

SPLASH! INTO THE EDWARDS AQUIFER EXHIBIT: TEACHER GUIDE



2201 Barton Springs Rd.
Austin, TX 78746
(512) 481-1466

Tues-Sat: 10am-5pm
Sun: 12pm- 5pm
Closed Mondays



Why Visit the Sheffield Education Center

- Students will engage in learning about the Edwards Aquifer and Austin's local water cycle and ecology, in the dynamic field trip setting of Zilker Park.
- Students see live animals, including the endangered Barton Springs salamanders.
- The topics covered in the Splash! Exhibit align with TEKS Standards and serve as an ideal supplement to classroom learning.
- It's **FREE** as an On-Your-Own tour. If you plan to bring more than 30 students, please call the Austin Nature & Science Center at (512) 974-3888 for scheduling.
- We also offer a hands-on, interpreter-led aquatic science program for grades 4-12. Call (512) 481-1466 for details.



Interpreter-led field trips

- Splash Lab (Grades 4-8)
- **NEW** Aquatic Science for High Schoolers (Grades 9-12)
- Texas Endangered Animals (Grades 4-6)
- Amphibians Abound (Grades 4-6)
- Incredible Insects (Grades 2-3)

On Your Own Tours

The exhibit has two main components: the cave and the front gallery. The cave accommodates groups of 15 students at a time; the front gallery can hold up to 35 students. While small groups rotate through the cave, other students can engage with interactive elements in the front gallery space. In all, the Splash! Exhibit can take up to an hour.

There are restrooms and water fountains directly adjacent to the Splash! Exhibit.

Please see the following page for a guide to visiting the exhibit with your students.

On Your Own Tour Discussion Points

Introduction

Since the exhibit is designed to look like an actual limestone cave, challenge younger students to imagine that they are a drop of water entering into the aquifer. For older students, point out the “Aquifer Recharge Zone” at the entrance of the exhibit and ask if they have seen these signs around Austin. Explain that this sign helps people become aware of those parts in central Texas, where we are living on top of the aquifer. Define “aquifer” and other key terms that you may have already introduced in the classroom.

AquaTheater

Choose the “Carved in Stone” movie from the menu. This 4-minute movie illustrates the geologic processes that formed the aquifer, as well as the watershed system of which Barton Springs and the Colorado River are each a part. Discuss the large span in geologic time and how Austin used to look.

Strata Cave

This passageway shows the rock layers of the aquifer that actually exist below us in Central Texas. Encourage students to touch the layers, and to describe the differences between each layer. Challenge the students to connect how the physical make-up of each rock layer impacts the movement of water through the aquifer.

Watershed Model and Aquaria

The watershed model demonstrates the movement of water from the Texas Hill Country through the Austin area, as well as identifying the different zones of the aquifer. Each aquarium houses aquatic animals from different zones of our local watershed. Emphasize the singularity of the Barton Springs salamander, an endangered species in our own backyard.

Pollution Tubes (a great place to gather your group before releasing them to try out games in the Water Science Room):

These tubes represent the different kinds of impacts human actions can have upon waterways. Discuss with students causes and effects of each type of pollution, especially in regard to the aquatic critters that live in Austin’s creeks.

Water Science Room

Scientists have many different ways to measure the quality of water in creeks and the aquifer. Encourage students to report back a new scientific test or fact about water they learned in this room.

Other Places to Visit in Zilker Park

- * An overlook at Barton Springs Pool is steps away from the Splash! Exhibit. This is a great space to challenge students to tie together what they have learned about water and the aquifer, while viewing one of Austin’s natural treasures.
- * There are many picnic tables, some of which can be reserved, and shaded grassy areas next to the Splash! Exhibit in Zilker Park for students to have lunch. There is also a large playground area within a 2-min walk from the exhibit.
- * The Austin Nature & Science Center is a 3-min bus ride away; schedule an On-Your-Own tour of the live animal exhibits, Dino Pit, and Naturalist Workshop for only \$1.00 per visitor (call 974-3888 to reserve a time slot). The Nature Center also offers structured, staff-led environmental education programs; visit <http://austintexas.gov/department/austin-nature-and-science-center> for more information.

Bus Parking

We recommend that busses drop off students and park in the parking lot closest to the playground.

Background Information and Curriculum Resources

Edwards Aquifer:

<http://www.edwardsaquifer.net/intro.html>

<http://www.esi.utexas.edu/outreach/caves/edwardsaquifer.php>

<http://www.bseacd.org/aquifer-science/about-the-aquifers/>

Water and the Austin Watershed:

<http://www.austintexas.gov/watershed/YouthEd>

<http://www.twdb.state.tx.us/Kids/>

Barton Springs:

<http://www.edwardsaquifer.net/barton.html>

<http://austintexas.gov/department/barton-springs-pool>

Barton Springs Salamander:

<https://tpwd.texas.gov/huntwild/wild/species/bartonspringssalamander/>

Salamander Activity for High School students:

<http://www.austintexas.gov/department/salamanders>

Films:

Living Springs- a documentary series on Barton Springs' history, ecology, and culture
livingspringsaustin.org

Austin Underground- videos on Geology, Hydrogeology, Salamanders, and Threats and Solutions
<https://www.youtube.com/watch?v=il5hjmJ6O1E&list=PL4DE9788E1378D157>

We look forward to seeing you!