

Weldon Spring Site

Interpretive Center
FIELD TRIPS *and*
OUTREACH PROGRAMS
School Year 2016-2017
and Summer 2017



U.S. DEPARTMENT OF
ENERGY

Legacy
Management

About Our Staff

The Weldon Spring Site interpretive staff is proud to have trained and achieved the Certified Interpretive Guide, professional level certification through the National Association for Interpretation (NAI).



Field Trips and Outreach Programs Requests

- All reservations will be confirmed by staff and supplemented with an agenda, logistics, and any special instructions.
- Groups may request up to three separate field trips and/or program experiences in a single school year. Simply include the details of each in the *Field Trips and Outreach Programs Request* form.
- Field trips to visit the Weldon Spring Site receive scheduling priority over outreach programs.
- Times are flexible depending on your travel needs and class times.
- High school and college-level field trips and programs are available. We'll work directly with you to cater a field trip or program specific to your needs.
- All of our field trips and programs are provided at no cost thanks to support from the U.S. Department of Energy Office of Legacy Management.



Request Process

- Complete the ***Field Trips and Outreach Programs Request form, School Year 2016–2017 and Summer 2017***
- Submit via email, phone, or mail:
 - Email: WSInterpretiveCenter@lm.doe.gov
 - Phone: (636) 300-2601
 - Mail: 7295 Highway 94 South, St. Charles, MO 63304
 - Website: <http://www.lm.doe.gov/Weldon>



Field Trips to the Weldon Spring Site

- Groups must provide their own transportation to and from the Weldon Spring Site.
- Group sizes of 10 to 130 are allowed each day of programming. Consecutive days can be scheduled to serve larger groups.
- Large groups are split into two or three smaller groups that rotate through each activity. Group numbers will be indicated in your agenda.
- Indoor and outdoor lunch space is available (e.g., picnic tables and grass lawn).
- Please ensure students are prepared with appropriate clothing, sunscreen, and bug spray for outdoor programming.

Outreach Programs

- Outreach program staff will travel to your location at no cost. However, field trips to the Weldon Spring Site do receive priority over outreach programs.
- Please indicate your ability to provide a projector and computer on your request form.
- Classes are encouraged to combine into larger groups for all students to participate in each presentation.

Driving Directions

- *The Weldon Spring Site is located in southwestern St. Charles County, Missouri, approximately 35 miles west of St. Louis. From I-64/Highway 40/61, or I-70, exit at Highway 94 and continue south toward Defiance, just a half mile past Francis Howell High School.*



Weldon Spring Site
 U.S. Department of Energy
 Office of Legacy Management
 7295 Highway 94 South
 St. Charles, MO 63304

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Thematic Field Trips

Thematic field trips last approximately 3 hours. Our programs are flexible and can be customized to your field trip schedule. Groups will rotate among several activities connected to a central theme.

Life Cycles Come Full Cycle

Grades: K–3
Setting: Indoor and Outdoor
Seasonal: April through October
Rotations: Life Cycles, Field Study, Disposal Cell Hike
Key Content: Metamorphosis, life cycles, habitat

Discover the exciting life cycles of insects, amphibians, mammals, and birds that call the Howell Prairie home. Explore and compare different life cycles in the classroom through hands-on activities. Venture outdoors to the prairie habitat to capture, observe, and study critters in different stages of life cycles.

Food Chains and Food Webs of the Howell Prairie

Grades: 3–6
Setting: Indoor and Outdoor
Rotations: Food Chains and Food Webs, Field Study, Eyes of the Hawk – Disposal Cell Hike
Key Content: Food web, food chain, prey, habitat

Explore the Howell Prairie and the struggle for survival among predator and prey. Discover the lives of animals in constant search of food, water, and shelter in the changing prairie habitat. The Howell Prairie was established for habitat restoration, but did we get it right? Are we able to support healthy food chains and food webs for animals?

Science Investigations

Grades: 5–8
Setting: Indoor and Outdoor
Rotations: Water Investigations, Chemistry Studies, Disposal Cell Hike
Key Content: Chemistry, water quality, environmental contamination, investigation

What's in your drinking water? How do science and chemistry investigations help protect human health and the environment? Step into the role of an environmental scientist, learn lab safety, and use the scientific method to conduct chemistry experiments and investigate the water around us.



Create Your Own Field Trip

Each of the following Weldon Spring Site field trip sessions lasts 45 minutes to 1 hour, depending on your availability. Select one session or more for a customized, educational day. Students will rotate in groups among each session.

