



CRITTER CONNECTIONS



***Texas
Squirrels***

Texas Live Oak



There are over 40 different species or types of oak tree in Texas. One of the larger species found all over central Texas is called the Texas Live Oak, *Quercus fusiformis*. It has many similar features and range to the Live Oak, *Quercus virginiana*. The Texas Live Oak is adapted to live in harsher conditions and is a common tree in backyards and landscaping. It can reach heights of 20-40 feet tall. They have long, wide branches with many green waxy leaves. They are an evergreen, which means they have leaves year round.

Oak trees are flowering plants, but they do not produce flowers like you would normally imagine. Oak flowers, called catkins, are 2-3 inch long stems covered with many small greenish flowers that bloom in the spring. Oak flowers are pollinated by wind, which is why they do not need to be bright and showy like flowers that

are pollinated by animals. However this can cause problems for people allergic to oak in the springtime. Areas with many oak trees produce lots of pollen into the air which cause cold-like symptoms known as allergies. Once the flowers are pollinated, the fruit will grow as an acorn. Texas Live Oak acorns are $\frac{3}{4}$ -1 inch long and are often longer than other types of acorns.

Oaks are very important to wildlife. Their acorns are an important food source to many types of wildlife including squirrels. The tree also provides cover and shelter for wildlife living in hollows inside the large trunk, and birds and small mammals will build their nests up in the branches far away from predators.

Photos and source: Ladybird Johnson Wildflower Center



Food Chain Mobile



1. Download printable craft at: goo.gl/KDHnk3
2. Color and cut out the bobcat, squirrel and acorn.
3. Hang or tape the acorn inside the squirrel's mouth and hang or tape the squirrel inside the bobcat's mouth.
4. Thread a paperclip or string through the top of the bobcat's head and hang from the ceiling.

Did you know...

- ... that a squirrel's front teeth grow forever?
- ... that squirrels forget some of their buried nuts which leads to new trees?
- ... that the word squirrel comes from the Greek word *skiouros*, which means shadow-tailed?
- ... that squirrels can smell and recover food from under one foot of snow?
- ... that flying squirrels don't actually fly? Instead, they glide.
- ... that squirrels build nests called dreys?
- ... that tree squirrels have very sharp claws to help climb?
- ... that baby squirrels are called kits or kittens?
- ... that squirrels will pretend to bury food to trick potential thieves?



Eastern Fox Squirrel

Photo source: M. L. Haen

Color Me

Thirteen-Lined Ground Squirrel

Ictidomys tridecemlineatus



Image © Sheri Amsel, www.exploringnature.org



Texas Squirrels

By Elanor Dean

The squirrel family, Scuridae includes squirrels, chipmunks and prairie dogs. In Texas there are eight species or types of squirrel including flying squirrels, ground squirrels and tree squirrels. The word squirrel comes from a Greek word, skiouros which means shadow-tailed, referring to the bushy tail on certain species. Squirrels are rodents like rats, mice and beavers. All rodents have ever-growing **incisors**, which means their front teeth never stop growing. Their front teeth are orange because they are covered with a hard coating called enamel. Rodents must wear down their teeth so they don't keep growing into their brain. As they grind their teeth against hard things such as tree bark, the soft tooth underneath wears down, and the enamel sharpens like a chisel. This is a trait found in all rodents.



Eastern Fox Squirrel

Tree Squirrels

There are two tree squirrels found in Texas; the Eastern Gray and Eastern Fox squirrels. Both of these squirrels have similar adaptations and are what most people think of when imagining a squirrel. Fox squirrels are a bit larger than the gray, measuring about 52 centimeters with their tail accounting for almost half of that length, compared to the gray squirrel which is about 46 centimeters from head to tail. Aside from difference in size, they also have different colored fur. Fox squirrels are much brighter with cinnamon-orange hair on their underside and tail and grayish brown hair on their back. Gray squirrels are more plain in color with a pale underside and grayish



Eastern Gray Squirrel

brown back and tail.

Another difference between Fox and Gray squirrels is where they live in Texas. Eastern Gray squirrels are found just in the Eastern part of the state, but the Eastern Fox Squirrel is found across most of Texas, except the western panhandle region. Both are found in similar habitats, woodland areas with trees to climb and nest. Tree squirrels and ground squirrels are **diurnal**, which means they are most active and awake during the day.

Squirrels will sleep in hollow trees when they are available, but will also build nests to raise their young. A squirrel nest, known as a **drey** is a round shape made of twigs and leaves, similar to a large bird nest. If you are ever in an area with many trees, take a look at the tops of the trees and you might see a squirrel nest. They have long, sharp claws adapted to climb the trees, and they use their tail to help balance when moving along narrow branches.



Squirrel drey

Tree squirrels are mainly herbivores or plant eaters, consuming nuts, fruit, seeds and bark. They will occasionally eat insects, too. In neighborhoods, squirrels are sometimes considered to be a pest because they will eat food from bird feeders. The most well-known foods of tree squirrels are acorns. They live in wooded areas where oak trees are common, so there are many acorns for them to eat. Squirrels are well known for storing food for the winter in food **caches**. In the fall, they will dig a hole and bury the acorn underground. They will go back to the same spot and bury more nuts in different locations. Once winter comes, they are able to smell the nuts buried under a foot of snow. Sometimes, if they think another squirrel, or plant eater is following them, they will pretend to bury a nut. This tricks the food thief into digging in that same spot, only to find nothing there. While the thief is busy searching for the nut, the squirrel is able to sneak away to its real storage spot. Squirrels store many nuts in the fall and sometimes will not eat them all once winter comes, or will forget some of the places nuts were buried. This is very important for the environment, because nuts that are not eaten will grow into new trees.

