Environmental Systems and Societies

*Biome Location Assignment (78 points)*

**Learning Goal:** I want you to be able to assimilate data and utilize that data to predict the biome you would expect to find in a particular location. I would also like you to be able to justify your prediction with a discussion of the data and related ecological concepts.

**Success Criteria:** You will collect and organize data about a variety of biomes into a comprehensive data table (This data will be provided by your classmates). You will turn three of the categories of data into graphs. I will give you a set of data from an unknown biome and you will use your data table and graphs to determine what biome my data came from. Additionally, you will write a conclusion (which follows a specific format) justifying your decision.

**What you need to turn in:**

* Data table organizing the information gleaned in class (No you don’t have to do all of the terms just the ones listed below). 17 points
* Three graphs: Annual precipitation, Insolation, and Average Temperature (all versus the biomes—excluding freshwater, marine, and cave). (21 points)
* Conclusion which predicts the biome, and justifies that prediction with data and explanations. (41 points)

**What should be included in your conclusion:**

* A claim—you should tell me what biome you think the data is describing. (3 points)
* Evidence for your claim—you should include at least five (5) pieces of supporting evidence. (5 points)
* Warrant—you should include validation of your evidence, in other words explain the concepts that make your evidence valid. (14 points)
* Opposing views—you should acknowledge other possibilities and explain why you do not think they are the correct conclusion (Do this for each piece of evidence). (14 points)

**Your mystery data set:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Net Primary Productivity (g m-2 yr-1‑) | Annual precipitation (mm y-1) | Insolation (W m-2  yr-1) | P/E ratio | Average Temperature  (˚C) | Latitude (˚) | Vegetative Patterns |
| 500 | 600 | 140 | P=E | 17 | 35 south | Frequent [wildfires](http://en.wikipedia.org/wiki/Wildfire)  ensure that only small plants such as [grasses](http://en.wikipedia.org/wiki/Poaceae) flourish, and [trees](http://en.wikipedia.org/wiki/Tree) are rare. |

What am I looking for:

Total points: 78 under project

Data table: Title -1, I.V. and D.V. on correct axis -1, Units – 7, label columns – 8

Graphs (each): title – 1, label correct axis-2, units of measure – 2, Data set arranged correctly – 2

Conclusion: claim – 1, correct -1, agrees with their evidence -1

Evidence – 5 pieces

Warrant (each) does it explain evidence – 1, is it a correct explanation – 1

Opposing views: (each) do they give other possibilities -1, do they explain why they disagree -1