

## Environmental Issues Research Project

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Humans are the first known species to alter the environment in which we live, in such a way that it can have long term negative impacts on life existing in every corner of the globe. In an effort to achieve short term personal gain, many societies throughout history have practiced various methods of environmental disruption and destruction. From the ancient Greeks to the Mayans to the modernized Western world, these practices have persisted throughout civilizations around the world and are once again demonstrating the enormous impact humans have on the environment.

Jared Diamond is a professor of geography at the University of California at Los Angeles, and is a member of WWF's board of directors. He is the Pulitzer Prize-winning author of *Guns, Germs, and Steel*; and author of *Collapse: How Societies Choose to Fail or Succeed*. The 11-minute video was recorded in early 2011 by ClimatePrep.org , a site focused on ways people around the world are preparing for and responding to climate change.

Click the picture below to watch the video:



DIAMOND: There are so many societies in which the elite made decisions that were good for themselves in the short run and ruined themselves and societies in the long run....

Similarly, in the United States at present, the policies being pursued by too many wealthy people and decision makers are ones that — as in the case of the Mayan kings — preserve their interests in the short run but are disastrous in the long run.

*“We are working so hard for our children and grandchildren. All of us parents send our kids to school; we debate endlessly about whether our kids are in the right school. We draw up our wills, and maybe we draw up trusts. We buy life insurance. **It’s all wasted if what we are propelling our kids into is a world not worth living in.**”*

In his book, *Collapse: How Societies Choose to Fail or Succeed*, Jared Diamond outlines 12 environmental issues that we must “solve” if we are to change our fate and not end up like so many other societies which have all collapsed due to their inability to recognize and/or solve these very same issues.

Download and read at least the Prologue: A Tale of Two Farms at:

<http://cpor.org/ce/Diamond%282005%29Collapse-HowSocietiesChooseFailureSuccess.pdf>

The 12 Environmental Issues Jared Diamond describes are:

1. Destruction/loss of natural habitats (by deforestation and habitat destruction)
2. Destruction/loss of wild food resources (by overhunting and overfishing)
3. Destruction/loss of biodiversity (due to habitat destruction, overhunting, overfishing)
4. Destruction/loss of soil (soil problems such erosion, salinization, and soil fertility losses)
5. Limitations of energy resources (energy shortages)
6. Limitations of available freshwater (water management problems)
7. Limitations of photosynthetic capacity (full human utilization of the Earth’s photosynthetic capacity)
8. Introduction of toxic chemicals (into the environment: air, water, soil)
9. Introduction of alien/invasive species (effects of introduced species on native species)
10. Introduction of atmospheric gases (resulting in anthropogenic climate change)
11. Human population growth
12. Environmental impact per capita

**Your Task:**

1. Choose one of the 12 above listed environmental issues.
2. Research the issue.
3. Write a 5-7 page paper (AP course) or 3-4 page paper (1/2 year course) discussing the issue as described in the guidelines to follow.
4. Develop a 40 minute lesson (AP course) or a 15 minute lesson (1/2 year course) to teach the issue to your class using a Power Point presentation as described in the guidelines to follow.

Ideas refuted by Dr. Diamond . . . think about them before writing your suggested solutions.

1. The environment has to be balanced against the economy.
2. Technology will solve our problems.
3. If we exhaust one resource, we can always switch to some other resource meeting the same need.
4. There really isn't a world food problem; there is already enough food; we only need to solve the transportation problem of distributing that food to places that need it or the world's food problem is already being solved by the Green Revolution, with its high yield varieties of rice and other crops, or else it will be solved by genetically modified crops.
5. As measured by commonsense indicators such as human lifespan, health, and wealth . . . , conditions have actually been getting better for many decades or just look around you: the grass is still green, there is plenty of food in the supermarkets, clean water flows from the taps, and there is absolutely no sign of imminent collapse.
6. Look at how many times in the past the gloom-and-doom predictions of fear mongering environmentalists have proved wrong. Why should we believe them this time?
7. The population crisis is already solving itself, because the rate of increase of the world's population is decreasing, such that world population will level off at less than double its present level.
8. The world can accommodate human population growth indefinitely. The more people, the better, because more people mean more inventions and ultimately more wealth.
9. Environmental concerns are a luxury affordable just by affluent First World yuppies, who have no business telling desperate Third World citizens what they should be doing.
10. If those environmental problems become desperate, it will be at some time far off in the future, after I die, and I can't take them seriously.
11. There are big differences between modern societies and . . . past societies . . . who collapsed, so that we can't straightforwardly apply lessons from the past.
12. What can I, as an individual, do, when the world is being shaped by unstoppable powerful juggernauts of governments and big businesses?

