ivory trade. This is important because international and US regulations on the harvesting, export, and import of ivory can change from year to year. You need the most up-to-date and accurate information to explain to customs officials why it is OK to possess a chunk of raw ivory while entering the US.

Governmental agencies, university scientists, and private organizations have web sites that provide information or advocate policies related to the ivory trade. Anyone, in fact, can create a web site and say anything they wish about elephants and ivory. Thus, when you encounter a new web site during this mission, ask yourself: how can I distinguish fact from fiction, responsible from irresponsible statements, and informed from uninformed opinion?

An Internet/Web Primer

The Internet consists of computers all over the world that distribute information (text, numbers, pictures, video, sound) and computers that receive this information. Much of the data is presented by **computer servers** in a special format (e.g., **html**) that can be viewed as **pages** on a computer screen. The network of computers that shares these pages is called the **World-Wide Web** (WWW). Your computer is probably connected to the network of **web sites** by a phone line, television cable line, or fiber-optic cable.

Each computer that serves web pages to other computers has two unique identities or addresses on the Internet, an Internet Protocol (**IP**) number and Universal Resource Label (**URL**) name.

To see web pages on your computer screen, you need a special program, called a **web browser**. The web browser calls up the address of another computer on the Web, interprets a stream of digital data, and presents the data in an appropriate graphical or audio format. The two most common web browsers are **Netscape Navigator** and **Microsoft Internet Explorer**.

Web Searches

Millions of computers share web pages about any subject you can imagine, including elephants and the ivory trade. To find pages on a specific topic, you need to use a program called a **search engine**. Search engines reside on computer servers around the world. Web browser programs use these search engines to find the addresses of web pages that match **search terms** that you enter.

Use a search engine such as **Google.com** or **dogpile.com** to find information on the ivory trade. You will need to choose some search terms. Logical choices might be ivory, elephant, and law. You can enter terms as a string of words separated by spaces (ivory elephant law). You can enter phrases between quotes ("ivory trade"). Some search engines allow you to pose a question.

Your search engine will scan a very long list of web pages, looking for those with words or phrases that match your search terms. A list of matching pages then appears on your screen. When you click on one of the choices, your web browser will take you to the web site that has that page.

Citing Internet Sources

To cite files available for viewing/downloading via the World Wide Web by means of Web browsers, provide the following:

- Author's name (if known)
- Full title of the document in quotation marks
- Title of the complete work, if applicable, in italics
- Date of publication or last revision (if available)
- Full http address (URL) enclosed within angle brackets
- Date of visit in parentheses

Example 1

Burka, Lauren P. "A Hypertext History of Multi-User Dimensions." *MUD History*. 1993. <<http://www.ccs.neu.edu/home/1pb/mud-history.html>> (5 Dec. 1994). (Note that this is similar to an article in a magazine, where the article title is put in quotes, and the magazine title is put in italics or underlined.)

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WEB QUEST QUESTIONS

Part I. Elephant Laws

Customs officials say the imported ivory is illegal. What does this mean?

- Does the ivory come from a country where elephants cannot be killed?
- Does the ivory come from a country that cannot sell its stockpiled ivory?
- Does it come from a country that should not be re-selling ivory?

By going to the Web to answer the following questions and with your electrophoresis data, you can decide if the detained traveler is in deep doo-doo with the US Customs Office.

1. At this moment, which countries are allowed to kill elephants for ivory or sell stockpiled ivory?

Search Terms:

Internet Citation:

Internet Citation:

2. At this moment, which countries are permitted to buy, process, and re-sell ivory from Africa?

Search Terms:

Internet Citation:

Internet Citation:

3. At this moment, can any ivory products be imported into the United States?

Search Terms:

Internet Citation:

Internet Citation:

4. Over the past few years, which countries have been allowed to kill elephants for ivory or sell stockpiled ivory from legal cullings?

Search Terms:

Internet Citation:

Internet Citation:

Part II. Elephant Ethics

The following ethical and philosophical questions are difficult to research on the Web. You might find the 'related questions' easier to answer and those answers helpful in answering the more general numbered question.

1. How do you think a person justifies the poaching or legal killing of elephants?
Related questions: How much does a poacher earn from selling an ivory tusk? What is the monthly salary of an African farmer?

Search Terms:

Internet Citation:

Search Terms:

Internet Citation:

2. Should elephant culling be legalized in countries with an abundance of elephants? Should it be legal for the ivory from culled elephants to be sold on the open market? Do you think elephants should be killed for their ivory in order to pay for maintaining elephant habitat?
Related questions: What is culling? Why are herds culled? How is culled ivory stored? If sold, who earns the money and what is the money used for? What are alternatives to culling?

Search Terms:

Internet Citation:

Search Terms:

Internet Citation:

3. If the hunting and killing of elephants is a cultural tradition, should it be allowed to occur for certain groups of people? Should it be banned? If elephants compete with humans for agricultural or forest resources, should those elephants be removed?
Related questions: How has the elephant been used by native cultures? Who used elephant products? Were enough elephants killed prior to colonization by Europeans to threaten the existence of the species? Where has deforestation occurred? What can be done to maintain elephant habitat?

Search Terms:

Internet Citation:

Search Terms:

Internet Citation:

4. Can an international group make policy decisions for individual countries and be responsible for enforcing them? Should scientific data alone be used to determine international policy decisions?

Related questions: What international agencies regulate ivory trade? Who has opposed the regulation? Under what authority do the international agencies operate?

Search Terms:

Internet Citation:

Search Terms:

Internet Citation:
