

Outdoor Science! Week 1

Day 4: I Need You & You Need Me!

Teacher/Parent Background:

- In this activity, students will engage in a read aloud video of the book *Cactus Hotel* to identify and describe the interdependence between flora, fauna and non-living things in a desert habitat. Through “tours” of the outdoors, students will actively explore the interdependence of the living and non-living things in their very own urban/desert habitat!

Related Standards:

- Construct an argument from evidence that organisms are interdependent.

Key Terms:

Interdependence - a dependence or reliance between living things and non-living things in a habitat

Materials List:

- Internet access
- *Desert Flora, Fauna & Non-living Things Pictures* - included in the *Activity Description* section
- Computer/phone with audio
- *Cactus Hotel Read Aloud Video* by Rebekah Wall
 - *Cactus Hotel* - written by Brenda Z. Guiberson
- Journal
- Pen/pencil
- Parental/adult supervision
- Safe, outdoor areas
 - Frontyard, backyard, neighborhood sidewalks, nearby field or park, etc.
- Colored pencils/crayons

Activity Description:

- Ask students to review examples of adaptations and survival advantages of the flora and fauna in journals from *Day 3: Survival 101*. Briefly recap the main ideas from Day 3's activity:
 - What were some of the flora and fauna adaptations we observed/discussed?
 - How do these adaptations provide the flora and fauna with survival advantages in their habitats?
 - What might happen to the flora and fauna if their habitat changes or if something in their habitat changes? Would their adaptations still be beneficial? Why or why not?
- As we have learned, structural and behavioral adaptations give flora and fauna a greater chance at survival in their habitats! But, adaptations can only help so much. Flora and fauna actually depend on one another and on non-living things like air, water, rocks, sunlight, etc., in their habitats to help them survive! In the science community, we call this ***interdependence***.
 - For example, think of what you do during an average day. Who or what do you depend on?
 - Just like the flora and fauna all around us, we depend on other living things and non-living things to help us each day!
- Let's take a closer look at interdependence in our own desert habitat! How might desert flora and fauna depend on one another and on the non-living things in their habitat; what might they need each other for?
- For example, consider the following desert flora, fauna and non-living things.
 - Show students the following *Desert Flora, Fauna and Non-living Things Pictures* below. Ask students to discuss and record the possible interdependence between the flora, fauna and non-living things. Pictures are as follows:

■ **Saguaro Cactus (with fruit)**



- Sunlight



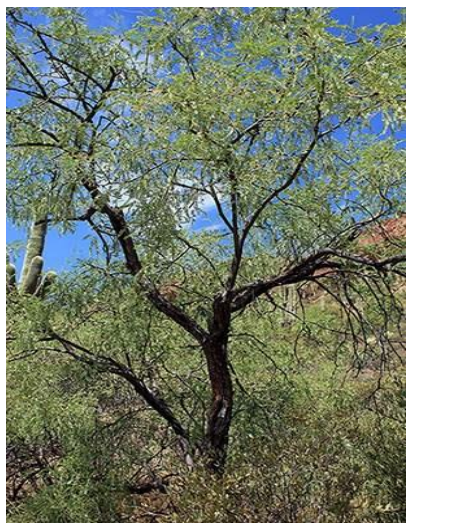
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- Sand/Rocks



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- Rodent



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- Palo-verde Tree



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- Rain



- - **Jack Rabbit**



- Now that we have discussed the possible ways in which these desert flora, fauna and non-living things might depend on one another, let's carefully explore their relationships by watching a read aloud video of the book, *Cactus Hotel*!
 - Play the [Cactus Hotel Read Aloud Video](#) from timestamp 0:00-2:47.
 - While students are watching the video, prompt them to record examples of how the flora, fauna and non-living things depend on one another in journals, through the use of drawings with labeled words/phrases.
 - After stopping the read aloud video at timestamp 2:47, discuss the following questions with students:
 - How did the flora, fauna and non-living things demonstrate interdependence? How did they depend on one another?
 - Which examples of interdependence did you find the most surprising or interesting?
 - So far in the *Cactus Hotel*, the growing cactus is about 25 years old and only measures about 2 feet tall! Considering that these cacti can continue to grow and live for about 150-200 years, what might happen to the relationships between the flora, fauna and non-living things around the cactus

- environment? What other examples of flora and fauna might rely on each other and "the cactus hotel", as time moves on and the cactus grows?
- Resume playing the [Cactus Hotel Read Aloud Video](#) until timestamp 6:46 and ask students to discuss and record the continuation and introduction of new interdependence examples among flora, fauna and non-living things. Some new examples may include:
 - Birds, bees and bats eat the nectar of the cactus flowers.
 - A Gila Woodpecker eats the cactus fruit and lives inside the cactus.
 - The Gila Woodpecker eats insects that can bring disease to the cactus.
 - The sandy ground around the cactus provides homes for ants, rodents, lizards, snakes, rabbits, and foxes.
 - As the cactus grows, more birds, insects and rodents make the Saguaro Cactus their home.
 - After discussing the interdependence example, ask students:
 - Now the Saguaro Cactus is 150 years old! If the cactus is near the end of its life, what might happen to the relationships between the flora, fauna and non-living things around the cactus environment? What other examples of flora and fauna might rely on each other and "the cactus hotel", as time moves on and the cactus dies?
 - Conclude playing the [Cactus Hotel Read Aloud Video](#). Ask students to discuss and record the continuation and introduction of new interdependence examples among flora, fauna and non-living things. Some new examples may include:
 - A gust of wind brings the cactus down to the sandy ground, making the cactus a new home for other living things like millipedes, scorpions, ants, and termites.
 - As new living things find a home in the resting cactus, lizards and snakes visit the area to find things to eat or to rest in the shade of the cactus limbs.

Closure:

- We have examined many examples of the interdependence between flora, fauna and non-living things in a desert habitat by watching/reading *Cactus Hotel*. Let's now explore the interdependence between the flora, fauna and non-living things outdoors, in our very own urban/desert habitat!
 - With adult/parental supervision, take a "tour" of the safe, easily accessible outdoor areas of your neighborhood. This may include: your front and backyard, sidewalks around your neighborhood, a nearby field or park, etc.
 - During the tour, ask students to discuss and record their observations of the interdependence between flora, fauna and non-living things through the use of drawings with labeled words/phrases.

Extensions:

- Watch!
 - Animal Wonders Montana - [How Animals and Trees Help Each Other](#)