Disposal Cell Hike

Grades: K–8, High School (HS)

Setting: Outdoor

Key Content: History, engineering, design, safety

Connect to lessons from the past and explore a modern engineering marvel. The 41-acre disposal cell hosts a 75-foot stairway climb to a viewing platform with panoramic views of the surrounding area. Discover why the disposal cell was constructed, the contents stored within, and learn about the long-term monitoring of an environmental cleanup site.



Water Cycle – NEW!

Grades: 2–4

Setting: Indoor

Key Content: Evaporation, transpiration, precipitation

Water is everything! Explore the stages of the water cycle through an interactive game and discussion. Dive into an exciting exploration of the water cycle in our newest field trip opportunity.

Butterfly Life Cycles

Grades: K–3

Setting: Indoor and Outdoor

Key Content: Butterflies, metamorphosis, life cycles

Discover the challenging life cycles of butterflies as they change from egg to larva, and adult through metamorphosis. Butterflies need healthy habitats for survival through all stages of their lives. Observe native butterflies, indoors and outdoors (depending on weather conditions).



Create Your Own Field Trip (continued from page 5)

Each of the following Weldon Spring Site field trip sessions lasts 45 minutes to 1 hour, depending on your availability. Select one session or more for a customized, educational day. Students will rotate in groups among each session.

Soil Science!

Grades: K–3

Setting: Indoor

Key Content: Clay, silt, sand, soil particles, rock

Mucky, dirty, and cool! We need soil to grow our food and for critters to create homes. Dig in and get your hands dirty while you learn about different soil types and how we need healthy soils every day.

New activity! – Compare soil samples from around the state and country to describe textures and color match to a Munsell® Soil Color Chart just like professional soil scientists.



Recycling Works!

Grades: K–8, HS

Setting: Indoor

Key Content: Grades 1–5: Sorting, environmental responsibility

Grades 6–8: Sorting, environmental ethics, material processing

Recycling is more important than ever! Learn how to decrease resource consumption, separate recyclable items from trash, and where it all goes once it's carried away.

Scavenger Hunt

Grades: K–8, HS

Setting: Indoor

Key Content: History, environmental impacts, nature, engineering, design

Explore the interpretive exhibit hall. Discover the Weldon Spring Site history, cleanup, and restoration of the natural environment. Students will work in small teams to create models to further connect with the Weldon Spring Site.

Solids, Liquids, and Gases

Grades: 2–5

Setting: Indoor

Key Content: Solids, liquids, gases, volume, mixtures, solutions

States of matter...matter! Chemists, engineers, and environmental scientists all need to understand how molecules are arranged, how they behave, change, and combine. Explore the physical properties of solids, liquids, and gases during an exciting exploration of the world around us.

Create Your Own Field Trip (continued from page 6)

Each of the following Weldon Spring Site field trip sessions lasts 45 minutes to 1 hour, depending on your availability. Select one session or more for a customized, educational day. Students will rotate in groups through each session.

Rocks

Grades: K–5

Setting: Indoor

Key Content: Rock types (igneous, metamorphic, sedimentary), erosion, formation, rock uses

The landscape of our planet is continually changing, eroding, and forming beneath our feet. Kindergarten and first-grade students will make observations to compare and contrast types of rocks. **New activity!** – Second- through fifth-grade students will perform a series of hands on tests to determine rock types and identify unique characteristics just like geologists. All students will explore rock uses and discover how Missouri rocks play a crucial role in the design and safety of the site’s Disposal Cell.

Mapping Adventure

Grades: 3–8, HS

Setting: Outdoor

Key Content: Map reading, navigation, teamwork, fun

Build teamwork skills! Students are challenged with an outdoor, mapping scavenger hunt. Teams will interpret maps, symbols, and directions to locate checkpoints around the Interpretive Center’s native garden.

Subsurface Investigations

Grades: 5–8, HS

Setting: Indoor

Key Content: Groundwater, aquifers, contamination, monitoring

Do you know where your water comes from? Groundwater is constantly flowing beneath our feet through soil and bedrock. People’s actions and natural events can greatly impact groundwater flow and potentially cause contamination. Learn about the groundwater monitoring program and tests performed at the Weldon Spring Site.



Create Your Own Field Trip (continued from page 7)

Each of the following Weldon Spring Site field trip sessions lasts 45 minutes to 1 hour, depending on your availability. Select one session or more for a customized, educational day. Students will rotate in groups through each session.

