

**Q. What is environmental stewardship?**

Websites for more information:

- a. [www.fountain-crk.org](http://www.fountain-crk.org)
- b. [www.noaa.gov/office-education](http://www.noaa.gov/office-education)
- c. [en.wikipedia.org/wiki/Environmental\\_stewardship](http://en.wikipedia.org/wiki/Environmental_stewardship)

**Q. Why are earthworms important to soil?**

Websites for more information.

- a. [www.earthworm.org](http://www.earthworm.org)
- b. The Book of the EARTHWORM by Sally Coulthard  
[www.amazon.com](http://www.amazon.com)
- c. [www.accessagriculture.org/wonder-earthworms](http://www.accessagriculture.org/wonder-earthworms)
- d. <https://en.wikipedia.org/wiki/Earthworm>

**ASSIGNMENTS:** Students write lesson plans for how they will teach

- d. what soil is
  - e. what is environmental stewardship?
  - f. What makes earthworms unique and important?
  - g. What the unique features of healthy soil?
  - h. How is soil protected?

## Module 3

What solutions are happening today in Fountain Creek and other watersheds?

**Activities:** Teachers help students research on the internet and write individual or group presentations.

- a. [www.fountain-crk.org](http://www.fountain-crk.org)
- b. [www.Soils4kids.org](http://www.Soils4kids.org)
- c. [www.LittleGreenThumbs.org](http://www.LittleGreenThumbs.org)
- d. [www.ceres.org/](http://www.ceres.org/)
- e. [https://en.wikipedia.org/wiki/Environmental\\_stewardship](https://en.wikipedia.org/wiki/Environmental_stewardship)

Students write a list of ways they can participate in existing Fountain Creek solutions and/or how they can create new activities to help the creek's health.

## Module 4

Creating feelings of connection and appreciation (love) for Mother Earth and Watersheds.

**Activities:** Teachers help students look for examples where children and adults are caring for the environment – especially watersheds – in news stories, social media, movies, documentaries, photography, inventions, government policies, art, and music.

- a. Documentary: *Fourteen 2 Four Fountain Creek Watershed* (contact Fountain Creek District for a DVD copy that was shown on

PBS) <https://youtu.be/8cOKrr9FCN4>

- b. [www.raisetheriver.org/Watershed](http://www.raisetheriver.org/Watershed) (iwonderbundle.com)
- c. Documentary: *Watershed: Exploring a New Water Ethic for the New West*
- d. Documentary: *The Russian River: All Rivers – The Value Of An American Watershed*
- e. [www.kids.nationalgeographic.com/](http://www.kids.nationalgeographic.com/)
- f. <https://www.roamingwithrocky.com/about>
- g. <https://time.com/collection/best-inventions-2021/6114418/watershed/>
- h. <https://www.michaelhumphries.net/>
- i. [www.lindalear.com](http://www.lindalear.com)
- j. [www.topdocumentaryfilms.com/the-secret-life-of-plants](http://www.topdocumentaryfilms.com/the-secret-life-of-plants)

After research and writing, students present their individual feelings about the environment – especially watersheds - because of the impact of a news story, social media, movie, documentary, invention, government policy, piece of art or song. Their presentation needs to begin with, “I feel...”

## Module 5

**Activity:** Field trip to Fountain Creek Nature Center. Every student has a phone or camera to take pictures of what interests them.

- a. [www.fountain-crk.org](http://www.fountain-crk.org)
- b. [www.teachrock.org/lesson/cleaning-up-the-plastic-beach-elementary-schoolversion/](http://www.teachrock.org/lesson/cleaning-up-the-plastic-beach-elementary-schoolversion/)
- c. [www.youtube.com/watch?v=cElyV-ftQ5Y](http://www.youtube.com/watch?v=cElyV-ftQ5Y)

Teachers help students create a photo collage (on posterboard or digital) that explains what they saw and did on their field trip to Fountain Creek.

- a. <https://www.befunky.com/features/collage-maker/>



*This Teacher's Guide was researched and written by educator and master gardener Glenn Ballantyne. It was commissioned by the District through THK Associates Inc. to help youth learn about the Fountain Creek Watershed and desire to protect it. Distribution of this curriculum was funded by the Fountain Creek Foundation. For any inquiries about this guide, contact the Fountain Creek Watershed District's Outreach Coordinator: [wwwfountaincreekoutreach@gmail.com](mailto:wwwfountaincreekoutreach@gmail.com)*



# Conserving, Protecting and Enjoying The Fountain Creek Watershed

An Educator's Guide  
for 4th-8th Grades

Fountain Creek Watershed  
Flood Control and Greenway District  
PO Box 8100 • Colorado Springs, CO 80933  
[fountain-crk.org](http://fountain-crk.org)

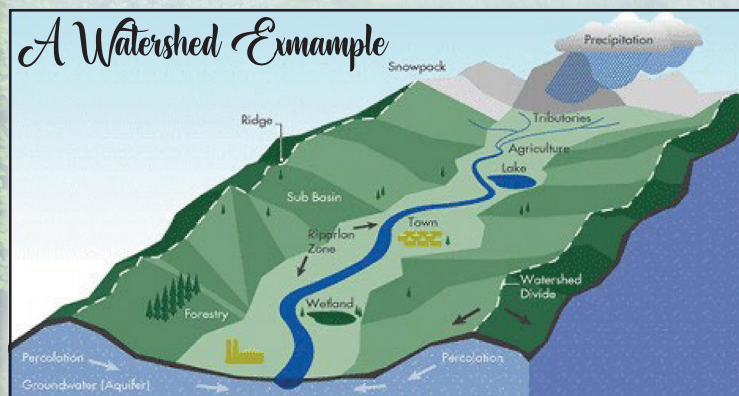
## We value classroom and informal educators!

