

Field, Forest and Stream – Activity #48



TEKS:

Texas Overview:

Science only

1.2 A, C, D, E

1.4 A, B

1.7 A, B

1.9 A

1.10A

2.2 A, B, C, D, E, F

2.4 A, B

2.8 A, 2.9 A, B, C

2.10 A, B

3.2 A, B, C, D, E, F

3.4 A, B

3.7 A

3.9A, B

4.2 A, B, C, D, E, F

4.4 A, B

4.7 A, B

4.10A

5.1 A

5.2 A, B, C, D, E, F,
G

5.4 A, B

5.9 A, 5.10 A

6.1 A

6.2 A, B, C, D, E 6.4
A, B

6.12 E

7.1 A

7.2 A, B, C, D, E 7.4
A, B

7.10 A, B

8.1 A

8.2 A, B, C, D, E 8.4
A, B

8.11 B

In the Field, Forest and Stream activity, students will compare three different ecosystems. This can be easily accomplished in just one trip to the San Jacinto Battleground State Historic Site. There, you'll not only see three different ecosystems, but you'll experience some Texas History, too.

This great spot is located just south of Houston on the San Jacinto River and Houston Ship Channel. The address is 2523 Battleground Road in LaPorte, Texas. You won't have trouble finding the location — just look for the towering, 570-foot-tall monument. After exploring the different ecosystems and battle sites, you also can visit Battleship Texas which is docked here.

The San Jacinto Battleground State Historic Site plays a great role in Texas history. On April 21, 1836, the Battle of San Jacinto took place. The Mexicans fleeing from Sam Houston ran towards the marsh. This was a big mistake. They got bogged down in the marsh soil and were easy targets for Texas soldiers, all of whom were ready for a victory after suffering defeat at the Alamo.

The park has undergone many changes since Sam Houston defeated Santa Anna in the battle that won Texas its independence from Mexico. Subsidence and development has changed the face of the park. But thanks to the efforts of many different groups, the area is being restored to the way it looked in 1836. Plants and other natural features, such as the bluff along the river, contributed to Sam Houston's victory at the Battle of San Jacinto. The features allowed Sam Houston and his army to sneak up on the Mexican Camp and take them by surprise.

Visiting the park today you will find five different habitats including one that is considered the most endangered in the United States — the Coastal Prairie. The Coastal Prairie is endangered because of development, fire suppression, overgrazing by domestic animals and invasive species such as the Chinese tallow tree.

Normally, tall grasses — such as the little and big bluestem, switchgrass and Indian grass — are dominant in the Coastal Prairie. Animals found in the ecosystem include rabbits, hognose and cottonmouth snakes and



<http://tourismprod.baytown.org/Recreation/>

Resources:

www.sanjacintomuseum.org/

www.tpwd.state.tx.us/spdest/findadest/parks/sanjacinto_battleground/

www.tpwd.state.tx.us/publications/pwdpubs/pwd_bn_w7000_0120/

a variety of birds including the meadowlark.

But one animal in particular — the Atwater's Prairie Chicken — is near extinction due to the loss of the Coastal Prairie. Very few of these birds are left and the species could become extinct if conservation efforts aren't successful. The Houston Zoo, in partnership with the Johnson Space Center and a few other groups, is trying to save this species by breeding them in captivity and then releasing them in several prairie reserves.

The water at the San Jacinto Battleground has a great range in salinity. These salinity classes determine the type of wetland or marsh.

Amount of salt, parts per Thousand (ppt)	Water Classification
< 3ppt	Fresh-Fresh water marsh
3-6ppt	Intermediate
6-12ppt	Brackish
> 12ppt	Saline-tidal salt marsh

Tidal Salt Marsh

The tidal salt marshes are covered with water during high tide and exposed during low tide. The lowest part of the park, this is the area where Santa Anna's soldiers got mired down while trying to escape from battle.



www.wbu.com/pathways/sanjacinto.html



The tidal salt marsh is never the same because of the daily rise and fall of the tide, which changes the chemistry of the water, nutrients and sediments. Smooth cord grass is the most common plant found there. The marshes also are rich in the diversity of organisms living there with many invertebrates, microorganisms and fish found there.

The wetlands are a nursery for many species. Migratory and native birds use these marshes as a feeding ground. Other wildlife found here are turtles, otters, nutria (an invasive species) and alligators.



www.tpwd.state.tx.us



<http://prtl.uhcl.edu>



www.galvbayinvasives.org



www.fws.gov



www.baytownnaturecenter.org

Salt Meadow

The next level back from the Salt Water Tidal Marsh is the Salt Meadow. A larger variety of plants can be found in the Salt Water Meadow because of its elevation, which means it doesn't flood as often as the Salt Water Marsh.

Marshhay cordgrass, as well as salt myrtle, reeds and willow, all are common plants found in this ecosystem. Salt Cedar is an invasive species that also can be found there. Because there is a larger diversity of plants and small trees, this area is a good nesting spot for water birds. Snakes, muskrats and other smaller animals also can be found here.



www.galvbatinvasives.com

Fresh Water Wetlands

Two types of fresh water wetlands can be found at the San Jacinto Battleground State Historic Site — some that are filled with standing water all year long and some that contain water only part of the time. These wetlands have a good diversity of plants (cattails, sedges and rushes) and also provide freshwater and food for many animals including raccoons.

Riparian Hardwood Forests

Riparian Hardwood Forests —containing trees such as bald cypress, water oak, hackberry and live oak — are found along the San Jacinto River. In the 1800's, most of these forests were cut down for home and boat building but they were once home to many wild animals that no longer are found in Texas such as jaguars, black bears and cougars. These animals were hunted in the forests much like the bison were hunted on the Coastal Plains. These areas are important because they provide habitat for many animals.



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