

Working with Nature: TRWD Rainscapes

Duration **User determined** (cc)

Produced by [Tarrant Regional Water District](http://www.trwd.com)

STEAM Curriculum Lesson Extension:

Shedding the Traditional, High School

Please Note: To view this content, you will be leaving the EarthX website. It is offered by our educational friends through their website.

Goal

Students will observe a variety of solutions implemented to improve the quality of a watershed. They will discover how they have been incorporated into one setting and how they work to improve stormwater runoff.

Overview

Michelle Wood-Ramirez, TRWD Watershed Coordinator, guides viewers through a discussion on ways Tarrant Regional Water District has incorporated solutions to watershed issues into the land that houses their headquarters in Fort Worth, TX. After viewing the video, students will then tour the storymap on the webpage to learn how each of the solutions works to create both a functional and aesthetically pleasing stormwater infrastructure.

Connections to EarthX STEAM Curriculum Lesson: *Shedding the Traditional*

In this lesson, students learn how urbanization has disrupted the water quality and flow of watersheds. This video highlights solutions that can be used in the development of green space in an urban setting. The additional video, *To Better Our Community*, shows how land can be obtained to embed these solutions.

Guiding Questions

1. Rainscapes promote a wide variety of benefits to a watershed. Write a job description for the TRWD Rainscape.
2. In the video, the host states, "Stormwater runoff isn't a thing to be gotten rid of anymore. It's utilized as an important feature and function of the landscape." (1:11) After reviewing the storymap, which strategy do you think provides the most benefit to watershed water quality and why?

3. Rainscapes help to balance the need for urbanization and to keep watersheds safe. Describe a time when you had to compromise on two opposing needs. What was important to remember when successfully coming to terms with the conflicting situations?

Vocabulary

- Rainscape
- Stormwater
- Water conservation
- Green Stormwater Infrastructure (GSI)
- Urban development
- Ecosystem services
- Nitrogen
- Phosphorus
- Peak flow
- Bioswales
- Meandering rock channel
- Rain garden
- Conveyance system
- Infiltrate
- Treatment train
- Native vegetation
- Detention basin

Standards

Next Generation Science Standards

HS-LS2-7
HS-ESS3-4

Texas Essential Knowledge and Skills (TEKS) Science Objectives

112.32.c.7B
112.37.c.9A,C