

The Meadows Center for Water and the Environment



TEKS CURRICULUM GUIDE Second Grade



THE MEADOWS CENTER
FOR WATER AND THE ENVIRONMENT
TEXAS STATE UNIVERSITY

The Meadows Center

The Meadows Center Educational Tours mission is to provide people of all ages with the ability to recognize Spring Lake as a unique freshwater ecosystem through interpretative interactive experiences that engages the audience in an exploration of interconnections between all living things and water.

All tours require a two-week advanced reservation. Tour dates are not guaranteed until your confirmation notice from The Meadows Center Education Office has been processed. The listed group rates apply to any group of 15 people or more. Prices subject to change without notice. Listed prices are for school groups and non-profit organizations.



Activities for Second Grade

1. Glass-Bottom Boat Ride

Length: 30 minutes

As students glide across Spring Lake in glass-bottom boats, they have a rare opportunity to see underwater life from a different perspective. View over 1,000 springs that bubble up 150 million gallons a day of clear water from the Edwards Aquifer to form Spring Lake, the headwaters of the San Marcos River. Declared a critical Habitat by the Federal Government in 1980, Spring Lake is the home of many endangered species.

2. Wetlands Boardwalk

Length: 30 minutes

Journey over a 1/10 mile floating boardwalk through our wetlands habitat. Students will learn about what wetlands are and what species live in them. Stroll by "Turtle Island" where turtles often sunbathe and birds migrate through.

* Corresponds with Texas Aquatic Science lesson 10.5 Field Trip to a Wetland

<http://texasaquaticscience.org/>

3. Aquarium and Discovery Hall Exhibit

Length: 15 minutes

Students will see live endangered species on display in this new aquarium exhibit.

* Corresponds with Texas Aquatic Science lesson 4.5 Aquatic Organisms Comparison

<http://texasaquaticscience.org/>

4. Bug Picking

Length: 15-30 minutes

Participants will discover what bugs live in the water at Spring Lake by exploring water samples.

*Corresponds with Texas Aquatic Science lesson 8.5 Invertebrate Sampling

<http://texasaquaticscience.org/>

5. Wetlands Bug Bingo

Length: 15 minutes

This activity goes hand in hand with Bug Picking. Students will learn what different aquatic bugs look like and how to identify them while playing a fun game of "Wetlands Bug Bingo."

6. All the Water in the World

Length: 15 minutes

During this interactive activity, students learn how little fresh water is available for use by all living things.

7. Frog Food Chain Tag

Length: 15 minutes

During this interactive game, students pretend to be frogs competing with each other for prey while avoiding the predator herons in our wetlands food chain. What our frogs don't know is that there is a twist to this game... this wetland habitat has been polluted! How will the frogs survive?

8. Enviroscape 3D Watershed Model Presentation

Length: 30 minutes

Students learn about watersheds, and point and non-point source pollution that affects water quality. Students participate in an activity where they put different types of pollution on the ground of the 3D watershed and see how rainfall creates runoff that carries that pollution into rivers and lakes. (Available for schools with 4 or less classes total).

* Corresponds with Texas Aquatic Science lesson 14.3 What's the Pollution

<http://texasaquaticscience.org/>

9. Food Web Wonders

Length: 15 minutes

Participate in a giant string-web to explore how energy moves in an ecosystem. Species interact through food webs, which require a healthy ecosystem to function. Starting with the sun, energy moves through the natural system from plant to carnivore to decomposer.

*Corresponds with Texas Aquatic Science lesson 8.3 Where do I Live- What do I Eat

<http://texasaquaticscience.org/>

10. Mapping the Meadows Center

Length: 30 minutes

Students will delve into mapmaking during this hands-on activity to learn about the importance of maps and map-making, understand the importance of different elements of a map, and build upon foundational spatial thinking skills. Spatial ability is important for success in many fields of study, including mathematics, natural sciences, engineering, economic forecasting, meteorology, and architecture. Mapping at Meadows is part of a study we are conducting to learn about how students understand nature and maps.

Teachers have the option to receive a copy of the participating students' maps by email.

Parents who do not want their child's map to be involved in the study can sign the opt-out form. [Geography TEKS: Grade 2: \(b\) 5A, 5B, 19B](#)



Activity Connections with Texas Essential Knowledge Standards (TEKS)

