

BEFORE YOU BEGIN

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OKLAHOMA

From Mesas and Prairies to Pine Covered Forests



How to Play

Welcome to the Oklahoma State Parks Nature Study Challenge!

A great way to see Oklahoma's natural world is to visit a state park. If you're unable to travel, this Nature Study Challenge takes you on virtual trips to special places across Oklahoma.

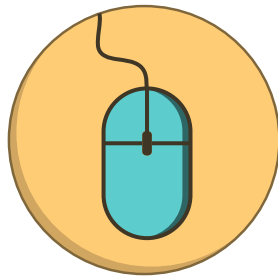
The Challenge has two parts; the "Oklahoma Pathfinder" and the "State Park Scientist."
You can complete one or both!



You'll earn rewards for each
part that you complete!

Activity Buttons

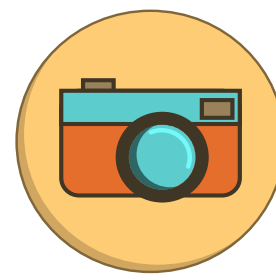
Throughout the Challenge you will see buttons like these. Make sure to click on them to continue your discovery.



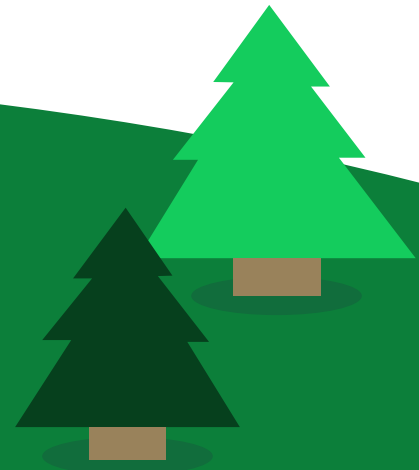
Link



Video



Photo





Pathfinder Challenge

As you complete steps to becoming a Pathfinder, you will take virtual tours of Oklahoma using 360 degree photography and videos of several state parks and natural areas.

You will be asked questions about these special places.
Record your observations in the spaces provided.

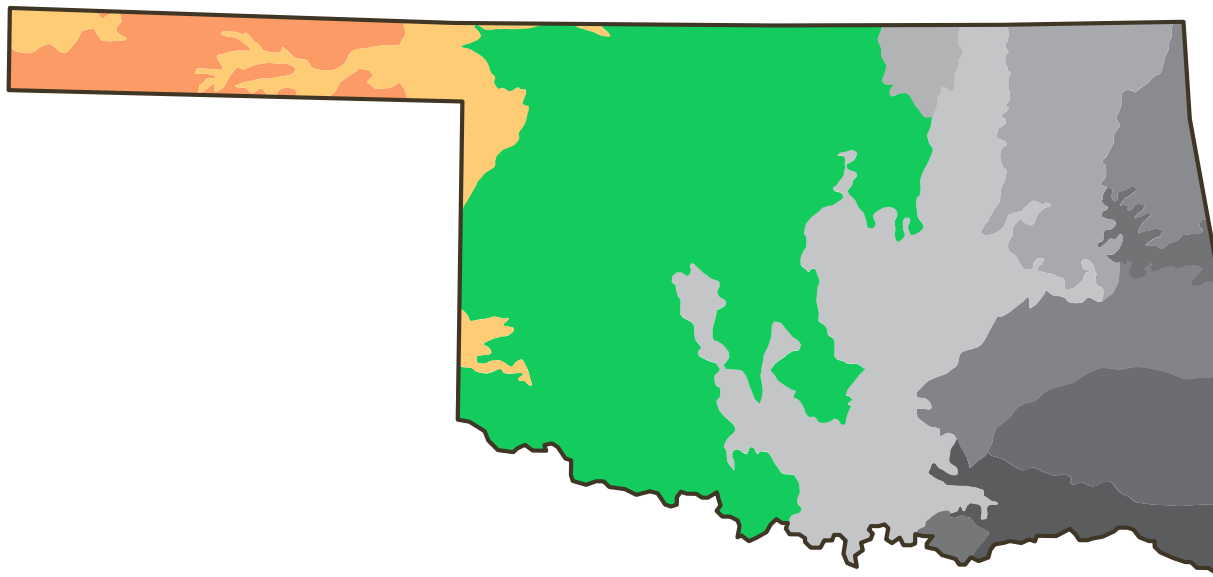
Lastly, be sure to "save" your
Oklahoma Pathfinder Challenge often.



