Gopher Tortoises

Shy Wolf Sanctuary
Education & Experience Center

Essential Question:

Why is a gopher tortoise considered a keystone species?

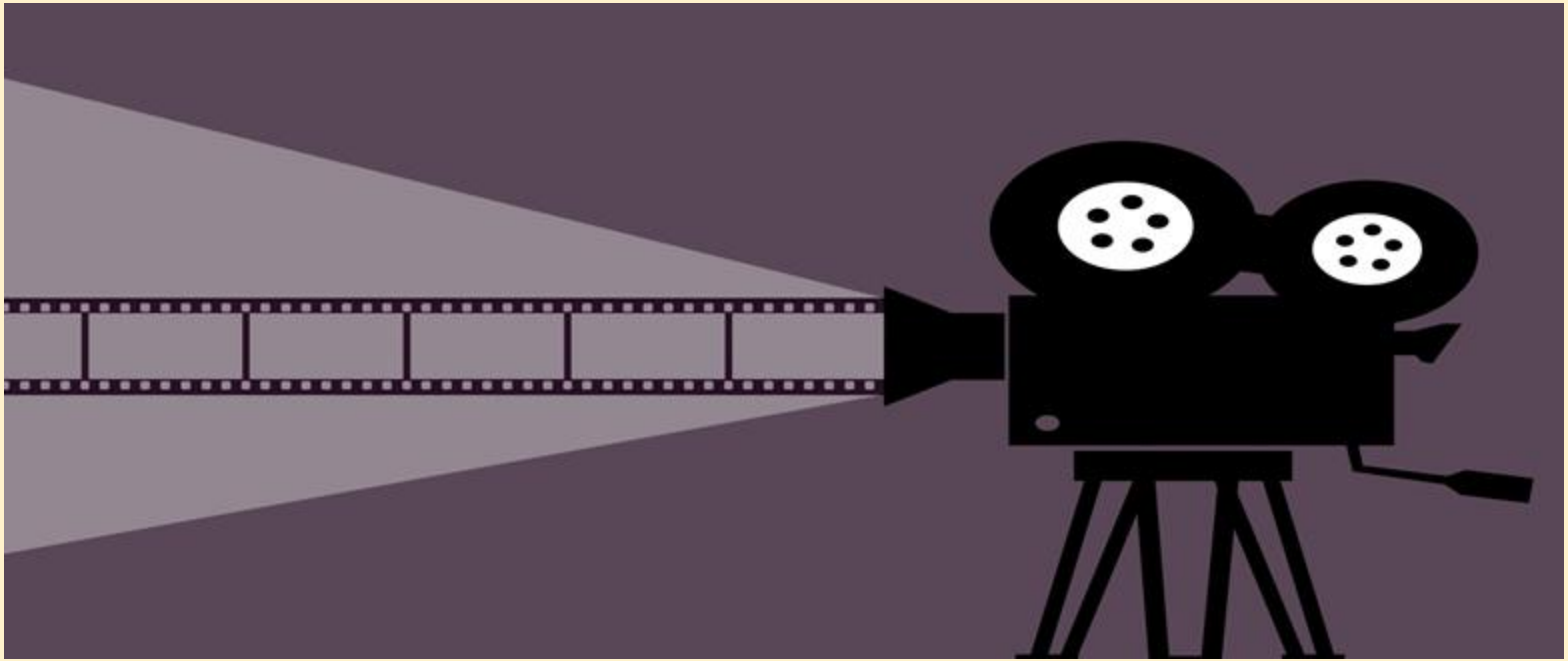
- You will be able to define and describe examples of symbiotic relationships.
- You will be able to describe relationships of species in a gopher tortoise burrow.
- You will explain why gopher tortoises are a keystone species.

KEY TERMS

• symbiosis • Competition • Keystone species	• mutualism • commensalism • parasitism

Watch the video

Gopher Tortoises



Fun Facts:

- Average 9-11” and up to 9 lbs
- They have stocky, elephant-like hind feet and flat shovel-like front limbs for digging
- Habitat - dry sandy, low vegetation, pine flatwoods, scrub, and dunes lives in the South East
- Burrows - up to ten feet deep and 40 feet long
- Herbivores - eat plants - grass, berries, legumes,
- Considered to be “Threatened”

