Environmental Science Biomes Project

THIS PROJECT IS DUE Friday 12/5/14 when you get to class (we won't work on it that day)!

Background: In studying environmental science, we will look at a variety of different factors, both biotic and abiotic, which influence living organisms and the biomes in which they live. From biology, remember that there are about eight general biome types- tropical rain forest, desert, coniferous forest, temperate deciduous forest, tundra, chaparral, grasslands, and aquatic (both oceanic and freshwater). However, these basic biome categories are simply generalizations, under which, there are many more specific biomes with unique features localized to particular geographic regions. Of course, the two dominant factors that predict biome types are ***precipitation*** and ***temperature***, both of which are associated with the general climate of an area, which is primarily dictated geographic latitude.

Directions: In this activity ***you will be working alone.*** In this project, you will be responsible for constructing a PowerPoint presentation of seven to ten slides, ***including a bibliographic slide*** (PowerPoint is available on all school computers if you do not have this program). Your presentations will also be presented to the class via a brief oral presentation.

Your slides that you create must follow the format listed below, with specific content on the appropriate slides.

Slide 1-- List your biome of study, provide a small map of the area, basic latitude and/or longitude boundaries, and names of regions or country examples within your biome area.

Slide 2&3-- Research and describe the basic abiotic factors of your particular biome. This would include factors such as average precipitation, average temperature, wind patterns, soil composition or profile, dominate geographic features, solar radiation, or limiting factors.

Slide 4-- Research the internet and either find a climatogram very similar to your region, or make a basic climatogram by making a simple graph from any data you find in your research. Explain any seasonal patterns or general trends of your climatograms, and the special influence these localized conditions have on the adaptations of key plant and animal species of that area.

Slide 5&6-- List at least 5 major autotrophs, 5 major heterotrophs, and 5 decomposers or scavengers found in your biome area. Also, be sure to l**ist any keystone species or species that have a particularly important cultural, economic or ecological value.**

Slide 7&8-- Describe the state of the particular biome area you are researching in terms of its preservation, degradation, or environmental status in general. Is it an area with deforestation problems? Are there national parks or nature preserves in the region? Are there specific dangers for the region that likely to be seen in the future? Are there any current environmental problems that are problematic for the region today?

Slide 9-- Research and list any programs or groups that are taking a proactive role in helping to preserve the biotic or abiotic resources of your biome of study. These programs or groups may be very

localized grassroots efforts, volunteer groups, privately funded preservation groups, or even government backed programs.

Slide 10-- Bibliography slide! When in doubt document your sources. Provide credit where credit is due. If you need help with documentation refer to the WAHS homepage and access the library/media center resources for citation guidelines (particularly for internet sources).

Most of all have fun, be creative, be scientific, and take a genuine interest in your study area, and be prepared to share you knowledge with the rest of your classmates. It's a big world with many amazing biome regions, some of which, many of us will never have the opportunity to visit first hand, but we can learn about the area through your research and knowledge.

In terms of getting your file to me, here are the best options:

1. Bring it in on a CD
2. Bring in your file on a thumb drive or portable USB storage device
3. Email it to yourself for later transfer from your mail account to my computer.

Here is a good file name□ **MasonWSheffieldQAfricanGrasslandPer3.ppt**

Your biome:_____

Ponds and lakes

Streams and rivers

Wetlands

Oceans

Coral reefs

Estuaries

Hot and dry desert

Semiarid desert

Coastal desert

Cold desert

Tropical forest

Temperate forest

Boreal forests (taiga)

Tropical grasslands or savannas

Temperate grasslands

Arctic tundra

Alpine tundra

Ponds and lakes

Streams and rivers

Wetlands

Oceans

Coral reefs

Estuaries

Hot and dry desert

Semiarid desert

Coastal desert

Cold desert

Tropical forest

Temperate forest

Boreal forests (taiga)

Tropical grasslands or savannas

Temperate grasslands

Arctic tundra

Alpine tundra