**So what do you say... are you
ready? Let's get started.**

Western Oklahoma

Click on one of the blue map buttons to learn about Oklahoma's state parks and other special natural areas in the western part of Oklahoma.



Once you have visited all of the selected state parks and natural areas in Western Oklahoma, click on the "right" arrow.

Black Mesa State Park

Annual Rainfall
17
Inches

Physical Features



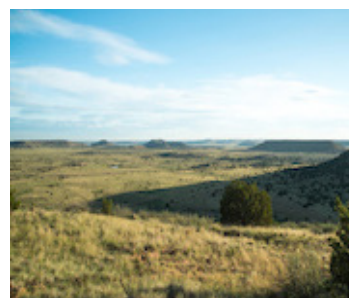
Oklahoma's highest elevation 4,973 ft. above sea level.

Geology



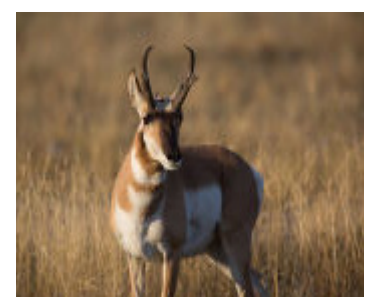
A layer of black, volcanic lava rock, called basalt, covers the top of the Mesa.

Vegetation



A shortgrass prairie with deep root systems that help grasses survive drought.

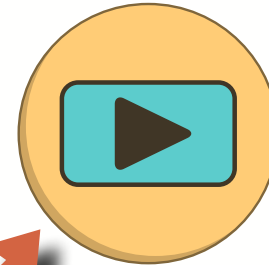
Wildlife



Pronghorn antelope, mule deer, golden eagle, scaled quail, magpie, and prairie rattlesnake.

Black Mesa State Park

Now let's begin our adventure by joining Jenifer Reynolds from an episode of the television show Discover Oklahoma as we hike to the top of the Mesa.

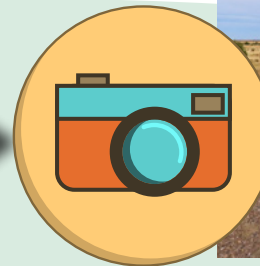


Black Mesa is amazing!

While watching the video did you notice the fastest animal in North America? What is the name of this animal that can reach speeds of up to 70 mph while running across the prairie?

Answer

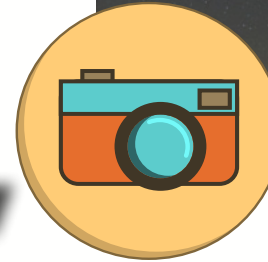
Now let's stand on top of Black Mesa, the highest elevation above sea level in Oklahoma.



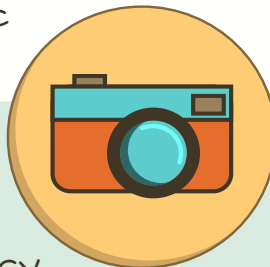
Black Mesa State Park

Stars and planets are always right above us. In our cities we can't clearly see the night sky because of street lights and lights on billboards and buildings, but we can see them perfectly at places like Black Mesa.

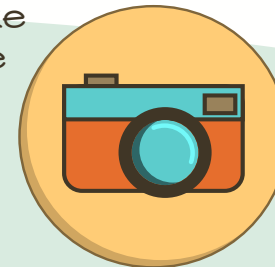
Check out the night sky at the rest area. It's breathtaking!



Now, check out the sunrise at the Southern Rim. Notice the black-colored basalt rock on the top and sides of the Mesa? It comes from a volcanic lava flow. This Preserve is owned by Oklahoma State Parks and is managed in partnership with the Nature Conservancy.



Next, let's explore the park's overlook. The park is about 8 miles from the Black Mesa Preserve. The park's group camp and Lake Carl Etling are great places for camping and fishing!



Alabaster Caverns State Park



Physical Features



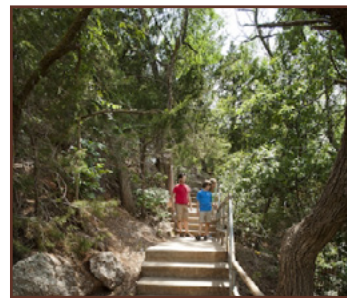
Alabaster Caverns is the world's largest gypsum cave that is open to the public.

