



**Nueces Delta Preserve  
Fieldtrip Info 2010-2011**

A fieldtrip to the Delta will fulfill many of the TEKS. We use the 5 senses, a sense of discovery, and the scientific method to teach about cycles, systems, organisms, rocks, conservation, plants, and the environment. During our programs, we discuss how these items change over time. We use equipment to collect and record data during investigations. Below you will find a list of TEKS we cover and the equipment we use.

During the fieldtrip, a number of stations will be run by the teachers and staff. Students will visit these stations in a round robin fashion. The activities provided are sample trips for each grade level, but as always, you may customize your fieldtrip by meeting with the CBBEP Environmental Educator.

**Kinder**

TEKS Covered: 112.11 (a) 1-4, (b) 1,2AC&D, 4, 5A, 6D, 7A&B, 9, 10B

Equipment used: hand lenses, collecting nets, field journals, thermometers

1	Ecosystem Exploration	Take a tour of the property and find a microhabitat to explore with your transect hoop.
2	Pond Exploration	Answer some questions about the temperature and health of the pond and draw your favorite specimen.
3	Critter Questions	Use collecting nets, collecting jars, and hand lenses to investigate small critters and draw your specimen.
4	Rock Sort	Take some time to sort the rocks in the rock box by size shape and texture.

**First**

TEKS Covered: 112.12 (a) 1-4, (b) 1, 2AC&D, 4, 5A, 6D, 7A&B, 9, 10B

Equipment used: hand lenses, collecting nets, field journals, thermometers

1	Ecosystem Exploration	Take a tour of the property and find a microhabitat to explore with your transect hoop.
2	Pond Exploration	Answer some questions about the temperature and health of the pond and draw your favorite specimen.
3	Critter Questions	Use collecting nets, collecting jars, and hand lenses to investigate small critters and draw your specimen.
4	Rock Sort	Take some time to sort the rocks in the rock box by size shape and texture.

## Second

TEKS Covered: 112.13 (a) 1-4, (b) 1, 2ACD&F, 4, 5A, 6D, 7, 9, 10

Equipment used: hand lenses, rulers, collecting nets, field journals, thermometers, rain gauges

1	Ecosystem Exploration	Take a tour of the property and find a microhabitat to explore with your transect hoop. Use a ruler to take some measurements.
2	Water Exploration	Weather permitting visit both a freshwater and saltwater body of water and compare their properties.
3	Rock Flip	Find a good size rock and flip to see what hides below. Record your findings.
4	A closer look a the environment	Take a moment to use your cloud window and weather equipment to record information. Take a short guided trail tour to see how this affects our environment.
5	Adaptation Matching Game	Take a look at the touch table and find the function of each structure on your card.
6	Insect Stages	Use collecting nets, collecting jars, and hand lenses to investigate small critters. Find and draw the lifecycle of one of the critters collected.

## Third

TEKS Covered: 112.14 (a) 1-4, (b) 1, 2B&F, 3A, 5A, 9, 10

Equipment used: microscope, cameras (not provided), hand lenses, rulers, thermometers, rain gauges, meter sticks, compass, collecting nets, field journals, sound recorder (not provided)

1	Science Sleuthing	Don your Sherlock Holmes hat, take a tour of the property and use your tools to fill out your sleuthing chart.
2	Weathering - How Soil Forms	Use the equipment given to investigate particle size and weathering formations.
3	Food Web Ring	Find a microhabitat to explore with your transect hoop. Create a food web from the organisms found there.
4	Water Exploration	Weather permitting visit both a freshwater and saltwater body of water and compare their properties.
5	Color my World	Use the paint chips on your journal to find something in nature the same color and draw it.
6	Adaptations - tools for food	Take a look at the touch table and find the tool each organism uses for food.

#### Fourth

TEKS Covered: 112.15 (a) 1-4, (b) 1, 2A&B, 4, 7, 8B, 9, 10A&C

Equipment used: microscope, cameras (not provided), hand lenses, rulers, thermometers, meter sticks, compass, collecting nets, field journals

1	Science Sleuthing	Don your Sherlock Holmes hat, take a tour of the property and use your tools to fill out your sleuthing chart.
2	Life Cycle	Use collecting nets, collecting jars, and hand lenses to investigate small critters. Find and draw the lifecycle of one of the critters collected.
3	Food Web Ring	Find a microhabitat to explore with your transect hoop. Create a food web from the organisms found there.
4	Weathering & Soil Sieve	Use the equipment given to investigate particle size and weathering formations.
5	Animal Tracks	Look at the block and find the track on your field journal. Name the other tracks you find here.
6	Beak & Leaf Adaptations	Take a look at the touch table and find the function of each structure on your card.
7	Microscopic Wonders	Take a tour of the microscope station and explore.
8	Water Cycle Game	Boogie through the water cycle as if you were a drop of water.