## **Guidelines for writing the paper:**

Each research paper must include:

- a cover page (\*does not count toward number of pages)
- an introductory paragraph(s), body paragraphs, and a concluding paragraph(s)
- any relative diagrams or figures (be sure to give credit to their source)
- a references page and/or works cited page with at least 5 references (\*does not count toward number of pages)

The paper must be typed with:

- 12pt. font
- 1” margins on top, bottom, and sides
- Times New Roman font
- 1.5x spaced

This is a *science* research paper; therefore you will be graded qualitatively. However, in order to receive an A, your paper should include the answers to all of the provided questions plus additional information that you feel is pertinent to a quality, completed paper.

**\*\*\*Note:** Plagiarism will NOT be tolerated. Nothing in your research paper should be copied and pasted from *any* source. If it is necessary to quote something from a source, you must use proper citations and include a works cited page, in addition to a reference page. If *any* part of your research paper is found to be plagiarized, you will receive a zero for the entire project and receive an academic referral to be placed in your student file! In order to help you build a reference or works cited page you may use the reference page builder in MS Word or a reference page building website such as one of the following:

<http://www.easybib.com>

<http://www.bibme.org/>

### **Guidelines for preparing the Power Point lesson:**

Each lesson must include:

- a Power Point presentation.
  - This is a summary of your paper and should touch on all important points
  - It is strongly recommended that each slide contain bulleted text with a font size of at least 24 and at least one image related to the text to help demonstrate the objective of that slide.
- Questions you will pose to your classmates
  - These should be prepared in advance.
- A brief discussion of a current event, a news topic within the last 1-2 years, related to your topic. This can be incorporated into your Power Point presentation as an example of one of your points.  
\*Remember to stick to your allotted time.

You will be presenting your lesson with the other student(s) who have chosen the same topic and will each receive the same grade for this portion of the project. Therefore, while you will submit your own research paper, you will, collectively, submit one Power Point lesson for your chosen environmental issue. This Power Point file *must be emailed to me by the date of your lesson* and you must arrive to class with a copy on an accessible drive. Do not depend on an available internet connection.

**\*\*\*Note:** You may use pictures from any sources you wish to prepare your presentation, but be sure to include their sources in the reference page of your research paper.

### **Guiding questions for your paper and presentation:**

\*\*\*Note: While you should include the answers to these questions in both your paper and in your presentation, you will need to include much more than just the answers to these questions. The purpose of these questions is only to provide a basis for your research.

1. Why is this an environmental issue?
2. What negative consequences will this issue have on wildlife? What negative impact will this issue have on humans?
3. Does this issue occur naturally? How? Is this issue anthropogenic?
4. What have humans done to create this problem? How long has it been going on?
5. Why have humans created this issue? How have humans benefitted from it? Which humans have benefitted from it?
6. Has anyone tried to control or stop this issue from occurring? Who? Has it been successful?
7. What needs to be done to “fix” the issue? How can that be accomplished?
8. Has this issue had any historical significance? Have we learned from history and in what ways?
9. What recent current events pertain to this issue?
10. If this issue continues to occur, what might be the long term and short term effects on ecosystems? on the economy? on human health?

### **Due Dates:**

The completed research **paper** is due \_\_\_\_\_.

It must be submitted in class on the due date. You will lose 10 points (one whole letter grade) for *each* day it is not submitted.

The **presentations** will occur in class from \_\_\_\_\_.

Your team will be assigned a specific date at which time you will make your presentation and hand in any presentation materials for grading. You must email the .ppt or .pptx file to [geremina@vschsd.org](mailto:geremina@vschsd.org) by your assigned presentation date and you must bring the file with you on an accessible drive. If your team is not prepared to perform your presentation by the assigned date, your team will receive a zero for the presentation part of your total grade.