Geology



Alabaster is a kind of gypsum rock. It can be white, pink, gray and sometimes black.

Vegetation



Uplands consist of Shortgrass Prairie; groves of red cedar and hardwood trees grow in the canyons.

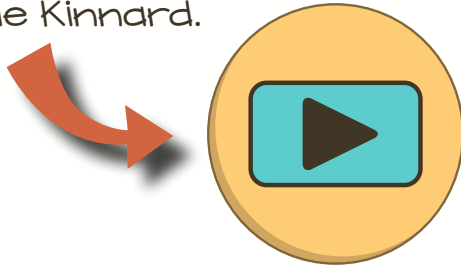
Wildlife



Each summer, bats in Alabaster Caverns eat about half their body weight in insects!

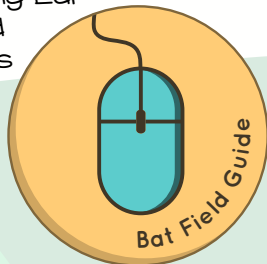
Alabaster Caverns State Park

Let's begin our cave tour by venturing through the caverns with historical interpreter Debbie Kinnard.

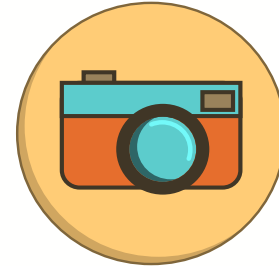


Check out the 5 different species of bats found at Alabaster Caverns:

Mexican Free-tailed
Western Big Ear
Tri-colored
Cave Myotis
Big Brown



Next, let's look at the entrance to the cave. Caves, like Alabaster Caverns, have given shelter to humans since prehistoric times. The first known exploration of Alabaster Caverns occurred in 1898. This cave became a state park in 1953.



Next, let's explore The Encampment Room. Notice the large selenite crystals in the white boulders? Gypsum is a mineral. Long ago gypsum was formed as an inland sea evaporated. Two kinds of gypsum found at Alabaster are selenite and alabaster.



Gloss Mountain State Park



Physical Features



These buttes are nearly 300' higher than the nearby prairie.

Geology



The Gloss Mountains are capped with gypsum rock, which slows the erosion of the clay and shale beneath it.

Vegetation



A mixed-grass prairie; this region has both shortgrasses and tallgrasses.

Wildlife

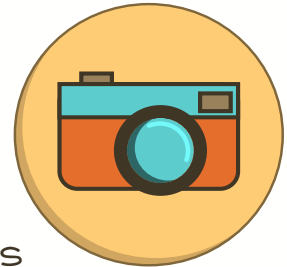


Some species include white-tailed deer, coyote, bobcat and turkey vulture.

Gloss Mountain State Park



To begin our discovery, let's view the west side of Gloss Mountain. A short, but steep trail leads us to the top of this flat-topped butte.



Check out Lone Peak for some great views of a butte and the prairie below.

Pieces of gypsum selenite are scattered along the sides of these buttes and can look like glass, making the buttes shine as they reflect sunlight.



Geologists tell us that long ago this area was covered by an inland sea. Over time, particles in the water settled at the bottom of the sea, forming gypsum rock.

Roman Nose State Park



Physical Features



Steep bluffs and a canyon with a spring-fed stream.

Geology



Hilltops are covered by a layer of gypsum rock which protects the softer sedimentary rock beneath.

Vegetation



Hardwood and red cedar trees grow in the valleys; prairie grasses grow on the uplands.

Wildlife



Species include coyote, red-tailed hawk, western-diamondback rattlesnake and raccoon.

Roman Nose State Park

We can see much of the park from Inspiration Point. Below is Lake Watonga. Red cedars and other trees cover the hilltops and Bitter Creek Valley.



Check out Big Spring! It's one of the three natural springs that flow here year-round.

The park is named after Henry Roman Nose, a leader of the Southern Cheyenne Tribe during the late 1800's and early 1900's. From 1902 until his death in 1917, his home was in this future park.