2 nd Grade Science TEKS	Applicable Activities
(2.1) Scientific investigation and reasoning. The student conducts classroom and outdoor investigations following home and school safety procedures. The student is expected to:	
(A) identify and demonstrate safe practices as described in the Texas Safety Standards during classroom and outdoor investigations, including wearing safety goggles, washing hands, and using material appropriately;	4, 6, 7, 8
(B) describe the importance of safe practices; and	4, 6, 7, 8
(C) identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal.	1, 2, 3, 4, 5, 6, 7, 8, 9
(2.2) Scientific investigation and reasoning. The student develops abilities necessary to do scientific inquiry in classroom and outdoor investigations. The student is expected to:	
(A) ask questions about organisms, objects, and events during observations and investigations;	1, 2, 3, 4, 5, 6, 7, 8, 9
(B) plan and conduct descriptive investigations such as how organisms grow;	1, 2, 3, 4, 5, 6, 7, 8
(C) collect data from observations using simple equipment such as hand lenses, primary balances, thermometers, and non-standard measurement tools;	4, 5, 6, 7, 8
(D) record and organize data using pictures, numbers, and words;	4, 5, 6, 7, 8
(E) communicate observations and justify explanations using student-generated data from simple descriptive investigations; and	3, 4, 5, 6, 7, 8, 9
(F) compare results of investigations with what students and scientists know about the world.	4, 5, 6, 7, 8
(2.3) Scientific investigation and reasoning. The student knows that information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions. The student is expected to:	
(A) identify and explain a problem in his/her own words and propose a task and solution for the problem such as lack of water in a habitat;	1, 2, 3, 4, 5, 6, 7, 8
(B) make predictions based on observable patterns; and	1, 2, 3, 4, 5, 6, 7, 8, 9
(C) identify what a scientist is and explore what different scientists do.	1, 2, 3, 4, 5, 6, 7, 8

(2.4) Scientific investigation and reasoning. The student uses age-appropriate tools and models to investigate the natural world. The student is expected to:	
(A) collect, record, and compare information using tools, including computers, hand lenses, rulers, primary balances, plastic beakers, magnets, collecting nets, notebooks, and safety goggles; timing devices, including clocks and stopwatches; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums; and	4, 8
(B) measure and compare organisms and objects using non-standard units that approximate metric units.	4
(2.7) Earth and space. The student knows that the natural world includes earth materials. The student is expected to:	
(B) identify and compare the properties of natural sources of freshwater and saltwater; and	1, 2, 6
(C) distinguish between natural and manmade resources.	1, 2
(2.8) Earth and space. The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to:	
(C) explore the processes in the water cycle, including evaporation, condensation, and precipitation, as connected to weather conditions.	1, 6
(2.9) Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to:	
(A) identify the basic needs of plants and animals;	1, 2, 3, 4, 5, 7, 9
(B) identify factors in the environment, including temperature and precipitation, that affect growth and behavior such as migration, hibernation, and dormancy of living things; and	1, 2, 3, 4, 5, 7, 8
(C) compare and give examples of the ways living organisms depend on each other and on their environments such as food chains within a garden, park, beach, lake, and wooded area.	1, 2, 3, 4, 5, 7, 8, 9
(2.10) Organisms and environments. The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to:	
(A) observe, record, and compare how the physical characteristics and behaviors of animals help them meet their basic needs such as fins help fish move and balance in the water;	1, 2, 3, 4, 5, 7
(B) observe, record, and compare how the physical characteristics of plants help them meet their basic needs such as stems carry water throughout the plant; and	1, 2, 3, 4, 5, 7
(C) investigate and record come of the unique stages that insects undergo during their life cycle.	1, 2, 3, 4, 5, 7

Additional Materials

Additional information on water education can be found on the Texas Aquatic Science website at <http://texasaquaticscience.org/>. This website provides additional learning opportunities and materials for a variety of subjects concerning water, including “Water is Life”, “Water for the people and the Environment”, “Bays and Estuaries”, and many others.



Frequently Asked Questions

How do I book a group tour?

You may book a tour online at <http://www.aquarena.txstate.edu/Educational-Tours/Tour-Reservation-Form.html>. If you have questions please call 512-245-7540. Our office hours will vary depending on park traffic, so please leave a message and we will call you back.

How far in advance should I book my tour?

We require two weeks advance notice for group tours. Please remember the days during March through August can fill up several months in advance, so please book your tour as soon as possible.

Do you have a maximum number of students that can attend the field trip?

There is not a set maximum number of students per field trip. Your tour-booking agent will discuss the best activities for your group's size when you book your tour. We recommend booking your tour early for best choice of dates.

Do you have a minimum number of chaperones required?

One teacher per class is sufficient for our tours. The one required adult should never leave the group alone with the tour guide. You may choose to bring additional teachers and parents if you wish (please check your tour confirmation for fee information). The boats will comfortably seat 25 people each, so additional adults may need to ride on a separate boat than the rest of the group.

What age groups are your programs appropriate for?

All ages. We customize our programs for your group.

I would like to do something different than listed on your website, can you accommodate my group?

We try our best to accommodate special requests.

Do I need to book a specific time for my tour?

Yes, you will book a specific date and time for your tour. Please arrive 15 minutes prior to the start time of your tour. We apologize that we are unable to push back the start times of tours. If your group is late we may need to cut a portion of your tour time. Please call 512-245-7570 and push 0 to notify us that you will be late.

What if it rains?

If it rains on your tour date you will have the option to reschedule. Please call 512-245-7570 and push 0 on the day of your tour and let a staff member know that your group will not be coming. The boats are enclosed and will still run unless there is lightning. We have limited indoor space so please dress for the weather if it is raining on your tour date.

Booking a Tour

Web: <http://www.meadowscenter.txstate.edu/Education/EducationalTours.html>

Phone: (512) 245-7540