



7th-12th
School Programs

Designated as a Ramsar Wetland of International Importance, Cheyenne Bottoms provides an excellent opportunity to introduce more Placed Based Education into your classrooms. The Kansas Wetlands Education Center is proud to provide high quality environmental education opportunities to students within a 75 mile radius of KWEC. And it's FREE! An educator can visit your classroom or you can bring students to the center on a field trip, still FREE! All of our programs are designed to help your students meet the Next Generation Science Standards, all while getting students engaged in hands-on cross-curricular activities based on the natural wonders of our wetlands.

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We can also assist with the development of a WILD club, assist teams for environmental themed contests like ECO meet and the envirothon or consult on creating outdoor spaces, like a pollinator garden or composters.

Special programs centered on World Shorebird Day (Sept. 6), World Wetlands Day (Feb. 2), and World Migratory Bird Day (May 9) are also offered each year.

Junior High (7th and 8th Grade) Classroom Programs

Power of Wind – Students will study alternative types of sustainable energy, specifically looking at wind as a source. Students will use the engineering design process to create and test their own turbine blade to try to register as much voltage output as possible. They will color and use a Beaufort wind scale. MS-ESS3-5, MS-PS3, MS-ESS-2, MS-ETS1

Wetlands STEAM – How do Science, Technology, Engineering, Art, and Math play a role in a wetlands ecosystem? Complete hands-on experiments to see how truly unique a wetland is. Activities could include dissecting a cattail and then making it into a boat, using nature apps, building a watershed model, create artwork and poetry and graphing pollutants. This works really well for multiple, once-a-month visits to tackle each area! MS-LS1-4,6, MS-LS2, MS-ESS3

Wetland Link International – Where do the shorebirds that migrate through Cheyenne Bottoms on the Central Flyway go? Learn about the culture of Chile and how our sister wetland education center educates students. May even be able to set up a skype call, a great way to practice Spanish! MS-LS2, MS-LS4, World Language – Cultures, Connections, Communities

Wetland Ecology – From solar energy, to photosynthesis, food chains, animal carrying capacity, water or carbon cycle, let KWEC help teach your science standards using fun, hands-on methods that apply concepts to a student's backyard. Activities might include designing a paper mâché animal habitat, becoming models of a food web, and participating in the water Olympics. MS-ESS2, MS-LS1, MS-PS1, MS-ETS1

Junior High (7th and 8th Grade) Field Trip Programs

Geotrooping – Using GPS technology, students will decipher clues and participate in a treasure hunt. Students will use a field guide to help identify plants or animals on the nature trail. MS-EST1, MS-ESS1-1

Water Canaries – One of the most interesting ways scientists assess water quality is with benthic macroinvertebrates. Students will get into the water in waders to collect inverts, and analyze their findings. Be prepared to get wet and muddy! MS-LS2-5, ESS3-3

The Science of Nature – We can work together to develop an environmental assessment that best meets your classroom needs, from water quality testing, bird song surveys, vegetation sampling, or transecting for insects. MS-LS2, MS-LS4

An Oily Issue – Oil spills are everybody's problem, but wildlife is usually the loser. Where does oil in the environment come from? How does oil affect birds? Students will conduct a series of experiments to determine what oil does to a bird's feathers and eggs. MS-LS2-4, ESS3-3, 4

High School (9th through 12th) Classroom Programs

Anatomy of Flight – Comparative anatomy provides some of the coolest, “Aha!” moments in science. Students will compare the bones and musculature of human, bird, and bat forelimbs. This program includes live animals, an Eastern Screech Owl and a Big Brown Bat, as well as a hands-on look at real bird wings and dissection of a chicken wing. HS-LS4-1

BFFs Forever – What happens to a species that goes through a genetic bottleneck? How does a species survive nature’s variations? Students will learn about the Black-footed Ferret’s place on the Kansas prairies while trying to keep a BFF population alive through a series of environmental challenges. Includes a visit from the KWEC prairie dog, a BFF’s main food source. HS-LS4-3,4,5,6

Green Schools Investigations – From waste reduction to looking at the energy and water usage data in your building, all schools can make small changes that add up to big savings for conservation and efficiency. Let KWEC help guide students into investigating ways their schools can become greener and earn state and national recognition by applying for a Kansas Green Schools status. HS-EST1, HS-PS3

History of Cheyenne Bottoms – So much history has happened at the marsh, from Indian battles, to greyhound racing and use as a military bombing range. Students will learn more about this natural area that was designated as a Ramsar Wetlands of International Importance in 1988 and is featured as one of the 8 Wonders of Kansas through actively solving clues to open a breakout box. Social Studies 3-1,3, 4-1,2, 5-3,4

Jr Duck Stamp Program – Great for an art course! Create a unique entry for the Kansas Junior Duck Stamp Art Contest. Work with the KWEC educator to explore aquatic habitats, provide detailed mounts, pictures or videos of the waterfowl and provide an education experience that will engage and inspire youth to spark an interest in habitat conservation. Artwork is due March 15 each year. HS-LS2, HS-LS4, HS-ESS3-3, Art Standards (drawing, illustration)

A Sand County Almanac – Published in 1949, the beautifully written essays of Aldo Leopold spearheaded a conservation movement. This program will be a mix of literature and outdoor activities geared toward the month taking place (so this could easily be repeated throughout the year to include more essays). Reading 9-12 1-2,3,4; 2-1; 3-1,3-9; 4-1, HS-LS2, HS-EE2-1-3; 4-2

pH of the Wetlands – The soil and plants are characteristically different in a wetland. Hydrophytes are adapted to the moist and humid conditions of a wetland. What makes them different from prairie plants, find out through a dissection. We’ll use electronic pH probes and a chemical testing kit to examine the differences in marsh plants and soil. HS-LS2, HS-LS4

High School (9th through 12th) Field Trip Programs

Eye from the Sky – Students will learn about drone technology and its use as a scientific tool. Fly a drone over different habitat areas at Cheyenne Bottoms and take aerial photography and compare to past pictures. HS-LS2-7, HS-ESS3-4. HS-ETS1-4

Wetland Forensics – Become a Crime Scene Investigator and use clues to solve a wetlands mystery. Clues may include the perpetrators habits, diet, tracks and more. Delve deeper to look at how scientists can use DNA and 3D printing to aid in problem solving. HS-ETS1, HS-LS-1, HS-LS3-1,2

Aquatic Survivors – Natural water bodies can be extremely variable: dissolved oxygen, nutrients, temperature, turbidity – all these things affect the life forms living there. Learn the difference between oligotrophic and eutrophic aquatic habitats. After getting in the water in waders, students will test water samples and collect/ID aquatic inverts. HS-LS1, HS-LS2

A Day in the Life of a Field Biologist – Just what do biologists do all day? Students will be introduced to some of the exciting career options in wildlife biology, and get to try out several data collection techniques from mammal trapping and bird song surveys to vegetative sampling; includes a driving tour of Cheyenne Bottoms. Monarch tagging can be scheduled for September. HS-LS1, HS-LS4

iNaturalist – Use apps to identify plants and animals along our nature trail and marsh and then learn to make your own nature app. Participants will spend a mix of time in the classroom and outside exploring. HS-ETS1, HS-LS1