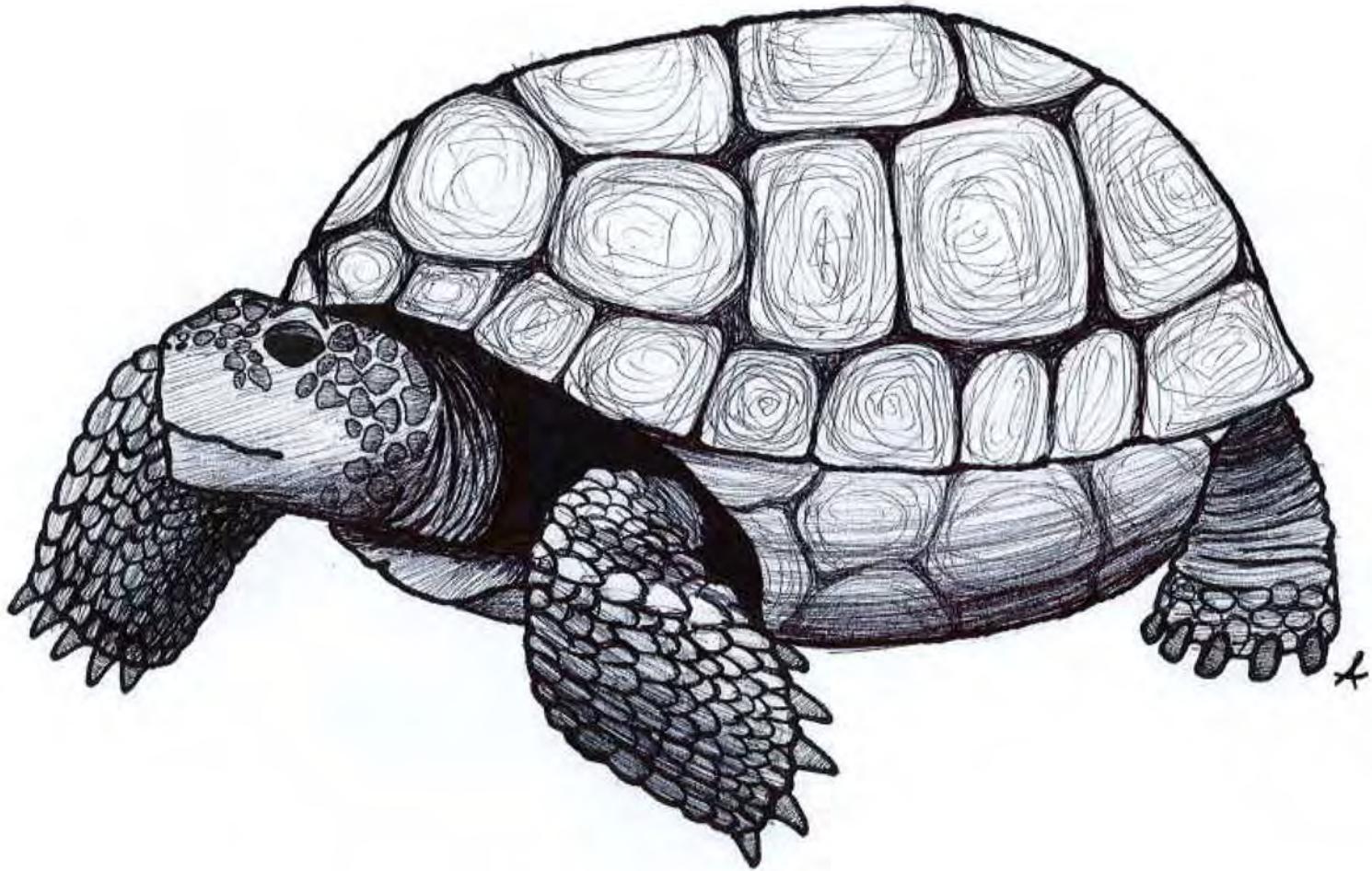


Gopher Tortoise

Field Trip Guide



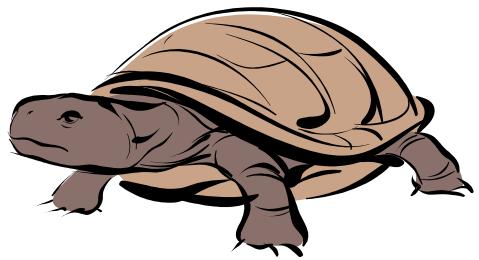
Educational Activities for Use
Outside of the Classroom