Weldon Spring Site Cleanup and Radiation Study

Grades: 5–8, HS

Setting: Indoor

Key Content: World War II, Cold War, contamination, cleanup, radiation

The Weldon Spring Site story began over 100 years ago. Prairies, farmland, and three towns were acquired in the 1940s in the name of national defense. A TNT munitions plant was first constructed to support America's World War II efforts, and later, a uranium production plant operated during the Cold War. Learn about the site's contamination and environmental cleanup. Practice with Geiger counters to discover natural and man-made radiation sources.

Renewable Energy

Grades: 5–8, HS

Setting: Outdoor

Key Content: Renewable resources, fossil fuels, electricity, volts, batteries

Fossil fuels heat our homes and run our cars, but what about a future with all renewable energy sources? Experiment with solar panels and wind turbines to compare the power they can generate.



Outreach Programs

Each of the following programs can be provided at your school or group location. Please refer to the Create Your Own Field Trip section for descriptions. Each outreach program lasts about 40 minutes to 1 hour depending on your schedule.

Butterfly Life Cycles

Grades: K–3

Setting: Indoor

Key Content: Butterflies, metamorphosis, life cycles



Recycling Works!

Grades: K–8, HS

Setting: Indoor

Key Content: Grades 1–5: Sorting, environmental responsibility
Grades 6–8: Sorting, environmental ethics, material processing

Solids, Liquids, and Gases

Grades: 2–5

Setting: Indoor

Key Content: Solids, liquids, gases, volume, mixtures, solutions

Please Note: This is a demonstration-only outreach program. Not all students will be able to conduct the experiments. The experiments can be messy, please plan accordingly.



Outreach Programs (continued from page 9)

Each of the following programs can be provided at your school or group location. Please refer to the Create Your Own Field Trip section for descriptions. Each outreach program lasts about 40 minutes to 1 hour depending on your schedule.

Water Cycle – NEW!

Grades: 2–4

Setting: Indoor

Key Content: Evaporation, transpiration, precipitation

Please Note: Open space such as a large classroom, library, or common area is necessary for student movement among activity stations.

Food Chains and Food Webs of the Howell Prairie

Grades: 3–6

Setting: Indoor

Key Content: Food web, food chain, predator, prey, habitat

Please Note: This outreach program is modified from the original, multi-hour thematic program to accommodate outreach scheduling.

Rocks

Grades: K–5

Setting: Indoor

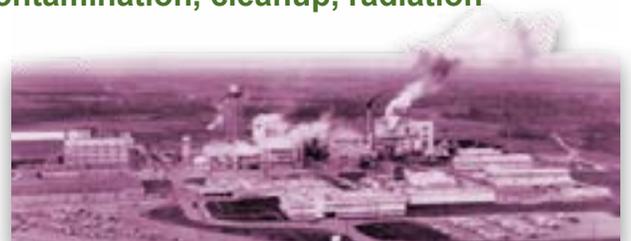
Key Content: Rock types (igneous, metamorphic, sedimentary), erosion, formation

Weldon Spring Site Cleanup and Radiation Study

Grades: 5–8, HS

Setting: Indoor

Key Content: World War II, Cold War, contamination, cleanup, radiation



Field Trips and Outreach Programs at a Glance

Field Trips and Programs	Grade Level											Indoor	Outdoor	Onsite Field Trip	Outreach Program
	K	1	2	3	4	5	6	7	8	HS					
Thematic Field Trips															
Life Cycles Come Full Cycle	✓	✓	✓	✓								✓	✓	✓	
Food Chains and Food Webs of the Howell Prairie				✓	✓	✓	✓					✓	✓	✓	✓
Science Investigations						✓	✓	✓	✓			✓	✓	✓	
Create Your Own Field Trips and Outreach Programs															
Disposal Cell Hike	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	
Water Cycle			✓	✓	✓							✓		✓	✓
Butterfly Life Cycle	✓	✓	✓	✓								✓	✓	✓	✓
Soil Science!	✓	✓	✓	✓								✓		✓	
Recycling Works	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓
Scavenger Hunt	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	
Solids, Liquids, and Gases			✓	✓	✓	✓						✓		✓	✓
Rocks	✓	✓	✓	✓	✓	✓						✓		✓	✓
Mapping Adventure				✓	✓	✓	✓	✓	✓	✓			✓	✓	
Subsurface Investigations						✓	✓	✓	✓	✓		✓		✓	
Weldon Spring Site Cleanup and Radiation Study						✓	✓	✓	✓	✓		✓		✓	✓
Renewable Energy						✓	✓	✓	✓	✓		✓	✓	✓	



*Connecting lessons from the past
with a vision for the future*



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