#### Fifth

TEKS Covered: 112.16 (a) 1-4, (b) 1, 2B, 4, 5C, 7B&C, 8A&B, 9, 10

Equipment used: microscope, cameras (not provided), hand lenses, rulers, thermometers, meter sticks, collecting nets, field journals

1	Science Sleuthing - biotic vs. abiotic	Don your Sherlock Holmes hat, take a tour of the property and use your tools to fill out your sleuthing chart.
2	Weathering - Deltas and Dunes	Use the equipment given to investigate particle size and weathering formations.
3	Food Web Ring	Find a microhabitat to explore with your transect hoop. Create a food web from the organisms found there.
4	Alternate forms of Energy	View and discuss some of the alternate forms of energy....wind and solar can be viewed from our property.
5	Adaptation Matching Game	Take a look at the touch table and find the function of each structure on your card.
6	Observation Station	Spend a session at the pond writing down as many detailed observations as you can. Use the equipment provided to make those observations.
7	Life Cycles - Macro-invertebrate	Use collecting nets, collecting jars, and hand lenses to investigate small critters. Find and draw the lifecycle of one of the critters collected.
8	Carrying Capacity	Play a game to find out how competition plays a role in carrying capacity.

## Nueces Delta Preserve Fieldtrip Info 2010-2011

Due to the size of most middle/high school trips, we usually do the grade levels over a series of days. During the fieldtrip, a number of stations will be run by the teachers and staff. Students will visit these stations in a round robin fashion. The activities provided are sample trips for each grade level, but as always, you may customize your fieldtrip by meeting with the educator.

### Sixth - Physical Science

TEKS Covered: 112.17 (a)1-4, (b)1, 2, 3A&D, 4, 10B, 12

Equipment used: field journals, meter sticks, microscopes, thermometers

1	Ecosystem Exploration	Take a tour of the property and find a microhabitat to explore with your transect. Be sure to take some measurements.
2	Critter Collection	Use collecting nets, collecting jars, and hand lenses or discovery scopes to investigate small critters and draw your specimen.
3	Pond Hike	Answer some questions about the temperature and health of the pond and collect data on some specimen.
4	Nature Art/Journal	Find a comfortable and safe spot to journal/draw and reflect about your trip to the Delta.
5	Adaptation/Taxonomy Talk	Take a look at the touch table and find the function of each structure Discuss how this helps with taxonomic grouping.
6	Science Sleuthing	Don your Sherlock Holmes hat, take a tour of the property and use your tools to fill out your sleuthing chart.

### Seventh - Organisms & Environment

TEKS Covered: 112.19 (a)1-4, (b) 1, 2, 3A&D, 4, 5B&C, 8B&C, 10, 11, 12, 13,

Equipment used: field journals, hand lenses, microscopes, measuring items, thermometers, water test kits, pH probes, temperature probes, collecting nets, insect traps, cameras (not provided)

1	Transect	Learn how transects are set. Visit one and key out any organisms that may have been trapped.
2	Ecosystem Exploration	Take a tour of the property and find a microhabitat to explore with your transect. Be sure to take some measurements.
3	Critter Collection	Use collecting nets, collecting jars, and hand lenses or discovery scopes to investigate small critters and draw your specimen.
4	Science Sleuthing	Don your Sherlock Holmes hat, take a tour of the property and use your tools to fill out your sleuthing chart.
5	Adaptation/Taxonomy Talk	Take a look at the touch table and find the function of each structure. Discuss how this helps with taxonomic grouping.
6	Weathering & Soil Sieve	Use the equipment given to investigate particle size and weathering formations.