Southern Cheyenne Henry Roman Nose (pictured far left) 1899, Walter Stanley Campbell Collection, Western History Collection, University of Oklahoma Libraries.



The valley of Roman Nose State Park was once an important resting place and winter campground for Southern Cheyenne, Arapaho and other Plains Indians. Here they found protection from winter's cold north wind.

Red Rock Canyon State Park

Annual Rainfall
32
Inches

Physical Features



Spring-fed streams flow through the canyon. The steep canyon walls consist of red sandstone.

Geology



The canyon slowly gets larger as water continues its timeless erosion of the red sandstone.

Vegetation



Rough Horsetail, a prehistoric reed-like plant, grows beside the stream, along with caddo maple and cedar.

Wildlife



Species include squirrel, many kinds of songbirds, red-tailed hawk and great horned owl.

Red Rock Canyon State Park

Let's take a look at the California Nature Trail. Can you find evidence that pioneer wagons once crossed this red rock? Look closely and you may see the grooves or ruts in the brownish rock. These ruts were made by wagon wheels over 150 years ago.



This cool canyon and its spring-fed creek make Red Rock Canyon a good place to be on a hot summer day. Long ago, Plains Indians and pioneers found shelter here and in other nearby canyons.



Click here to get a good view of the canyon!

Four Canyon Preserve



Physical Features



Deep canyons, prairie ridges and floodplains of the South Canadian River.

Geology



The Canadian River deposits sediments that come from nearby hills and as far away as the Rocky Mountains.

Vegetation



The uplands consist of mixed prairie grasses, canyons contain groves of cottonwood and Chinquapin oak.

Wildlife



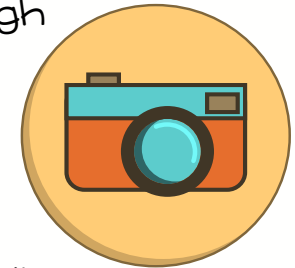
Species include mule deer, hawks and songbirds.

Four Canyon Preserve



Begin your discovery of this important natural area in western Oklahoma by going to the Ogallala-Permian Ecotone; click on the movie camera icon that says "welcome."

Now let's take a look at Saltbush Ridge, high above the South Canadian River.



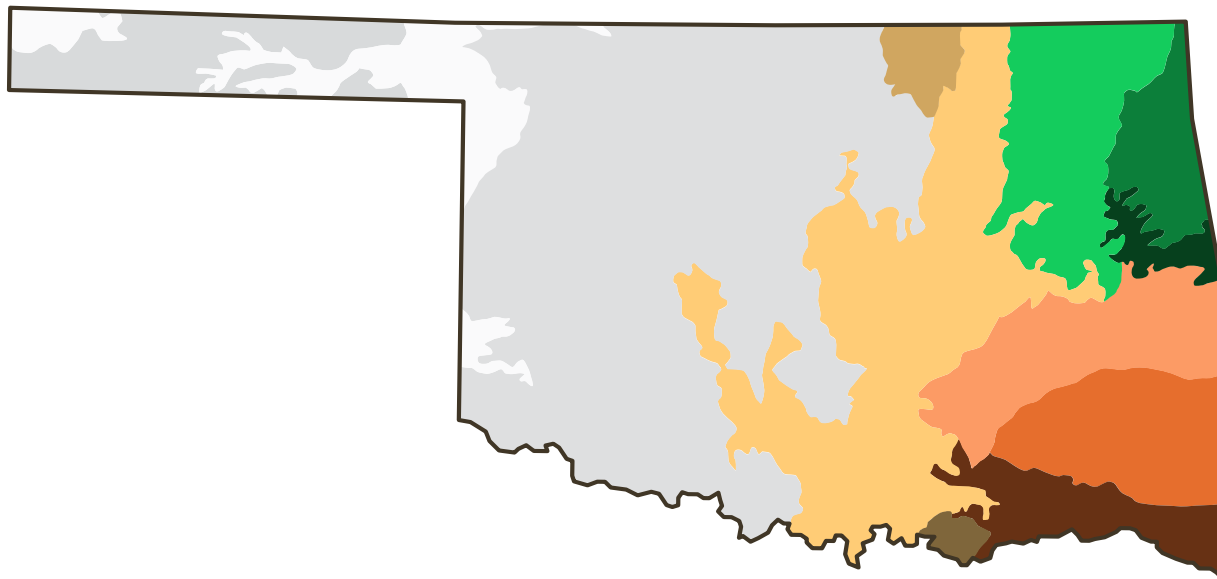
If you were standing on this ridge 150 years ago, you might have seen Plains Indians preparing a hunting party as herds of bison grazed in the river valley below!

