

The Wildlife Science Center

The Wildlife Science Center exists to increase the awareness of ecosystem conservation through focused, well conceived scientific education and research of, on, and about predators.



All of our programs are aligned with the Minnesota State Education Standards and can be designed to fit your specific educational needs.

For more information about content or to schedule your visit, please check out our website at www.wildlifesciencecenter.org or you can contact us at (651)464-3993 or wscinfo@wildlifesciencecenter.org.

The Wildlife Science Center

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Don't Forget...

FALL/WINTER

- | | |
|----------------|-----------------|
| _winter coat | _mittens/gloves |
| _hat/ear muffs | _long pants |
| _boots | |

SPRING/SUMMER

- | | |
|---------------------------------|------------|
| _insect repellent (non-aerosol) | _sunscreen |
|---------------------------------|------------|

RAINY DAYS

- | | |
|---------------|---------------------|
| _rubber boots | _rain gear/umbrella |
| _warm jacket | |

EXTRAS (bring if desired)

- | |
|------------------|
| _camera and film |
|------------------|

A trademark of the Wildlife Science Center experience is that every program we provide is individually adapted to meet the specific needs of each school's students and teachers. You, the teacher, select the activities and classes to complement your curriculum and suit your students. WSC staff members will design a schedule using your requests, and will provide all instruction during your visit. Browse the following class and activity descriptions, and select those that you wish your students to experience. Mail, fax, or e-mail your program choices to us at least **3 weeks prior to your arrival**. Many of WSC's classes are aligned with the state science standard and some additional classroom activities are available for use pre or post visit.



On-Site Programs

Minnesota Wildlife Encounter

Take part in an informational program and education session that concentrates on biodiversity and behavior, all while viewing our educational resources and ambassador animals.

The Wonderful World of Raptors

Take flight as we learn about the birds around us. Students will learn what makes birds unique among animals as well as the basics of bird identification.

Extended Education Experience

This overnight (one or two night) experience is filled with lots of educational opportunities- nature hike, orienteering, archery, soil and water chemistry, tree identification, or it can be designed to cover topics you would like your students to learn about. Don't forget the onsite wolves and other wildlife, the nightly campfires, night hikes, and other bonding activities that lend itself to an overnight experience.

Animals No One Loves

Get an up-close view of a few of the WSC's animals that people have labeled unlovable-a snake, owl, skunk, and porcupine. Learn about their adaptations, natural history and the stories/legends associated with these unusual critters.

Gather 'round the Campfire

Take the time to unwind and let the kids bond. Telling stories, toasting marshmallows, and just talking is a great way to get to know one another.

Systems-Based Science

You will experience a multi-disciplinary approach to learning by studying science, literature, social studies, and other topics involving our ambassador wolves and other wildlife.

Super Cool Snakes!

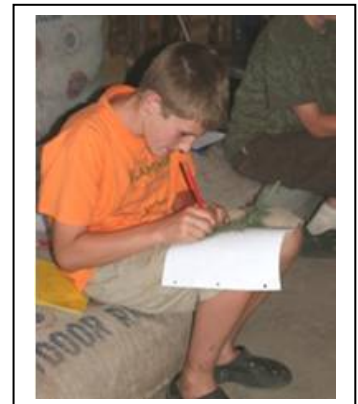
Why are so many people afraid of snakes? This class is all about what makes snakes so unique. We will learn about Minnesota snakes, their adaptations, and talk about why they are misunderstood.

Minnesota Trees

How can you tell a maple from an oak? Which trees are conifers? These and many more questions are answered by examining the tree species around us. Students will learn some simple tools to help them identify leaves, how to use and create a dichotomous key, and discuss the uses of tree materials.

Nature Hike

This guided hike will take you along the shore of a pond, through



woods featuring a variety of tree species, and across a meadow. Many teachable moments arise; from tree identification, flowers, animal tracks, birds and much more. Students are encouraged to make observations and ask questions.

Journal Writing

Taking the time to reflect about the world around you can be a powerful tool for young naturalists to connect with the environment. WSC staff asks that the teachers provide the format for the journal- whether is free-writing, drawing, writing prompts, specific questions, or blank pages.

Hands-on Science Experiments



What Makes up Dirt?

With our test tubes, soil samples, and testing equipment, the What Makes up Dirt activity is an excellent introduction to soil chemistry. The testing procedure helps students understand the basics of scientific method, and leads to discussions of ecosystems, food webs, and the health of the environment.

What's in Our Water?

With our test tubes, water samples, and testing equipment, the What's in Our Water activity is an excellent introduction to water chemistry. The testing procedure helps students understand the basics of scientific method, and leads to discussions of aquatic biology, food webs, and water quality.

Let's Do Real Science

An in-depth experience with education options including wolf management, wolf behavior studies, and student created experiments with the Wildlife Science Center's ambassador animals providing the data. Programs are designed to meet the needs of each individual class.

Fun and Games

Oh, Deer!

What do animals need to survive? Food, water, and space-that's it! In this game, the students play the role of a deer to determine whether or not they have enough natural resources to survive. This activity focuses on populations, food webs, and limiting factors.

Quick Frozen Critters

This freeze-tag game is played to demonstrate predator/prey relationships. Students take on the role of rabbits, while others play the role of lynx. Students learn about the close relationship between snowshoe hare and lynx population after this game is played.





Who Makes the Decisions?

This decision making activity puts the students in the roles of policy makers, farmers, environmentalists and other stakeholders in the discussing of wolf management. By participating in this activity students learn about how decisions are made, listening to all sides of the story, and the power of public opinion.

You Can't Hear Me

What makes an owl such an efficient hunter? We will discuss Minnesota owl species and their many adaptations that help them survive. In this tag game students play the role of predator and prey-owls are forced to use other senses to locate their prey.

Outreach Programs

Minnesota Wildlife

Take part in an informational program and education session that concentrates on biodiversity, adaptations, identification, classification all while viewing our skulls, furs, and other educational resources. (May or may not include raptors)

Animals No One Loves

Get an up-close view of a few of the WSC's animals that people have labeled unlovable-a snake, owl, skunk, and porcupine. Learn about their adaptations, natural history and the stories/legends associated with these unusual critters.



Raptors Rule

Get a close up look at birds of prey from WSC's collection of live owls, hawks, and falcons. Slides and artifacts complete a comprehensive look at the remarkable range of adaptations and life histories displayed by these predators of the sky.

Other Program Possibilities

Wolves and Literature
Wolves and Dogs
Wildlife Management
Comparative Anatomy
Wildlife Photography/Art
Radio Telemetry

Wolves and Society
Animal Behavior
Wildlife Careers
Classification
Adaptations
Endangered Species

Minnesota State Science Standards Addressed

K

- know simple ways that living things can be grouped
- observe and describe the environment using the five senses

Grade 1

- describe objects in terms of color, size, shape, weight, texture, flexibility
- observe and describe how plants and animals grow and change
- describe ways in which many plants and animals closely resemble but are not identical to parents
- animals need air, water and food and that plants require air, water, nutrients and light

Grade 2

- sort and classify objects in terms of color, size, shape, weight, texture, flexibility...
- observe and describe rocks, soils, water and air
- observe and describe some features of animals that allow them to live in specific environments
- observe and describe predator and prey relationships
- compare and contrast plant eaters and meat eaters

Grade 3

- explore the use of science as a tool that can help investigate and answer questions about the environment
- describe the structures that serve different functions in growth, survival and reproduction for plants and animals
- organisms interact with one another in various ways besides providing food
- changes in a habitat can be beneficial or harmful to an organism
- observe and differentiate between characteristics of organisms that are inherited and characteristics that are acquired
- identify similarities and differences between parent and offspring

Grade 4

- recognize the impact of scientific and technological activities on the natural world
- identify and investigate environmental issues and potential solutions
- classify plants and animals according to their physical characteristics

Grade 5

- recognize that individuals of the same species differ in their characteristics and that sometimes the differences give individuals an advantage in surviving and reproducing
- recognize that organisms need energy to stay alive and grow, and that this energy originates from the sun
- use food webs to describe the relationships among producers, consumers, and decomposers in an ecosystem in Minnesota

Middle School Science Standards

- explain how energy is transferred through food chains and food webs in an ecosystem
- explain how the amount of useable energy available to an organism decreases as it passes through a food chain and/or food web
- compare and contrast predator/prey, parasite/host and producer/consumer/decomposer relationships

“...Thank you for allowing our third graders to visit your wonderful facility. Our students have been coming to the WSC for several years now as part of our Graduation Standards. Every year the ... presentation gets better! Your staff...always gear the presentation to the age of our students...”
- Pam Meyer,
Stevenson
Elementary School
teacher

“This was the coolest field trip that we have ever taken. We really got to see the animals up close and watch them. “

3rd Grader from
Forest Lake
Elementary



- recognize that the sun is the principal energy source for the solar system and that this energy is transferred in the form of radiation
- recognize that an organism's body plan and its ability to regulate its internal environment enable it to make or find food, grow and reproduce in a constantly changing environment
- recognize that behavioral responses of organisms may be determined by heredity and past experience
- use the characteristics of an organism to identify the kingdom to which it belongs
- provide examples of the potentially irreversible effects of human activity on ecosystems
- define a population as all individuals of a species that exist together at a given place and time
- define an ecosystem as all populations living together and the physical factors with which they interact
- explain the factors that affect the number and types of organisms an ecosystem can support, including available resources, abiotic and biotic factors and disease
- interactions with the environment affect some inherited traits
- scientific evidence can be used to infer common ancestry among some organisms

“...My hope is that the transformation that came over my students during our study of wolves and our excellent trip to your center may also come over them in other studies in their lives...”
-Maria Therres, St. John School

High School Science Standards

- use biological evolution to explain the diversity of species
- understand that matter and energy flow through different levels of organization of living systems, from cells to communities, as well as between living systems and the physical environment as chemical elements are recombined in different ways
- discuss the impact of the use of natural resources and other human Earth's climate
- recognize that organisms have both innate and learned behavioral responses to internal and stimuli...
- describe the factors related to matter and energy in an ecosystem that both influence fluctuations in population size and determine the carrying capacity of a population
- predict and analyze how a change in an ecosystem, resulting from natural causes, changes in climate, human activity or introduction of invasive species, can affect both the number of organisms in a population and the biodiversity of species in the ecosystem..



The Wildlife Science Center:

- believes that everyone can learn
- encourages discovery and exploration
- promotes problem solving and reflection by asking open-ended questions
- responds to each child's insights and concerns
- offers opportunities for cooperative learning
- celebrates children's individuality and eagerness to learn

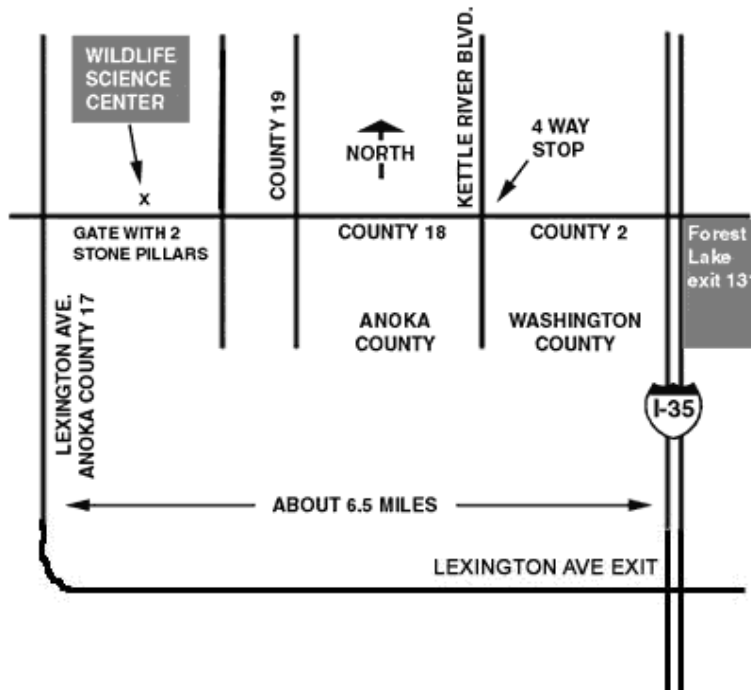
Directions and Map

FROM MINNEAPOLIS:

Take I-35W North to Lexington Ave. Exit (#33).
Take a Left on Lexington (Rte. 17 North).
Go 9.5 miles & take a right on Cty. Rd. 18 east.
WSC is located on the left side of road.

FROM ST. PAUL:

Take I-35E North to I-35 North.
Take the Forest Lake Exit (#131).
Take a Left on Cty. Rd. 2 out of town 6.5 miles.
Cty. Rd. 2 becomes Cty. Rd. 18.
WSC is located on the right side of road.



Teacher Evaluation

School/Group Name: _____

Personal Satisfaction	Excellent	Good	Fair	Poor
Reservation and scheduling process				
My expectations were met or exceeded.				
The program was a positive experience.				
The staff contributed to us having a meaningful experience.				

What did your students enjoy the most about their experience at the WSC?

What did your students like the least about their experience at the WSC?

What did you enjoy the most about your experience at the WSC?

What could be done to improve your overall experience?

Feedback for our staff: (Professionalism, speech, rapport, etc.)

If you have photos or activities, which are used in the classroom before or after your visit to the WSC, we would appreciate it if you would be willing to share them with us.

