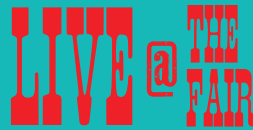


A “FronD”ness for Plants

Discovering the Errol McKoy Greenhouse



QUEST 9
ENVIRONMENTAL
SCIENCE

STATE FAIR OF TEXAS
CURRICULUM

Within the busy bustle of the Midway lies the Errol McKoy Greenhouse. It's not visited much beyond the pumpkin carving contest, but is a great place to catch a breath. In this Quest, we think you'll see there's more to find than just pumpkins!



During this Live @ the Fair Quest, you will:

- ★ Familiarize yourself with the Errol McKoy greenhouse plants
- ★ Note the ways that greenhouses simulate a carbon cycle.
- ★ Design your own Steampunk garden, inspired by the Greenhouse at the Fair
- ★ Compose poems describing the plants you discover



Standards

- ★ Environmental Science TEKS: 4A, 4B, 4C
- ★ Art TEKS: Art I: 1A, 2A, 2D, 3A, 4A; Art II: 1A, 2D, 3A
- ★ ELAR TEKS: E4(14)(B), E4(18), E4(19)
- ★ Career Development TEKS: 4C, 4D



Source: http://pre03.deviantart.net/76e8/th/pre/i/2013/167/9/3/steampunk_flower_garden_by_hiddendemon_666-d69cde8.jpg

Before You Go

- ★ Introduce a sample dichotomous key and teach students how to read it. Practice identifying photos or samples with the dichotomous key.
- ★ Review adaptations that trees and plants have, such as the scent of a creosote tree or the shape of the leaves in a desert plant. Talk about what adaptations plants in Texas might have in relation to the climate here.
- ★ Review the carbon cycle.

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QUEST 9 ENVIRONMENTAL SCIENCE

STATE FAIR OF TEXAS CURRICULUM

STATE FAIR MAP



While You're There

The objective of your visit is to note what plants are growing in the Errol McKoy Greenhouse and what other features the Greenhouse has.

- ★ A "FROND"NESS FOR PLANTS: Enter the Errol McKoy Greenhouse.
 - o Check out the variety of plants growing in the greenhouse.
 - o Either take notes or take photos of plant ID tags, leaf patterns, limbs, number of shoots, height, and colors.
 - o Take note of the different features of the Errol McKoy Greenhouse.
 - What is it made of? Does it have any type of temperature controls?



Invitation

- ★ Invite students to bring the listed materials and follow the route, and perform the tasks below at the State Fair of Texas:



Plan Your Route

- ★ Find the Errol McKoy Greenhouse on the map of the Fair, and walk there.



Optional Materials to Bring

- ★ Writing utensil and something to write on
- OR
- ★ A way to digitally take notes
- ★ A device with a camera
- ★ Measuring tape



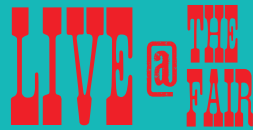
After the Fair

When you return to class following your State Fair visit, you will use the notes and photos you took inside the Errol McKoy Greenhouse to create a **dichotomous key** that another student would be able to use to ID greenhouse plants without needing ID tags.

- ★ One example of a dichotomous key can be found here: <https://www.yumpu.com/en/document/view/11362975/texas-native-plant-dichotomous-key/2>
- ★ Take a close look at the pictures or noted features of the plants in the Greenhouse.
 - o Tell whether you think each one is a native Texas plant and why/why not.
 - o It's ok if you aren't correct.
- ★ Use the notes you took on the features of the Greenhouse to diagram the mini carbon cycle taking place in the Greenhouse.
 - o It's ok to use the sun, even though it's outside of the greenhouse.

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QUEST 9
ENVIRONMENTAL
SCIENCE

STATE FAIR OF TEXAS
CURRICULUM



ENGLISH PORTION

Using either the notes or the pictures you took, write descriptive poems about three of the plants you observed in the Greenhouse. The descriptive poems should:

- ★ Be written in free verse
- ★ Be organized into three stanzas with four lines each.
- ★ Focus on the senses and describe what the plants look, smell, and feel like.
- ★ Make sure that you use descriptive vocabulary, vibrant imagery, and at least two literary elements (personification, simile) in each poem.



ART PORTION

Using the pictures that you took of the various flowers and plants in the Errol McKoy Greenhouse, you'll create a Steampunk garden from your favorite ones!

- ★ Steampunk is a form of art that pulls from a subgenre of science fiction. It combines aesthetic design with technology and is inspired by the steam-powered machinery of the 19th century.
- ★ Take a look at this link for a more detailed definition of Steampunk as it relates to art. <http://steampunkdistrict.com/what-is-steampunk-art/>
- ★ Here's another great link that has some incredible examples of Steampunk clothing and objects: <http://steampunkforkids.blogspot.com/>

Now that you have an idea of what Steampunk is, recreate some of the plants that you found in the Greenhouse in this style!

- ★ Think about what sorts of parts that you want to use for your plants.
- ★ Below is a link to a list of common parts used to create Steampunk art that you can find at a local hardware store. <http://steampunk-box.com/find-steampunk-materials-hardware-store/>
 - Take a look at the list to get some ideas and see what you might have lying around the house that would work as well.
- ★ Have fun with this, and get creative!
- ★ When you have finished, present your Steampunk garden to your peers.
 - See if they can guess which plants from the Greenhouse you recreated.
 - Discuss your process, the parts that you used, and what makes your sculptures Steampunk.