## **Eighth - Earth Science**

TEKS Covered: 112.20 (a)1-4, (b) 1, 2, 3A, 4, 9C, 10B, 11

Equipment used: field journals, meter sticks, anemometers, psychrometers, microscopes, thermometers

1	Water Quality	Collect water quality data from one of 2 areas on the Delta.
2	Weathering & Soil Sieve	Use the equipment given to investigate particle size and weathering formations.
3	Weather	Collect weather data and compare to monthly data online.
4	Food Web Ring	Find a microhabitat to explore with your transect hoop. Create a food web from the organisms found there.
5	Pond Hike	Answer some questions about the organisms that live around the pond. Draw and create a food web from the organisms found there.
6	Carrying Capacity	Play a game to find out how competition plays a role in carrying capacity.

## **Aquatic Science**

TEKS Covered: 112.31 (b) 1-5, (c) 1, 2E-G&J, 3, 4, \*5, 7, 9, 10, 11, 12

Equipment used: field journals, data sheets, water quality equipment, seines, plankton nets, measuring equipment, small mammal traps, binoculars, field guides, dichotomous keys, psychrometers, anemometers, compasses, cameras (not provided), flow meters, soil test kits, thermometers, pH meters, turbidity testing, hand lenses, GPS

1	Fish	Use several collection agents to collect and key out fish in Rincon Bayou.
2	Plankton	Use plankton neta to collect and ID several species found in Rincon Bayou.
3	Water Quality - Rincon	Collect data on a tidally influenced area between the Nueces River and the Bay.
4	Halophyte and Riparian Plant ID	Use several keys to ID plants in Rincon Bayou.
5	Weather	Collect weather data and compare to monthly data online.
6	Water Quality - Fresh/Brackish Pond	Collect data in a pond created by man's influence on the land. Compare to the data earlier in the day.

## Biology

TEKS Covered: 112.34(b)1-5, (c)1, 2, 3A&C, 7C&E, 8, 10B&C, 12,

Equipment used: field journals, data sheets, water quality equipment, seines, plankton nets, dichotomous keys, psychrometers, anemometers, thermometers, microscopes, hand lenses, cameras (not provided), GPS

1	Trail Tour & ID	Take a tour and learn about many of the organisms that live at the Delta.
2	Water Quality	Collect water quality data from one of 2 areas on the Delta.
3	Adaptations Talk	Use the touch table organisms to discover form and function.
4	Soil/Sieve/Core	Examine soils and the organisms that live there.
5	Fish/Plankton	Use several collection agents to collect and ID fish and plankton found in Rincon Bayou.
6	Human Uses Talk	Discuss how the Delta has been used throughout history.

## Environmental Systems

TEKS Covered: 112.37(b)1-5, (c)1, 2, 3, 4ABE&F, 55A&B, 7A, 8B&E

Equipment used: field journals, data sheets, water quality equipment, seines, plankton nets, measuring equipment, small mammal traps, binoculars, field guides, dichotomous keys, psychrometers, anemometers, compasses, cameras (not provided), flow meters, soil test kits, thermometers, pH meters, turbidity testing, hand lenses, GPS

1	Transect	Learn how transects are set. Visit one and key out any organisms that may have been trapped.
2	Land Management	Discuss the land management issues on a preserve. Find out what kind of balance must be maintained.
3	Trail Tour	Collect data and assist in a population study of plants as we tour the trail. The focus will be on invasive species.
4	Fish/Plankton	Use several collection agents to collect and ID fish and plankton found in Rincon Bayou.
5	Birding 101	Don your binoculars and field guides as we look for waterfowl on Rincon Bayou.
6	Water Quality	Collect data on a tidally influenced area between the Nueces River and the Bay.

## Earth Science

TEKS Covered: This fieldtrip matches TEKS in any HS science class.

Equipment used: field journals, data sheets, water quality equipment, seines, plankton nets, dichotomous keys, psychrometers, anemometers, thermometers, GPS

1	Water Quality - Fresh/Brackish Pond	Collect data in a pond created by man's influence on the land.
2	Trail Tour	Take a tour and learn about many of the organisms that live at the Delta.
3	Groundwater/Human Uses Study	Visit the pond, and discuss how the Delta has been used throughout history. Primarily focus on the McGregor's uses of the land.
4	Water Quality - Rincon	Collect data on a tidally influenced area between the Nueces River and the Bay. Compare to the data earlier in the day.
5	Soil/Sieve/Core	Examine soils and the organisms that live there.
6	Weather	Collect weather data and compare to monthly data online.