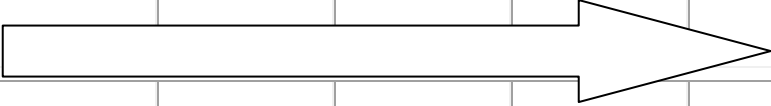
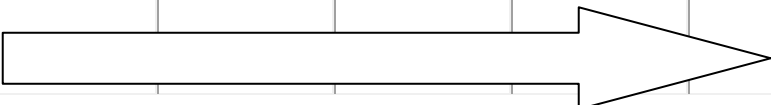
### **Do you have questions or need help?**

If you need any help or have any questions you can come to extra-help, find me in my office, or email me from school or home at [geremina@vschsd.org](mailto:geremina@vschsd.org) and I will reply as soon as possible. Also remember the school librarian or public library librarians are more than happy to help you locate materials for your research.

# Environmental Issues Research Project

Name: \_\_\_\_\_

CATEGORY	4	3	2	1	0	Student achieved points
<b>Organization/Writing skills</b>	Information is very organized with well-constructed paragraphs and no spelling, punctuation, or grammatical errors.	Information is organized with well-constructed paragraphs and almost no spelling, punctuation, or grammatical errors.	Information is organized, but paragraphs are not well-constructed and/or multiple spelling, punctuation, or grammatical errors.	The information appears to be disorganized and there are many spelling, punctuation, or grammatical errors.	Research paper is missing components including an introduction, any necessary body paragraphs, or conclusion.	
<b>Amount of Information</b>	All topics are addressed and all questions answered with at least 3 sentences about each.	All topics are addressed and all questions answered with at least 2 sentences about each.	All topics are addressed, and most questions answered with 1 or 2 sentences about each.	One or more topics were not addressed.	Most/many required topics were not covered within the research paper.	
<b>Quality of Information</b>	Information clearly relates to the main topic. It includes 3 or more supporting details and/or examples.	Information clearly relates to the main topic. It provides 1-2 supporting details and/or examples.	Information clearly relates to the main topic. No details and/or examples are given.	Information has little or nothing to do with the main topic.	No relevant information within the research paper.	
<b>Quality of Presentation</b>	Oral presentation has been well prepared for, is enthusiastic, and clearly illustrates all important information to the audience.	Oral presentation has been well prepared for, is enthusiastic, and mostly illustrates important information to the audience.	Oral presentation has been somewhat prepared for and/or only partially illustrates important information to the audience.	Oral presentation has not been well prepared for and/or does not adequately illustrate important information to the audience.	Lack of oral presentation.	
<b>Diagrams &amp; Illustrations</b>	Diagrams and illustrations are neat, accurate and greatly add to the audience's understanding of the topic.	Diagrams and illustrations are accurate and mostly add to the audience's understanding of the topic.	Diagrams and illustrations are accurate but only sometimes add to the audience's understanding of the topic.	Diagrams and illustrations are not accurate OR do not add to the audience's understanding of the topic.	Lack of diagrams or illustrations relating to the topic.	
<b>Sources</b>	An adequate number of sources (information and graphics) are accurately documented accurately in the desired format.	An adequate number of sources (information and graphics) are documented, but are not in the desired format.	Some sources have been provided (information and graphics) and are documented accurately in the desired format.	Some sources have been provided (information and graphics) but are not documented accurately in the desired format.	Completely missing list of sources OR provided list contains only 1-2 sources not documented accurately in the desired format.	

<b>Total points achieved</b>							
							
<b>Final Score</b>							
							

**Conversion Chart:** to calculate Total points achieved to the Final Score out of 100 points.

*Total Points      Final Score      Letter Equivalent*

24 points      = 100      = A+

22 – 23 points = 92/96      = A

20 – 21 points = 83/88      = B

17 – 19 points = 71/75/79 = C

16 points      = 67      = D

15 points      = 63      = F

12 – 14 points = 50/54/58 = F

10 – 11 points = 42/46      = F

8 – 9 points    = 33/38      = F

5 – 7 points    = 21/25/29 = F

3 – 4 points    = 13/17      = F

1 – 2 points    = 4/8      = F

0 points        = 0      = F