

STANDARDS CORRELATIONS

This Zoo Trek was designed for students in upper elementary and middle school.

Participation in the Zoo Poo Zoo Trek supports the Next Generation Science Standards (DCIs) and Maryland College and Career-Ready Standards listed below.

LS1.A
LS1.C
LS2.A
LS2.B
LS2.D
LS4.C
WHST.6-8.8
WHST.6-8.9
SL.8.1

Science and Engineering Practices:

- Constructing Explanations and Designing Solutions

Crosscutting Concepts:

- Cause and Effect
- Energy and Matter
- Systems and System Models
- Structure and Function
- Scale, Proportion, and Quantity

Maryland Environmental Literacy Standards
3.A
4.A.1; 4.C.1

zoo trek

ZOO POO

Teacher Guide

In nature, nothing goes to waste--even waste! In a healthy ecosystem, animal waste forms a critical part of nutrient cycles. Animal poo can be a source a fertilizer for plants, a means of communication within and between species, a medium for moving seeds over distances, a building material, even a dietary staple (think dung beetles!)

The topic of animal poo can be a fun way to engage students in curriculum ranging from matter and energy cycles to adaptations, to ecosystem interactions. This Zoo Trek features five species with interesting poo or poo habits: African penguins, white rhinos, African elephants, okapis, and North American river otters.

USING THE ZOO TREK ON YOUR FIELD TRIP

Print at least one copy of the Zoo Trek for each group. Encourage students and chaperones to read the materials for each featured species as they visit that zoo habitat.

Chaperones can access an [interactive Zoo map](#) on their phones. You can also print a pdf version of the [Zoo map](#) to provide students and chaperones.

Please keep in mind that every day is different at the Zoo. Some animals may be off exhibit during your visit.

MARYLAND
ZOO

BACK AT SCHOOL

Because the topic of animal poo can support a wide range of science concepts, extension activities can take many directions and incorporate a variety of college- and career-ready skills. Here are just a few possibilities.

Poo-llution

In a healthy ecosystem, animal waste is a normal and necessary part of nutrient cycling. But excess nutrients from pet and farm animal wastes can disrupt both terrestrial and aquatic ecosystems.

- Invite students to learn more about the issue of pet waste, and share with them about the Scoop that Poop Project by the Prince George's County Department of the Environment. This campaign sought to increase awareness about the problems caused by pet waste and to encourage county residents to pick up after their pets. Have students design their own public service announcement posters or video scripts about the issue of pet waste.
- Have students dive deeper into the issue of excess nutrients in Chesapeake Bay. As a class, develop an action plan for how your school community could decrease its nutrient load on the Bay.

Poo Are You?

Animal poo, or scat, is a useful tool for biologists and conservationists. Scat can reveal what species are present in an area, what the animals are eating, whether there are certain parasites in the population, and even how many individuals of a given species live in a particular area.

- Have students research Maryland native animal species such as white-tailed deer, red foxes, black bear, grey squirrel, wild turkey, raccoon, and skunk to learn about their scat and as a class create a "Scat Guide." If feasible for your school's location, do a scat walk as a class using your guide to see what species have recently moved through the area. Note: For health and safety, do not touch any scat that you do find.

Poo Facts

- Have students research further the species identified in this Zoo Trek to learn more about their poo and poo habits, with an emphasis on how the poo of one species affects the broader ecosystem. Other species they could consider for this task include dung beetle, hippo, parrot fish, lappet-faced vulture, fruit bats, chimpanzee, and gorilla. If the administration is on board, consider having students make "poo fact" posters to hang in the school restrooms.

