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Program updates can be found at: <u>https://gardenofgods.com/educational/edu-1/school-field-trips</u>

Land Use Acknowledgement:

We gratefully acknowledge the native peoples on whose ancestral homeland we gather, as well as the diverse and vibrant Native communities of Colorado today.

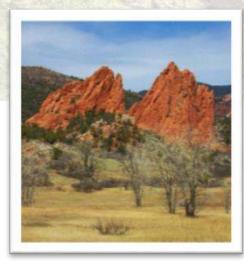
Meet the Park Program

Welcome! We look forward to sharing the ecological and environmental story of Garden of the Gods with your students.

We align with current Colorado Academic Standards for K-5 Life Science.

Goals:

- Students recognize the exceptional natural wonder of the Garden of the Gods.
- Students will understand what makes up an ecosystem.
- Students recognize how different ecosystems coexist within the Park, making the Garden a crossroads of plant and animal life.
- Students identify plants and animals from the six ecosystems in the Park.
- Students identify how the Garden's ecology has supported human habitation for over 4,000 years.



Teacher Reference Guide:

An **ecosystem** is a single environment and all the living and non-living things in it. This means an ecosystem is more than just the plants and animals in an area. An ecosystem is also defined by the type of soil and rocks, the amount of precipitation, the elevation, and several other factors.

The Garden of the Gods is a crossroads of six different ecosystems. Below is a list of common plant and animal species found in the park and their corresponding ecosystems. Note that some are found in multiple ecosystems, which is indicative of the park's special biological diversity.

- Prairie Grasslands
 - Animals Prairie Rattlesnake, Coyote, Striped Skunk, Mule Deer, Magpie, Red-Tailed Hawk, Honey Ants
 - o Plants Prickly-Pear Cactus, Yucca, Paintbrush
- Wetlands
 - Animals Black Bear, Red Fox, Gray Fox, Magpie, Red-Winged Blackbird, Prairie Rattlesnake
 - o Plants Common Fireweed, Cottonwood Tree, Cattail
- Mountain Shrublands
 - Animals Rocky Mountain Bighorn Sheep, Cottontail Rabbit, Bobcat, Wild Turkey, Eastern Fence Lizard, Honeybee
 - Plants Wild Rose, Mountain Mahogany, Piñon Pine, Three-Leaf Sumac, One-Seed Juniper
- Piñon and Juniper Woodlands
 - Animals Mountain Lion, Mule Deer, Least Chipmunk, Spotted Towhee, Scrub Jay, Honey Ant
 - Plants Prairie Coneflower, Pasque Flower, One-Seed Juniper, Gambel Oak, Piñon Pine
- Cliff Islands
 - Animals Least Chipmunk, Rock Pigeon, White-Throated Swift, Violet-Green Swallow, Prairie Falcon
 - Plants Yucca, Three-Leaf Sumac, One-Seed Juniper, Ponderosa Pine
- Montane Forests
 - Animals Little Brown Bat, Pack Rat, Mule Deer, Mountain Lion, Tiger Swallowtail Butterfly
 - Plants Rocky Mountain Penstemon, Butterfly Weed, Ponderosa Pine, Chokecherry, Mountain Mahogany

Animals and plants in the Garden depend on each other to maintain a healthy environment. Some of our plants and animals would disappear from the Park if this balance did not exist. For example:



The Tiger Swallowtail Butterfly (Colorado's largest) lays its eggs on the chokecherry shrub. The chokecherry is a *host plant* for the butterfly. The eggs hatch, the larvae feeds on the leaves, and then they spin their chrysalis on this same plant. The adult butterfly pollenates the plant allowing it to reproduce. Loss of the chokecherry can result in a loss of the butterfly and vice versa.

Certain plants and animals in our Park serve as *keystone species*. That means that their presence is of primary importance to the Garden's biodiversity. For example:

The Gambel's Oak provides shelter and nesting sites for many of the Park's birds. It provides forage for mule deer, black bear, and many rodent species. Since they grow in wide stands, they provide excellent erosion control. The loss of this species in the Park would drastically alter our landscape and many animals would no longer live here.

Not only is the Park a crossroads of plants and animals, it has long been a gathering place for many different peoples. Archaeologists have evidence of human habitation in the Garden for the last 4,000 years. The Ute (*Nuu-ciu*) thrived here amongst the rocks of the Garden. Sun Mountain (*tava*) is their name for Pikes Peak. We know they made great use of the Park's natural resources and climate. They wintered here, sheltered by the rocks and hunted deer, turkey and bison. They utilized the yucca, three-leaf sumac, and piñon pine for food and amenities.

Supplementary activities could include:

- Collect pictures of people, plants and animals of the area
- Complete "Look What I Learned!" worksheet included in this packet
- Have students do artwork or creative writing based on their experience at the Park



Look What I Learned! Garden of the Gods Field Trip

Name _____

Meet the Park

- 1. Name three of the six ecosystems that form a crossroads in Garden of the Gods Park?
- 2. What is an ecosystem?
- 3. What is a keystone species?



- 5. How did some plants get way up high on the rocks?
- 6. What might happen to the Park's plant and animal life if the area predators disappeared?
- 7. Name some things the Ute people used the yucca plant for.
- 8. Why does the black-billed magpie build a nest with a roof and two entrances?
- 9. Name some animals you might see if you visited the Park at night?
- 10. What do we call animals that mainly come out at night?
- 11. Why have we built the trash cans so strong in the Park?



12. On the back of this paper draw your favorite rock, plant, or animal you saw at the Garden of the Gods today.

Look What I Learned! <u>Answer Key</u> Garden of the Gods – Meet the Park

Meet the Park

- 1. Name three of the six ecosystems that form a crossroads in Garden of the Gods Park? **Prairie grasslands, wetlands, mountain shrublands, piñon and juniper woodlands, cliff islands, and montane forests**
- 2. What is an ecosystem? All of the living things in a given area, interacting with each other, and with their environments (weather, earth, sun, soil, climate, atmosphere).
- 3. What is a keystone species? A species that has an unusually large effect on its neighbors. Without it the environment would dramatically change.
- 4. What is the Colorado state mammal? **Rocky Mountain Bighorn Sheep**
- 5. How did some plants get way up high on the rocks? Wind and birds
- 6. Name some things the Ute Indians used the yucca plant for. **Soap, shampoo, medicine, rope, paint brush, toothbrush, salad, sewing needles, weaving rugs/sandals, etc., roast pods and seeds for snack**
- 7. What happens if people keep walking on the grass and plants growing in the Park? The plants will die, leaving less habitat for wildlife; the park will wash (erode) away; the park will not be left natural.
- 8. Why does the black-billed magpie build a nest with a roof and two entrances? **To protect the nest from the weather and to evade predators**
- 9. Name some animals you might see if you visited the park at night? Little brown bat (in summer), raccoon, mountain lion, coyote, black bear, great horned owl
- 10. What do we call animals that come out at night? Nocturnal
- 11. Why have we built the trash cans so strong in the Park? So bears and other animals can't get into the trash