

# Wildlive Cards and Animal Observation

# ACTIVITY 1

## ENGAGE: Migration Station Folded Booklet, Migration Station Video and Ernie and Carmen's Animal Observation Guide

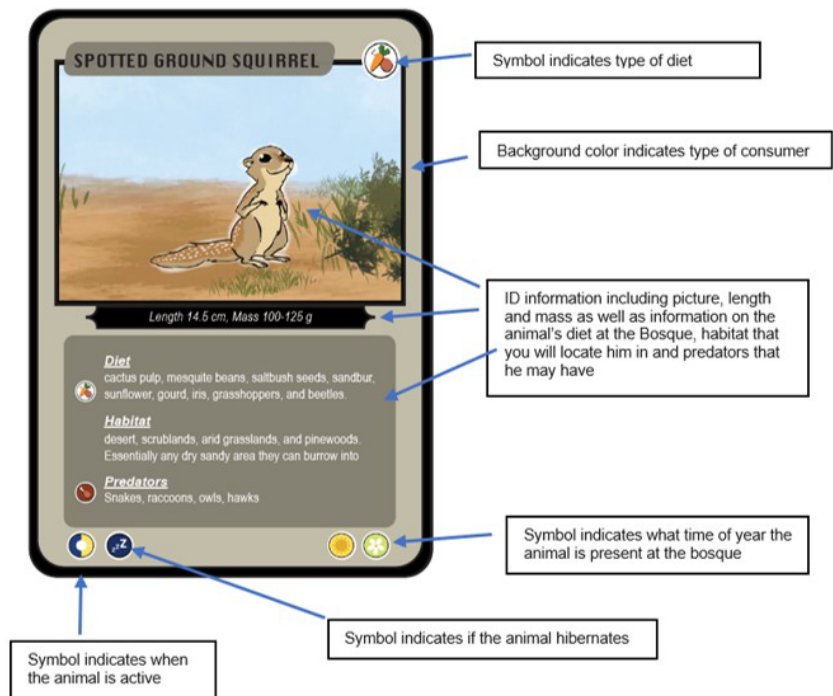
The students will read the Migration Station Folded Booklet (or the teacher may review with the class the Migration Station Slide Show presentation). The teacher should use the background information section of this lesson plan to answer any questions or provide more information regarding the Rio Bosque Wetlands Park. The teacher may use the Migration Station video to show the students movie footage of the park.

## EXPLORE: Investigating the Rio Bosque Car

### How to Read the Cards

For students to understand the dynamics of the Rio Bosque food web and how it changes, they should take into consideration when animals are present and active. Some animals migrate and are only present during certain months of the year. Others are present at the park year-round. Some forage for food during the day, only in the morning, afternoon or under the cover of night. To help students to build a food chain or web that is more realistic of what actually happens at the park, each card contains symbols in addition to facts about diet, predators and habitat.

**For best results with the cards, we suggest that you allow your students to explore them first by sorting them to try to guess what the symbols and colors may mean.**



Only after sorting the cards, should the students receive the card key or Ernie and Carmen’s Animal Observation Guide. Here is a sample card:

For a better understanding of the cards, please use the card key or Ernie and Carmen’s Animal Observation Guide.

### EXPLORE: Investigating the Rio Bosque Cards

Procedure:

1. Give each student group (four to five students) a set of the Rio Bosque Cards.
2. Have the students sort the cards by however they feel that they should be sorted, taking care to look at the cards for details and symbols
3. On a chart paper or board, have the students list the different ways that the cards could be sorted. A sample list could include:

- Card color
- Consumer, producers
- Omnivore, herbivore, carnivores
- Night, day symbols
- Season symbols
- Birds, mammals, insects, etc
- Desert animal verses aquatic
- Zzz symbols

4. Have the students look at the Rio Bosque card key to decode the cards and what they mean.
5. Have the students each pull an herbivore from the cards. By examining the card, students should research what type of plants the herbivore may eat. Have the students look for plants in the deck that the herbivore may eat. They will place this card to the left of the herbivore card.

## Rio Bosque Card Key

**Seasons at the Rio Bosque**  
If you see these symbols on your card, you will know what time of year that these animals are present and active at the Rio Bosque.