As a Pathfinder, you might find that Cinnamon Canyon is a good place to camp.



Eastern Oklahoma

You're doing amazing! Now, click on one of the blue map buttons to learn about state parks and other special natural areas in the eastern part of Oklahoma.



Once you have visited all of the selected parks and natural areas in Eastern Oklahoma, click on the "right" arrow.

Natural Falls State Park

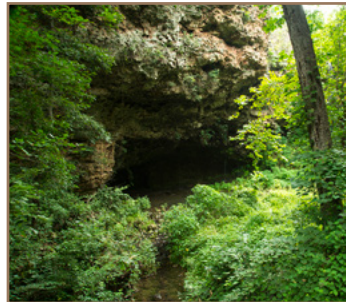


Physical Features



The park is typical of the Ozark Plateau. A beautiful 77' waterfall flows over a chert and limestone cliff.

Geology



Caves are common in the Ozarks. Water shapes the land as it erodes chert, limestone and other rock.

Vegetation



The park has 17 different kinds of ferns and many kinds of native grasses, trees and shrubs.

Wildlife



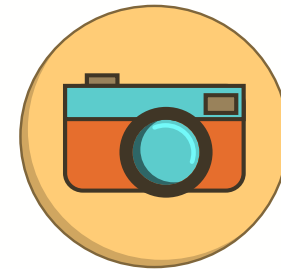
Species include white-tailed deer, squirrel, raccoon, songbirds, hawks, and owls.

Natural Falls State Park

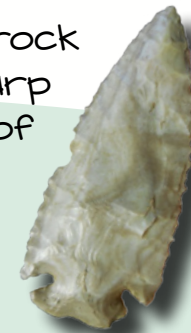
Even though this is not a large park, Natural Falls State Park is one of Oklahoma's most beautiful places!



Check out this view from above the falls!



Chert, also known as flint, is the top layer of rock in this park. A hard rock, chert often has sharp edges. For thousands of years, many tribes of Native Americans made arrowheads, lance points and tools from this kind of rock.



Osage Hills State Park

Annual Rainfall
40
Inches

Physical Features



Rocky hills and bluffs overlook the valley that is formed by Sand Creek.

Geology



Sandstone is the primary sedimentary rock within this park.

Vegetation



Typical of the Cross Timbers region, forests of post oak and blackjack trees cover the uplands.

Wildlife



White-tailed deer, coyote, bobcat, fox squirrel, rabbit, songbirds, wild turkey, owls and hawks.

Osage Hills State Park

Osage Hills, one of Oklahoma's first state parks, was built by the Civilian Conservation Corps from 1935 to 1941. Impressive examples of their rustic architecture, using large stone and timber, can still be seen throughout the park today.



Now, let's check out the bluffs and waterfalls along Sand Creek.



The unpolluted water of Sand Creek flows through Osage Hills State Park. Left untreated, it is not good for us to drink. However, Sand Creek is a great place for wildlife to get a drink.

What's one way a Pathfinder would know that a deer or other animal has come to Sand Creek, even if they didn't see the animal?

Answer

Greenleaf State Park



Physical Features



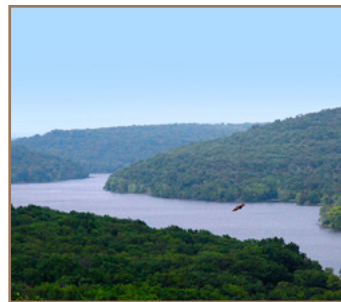
An upland forest borders Greenleaf Lake. From a trail overlook, the Arkansas River can be seen.

Geology



At the western edge of the Boston Mountains, sandstone and shale are present along with limestone bluffs.

Vegetation



Post oak, black hickory and buckbrush are common. Near to the lake are black willow and other wetland plants.