Florida Fish and Wildlife
Conservation Commission

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Identifying Wildlife Tracks

As a keystone species, the gopher tortoise plays a vital role in Florida's ecosystems. A keystone species, like the gopher tortoise, keeps its environment stable for itself and other species. The gopher tortoise keeps its environment stable by sharing its burrows with over 350 other species, called "commensals". These commensal species include mice, frogs, snakes, lizards, wasps, ants, beetles, and other bugs. Most of these critters are a food source for other animals. Without healthy populations of these base species, animals that are higher up in the food chain could not survive. An environment needs a healthy food chain full of biodiversity in order to stay stable. In Florida, the gopher tortoise is critical to maintaining biodiversity.

The number of plant and animal species in an environment make up its biodiversity. Environments with a larger variety of species have more biodiversity and tend to be healthier. One way of finding out if an ecosystem has high biodiversity is by looking at animal tracks found in that ecosystem. You can't always find tracks for frogs and bugs, but you can find tracks for bigger animals that may depend on them for food. If you can find a large variety of tracks from animals like raccoons, foxes, cranes and other big animals, then there is a healthy population of the base species. There may even be a gopher tortoise or two nearby. Today, we're going to be hunting for some of those tracks.

Use the track guide to identify as many animal tracks as you can and then answer the following questions:

1. How many different kinds of animal tracks did you find today?
2. Did you see any gopher tortoises or burrows?
3. What do you think gopher tortoise tracks look like? Draw them in the box in the center of your track identification guide.
4. Do you think the habitat you visited today has high biodiversity? Why or why not?

As you explore Florida's natural habitats, please remember that you are there to observe. Please do not touch, pick up, or disturb any wild animals or their homes.



Gopher Tortoise Food

The gopher tortoise is a reptile that is native to Florida. It inhabits each of Florida's 67 counties, in well-drained, flat areas. Gopher tortoises can be found in habitats like coastal dunes, scrub, sandhill, and pine flatlands. Gopher tortoises dig burrows for shelter from extreme weather and wildfires. Over 350 other species also seek shelter in their burrows. Gopher tortoises spend most of their time underground in their burrows, but when they do come up they are HUNGRY! Gopher tortoises are herbivores. They prefer short, leafy plants as well as grasses and berries.

See if you can collect ten kinds of plant leaves that a gopher tortoise might eat! Make an impression of the leaf by placing it on a flat surface, laying your paper over it, and running a colored pencil or crayon over it. You should be able to see the outline of the leaf and any veins or ridges the leaf may have.

Here are the steps for making leaf impressions:

1.



2.



3.



For help with plant identification, please visit <http://www.fnai.org/FieldGuide/index.cfm>

For more information about gopher tortoises, please visit <http://myfwc.com/gophertortoise>

Threats to the Gopher Tortoise Freeze Tag

Background:

The gopher tortoise is a very important native species in Florida. Gopher tortoises dig burrows that provide safe homes for hundreds of other animals. This makes them critical for maintaining an area's health and biodiversity. Today, the gopher tortoise is, unfortunately, a Threatened species. They face many dangers, most of them caused by people.

Humans are having severe effects on gopher tortoises. People influence habitat loss, the spread of disease, and the possibility of tortoises coming into contact with dogs. All of these factors have harmful effects on gopher tortoises. People may be the problem, but we can also be the solution. We can reverse the harmful impact we are having on gopher tortoises by promoting responsible practices like prescribed burns, green spaces, and not handling wild tortoises. In this game, you will see how threats can harm gopher tortoise populations, and how responsible practices can reverse the effects of those threats.