  
Spring

  
Summer

  
Fall

  
Winter

  
Year-round

**Activity at the Rio Bosque**  
If you see these symbols on your card, you will know what time of day that these animals are present and active at the Rio Bosque.

  
Diurnal

  
Crepuscular

  
Nocturnal

**Animal Behavior**  
If you see these symbols on your card, you will know what type of behavior the animal has that stops them from being present and active at the Bosque year round

  
Brumation

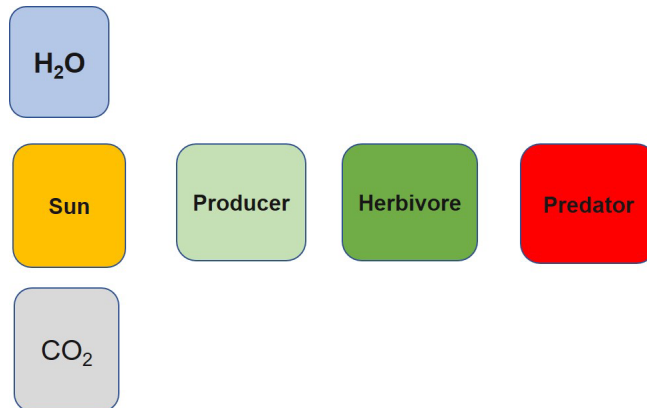
  
Hibernation

  
Estivation

  
Migration

6. Have the students then research from the card what type of predators that the herbivore may have. Have the students look for the predator in the deck. Once they have found a predator have them place that predator to the right of the herbivore.
7. Explain to the students that they are making a food chain. A food chain is a model that shows how the flow of energy travels from one living thing to another. Ask the students where the plant would get their food. (Students should answer from photosynthesis or the sun) Have the students search the deck for the photosynthesis cards (sun, water, carbon dioxide). Using the teacher background pages,

explain to the students about how these three elements must be present in order for photosynthesis to happen. Have the students place the sun card to the left of the herbivore. Water and carbon dioxide should line up directly below and above the sun card. It should look something like this



8. Using paper and pencil, have the students draw their food chains, naming the animals and plants from their card deck into their food chain. Can they add more predators to their food chains? What is the longest food chain that they can create? Have them place arrows to show the flow of energy from the sun to the predator. Call a few students from the groups to demonstrate their food chain to the class. Then have them present their food chains to each other in the group.
9. As they present their food chain to their group, have the students note if there are any herbivores and carnivores that would be in competition with each other for the same food by comparing the different food chains made within their group. These group members can form a food web. The teachers will choose a group that has some competitions within their food chains. Have the group bring their cards from their chains to the front of the class. The teacher will then help the group build a food web to show competition for the same food sources. Using scotch tape and a chart marker, tape the cards onto the white board or chart paper. Demonstrate the levels of the web, starting with the sun at the bottom level, then building producers, herbivores, and predators. Draw arrows to show the flow of energy from the bottom level to the top predators. Once the students are clear on how to draw the levels, have each group build a food web with the cards and their own chart paper. Have the students post their food webs around the room.

### **EXPLAIN: Ernie and Carmen's Animal Observation Guide**

In this reading and discussion activity the students will use their knowledge of a second language to help them to decode science vocabulary. Scientists often use words with Latin-based roots, prefixes and suffixes to help describe science. Since Latin is no longer spoken, the meaning of the words do not change. There are many students in the El Paso area that speak a second language that is Latin-based, Span-

ish. The use of Spanish or Latin cognates to help students to decode English words is an ESL strategy that not only helps students to bridge and become proficient in two languages but also builds confidence in second language learners as they realize that the language of science is very similar to the language spoken at home.

**Procedure:**

Each student will receive the **Ernie and Carmen Animal Observation Guide** to read with their group members. After reading the guide the teacher will bring the class back into whole class instruction to discuss the reading.

**Teacher:** Knowing a second language like Spanish can help you to better understand science words. Let your group members know if you understand or speak Spanish in your home. Your knowledge and the help of our dictionaries will help us to find words similar in meaning to the new vocabulary that we are studying in class. Let's refer to the section in the Guide that says Activity and Foraging. The first word that we learned about was the word Diurnal, which means active during the day. What Spanish or English words do we know that would help us to remember that Diurnal means refers to daytime?

