# Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_Period:\_\_\_\_\_\_\_\_\_\_\_\_\_

Biome:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Ecosystem:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Community:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Population:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Invasive species:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Instructions:**

Research:

You will be assigned a biome from the teacher. From your biome you must research one type of ecosystem, a community within your ecosystem, a population within your ecosystem, and an invasive species that affects that population within your ecosystem.

Presentation medium:

* 1. You and a partner will create a presentation medium (either google slides or prezi)
	2. Your presentation most include all the information from your research, as well as, several graphics (pictures, charts, graphs, etc…) to help explain your topic
	3. It must be colorful, neat, and consistent.
	4. Bibliography slide must be provided

 1. Two or more sources listed in alphabetical order in the correct format.

 Example of format:

 Webpage:

Authors last name, First name, title of webpage, web address, and date information was retrieved (2/25/16),

 Book resource

Author’s last name, First name, title of text, title of book, publishing company, and date copyrighted.

Presenting:

You and a partner will present your biome and information to the rest of the class.

**Biomes:**

1. Tiaga (boreal forest) 2. Tundra 3. Tropical rainforest 4. Temperate Forest 5. Desert

6. Tropical Dry Forest 7. Savanna (tropical grassland) 8. Temperate Grassland

9. North western Coniferous Forest 10. Temperate woodland and shurbland

**Research questions:**

**Biome level research:**

1. Explain and describe the characteristic abiotic factors of that biome such as climate and soil content and create a climograph to depict them.

 2. Explain and describe the biotic factors such as the types of plants and animals found there

 3. Explain where throughout earth your biome is located and why it is located there

 4. Compare and contrast your biomes biodiversity to the other earth biomes

**Ecosystem and community level:**

 1. Pick one specific ecosystem that would fall into your biome

Example: Temperate Forest biome ecosystem would be the deciduous forests of Indiana.

 2. Explain the specific types of living things that live within your ecosystem

3. Create a food web and trophic pyramid of those species. (Must have at least 2-3 types of species in each level and 1 type of decomposers)

4. Explain and identify the three types of symbiotic relationships in your community (mutualism, commensalism, and parasitism). Give examples using species from your community.

5. Identify the keystone species for your community and provide evidence to why it would be considered the keystone species

**Population level:**

 1. Pick one specific population of a species that lives in your ecosystem

2. Determine that population’s carrying capacity within the ecosystem and create a population graph depicting the population’s growth over the last 50 years.

3. Explain four limiting factors that can affect the population’s growth in your ecosystem and how they affect growth.

3. Identify an invasive species in your ecosystem and how it has affected your population’s growth.

**Human Impact:**

 1. How have humans impacted your ecosystem negatively?

 a. How have they impacted the soil? Provide specific examples

 b. How have they impacted the water? Provide specific examples.

 C. How have they impacted the air? Provide specific examples

 2. How have humans impacted your ecosystem positively?

Grading rubric

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Level 4:Excellent (10pts) | Level 3: Good(8pts) | Level 2:The basics (6pts) | Level 1:Needs improvement (1-4pts) |
| Content | All content has been explained using correct scientific terminology, and is supported by scientific evidence. | Most content has been explained using correct scientific terminology, and is supported by scientific evidence. | Most content has been explained using correct scientific terminology, but hardly any evidence is provided.  | Some content has been explained using correct scientific terminology, and not evidence is provided to support claims. |
| Slides | All slides are colorful, have graphics, easy to read and follow, with no grammar or spelling mistakes | Most slides are colorful, have graphics, easy to read and follow, with few grammar or spelling mistakes | Some slides are colorful, have graphics, easy to read and follow, with few grammar or spelling mistakes | Few slides are colorful, have graphics, easy to read and follow, with many grammar or spelling mistakes |
| Presentation | Presentation is clear, concise, easy to follow, and presenters can answer any and all questions correctly | Presentation is clear, concise, easy to follow, and presenters can answer most questions correctly | Presentation is not clear, or concise, or easy to follow, but presenters can answer most questions correctly | Presentation is not clear, concise, or easy to follow. Lots of information isn’t explained and the presenters can answer few to no questions correctly |
| Bibliography | At least 2-3 resources are provided in the correct format and in alphabetical order | At least 2-3 resources are provided but in the wrong format and in alphabetical order | At least 1 resource is provided in the correct format  | No resources are provide, or 1 resource is provided but not in the correct format.  |