Directions:

This is a game of freeze tag. If a "freezer" tags a "tortoise", the tortoise is then frozen. A frozen tortoise is unable to move, and must remain in the place it was when it was tagged until it is unfrozen. Only the "unfreezers" may unfreeze any frozen tortoises. Once unfrozen, the tortoise is able to move around freely once more. The "freezers" should actively try to tag the tortoises. The "tortoises" should try to evade the "freezers". "Unfreezers" should attempt to unfreeze any frozen tortoises as quickly as possible.

The placards: For this activity, six placards have been provided. Three of them describe threats to the gopher tortoise. The other three describe positive actions that aid in tortoise conservation. Print them out, punch holes in the tops of each, and string them with a yarn or thread so that they may hang like loose necklaces on the players.

The freezers: The freezers will wear the placards that describe threats to the gopher tortoise (indicated with the color red). The threats include habitat loss, domestic dogs, and disease. Habitat loss is a threat to the gopher tortoise because it results in a lack of healthy space for the tortoises to live. Domestic dogs are a threat to the gopher tortoise because they often prey on tortoises. Disease (especially Upper Respiratory Tract Disease) is a common threat because it is easily spread from tortoise to tortoise and there is no known cure. The freezers representing these threats will tag gopher tortoises, resulting in the tortoises being frozen. The tortoises must stay that way unless conservation efforts (unfreezers) are able to save (unfreeze) them.

The unfreezers: The unfreezers will wear the placards that describe responsible practices that can help reverse the damaging effects of the threats (freezers). The responsible practices include prescribed burns, green spaces and hands off. Prescribed burns are necessary for promoting growth of low-growing, leafy plants and grasses for gopher tortoises to forage. Green spaces are places that are set aside and not developed, allowing animals like the gopher tortoise to have areas of undisturbed habitat. "Hands off", meaning not handling wild tortoises, is important for disease prevention and the animal's safety. These responsible actions can help reverse the damage caused by threats. During the game, unfreezers are able to unfreeze any frozen tortoises.

The tortoises: Each of the players that are not a freezer or unfreezer is a gopher tortoise. Collectively, they represent Florida's resident population of wild gopher tortoises. Their job is to avoid the threats and try to survive. See what happens as they attempt to evade habitat loss, disease, and domestic dogs, with the help of responsible conservation actions. Will this population be conserved?

Keywords:

Biodiversity: the variety of species within an environment. Habitats with numerous different species have high biodiversity. Habitats with few

different species have low biodiversity. Habitats with high biodiversity tend to be healthier than those with low diversity. Gopher tortoises help habitats have higher biodiversity.

Conservation: The preservation of natural resources through responsible management and sustainable practices.

Habitat loss: The physical loss in available space for a species to live in. The gopher tortoise is experiencing habitat loss due to destruction, fragmentation, and degradation. Essentially, tortoise habitats are being destroyed, broken up into smaller pieces, and declining in quality.

Native: belonging to a certain place. The gopher tortoise is native to Florida, meaning that it is part of Florida's natural environment.

Prescribed burns: A planned fire applied to a specific area under safe weather conditions in order to maintain the health of the area. Prescribed fires in Florida are important for maintaining short, leafy plants and grasses for tortoises to eat.

*For a variation on the game, try changing the rules up a bit. For example, you could:

- Allow the freezers to freeze the unfreezers. In other words, allow the threats to stop the sustainable practices. This will demonstrate a shift in the balance of conservation that may occur if the effects of a threat outweigh the benefits of a sustainable activity.
- Remove some of the unfreezers. This will demonstrate how hard it is to save the gopher tortoise when very little conservation effort is made.
- Remove some of the freezers. This will demonstrate how the tortoise population might benefit from the removal of some of the things that threaten it.

