

Environmental Geology 103 Final EPIC SONG BATTLE

Environmental geology is applied geology and being applied requires an understanding of all of the pieces of the puzzle. In this course, we have discussed the issue of population growth as well as a driving force, plate tectonics, behind a naturally changing climate and many hazards, and then the hazards themselves. We discussed anthropogenic climate change and the implications globally. An understanding of each of these and their interconnectedness provides a great context for decision-making and earth science literacy.

Task

As a representative to the United Nations for that country, you have been invited to participate and share in an environmental summit to discuss environmental issues affecting your socioeconomic development and the way of life. Specifically the UN has asked you prepare a thorough report (in the form of research notes) for the environmental summit on how the sustainable development in your country is affected by the following issues: population, plate tectonics, and hazards. Then based on your reports and evaluations, make a final conclusion and discuss future prospects for your country – **what are your recommendations and what direction should your country take for a sustainable future?**

In addition, the UN wants to inform and appeal to a younger crowd, raising the awareness of some of these hot topic issues. So they are working with YouTubers to create Epic Song Battles of the Environment.

PART 1:

1. Individually, you will research a country based on the guiding questions.
2. From that research, you will pick the top three environmental issues.
3. You will investigate any solutions that the country is trying to implement to address the 3 issues.
4. Are these solutions sustainable?
5. Then you will meet with your group online and discuss all of this, picking the top 3 issues (the ones that your team thinks are the most important)

PART 2:

1. Prepare a debate in the form of an epic song battle (rap, country, pop, etc. of ~5 minutes) pitting the countries against each other. Everyone MUST contribute to the decision-making and the generation of the end product, preparing at least some portion of the media that you choose

RESEARCH

Population:

1. What is the population of the country?

Growth rate:

Surface Area:

Life expectancy at Birth:

Population undernourished:

Population using improved drinking water sources:

Adult literacy rate:

<http://data.un.org/countryProfile.aspx?crName=United%20States%20of%20America>

2. What is the biocapacity for your country? How does it relate to its ecological footprint? Explain

http://www footprintnetwork.org/en/index.php/GFN/page/footprint_for_nations/

3. What is the energy usage of your country?

What is the primary source of energy?

Where does your country rank globally as an energy consumer?

Oil Production

Oil Consumption

Oil Estimated Net Exports

If your country imports, what countries does it rely on for imports?

Natural Gas Production

Natural Gas Consumption

Natural Gas Estimated Net Exports

Coal Production

Coal Consumption

Coal Estimated Net Exports

Total Energy Production

Total Energy Consumption

Total CO2 Emissions from Consumption of Fossil Fuels

Other interesting facts

<http://www.eia.gov/countries/> (if available, make sure to read the full analysis brief)

Are forms of renewable energy being used, such as geothermal, wind, solar, etc.?

4. What is the land usage of your country?

Geography

Natural Resources

Land Use

Environmental Issues

Economy

GDP by sector of origin

Agriculture
Industries

<https://www.cia.gov/library/publications/the-world-factbook/>

Plate Tectonic Setting:

1. What is the plate boundary (if any)?
2. If at a plate boundary, what type of faulting and at what depth are the earthquakes expected?
3. If volcanism, what type and explain its explosivity (explain why)?

Hazards:

1. Linking plate tectonics (earthquakes, volcanoes, natural resources) and urbanization
 - a. Mitigation measures
2. Coastal zone development/land use issues
3. Water Availability - Groundwater (Pollution, recharge, use, etc.)
4. River systems and flooding
5. Waste water treatment and sewage
6. Climate change (anthropogenic and natural) –Extreme weathers, drought, industrialization, population

<https://www.cia.gov/library/publications/the-world-factbook/>

Top 3 Environmental Issues

What are the top three environmental issues that your country faces? What are the ones that your group of 5 decided upon? What were the top three issues of the other country? How are your countries similar and different?

Solutions:

Is your country trying to make changes to improve their environmental situation? If so, are their ideas sustainable? Do you have other recommendations?

GUIDELINES

- A group space will be made for you small group on Google or OAKs. You can discuss questions and answers, presentation, etc. here. Only your group members and myself will be able to view this space.
- Then I will combine in Google or OAKs, the two groups pitting countries against each other.
- Each person **MUST** complete the research. Those notes will be **submitted individually** as part of your final (they can be typed or hand-written). Also include your thoughts on what you discuss as a group, your notes for the discussion, and anything else you think would help me understand how much you contributed.
- Each group will deliver a 5+ minute epic song battle (submitted by 1 member of the team on OAKs). **This is your opportunity to be CREATIVE. Points will be provided for that.** In addition to the research, **each person MUST contribute to the presentation.**
- Some resources:
 - Smule's AutoRap: <http://www.smule.com/apps>
 - IMovie or PC equivalent
 - Anything else you can find/think of

Rubric for Notes (60 points total)

	15	10	5	0
Summarization vs. Copying	Notes are summarized as keywords and phrases	Notes are mostly summarized as keywords and phrases	Notes are mostly copied directly from the source	Notes are copied directly from the source
Relevance	Notes relate to the topic	Notes mostly relate to the topic	Some notes relate but most do not	Notes are not related to the topic
Citation	All notes refer to their source	Most notes refer to their source	Some evidence that note refer to their source	No evidence that notes refer to their source
Content and Quantity	More than enough notes are taken to create the segment of the presentation	A sufficient number of notes are taken to create the segment of the presentation	Nearly enough notes are taken to create the segment of the presentation	Not enough notes are taken to create the segment of the presentation

Rubric for Presentation and End Product (40 points total)

	Beginning	Developed	Very Good	Exemplary	Score
Accuracy	Very little of the information was accurate.	Most of the information was accurate and able to be defended.	Almost all information appeared to be accurate and clearly defended.	All was accurate and clearly defended.	1-10
Role	Point-of-view, arguments, and facts were rarely in character.	Point-of-view, arguments, and facts were sometimes in character.	Point-of-view, arguments, and facts were often in character.	Point-of-view, arguments, and facts were consistently in character.	1-10
Required Elements	Student included less information than was required.	Student included most information that was required.	Student included almost all information that was required.	Student included all information that was required.	1-10
Knowledge Gained	Cannot explain one way in which his/her character "saw" things differently than the other character.	Can clearly explain one way in which his/her character "saw" things differently than the other character.	Can clearly explain several ways in which his/her character "saw" things differently than the other character.	Can clearly explain several ways in which his/her character "saw" things differently than the other character and can clearly explain why.	1-10

Total Score: