

DESERT INDOORS®

Environmental Education Activities for Students at Home

(This activity was created in accordance with shelter-in-place. Remember to practice social distancing and stay local.)

Module: *Become a Pollinator!*

Topic: Desert Habitats

Objective/Learning Goal: Children will be able to use scientific knowledge to explain adaptations of plant species within the California Desert.

Glossary:

- **Adapted** - A change or the process of change by which an organism or species becomes better suited to its environment.
- **Anther** - These form pollen grains.
- **Petals** - Leaf-like and often-colorful part of the plant that surrounds the reproductive parts of the flower and make the flower conspicuous to pollinators.
- **Pollen** - Fine powder dust that contains the sperm from the male part of the plant.
- **Pollinator** - An animal or insect that moves pollen from one flower to another.

Materials: Cotton swabs

Outdoor Activity:

Build Background Knowledge - Ask children what they already know about the relationship between plants and *pollinators*. What are pollinators? What do they do and why are they important?

- What are basic requirements that plants and pollinators need to live and survive?
→ Light, air, water, nutrients, time, moderate temperatures, and space.

Which pollinator will be attracted to a plant is called "*Pollinator Syndrome*." It is the characteristic or trait that will appeal to a pollinator. A combination of smell, color, pollen location and type, flower structure, and nectar all effect what type of pollinator will be attracted to the flower.

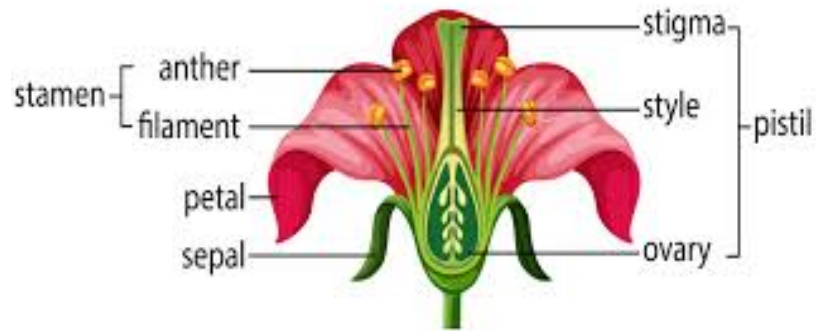
For example: The beak of the hummingbird has *adapted* and specializes in gathering nectar from long funnel shaped flowers that usually are bright red; think penstemons. Native bees are attracted to the mild sweet smell, brighter color, and shallow shape of flower *petals*; think lupine. The Hawkmoth is attracted to the nighttime smell of the Sacred Datura.

Go Outside- Look for flowers growing in the backyard or on a close walk. Holding a flower, have or help your child swab the *anthers*, carefully transferring *pollen* from one flower to another. Challenge them to repeat the process on as many types of flowers as they can!

Type of Mojave Pollinator						
Trait	Bat	Bee	Butterfly	Bird	Moth	Beetle
Color	White, green, purple	white, yellow, blue, purple	red and purple	red, orange	pale purples, red, pink, white, pale yellow or green	green
Flower Shape	Bowl shaped, closed during the day	shallow or flat, has platform for landing	tubular with landing pad	tubular funnel shaped	tubular without landing pad	large bowl shape
Nectar	Abundant and hidden	present	abundant deeply hidden within tube	abundant deeply hidden within funnel	abundant and hidden	present
Odor/Smell	emitted at night, musky	mild smell, usually agreeable	mild smell, usually agreeable	mild to no smell	emitted at night, sweet	no smell to unpleasant
Pollen	plentiful	minimal and sticky	minimal	minimal	minimal	plentiful

See pollinator.org for more information on the other types of pollinators and how to become pollinator aware.

Common Flower Parts



We would love to hear how your project went and to have you share your findings as scientists?