HABITAT LOSS AND DEGRADATION

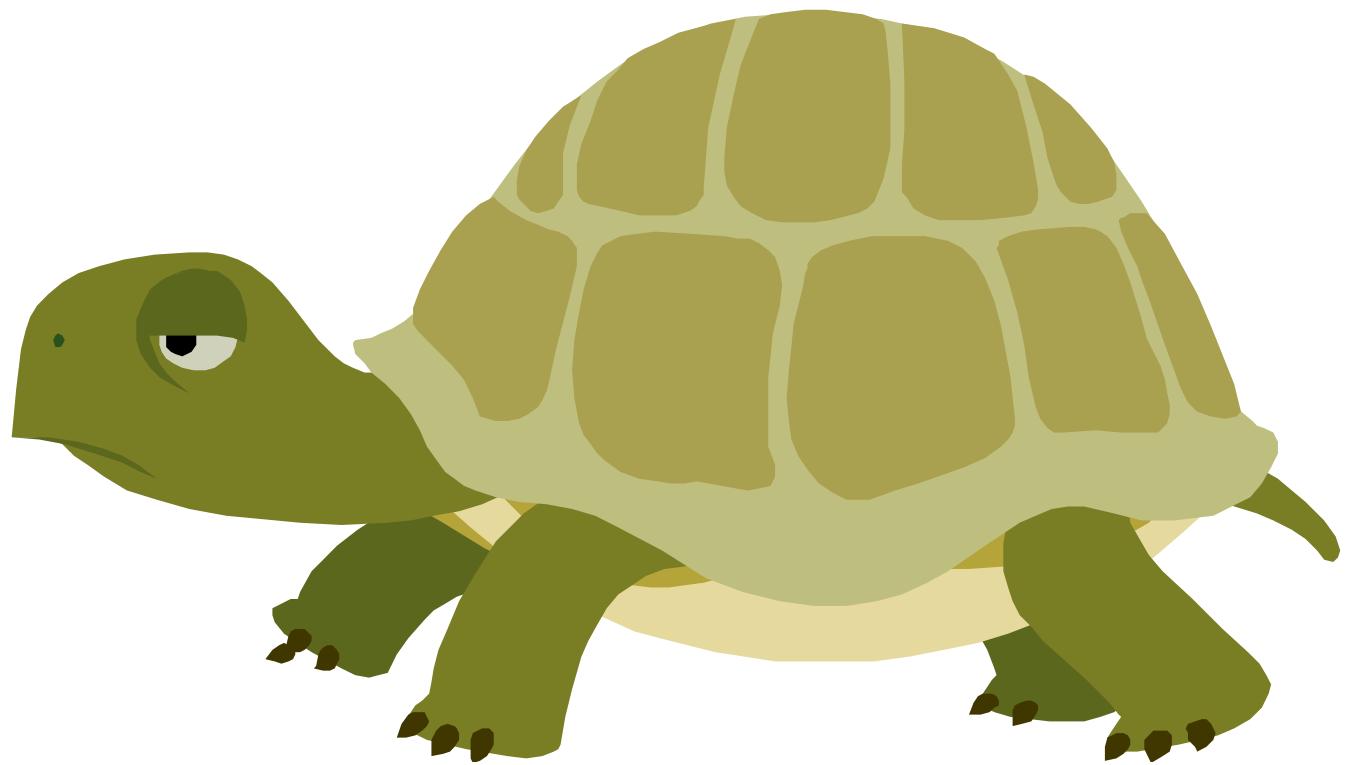


DOMESTIC DOGS



DISEASE

(UPPER RESPIRATORY TRACT DISEASE)



PREScribed BURNS



GREEN SPACES



HANDS OFF

(OBSERVE FROM A SAFE DISTANCE)



Coastal Dunes Gopher Tortoise Scavenger Hunt

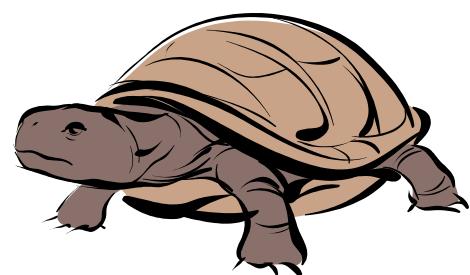
The gopher tortoise is a very important animal in Florida. As a keystone species, it helps keep its environment stable and full of diversity. Over 350 other species depend on the gopher tortoise for survival. These species, called "commensals", include some snakes, mice, frogs, lizards and bugs that all need the burrows. Even armadillos, rabbits, and foxes may use the burrows for shelter. Finding many of these animals may mean that there is a gopher tortoise nearby. These animals all share the gopher tortoise's habitat and home.