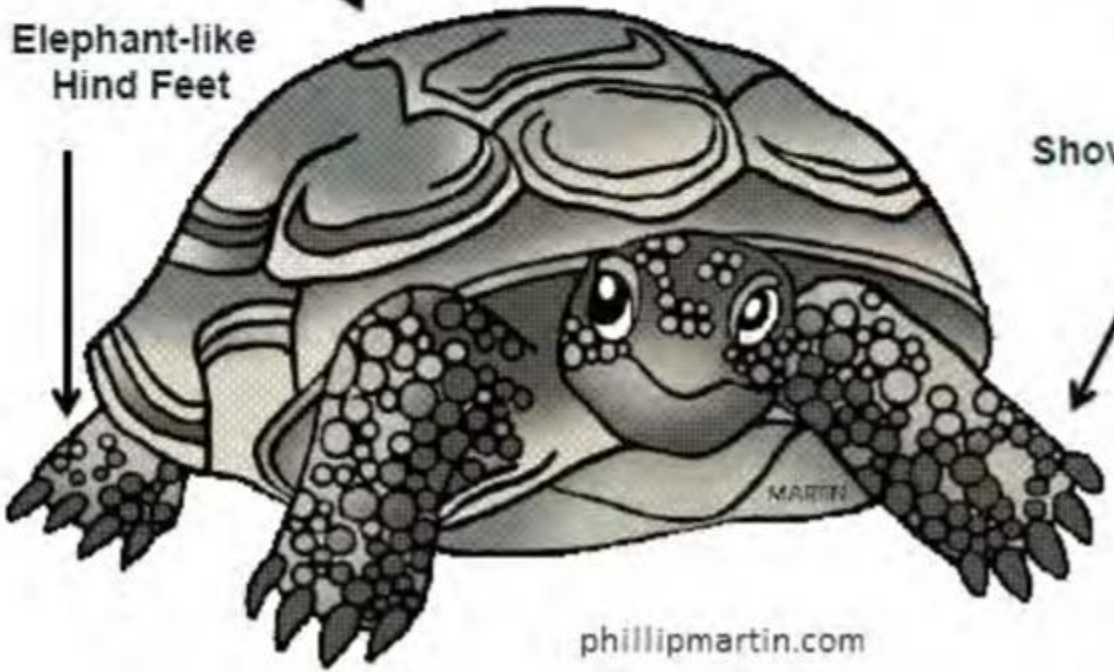
Gopher Tortoise Poop

Note the undigested grass and pine needles.

Domed Shell

Elephant-like Hind Feet

Shovel-like Forelimbs for Digging



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Tortoise burrows provide other species protection from the heat and from periodic fires. These species could not survive without the protection of the burrow.

KEYSTONE SPECIES

A **species** whose presence and role within an ecosystem has a great impact on other organisms within the system.

A **keystone species** is often a dominant predator whose removal allows a prey population to explode and often decreases overall diversity

Gopher tortoises are not dominant predators BUT gopher tortoises share their burrows with more than 350 other species

You might find any of these in the burrow...

Cotton mouse

Diamond back rattle snake

Gopher frog

Scarab beetle

Burrowing Owl

Whip scorpion

Watch the video

Shy Wolf's Gopher Tortoises

Gopher Tortoises

What was the presenter's Name?

Gopher tortoises are native and a protected species

How many species of aquatic turtles are in Florida? How many terrestrial?

What do tortoises eat?

Where can they be seen in Florida?

How long do gopher tortoises live in the wild? How long in captivity?

Competition

Both organisms in a habitat compete for the same food source, nesting space, water.

A woodpecker and squirrel share a tree and compete for nesting space in holes and spaces

Parasitism

One organism benefits, the other organism is harmed.

The mosquito gets food the human gets disease and loses blood

Commensalism

One animal benefits, the other is neither helped nor harmed.

The remora fish gets a free ride on the shark without using any energy ad the shark doesn't even know the fish is there

Mutualism

BOTH organisms benefit in this relationship

Honeybee and Flower

The bee gets pollen and the clover gets pollinated

The gopher tortoise and its burrow is protected by the state of Florida. The primary threat to the tortoises is loss of habitat, but they also face a high risk of road mortality.

How you can help?

Use the link listed below to explore ways you can help the gopher tortoise.

https://myfwc.com/wildlifehabitats/wildlife/gopher-tortoise/help/

Resources:

Attenborough: The Wonders of Tortoise Tunnel, BBC. BBC Studios
https://www.youtube.com/watch?v=o5FwvUD2e94

The Tortoise Burrow, Newsletter of the Gopher Tortoise Council; Volume 37, Number, Spring 2017https://gophertortoisecouncil.org/pdf/newsletters/2017spring.pdf

The Gopher Tortoise, Shy Wolf Animal Sanctuary Education and Experience Center, www.shywolfsanctuary.org

www.shywolfsanctuary.org

Guiding Questions: What are the guiding questions for this lesson?

1. In your own words, describe the 5 types of symbiotic relationships.

2. What are 2 different examples of each type of symbiotic relationship?

3. Identify 5 examples of vertebrate animal species and 5 examples of invertebrate species that are known to share the gopher tortoise burrow.

4. Why are the organisms found in the gopher tortoise burrow called commensals?

5. What are examples of organisms in the burrow that demonstrate mutualism? Commensalism? Parasitism?

6. Imagine an encounter between species living in the burrow. How might they survive these encounters?

7. How do the problems facing the gopher tortoise affect its burrow inhabitants?