Flying Squirrels

Flying squirrels are also found in trees, but they are quite different than the other tree squirrels. There is one species of flying squirrel in Texas, the Eastern Flying Squirrel, and it is found in the Eastern part of the state where there are many trees. They live in wooded habitats with many trees to glide between and sites they can den. Unlike



Flying Squirrel



the other squirrels, flying squirrels are nocturnal or awake at night. They are also quite social and will live together in groups and communicate by making many different squeak sounds.

Flying squirrels are much smaller than tree squirrels, measuring only about 22 centimeters long. Like tree squirrels, their tail is about half of their total length. Their coloration is similar to the gray squirrel with a pale underside and a gray back. They cannot actually fly, but instead will glide using a special skin membrane known as the **patagium**. This membrane connects their front and hind feet. When they spread their legs apart it creates a sort of parachute which allows them to glide between trees. They usually only glide 6-9 meters at a time, but have been known to glide up to 30 meters. Before jumping from a tree, the squirrel will first look around to determine how far it wants to go and once it is gliding it will use its tail to steer between trees.



Flying Squirrel

Flying squirrels are considered omnivores and will eat different types of food including nuts, insects (both adult and larvae), eggs, fruit and even carrion, or food that is already dead. They will also store nuts for the winter.

Ground Squirrels

The final and largest groups of squirrels in Texas are the ground squirrels. One species, the Rock Squirrel looks a lot like tree squirrels, but they are found in rocky areas in central and west Texas. While they are grouped with ground squirrels, they are able to climb trees quite well. Rock squirrels are about the same size as the Eastern Gray and Fox squirrels, and they have a large bushy tail. They are similar in color to the gray squirrel, but the front half of their back and head has dark brown-black hair. Rock Squirrels are also omnivores consuming nuts, seeds, fruit, insects and sometimes even young turkeys. The other four ground squirrels look more like prairie dogs.



Rock Squirrel

Three of the remaining ground squirrels are found in Central and West Texas and the Thirteen-lined Ground Squirrel is in North Texas and a small strip from the Dallas-Fort Worth area, south to the coast. Ground squirrels



Thirteen-Lined Ground Squirrel

are smaller than tree squirrels, measuring about 20-30 centimeters. Their tail is not large and bushy, but is still long and covered with hair. The Mexican, Spotted and Thirteen-lined Ground Squirrels have rows of spots on their back, and the Texas Antelope Squirrel, found in desert regions in far West Texas has two stripes down its back like a chipmunk.

Depending on the species, these squirrels are found in grassy or desert habitats. They use their sharp claws to dig burrows in the ground. Sometimes they will use the abandoned burrows of other mammals. They will mainly eat plants found in their habitat including mesquite beans, cactus, fruit, seeds and insects.

Young squirrels are called kits or kittens. When they are born they are blind and hairless and rely on their mother for protection and food. They will live in the burrow and drink their mother's milk until they are a few months old, at which point their hair has grown in and they are able to live on their own. In the wild, squirrels are hunted by many different predators and will usually live for 2-5 years. Squirrels have many predators including hawks, raccoons, foxes, bobcats and snakes. The nocturnal flying squirrels also have to watch out for owls. Squirrels are very important to the environment, both as food for predators and by spreading plants from seeds they bury.



Squirrel Kitten



Mexican Ground Squirrel

WORD BANK

Incisors – the flat front teeth of mammals

Diurnal – active during the day

Drey – a squirrel nest

Cache – the place where squirrels store their nuts for the winter

Patagium – a membrane of skin connecting the front and hind legs which animals like the flying squirrels uses to glide

Sources: The Mammals of Texas and Texas Parks and Wildlife

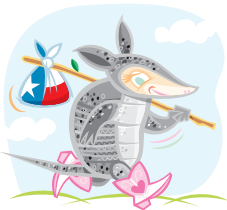
Photos: Grendelkhan, Antoine Taveneaux, BirdPhotos.com, Palmiped, Cephas, Ken Thomas, Geoff Gallice, Greg Schechter, Travis Witt, USFWS

Created by Puzzlemaker at DiscoveryEducation.com

The diagram shows 10 horizontal bars, each divided into segments. The numbers below the bars indicate the length of specific segments or the total length:

- Bar 1 (top): 13 (total length), 5 (last segment)
- Bar 2: 10 (total length)
- Bar 3: 4 (first segment), 3 (second segment)
- Bar 4: 12 (first segment), 15 (last segment)
- Bar 5: 1 (first segment), 14 (second segment), 2 (last segment)
- Bar 6: 11 (total length), 6 (first segment), 7 (last segment)
- Bar 7 (bottom): 8 (first segment), 9 (second segment)

13	14	15



Nancy's Corner



Do you know of a place nearby your home or school where you can see squirrels?

What do you think they do each day?

Draw a picture of it in the blank space provided.



1. Gather a journal, pencil and binoculars if needed.
2. Find a spot close to where squirrels live and watch them quietly for at least 15 minutes a few times a week.
3. Record what the squirrels do during the day. Describe their movement, the sounds they make and what they are doing (climbing, building a nest, gathering food, etc.).
4. Draw the squirrels in their habitat and make notes if you see an interesting behavior.
5. Do this in different seasons and read back over your notes. Did you notice any changes?

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