Gopher tortoises have specific habitat requirements. They live in areas with sandy soils and lots of short plants, grasses, flowers, and berries for them to eat. They enjoy prickly pear cactuses, sea grapes, beautyberry, grasses and other low growing plants. The gopher tortoise can be found in coastal dunes, sandhills, scrub habitats and pine flatlands.

Coastal dunes are found near beaches and shorelines. They are characterized by sand dunes with numerous low-growing plants growing on upper dunes away from the water. Plants found in coastal dunes include sea oats, railroad vine, sea grapes and some grasses. Gopher tortoises are often found in these areas because they provide sandy areas for burrowing and plants for foraging. As you explore the coastal dune habitat you are visiting today, complete this scavenger hunt to find out if you are in a place that meets the gopher tortoise's needs. Remember: when we visit natural habitats, we are there to **OBSERVE**. Please do not touch, pick up, or disturb any live animals or their homes.

What to find:

- ◊ Three sandy spots where a gopher tortoise could dig a burrow
- ◊ Four different kinds of plants a gopher tortoise might eat
- ◊ A flower
- ◊ Four bugs that can fly
- ◊ Four bugs that crawl
- ◊ A mammal
- ◊ A reptile
- ◊ Five birds



For additional help identifying plants and animals, visit
<http://www.fnah.org/FieldGuide/index.cfm>

Pine Flatlands Gopher Tortoise Scavenger Hunt

The gopher tortoise is a very important animal in Florida. As a keystone species, it helps keep its environment stable and full of diversity. Over 350 other species depend on the gopher tortoise for survival. These species, called “commensals”, include some snakes, mice, frogs, lizards and bugs that all need the burrows. Even armadillos, rabbits, and foxes may use the burrows for shelter. Finding many of these animals may mean that there is a gopher tortoise nearby. These animals all share the gopher tortoise’s habitat and home.

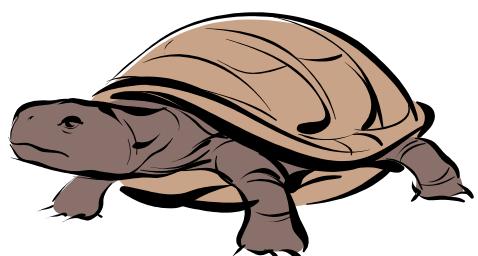
Gopher tortoises have specific habitat requirements. They live in areas with sandy soils and lots of short plants, grasses, flowers, and berries for them to eat. They enjoy prickly pear cactuses, sea grapes, beautyberry, grasses and other low growing plants. The gopher tortoise can be found in coastal dunes, sandhills, scrub habitats and pine flatlands.

Pine flatlands are low, wetter areas with lots of saw palmettos and grasses. Pine flatlands are common areas in south Florida. Gopher tortoises are often found in these areas because they have lots of places to burrow and find food. As you explore the pine flatland area you are visiting today, complete this scavenger hunt to find out if you are in a place that meets the gopher tortoise’s needs. Remember: when we visit natural habitats, we are there to OBSERVE. Please do not touch, pick up, or disturb any live animals or their homes.