Teacher guides students to possible answers such as the Spanish word Día or the English word Diary. These words will be written on the board or chart paper

**Teacher:** Let's look at the next word, Nocturnal, which means, active at night. What Spanish or English words do we know that would help us to remember that nocturnal refers to activity at night?

Students may respond with noche for Spanish and even though it may be difficult to locate a noct rooted English word, the word equinox (which is the first day of spring) means that both day and night are equal in time.)

The teacher will continue the discussion about Latin related words with the class to help discover other similarities between Spanish and science vocabulary and English and Science vocabulary. The class will create a chart and begin to fill in the vocabulary words and related words. Answers may vary. Here is an example of a possible chart and some of the examples of the words they may discuss:

**Ernie & Carmen's  
Animal Observation Guide**

You will see a lot of wildlife and evidence of wildlife at the Rio Bosque Wetland Park. Ernie and Carmen have provided you with Wildlife cards to help you to identify the life in the Rio Bosque food web as it changes throughout the year. These symbols will tell you more about this wildlife. While you are reading about the meaning of these symbols, if you know a latin based language like Spanish, you may see similarities between Latin Science words and everyday Spanish or English words.

Seasons at the Rio Bosque

If you see these symbols on your card, you will know what time of year that these animals are present and active at the Rio Bosque.



Activity and Foraging

If you see these symbols on your card, you will know when a creature is most active.



Diurnal  
Diurnal is a Latin-based science word, Di - Day, urnal - Time. Animals that show this symbol are most active during the daytime hours. Example: Harris's Hawk



Nocturnal  
Nocturnal is another Latin-based science word, Noct - Night, urnal - Time. Animals that show this symbol are most active during the nighttime hours. Example: Coyotes



Crepuscular  
Crepuscular is a Latin-based science word, Crepusc - Twilight, ular - Pertaining to. Animals that show this symbol are most active in the morning when the sun is dawning or in the afternoon as the sun is setting, "dusk" or "twilight". This is very common for desert animals that wait to become active when the temperatures are bearable. Example: Spotted Ground Squirrel

**Science Word**

diurnal  
nocturnal  
crepuscular  
herbivore

**English related words**

diary  
equinox  
angular, muscular  
rectangular, spectacular  
herb, herbicide

**Spanish related words**

día  
equinoccio, noche  
angular, musculoso,  
rectangular, espectacular  
hierba, herbicida

**Applying the Observation Vocabulary to Food Webs**

Referring to the food webs that the groups built in the explore activity, give the students some post-it notes and the following questions to leave feedback for the groups during a gallery walk. A gallery walk is an activity where students can walk from one display to another to observe student work, much like a visitor to a gallery would view artwork. During the gallery walk the students would write feedback to the group using their post it notes and the questions that the teacher has posted on the board or chart paper. Here are the questions:

- Are the animals in this food web able to be in competition with each other year-round? If not, which animals would not be present for competition in the food web?
- Would the animals in this food web be active at the same time during the day or night? If not, which animals would not be active during this food web?
- What season best describes this food web? Are there any animals that would be hibernating, estivating, or bromating during this food web? Would any be migrating?

**Extension Activities to the Cards**

Students can play these games to familiarize themselves with food webs and food chains at the Rio Bosque Wetlands:

**Seasonal Webs:**

The teacher assigns a season to the entire class and sets a timer. The student groups have 15 minutes to build a food web with animals and plants present at the Bosque for that season. The first group to complete a food web that contains photosynthesis and at least 4 additional levels for this season will be the winner.

**Card Wars (one deck per pair of students):**

Students will play in partners, shuffle the cards, and then split the cards evenly between each student. The students will flip the first card from their pile. If one animal can consume the other animal or plant, the student card doing the consuming gets to keep the cards. If there is no match, the cards remain in the middle until a living thing is consumed. The students will continue to flip a new card until they find a consumer. The student holding the consumer card gets to keep all of the cards in the middle. This game can be timed for 15 minutes or until one student loses all of his or her cards. The player with the most cards wins the war.