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| **iLearn BI 101** | **Plant Diversity Assessment:**  **Seed Bank Nomination** | Name: |

**Procedures:**

Now is your opportunity to demonstrate what you have learned about plant diversity. After completing this activity and question set you will be submitting this document for grading through the course website. Upon completion of this assignment with the minimum required score, you will have completed the Plant Diversity module. The details on the grading and submission process can be found on the course website.

Use the questions below to guide your research. Your answers are expected to be thoughtful, detailed and in complete sentences with proper spelling and grammar, and incorporating terminology learned in the Plant Diversity module. It is expected that your answer to each question includes 2 – 3 paragraphs of information.

**Introduction:**

What are some of the goals of a seed bank beyond maintaining a stock of edible plants? If you were on a committee to decide which plant was the most crucial for future generations to have access to, what would that plant be and why? What argument would you make for its inclusion in a conservation seed bank? These are the types of questions you will answer as you complete this assignment.

In this day when conservation efforts are quite important to preserve genetic diversity for future generations "seed banks" have been created around the world in an attempt to preserve seeds of various foods for future research and "genetic stock" to retain the diverse array of traits found in the seed plants. Remember that seed plants include both gymnosperms and angiosperms. There are upwards of 1,300 seed banks across the globe. Two of the most famous banks are the Millennium Seed Bank Project located in West Sussex, England. It is the largest bank in the world, and as of 2009, holds 10% of all known plant species within its vaults, deep underground. The Svalbard Global Seed Vault is another famous seed bank in Northern Norway. Its vaults preserve seeds using the natural permafrost of the northernmost latitudes to keep seeds cold and preserved. Did you know that a seed bank also exists just east of Linn-Benton Community College?

Your ultimate goal in this assignment is to choose a plant species that you feel should be nominated for inclusion in a seed bank. In order to make an informed decision, your first task is to learn more about seed banks and their goals. It is not just about preserving and maintaining a stock of edible seed plants. As you research seed banks and formulate your nomination, consider all the aspects of seed plants that you learned throughout the plant module such as lifecycle, reproduction strategies, etc. Answer the following questions as you conduct your research.

**Report:**

1. Discuss three goals of seed banks, i.e. what are three reasons we want seed banks to exist?


5. What are some challenges that seed banks face when preserving seeds within their facilities. Frame your answer based on what you know about the biology and structure of a seed.

1. Now that you have a better idea of what seed banks do, choose a plant that your feel is worthy of inclusion. Discuss what aspects of your chosen species helped you to determine your selection, including the relationship humans have with the species.

1. Describe your plant. Include in your description its classification (gymnosperm or angiosperm), what its reproductive structures look like, and the typical habitats that your species would live in, unique characteristics that set this plant apart from other plants, etc.

1. Discuss the important aspects of your plant species life cycle. Be sure to include in your description some of the important aspects of plant biology discussed in the textbook and lecture material. (i.e. reproductive strategies, including relationships with pollinators if applicable, seed dispersal mechanisms, etc.)

1. Insert a picture of your plant by clicking on the picture icon below:

