

WETLAND WONDERS

(August — October, April, and May)

Wetlands are unique habitats, distinguished by specific plant and animal life, soil types, and drainage patterns. An urban wetland is a gem to explore. Students will put on boots to wade in Murfree Spring, peer through microscopes to see the “unseen world” of pond water, and experience up-close encounters with Discovery Center wetland animals.

6th GRADE

Standards:

Science

Language Arts

Social Studies

Life Science

Standard 2. INTERDEPENDENCE:

Conceptual Strand 2: All life is interdependent and interacts with the environment.

GLE 0607.2.1. Examine the role of consumers, producers, and decomposers in a biological community.

Teacher Questions, Pre-Tour

Q: Have students define “consume,” “produce,” and “decompose.” Knowing what they have previously learned about food cycles, have them give examples of producers (plants), consumers (animals that eat plants or other animals), and decomposers (animals that eat dead plants/animals).

Teacher Questions, Post-Tour

Q: Name some of the producers, consumers, and decomposers that may exist in the wetlands at the Discovery Center. What would happen if there were no producers? No consumers? No decomposers in the wetlands?

GLE 0607.2.2. Describe how matter and energy are transferred through an ecosystem.

Teacher Questions, Pre-Tour

Q: Have students describe how energy is transferred from the sun to themselves via a lunch of hamburger with bun, French fries, a salad, and milk. Which foods have more ‘steps’ (energy levels) from the sun to their plate? (the hamburger and milk).

Teacher Questions, Post-Tour

Q: Describe the energy transfer from the sun to a Great Horned Owl, using at least 5 steps (sun, plant, mouse, snake, skunk, Great Horned owl --- could leave out the snake or the skunk if necessary). Is energy gained or lost with each succeeding level? Why do you think so?

trophic level: energy transfer through an ecosystem. [Art]. In *Britannica Online for Kids*. Retrieved from <http://kids.britannica.com/comptons/art-90132>

Standard 10. ENERGY:

Conceptual Strand: Various forms of energy are constantly being transformed into other types without any net loss of energy from the system.

GLE 0607.10.2. Analyze various types of energy transformations.

Teacher Questions, Pre-Tour

Q: What is the source of energy for green plants? (Sunlight). What is the source of energy for people? (Ultimately traced back to sunlight; we get energy from the food we eat.)

How does food change into energy? What are different kinds of energy and how do they change (transform) into other kinds? (Check out <http://www.eschooltoday.com/what-is-energy-for-children.html>.)

Teacher Questions, Post-Tour

Q: Where do you find a lot of plants at the Discovery Center? How does the energy in a plant transform into the energy it takes a frog to jump? Can you explain potential energy and kinetic energy in terms of a frog?

Language Arts

Recommended Reading:

Nonfiction:

City Animals (Zoobooks Series) by John Bonnett Wexo.

Ducks, Geese, & Swans (Zoobook Series) by John Bonnett Wexo

Nocturnal Animals (Zoobooks Series) by John Bonnett Wexo. (Grades 4 and up)

Owls (Zoobooks Series) by Timothy L. Biel. (Grades 4 and up)

Salamander Rain: A Lake & Pond Journal by Kristin Joy Pratt-Serafini. (Grades 3 and 4).

Skunks and Their Relatives (Zoobooks) by John Bonnett Wexo. (Grades 4 and up)

Turtles (Zoobooks Series) by Timothy L. Biel. (Grades 4 and up)

Snakes! (Zoobook Series) by John Bonnett Wexo. (2001).

Snakes! Strange and Wonderful by Laurence Pringle. (2009). Elementary.

Fiction:

(Hybrid: fiction and nonfiction) Near One Cattail: Turtles, Logs And Leaping Frogs by Anthony D. Fredericks. (Ages 4 and up)

The Magic School Bus Gets Eaten: A Book About Food Chains by Pat Relf. (Ages 4 and up, 32 pages).

Talking Earth, The by Jean Craighead George. (1987), (Ages 8 and up) Lexile Measure: **770L**

For teachers:

Ranger Rick's NatureScope series titles:

Amazing Mammals, Part I (1998, National Wildlife Federation, McGraw-Hill)

Amazing Mammals, Part II (1998, National Wildlife Federation, McGraw-Hill)

Endangered Animals: Wild and Rare (1997, National Wildlife Federation, McGraw-Hill)

Let's Hear It for Herps (1997, National Wildlife Federation, McGraw-Hill)

Wading Into Wetlands (1997, National Wildlife Federation, McGraw-Hill)

Social Studies

Standard 6. INDIVIDUALS, GROUPS, and INTERACTIONS:

Content Standard 6.0: Personal development and identity are shaped by factors including culture, groups, and institutions. Central to this development are exploration, identification, and analysis of how individuals and groups work independently and cooperatively.

GLE 6.6.01. Recognize the impact of individual and group decisions on citizens and communities.

Teacher Questions, Pre-Tour

Q: How are changes made at your school? (for example, if you wanted different types of food in the cafeteria?) How are changes made in your city/county? In your country? In the world?

Teacher Questions, Post-Tour

Q: The wetlands and the Discovery Center building and property used to be owned by a bottling company. How do you think the changes were made for this property to be used for a museum and the wetlands preserved so that you could visit with your classmates or families? What do you think the impact of having a family museum has been on Murfreesboro and the surrounding communities? (Many school groups visit the museum each year, not only from Rutherford County and the City of Murfreesboro, but from surrounding counties, including Davidson. In addition, the museum hosts special events for the community, and is the facility for many events for special groups.)