What to find:

- ◊ Three sandy spots where a gopher tortoise could dig a burrow
- ◊ Five different kinds of plants a gopher tortoise might eat
- ◊ Four pine trees
- ◊ Six pinecones
- ◊ Three saw palmettos
- ◊ Four bugs that can fly
- ◊ Four bugs that crawl
- ◊ A mammal
- ◊ A reptile
- ◊ A bird

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Sandhill Gopher Tortoise Scavenger Hunt

The gopher tortoise is a very important animal in Florida. As a keystone species, it helps keep its environment stable and full of diversity. Over 350 other species depend on the gopher tortoise for survival. These species, called “commensals”, include some snakes, mice, frogs, lizards and bugs that all need the burrows. Even armadillos, rabbits, and foxes may use the burrows for shelter. Finding many of these animals may mean that there is a gopher tortoise nearby. These animals all share the gopher tortoise’s habitat and home.

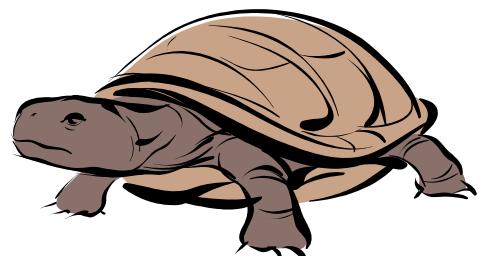
Gopher tortoises have specific habitat requirements. They live in areas with sandy soils and lots of short plants, grasses, flowers, and berries for them to eat. They enjoy prickly pear cactuses, sea grapes, beautyberry, grasses and other low growing plants. The gopher tortoise can be found in coastal dunes, sandhills, scrub habitats and pine flatlands.

Sandhills are characterized by longleaf pines and grasses growing in dry, sandy soils. Sandhills commonly occur in the northern half of Florida, in areas with hills or ridges. Gopher tortoises are often found in these areas because they have dry soil for burrowing and plenty of food. As you explore the sandhill habitat you are visiting today, complete this scavenger hunt to find out if you are in a place that meets the gopher tortoise’s needs. Remember: when we visit natural habitats, we are there to OBSERVE. Please do not touch, pick up, or disturb any live animals or their homes.

What to find:

- ◊ Three sandy spots where a gopher tortoise could dig a burrow
- ◊ Five different kinds of plants a gopher tortoise might eat
- ◊ Four pine trees
- ◊ Six pinecones
- ◊ Four bugs that can fly
- ◊ Four bugs that crawl
- ◊ A mammal
- ◊ A reptile
- ◊ Two different kinds of birds

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Scrub Habitat Gopher Tortoise Scavenger Hunt

The gopher tortoise is a very important animal in Florida. As a keystone species, it helps keep its environment stable and full of diversity. Over 350 other species depend on the gopher tortoise for survival. These species, called "commensals", include some snakes, mice, frogs, lizards and bugs that all need the burrows. Even armadillos, rabbits, and foxes may use the burrows for shelter. Finding many of these animals may mean that there is a gopher tortoise nearby. These animals all share the gopher tortoise's habitat and home.

Gopher tortoises have specific habitat requirements. They live in areas with sandy soils and lots of short plants, grasses, flowers, and berries for them to eat. They enjoy prickly pear cactuses, sea grapes, beautyberry, grasses and other low growing plants. The gopher tortoise can be found in coastal dunes, sandhills, scrub habitats and pine flatlands.

Scrub habitats have short shrubs, shrubby trees and some grasses growing in very dry, sandy soil. Scrub habitats may be found in central and northern Florida, just inland from the coast. Gopher tortoises are often found in these areas because they have dry sand for burrowing and plenty of food. As you explore the scrub area you are visiting today, complete this scavenger hunt to find out if you are in a place that meets the gopher tortoise's needs. Remember: when we visit natural habitats, we are there to OBSERVE. Please do not touch, pick up, or disturb any live animals or their homes.

What to find:

- ◊ Four sandy spots where a gopher tortoise could dig a burrow
- ◊ Three different kinds of plants a gopher tortoise might eat
- ◊ Four shrubs
- ◊ Two shrubby trees
- ◊ Four bugs that can fly
- ◊ Four bugs that crawl
- ◊ A mammal
- ◊ A reptile
- ◊ Three birds

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