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| **iLearn BI 101** | **Invertebrate Diversity Assessment:**  **Pollinator Relationships** | Name: |

**Procedures:**

Now is your opportunity to demonstrate what you have learned about invertebrate 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 Invertebrate 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 Invertebrate Diversity module. It is expected that your answer to each question includes 2 – 3 paragraphs of information.

**Introduction:**

Many flowering plants have specific pollinators that they attract; they are said to be "co-evolved." The association between the pollinator and the flower is a close, dynamic relationship where the pollinator is directly dependent upon the flower that it pollinates (for food) and the flower requires the pollination services of that one specific pollinator.

As part of this assignment you are challenged and encouraged to draw upon your prior knowledge, your powers of observation of the natural world, and your internet sleuthing skills to provide an example of these highly specific pollination associations. Be sure that the pollinator you choose is an invertebrate and that this relationship is one of an obligatory mutualism: one species of invertebrate that is dependent upon one species of plant and vice versa!

As you research your pollinator and the plant it has a relationship with, consider all the aspects of both plants and invertebrates that you learned throughout the modules such as lifecycle, reproduction strategies, habitat, etc. Answer the following questions as you conduct your research.

**Report:**

1. Describe the unique relationship pollinator/plant you discovered in your research. Be sure to describe how the plant entices the invertebrate to the flower to provide pollination services and what rewards the invertebrate receives.

1. Discuss the co-evolution of these two organisms. What specific aspects (morphology, nutrient requirements, etc), of each participant drives the adaptations of the other? What features does each species have that promotes the specificity of this relationship, i.e. why does this pollinator go to this flower and only this flower?

1. Based on our exploration of the different invertebrate phyla, describe the classification of the invertebrate pollinator. What phylum is your invertebrate found in? If your pollinator is an arthropod, identify the class as well as the phylum. What features does this animal have that identifies it as a member of that classification group?

1. Where in the world will you find this pollinator and its flower? Describe some aspects of the habitat that allowed this relationship to form. (i.e. flowers distribution is few and far between, harsh environmental conditions that normally inhibit plant survivorship, etc.)

1. Outside of the relationship with the flowering plant, describe other aspects of your pollinator’s biology and lifecycle. Include things such as life span, social structure, reproductive strategies, etc.

1. Insert a photo of your pollinator and flowering plant by clicking on the picture icon below.

