**Ecosystem-in-a-Box & Ecologist’s Letter Project (100 points total)**

**\*\*\* Due Thursday, 10/22 (A Day) and Friday, 10/23 (B Day) \*\*\***

**Directions for the Ecosystem-in-a-Box (50 points):**

1. With your team, choose one of the following ecosystem types:

* Tundra
* Taiga (Coniferous Forest)
* Desert
* Deciduous Forest
* Tropical Rain Forest
* Grassland
* Freshwater System
* Saltwater System

1. After choosing the type of ecosystem, perform research to find a ***specific location of your ecosystem: city and state or country***.
2. The box for the project should be shoebox size or larger.
3. The diorama should contain:

* At least 3 animal species found in your ecosystem.
* At least 3 plant species found in your ecosystem.
* This must be realistically represented with geographical features such as weather, mountains, streams, rivers, etc.
* You may use clay, paint, papier-mâché, small plastic toys (for plants & animals), or anything else you can think of to represent your ecosystem. BE CREATIVE!!!
* A background on the back and sides of the box. This may be painted, drawn and colored, or made of neat collage pictures cut from magazines.

**Directions for the Ecologist’s Letter (50 points):**

You and your team have been chosen to join a specific expedition to your ecosystem’s location. While you are there, you are writing a letter to your old high school biology teacher, Ms. McCabe.

1. Your letter should include:

* One paragraph (5-6 sentences) per member of your team.
* An accurate description of your ecosystem (include specific location!).
* Descriptions of at least 3 plant and 3 animal species shown in your diorama.
* Average temperature & yearly rainfall of your ecosystem.
* A description of what life is like in your ecosystem.
* Descriptions of unique conditions in your ecosystem such as length of day and night, and any other aspects of your ecosystem that you find interesting.

1. Include the following vocabulary correctly to receive 20 points toward your project
   * Biotic factors
   * Abiotic factors
   * Autotroph
   * Heterotroph
   * Producer
   * Primary consumer
   * Secondary consumer
   * Tertiary consumer
   * Energy flow
   * Carnivore
   * Herbivore
   * Density-dependent limiting factor
   * Density-independent limiting factor
   * Primary succession
   * Secondary succession
   * Emigration
   * Immigration
   * Biodiversity
   * Population density
   * Carrying capacity

***\*\*See the attached project and letter rubric.\*\****

**Names in Team \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Period \_\_\_\_\_\_\_\_\_\_\_\_**

**Grading Rubric for Ecosystem-in-a-Box Project and Ecologist’s Letter**

|  |  |  |  |
| --- | --- | --- | --- |
| **Ecosystem-in-a-Box** | | **Ecologist’s Letter** | |
| Minimum of 3 animal species | /10 | 10 Seasons | /10 |
| Minimum of 3 plant species | /10 | Plants, animals, temp., rainfall | /5 |
| Realistic Representations | /10 | 1 paragraph per team member | /5 |
| Creativity | /10 | Life | /5 |
| Background/Sides | /10 | Unique conditions | /5 |
|  | | Vocabulary | /20 |
| Total | /50 | Total | /50 |
| **Final Grade /100** | | | |

**Names in Team \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Period \_\_\_\_\_\_\_\_\_\_\_\_**

**Grading Rubric for Ecosystem-in-a-Box Project and Ecologist’s Letter**

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| Background/ Sides | /10 | Unique conditions | /5 |
|  | | Vocabulary | /20 |
| Total | /50 | Total | /50 |
| **Final Grade /100** | | | |