



EDUCATOR RESOURCE GUIDE FOR GRADES 5TH-8TH



Enhancing the understanding and enjoyment of life by providing a premier destination for visitors to engage in environmental conservation and wildlife education.

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WELCOME

Dear Educators,

Thank you for making environmental conservation and wildlife education a priority in your students' education. We hope that this experience will be one that not only supplements your core curriculum, but also opens the world for your students.

This resource guide will provide you with activity ideas to prepare your students for their experience at the museum. Please feel free to adapt any of the activities in this study guide to make them appropriate and meaningful to your students.

Be prepared to arrive early. You should plan on arriving to the museum about 15 minutes prior to your tour. Allow for travel time, parking and trips to the restroom.

Know your needs. To best serve the needs of you and your students, please indicate in advance if you have individuals who require special services or seating needs upon making your tour reservation.

For questions, contact Executive Director Margaret Karius at 920-419-2721 or email info@wiwildlifemuseum.org.

Sincerely,

Margaret M. Karius
Executive Director
Wisconsin Museum of International Wildlife

ACTIVITY

Regions of Africa

OBJECTIVE

The lesson focuses on Africa, its five main regions and the climates of each. Students will identify which of the museum’s animals live in which region based on their characteristics. A similar lesson is also taught with an emphasis on North American animals.

PRIOR TO ARRIVING AT THE MUSEUM

Take a few lessons to learn about the geography of Africa (or North American, if you are signed up for that specific tour). Have the students color in a map, labeling major rivers, seas, deserts, and other landforms. Note that most of northern Africa is smothered by the Sahara, and discuss what that might mean for wildlife.



ACTIVITY AT THE MUSEUM

Students will write the name of each African animal in the museum under the correct region in Africa: Northern, Western, Central, Eastern and Southern. The museum does not have animals from every region, and some animals live in multiple regions. There is one type of bird on the list.

WI SOCIAL STUDIES CONTENT STANDARD A.8.1

WI SCIENCE CONTENT STANDARD F.8.2

Additional standards are referred to on page 10.

ACTIVITY

Ecology and Evolution: Animal Adaptations

OBJECTIVE

The lesson will focus on evolution and natural selection. Through a tour of the museum, students will learn how each animal in the museum is specially adapted to its environment.

PRIOR TO ARRIVING AT THE MUSEUM

Introduce important vocabulary words like natural selection, mutation and evolution. Discuss the different features of animals that exist in different parts of the world.

ACTIVITY AT THE MUSEUM

Adaptations help animals survive in their ecological niche or habitat; adaptations can be anatomical, behavioral or physiological.

Anatomical adaptations are physical features such as an animals shape. Behavioral adaptations can be inherited or learned and include tool use, language and swarming behavior. Physiological adaptations include the ability to make venom; but also more general functions such as temperature regulation.

The Museum will show students animal pelts, antlers, horns, skulls and teeth to show how animals evolve to survive.

WI SCIENCE CONTENT STANDARD A.8.8

WI SCIENCE CONTENT STANDARD F.8.2

Additional standards are referred to on page 10.

ACTIVITY

The Value of Animal Life: Endangered Animals

OBJECTIVE

This lesson will teach students what it means for an animal to be threatened, endangered and extinct with a tour through the museum. Information regarding illegal practices and how to help stop them will also be provided.

PRIOR TO ARRIVING AT THE MUSEUM

Ask the class, what do animals do for us? Why do we like animals? Emphasize intrinsic rather than material value – animals are beautiful, fun and they make us happy. Bring up the illegal practice of hunting elephants for their valuable tusks. Also discuss the meaning of the word extinct.

ACTIVITY AT THE MUSEUM

The Museum will discuss the different animals in the museum, their habitats, some interesting facts about the animal, and if they are either threatened, endangered or extinct. Predators, environmental factors and human behavior will be presented regarding the level of threat these animals endure.

WI SCIENCE CONTENT STANDARD F.8.9

WI MODEL ENVIRONMENTAL STANDARD B.8.2

Additional standards are referred to on page 10.

ACTIVITY

Conservation and Ecology: Stewards of the Planet

OBJECTIVE

Students will learn how human activities are altering the habitats of the creatures in the museum and how to better live in harmony with animals.

PRIOR TO ARRIVING AT THE MUSEUM

Discuss environmental problems of the world right now, primarily global climate change, pollution and deforestation. Ask the students why these challenges – as well as illegal hunting – are negative for wildlife.

ACTIVITY AT THE MUSEUM

Environmental stewardship refers to responsible use and protection of the natural environment through conservation and sustainable practices.

There are 3 types of environmental stewards: doers, donors, and practitioners. Doers go out and help the cause by taking action. For example, the doers in an oil spill would be the volunteers that go along the beach and help clean up the oil from the beaches. A donor is the person that financially helps the cause. They can do anything from donating their money, to having galas or other fundraisers. They are typically governmental agencies. Lastly there are practitioners. They work on a day-to-day basis to steer governmental agencies, scientists, stakeholder groups, or any other group toward a stewardship outcome. Together these 3 groups make up environmental stewards and with the help keep the ecosystem running healthily.^[4] Anybody can be an environmental steward by being aware and knowledgeable of the world around them and making sure they do as little as possible to negatively impact our world. Without these groups it would be hard to get any sort of sustainability in our increasingly technology, pollution, industrial based world.

The Museum staff will work with the students to discuss current environmental problems as well as identify how they as stewards can create solutions to conserve and protect our planet and wildlife.

WI SCIENCE CONTENT STANDARD E. 8.4

WI MODEL ENVIRONMENTAL STANDARD B.8.5

Additional standards are referred to on page 10.