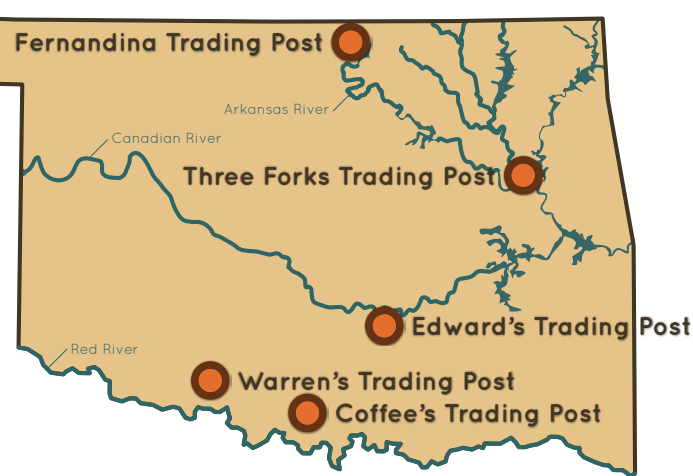
Wildlife



Whitetail deer, raccoon, opossum, squirrel, songbirds, owls and hawks are common.

Greenleaf State Park

Let's take a look at the Arkansas River scenic overlook. As you view this scene, zoom the camera toward the Arkansas River. The historic Three Forks Trading Post was located about twenty miles upriver.



A very historic park, many of the park's buildings were constructed by the Works Progress Administration in the 1930's and 1940's.



Robbers Cave State Park



Annual Rainfall
48
Inches

Physical Features



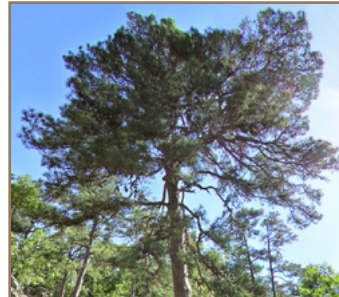
Sandstone ridges, canyons, valleys, stream and lakes add to the natural beauty of this park.

Geology



Sandstone rock was folded and faulted during the formation of the nearby Ouachita Mountains.

Vegetation



Shortleaf pine dominate much of the forest habitat. Oaks, hickory and elm are among the other upland plants.

Wildlife



Raccoon, opossum, squirrel, fox, songbirds, raptors and turkey vulture. On the trail, be aware of snakes.

Robbers Cave State Park

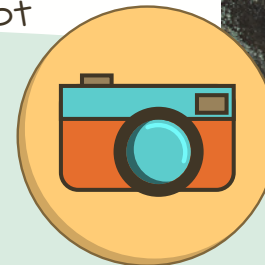
One of Oklahoma's first state parks, much of Robbers Cave State Park was built in the 1930's by the Civilian Conservation Corps.



Let's take a look at Robber's Cave itself! Long ago outlaws used this cave as a hideout.



While the trail to the cave is short, it's also steep in places. Just as we stand on this ridgetop, outlaws also used this spot for a good view of the valley below.



Tallgrass Prairie Preserve



Physical Features



Gently rolling hills with canyons near Sand Creek.

Geology



Geologists believe that sandstone and limestone sedimentary rock found here is between 290 to 323 million years old.

Vegetation



Big bluestem and Indian grass are common. Post oak and blackjack oak are among the trees of the Cross Timber forest.

Wildlife



About 2,500 free-ranging bison live on the Preserve.

Tallgrass Prairie Preserve

Let's begin our discovery of this special natural resources by looking at the prairie. The native grasses, wildflowers and other plants provide habitat for many kinds of animals.

Isn't the prairie beautiful?



Now let's check out a bison herd!



Notice the camera icons on the 360 degree photo. Click on the links to learn more.



Bison are very important to almost all Native Americans. Before modern times, Indians used nearly every part of the bison. Bison provided them with food, clothing, shelter, utensils and was important in their religious ceremonies.

How many bison currently live at the Tallgrass Prairie Preserve during the winter season?

Answer

GOOD JOB PATHFINDER!

You've completed the Oklahoma Pathfinder Challenge! Have an adult help you to save and email this PDF document, using the link below, to receive your rewards! You'll soon receive your Oklahoma Pathfinder certificate and two wildlife trading cards in the mail. Great job!

Name

Parent Name

Parent Email

Mailing Address

City, Zip Code

Don't forget to complete additional parts of this Nature Study Challenge. From the Oklahoma State Parks web-page, download and complete the "State Park Scientist" PDF to receive more rewards!