The Fountain Creek Watershed Flood Control and Greenway District was created through state and federal legislation. The boundaries, governance, powers and duties of the District are established through this legislation.

The District consists of the counties of El Paso and Pueblo and is governed by a Board of Directors consisting of a representative from the cities of Colorado Springs, Fountain, and Pueblo; El Paso and Pueblo counties; small municipalities in El Paso County; and the Lower Arkansas Valley Water Conservancy District.

The District is tasked with these activities:

- mitigate flooding, erosion and sedimentation
- address water quality issues
- improve drainage
- protect open space
- offer engaging educational programs
- develop public recreational opportunities including open space



A watershed is an area of land and water that drains to a common point. Sometimes the word is used interchangeably with drainage basin or catchment. The Fountain Creek Watershed encompasses 927 square miles of land and water drainages that travel from the top of Pikes Peak to the confluence of the Arkansas River in Pueblo. This curriculum introduces students to the science of watersheds, and the meaning and joy of environmental stewardship. Youth are the future community decision makers, and it is critical that they understand the value of a watershed and their role within it.

Students will learn what a watershed is and about the vital roles soil has in a watershed. They will learn to communicate this information to inspire classmates, parents, and other adults about the importance of understanding, respecting, and taking stewardship of watersheds and the soil in them.

The students will research using online computer access for information,

and then with the guidance of their teacher, co-create their own lesson plans and techniques for teaching this information to others. The audience could be a partner, classroom, younger students, parents, or open house. This is important: students will want to teach what they learn about watersheds, because kids love to share what they know about.

Students will make choices that lead to a safer and cleaner Fountain Creek Watershed. Students will connect with the Watershed's Outreach Programs to learn about events in their community that are working to improve the knowledge and health of Fountain Creek.

The Watershed District Outreach Program believes that when we learn about a topic, we tend to respect and care about it, and we want to share information about it with others. We want to gather interest and support.

This educational program is designed to inspire students to learn about watersheds by blending science with environmental stewardship while building presentation skills.

## Module 1

**A Warm-Up Partner Activity:** Teachers help students research on the internet and write individual or group presentations on topics related to FOUNTAIN CREEK WATERSHED. Students can work in pairs choosing ONE of the five questions below and prepare a 5 minute speech with some graphics of their choosing.

Presentation ideas:

- 11x17 paper poster of their original artwork
- A PowerPoint slide show of minimum of 5 slides
- A shoebox diorama
- A hands-on demonstration for the class
- A worksheet handout for the peers (crossword puzzle? word-search? Fill-in-the-blank paragraph?)
- A skit with 3 characters
- A live or taped interview with an 'expert' character they create

### #1 What is a watershed?

Students create their own description of Fountain Creek. In their own words they work from the basic description to include specifics of Fountain Creek Watershed. "A watershed, also known as a drainage basin, and is an area of land where all water drains to a central body of water like a lake, creek, river, or stream."

Websites for more information:

[oceanservice.noaa.gov/facts/watershed.html](https://oceanservice.noaa.gov/facts/watershed.html)

<https://www.usgs.gov/special-topics/water-science-school/science/watersheds-and-drainage-basins>

### #2 What are the unique features of a watershed?

Students revise in their own words this summary statement: Watershed

characteristics such as size, slope, shape, drainage density, land use/land cover, geology and soils, and vegetation are important factors affecting various aspects of runoff. Fountain Creek is unique because it begins at 14,000 feet above sea level and flow down to 4,700 feet as it enters the Arkansas River.

A website for more information Fountain Creek Watershed Map [www.geospatialworld.net/article/study-of-watershed-characteristics-using-google-elevation-service/](http://www.geospatialworld.net/article/study-of-watershed-characteristics-using-google-elevation-service/)

### #3 What is ground water?

Students revise in their own words this summary statement: When rain falls on dry ground, it can soak into, or infiltrate, downward into the soil. This groundwater remains in the soil, where it will eventually seep into the nearest stream.

Websites for more information: [www.groundwater.org](http://www.groundwater.org)

### #4 What is the natural or human history of the Fountain Creek Watershed?

Students revise in their own words this summary statement: The 74.5-mile-long creek was once known as the Fontaine qui Bouille and is a tributary of the Arkansas River.

Websites for more information: [https://en.wikipedia.org/wiki/Fountain\\_Creek\\_\(Arkansas\\_River\\_tributary\)](https://en.wikipedia.org/wiki/Fountain_Creek_(Arkansas_River_tributary))

### #5 What are benefits of a healthy watershed?

Students revise in their own words this summary statement: The benefits of a healthy watershed are far-reaching and range from less disease transferred to humans and pets, to recreational opportunities, abundant vegetation, and a safer environment.

Websites for more information: [www.epa.gov/hwp/benefits-healthy-watersheds](http://www.epa.gov/hwp/benefits-healthy-watersheds)

### #6 What is being done to make the Fountain Creek Watershed healthier?

Students revise in their own words this summary statement: The Fountain Creek District's outreach, education and renovation projects are enhancing our waterways and greenways for the benefit of citizens and wildlife alike for today and for future generations.

Websites for more information: <https://www.fountain-crk.org/>

## Module 2

**Activities:** Teachers help students research on the internet and write individual or group presentations.

### Q. What is soil?

Websites for more information: <https://www.soilassociation.org/www.epa.gov/agriculture/agriculture-and-soils> [www.soils.org](http://www.soils.org) Soil Science Society of America