ACTIVITY

Natural Recycling

OBJECTIVE

Students will learn about the Earth's natural chemical cycles and the place of wildlife within them. The lesson will also focus on the science behind recycling raw materials.

PRIOR TO ARRIVING AT THE MUSEUM

Discuss and together draw a diagram of the carbon and water cycles, brainstorming how wildlife fits in with them. Talk about the difference between reducing, reusing and recycling materials.

ACTIVITY AT THE MUSEUM

Decomposition is an organic process necessary for the continuation of life since it makes essential nutrients available for use by plants and animals. Decomposers are plants or animals that feeds on dead material and causes it to break down or decompose. Examples include fungi, lichens, earthworms, insects and bacteria.

The activity at the Museum will show examples of material, industrial and even hazardous waste and ways to reduce, reuse and recycle. The staff will then compare those recycling processes to the natural recycling process that occurs with plants and animals in nature.

WI SCIENCE CONTENT STANDARD F.8.8

WI MODEL ENVIRONMENTAL STANDARD B.8.7

Additional standards are referred to on page 10.

ACTIVITY

What Do They Say about Hunting?

OBJECTIVE

Provides students with the facts they need to develop informed opinions about the role of hunting in modern society and takes a fair look at both sides of the hunting debate.

PRIOR TO ARRIVING AT THE MUSEUM

Hunting continues to be a controversial and emotional topic in American society. The inflamed rhetoric that often defines discussions about hunting makes it difficult to differentiate between fact and opinion.

Ask your students these questions:

- Is hunting endangering the future of wildlife in America?
- Is hunting a true contest between hunter and game?
- Are hunters responsible sportsmen?
- Is hunting still a valid activity in our modern society?

Have your class divide into those who oppose hunting and those who support it. Neutral or undecided students can form their own group. Serve as a moderator for your classroom to debate about hunting. You can also create your own discussion points related to the hunting issue. Following the debate, neutral or undecided students can be asked if the debate swayed them for or against hunting and if they would now like to join one group or the other.

ACTIVITY AT THE MUSEUM

Most hunters have immense respect for the wildlife they hunt—and for the wildlife they don't hunt. They also respect the land that supports wildlife. Hunting can teach you to understand the cycles of nature and make it easier to accept that death is a natural and important part of life.

Being a responsible hunter means respecting wildlife and giving something back in exchange for the continued privilege to hunt year after year. As a group, hunters have done more to help wildlife than anyone else. Through their support for wildlife management and conservation programs, hunters are directly responsible for many of the healthy wildlife populations we enjoy today.

The purpose of hunting in primitive times as well as in today's society will be discussed. The activity at the Museum will hopefully help students differentiate between factual statements and statements which cannot be proven correct or incorrect about hunting. The staff will also assist students in evaluating information that they receive from sources such as websites, periodicals, newspapers, radio and television. The "un-endangered species," wildlife that have been rescued from near extinction by wildlife management programs administered by state and federal conservation agencies will be identified.

Additional standards are referred to on page 10.

STANDARDS

NEXT GENERATION SCIENCE STANDARDS

Next Generation Science Standards is a collaborative effort of 26 states and provides a framework for science educational standards. The Wisconsin Museum of International Wildlife belongs to the “Nature of Science” category, which helps students understand the world around them. The three areas of focus that this resource guide and museum experience will benefit your students:

- Scientific Knowledge Assumes an Order and Consistency in Natural Systems
- Science is a Human Endeavor
- Science Addresses Questions About the Natural and Material World

WISCONSIN DEPARTMENT OF INSTRUCTION STANDARDS

Science, Standard F: Life and Environmental Science Performance Standards - Grade 8

By the end of **grade eight**, students will:

STRUCTURE AND FUNCTION IN LIVING THINGS

F.8.1 Understand the structure and function of cells, organs, tissues, organ systems, and whole organisms

F.8.2 Show how organisms have adapted structures to match their functions, providing means of encouraging individual and group survival within specific environments

F.8.3 Differentiate between single-celled and multiple-celled organisms (humans) through investigation, comparing the cell functions of specialized cells for each type of organism

REPRODUCTION AND HEREDITY

F.8.4 Investigate and explain that heredity is comprised of the characteristic traits found in genes within the cell of an organism

F.8.5 Show how different structures both reproduce and pass on characteristics of their group

REGULATION AND BEHAVIOR

F.8.6 Understand that an organism is regulated both internally and externally

F.8.7 Understand that an organism's behavior evolves through adaptation to its environment

POPULATIONS AND ECOSYSTEMS

F.8.8 Show through investigations how organisms both depend on and contribute to the balance or imbalance of populations and/or ecosystems, which in turn contribute to the total system of life on the planet

DIVERSITY AND ADAPTATIONS OF ORGANISMS

F.8.9 Explain how some of the changes on the earth are contributing to changes in the balance of life and affecting the survival or population growth of certain species

F.8.10 Project how current trends in human resource use and population growth will influence the natural environment, and show how current policies affect those trends.

ADDITIONAL RESOURCES

International Wildlife Museum: <http://www.thewildlifemuseum.org/>

Safari Club Foundation: <http://safariclubfoundation.org/>

Safari Times Magazine (Copies available at the Museum)

Ducks Unlimited: <http://www.ducks.org/>

Whitetails Unlimited: <http://www.whitetailsunlimited.com/>

Rocky Mountain Elk Foundation: <http://www.rmef.org/>

Ruffed Grouse Society: <http://www.ruffedgrousesociety.org/>

Wisconsin Department of Natural Resources: <http://dnr.wi.gov/>