The Biome Ecology Project

130 points

The Basics:

* Find out some basic information about the ecosystem of the location you are assigned.
* Decide what the location is best suited for, ideas below.
* Work together as a group to gather lots of information about your location, details below.
* Compile information digitally to submit to the teacher.
* Design a creative and engaging 3-5 min presentation (using technology) for the class that highlights the most interesting and crucial aspects of your location.

The Details:

Your biome project is worth **130 points** in the project category. Your groups will be three people. Some exceptions will be made, based on class size, with teacher permission. Your group will draw one biome to research from a list of possibilities.\*

Your **grade** will be determined in three components:

* the **Biome Digital Presentation** you share with the class: **50 points possible, assessed by teacher** (Animoto, Prezi, Haiku Deck, or PowerPoint, etc)
* the **Digital Research Compilation** you turn in to the teacher: **50 points possible, assessed by teacher** (PowerPoint, MentorMob, LiveBinder, etc.)
* your team members’ **peer assessment** of your contribution to the project: **30 points possible**

Project Premise:

Before you begin designing your creative, engaging presentation, decide what your approach will be. **What is the ideal purpose for your location?** You get to market your biome according to what you decide, and the purpose of the presentation is to highlight features of your biome that you think fit this purpose!

Maybe your biome is the perfect location for:

1. Hosting a season of Survivor! 🡪 your group is pitching to a television network
2. Building a vacation home 🡪 your group becomes a team of architects.
3. Spending a summer vacation 🡪 your group becomes a travel agency
4. Building a housing complex 🡪 your group will be real estate agency
5. Spending a Gap year 🡪 you are a group of guidance counselors for a high school or university
6. A Peace Corps stay 🡪 you are marketing for the Peace Corps
7. Any other creative idea or approach!

Building an Engaging Digital Presentation:

1. Use credible websites to investigate the following: Google Map location, climate, weather, seasons, plants and animals, food webs.
2. Maximum presentation time 3-5 minutes (does not include question time after presentation)
3. Use a digital app (examples: Animoto, Prezi, Haiku Deck, PowerPoint, etc.) iPads will be available certain class periods, to be announced. Plan accordingly if you do not have access to your own personal device.
4. Be artistic and creative! Use color, sound clips, clear and legible text, video clips, etc.
5. Your presentation must be dynamic and engaging.

Items to include in Digital Compilation (not presented to class):

* **Location Details** [Inserting Google Maps](http://www.randomconnections.com/?p=2366)
* **Date Range**
* Yearly **Climate Pattern**
  + [climatogram in Excel XP](http://www.ciese.org/curriculum/weatherproj2/en/docs/climatogram.shtml)
  + [How to make a climatogram in Excel 2007 or 2010](http://www.youtube.com/watch?v=QeRiKtgC5y0)
  + ([How to make a climatogram link (simple)](http://www.grochbiology.org/HowToMakeAClimatogram.htm)
* Sources of **natural resources**
* List of **indigenous plants**, especially edible ones
  + <http://www.survivaliq.com/index.htm>
  + Bryophytes, Pteridophytes, Gymnosperms, Angiosperms
* List of **native animals**
  + [phyla and classes](http://www.grochbiology.org/Classification%20and%20Diversity%20Word%20Bank%20for%20the%20Lab%20Practicum.doc)
* **Other organisms** that could be considered food
  + Bacteria, Archaea, Protista, Fungi
* What is the **carrying capacity** of the area?
* Trends for the area, represented quantitatively,
  + climate change, weather patterns, invasive species, human impact, etc.
* Construct a **food web** that includes you and other organisms in your biome.
* **Challenges of this biome**
* Which **natural disasters** is your biome prone to experience?
* How can the environment be protected? What measures can be taken to limit impact?

Important Reminders:

* Cite references in APA format ([www.bibme.org](http://www.grochbiology.org/www.bibme.org))
* Be specific and thorough
* See posted resources for more details
* This project must be ***shared and received***, ***and compatible to open*** by the teacher by the posted due date, otherwise it will be considered late.

There are further resources to support your work on this project, such as rubrics, standards, expanded details, etc, posted on the class website and School Loop! Please be thorough and responsible researchers and group members, and plan how you will be sure to accomplish all aspects of the project within the allotted time. Take into consideration computer lab days, iPad access, group members’ schedules, and organizational strengths and weaknesses of everyone involved. Good luck, and have fun!

This project is adapted from Faith Wittke, Westside High School Augusta, GA who credited Barbara Howerton with the original idea.