

# BIOLOGY 30: CLASSIFICATION OF LIFE

## CLASSIFICATION OF PRAIRIE ORGANISMS

### OUTCOME

- BI30-OL3: Explore how the dynamic nature of biological classification reflects advances in scientific understanding of relationships among organisms.

### ESSENTIAL QUESTIONS

1. How do western science systems of classification reflect relationships in the real world? How have these systems evolved over time?
2. How do indigenous systems of classification reflect relationships in the real world? How have these systems evolved over time?
3. What is the relationship between language and sustainability?

### BACKGROUND KNOWLEDGE

- Compare and contrast Linnean classification with phylogenetic classification. Here is a concise summary.
- Review this critical comparison of scientific knowledge and indigenous knowledges:  
<http://www.nativescience.org/issues/tk.htm>

## ACTIVITY: ELDER VISIT

1. Invite an Elder into your classroom and ask them to share knowledge about relationships between living beings. You can share the story of the Cascadia Field Guide provide context for your inquiry.
2. Given our context of climate change and biodiversity loss, brainstorm the benefits of classifying organisms based on ecological relationships.
3. Visit a nearby ecosystem and observe the relationships that exist between living things. Biodiverse ecosystems can be found throughout Meewasin's conservation zone. Create a page in a field guide that includes three organisms living in relationship; include line drawings, as well as descriptions.



### EXTENSIONS

1. BI30-OL3: **Explore how the dynamic nature of biological classification reflects advances in scientific understanding of relationships among organisms.** Can Phenology be used as a system of classification? Imagine a field guide that is organized based on seasonal patterns. Compare and contrast this with a field guide based on binomial nomenclature or physical appearances. How does phenology relate to climate change? Participate in "Plantwatch" to improve your knowledge of the seasonal rhythm of prairie plants.

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## HOME CONNECTION

- Try this activity in a space within walking distance of your house. How difficult is it to observe organisms in relationship in the city? If it is challenging, how can we improve this? See our Science 9 lesson for tips on increasing biodiversity in your community.

## DID YOU KNOW?

Meewasin works to protect a variety of ecosystems including grasslands, aspen bluffs, wetlands, riparian areas, and our river. Understanding the relationships that exist in these spaces is critical to a sustainable future for our city!