



MARYLAND ZOO

ZooTrek : Protecting Wildlife

Grades 6–8



The mission of The Maryland Zoo in Baltimore is to inspire and educate people to join with it in the active support of conservation of wildlife and wild places. Through the actions we take and choices we make, we can all help protect species and their habitats.

HOW TO USE THE ZOO TREK

Use the animals and exhibits highlighted in this *Zoo Trek* to help focus your Zoo visit .

1. Find the highlighted species on the Zoo Map to help you plan your route. You do not need to follow the *Zoo Trek* in a particular order.
2. At the exhibit for each featured species, read through the *Zoo Trek* information. Take turns reading the questions aloud, and talk about your answers with your classmates.
Remember, there may not always be one “right” answer!
3. Many of the animals are well camouflaged. The **Viewing Tips** can help you find them in the exhibits.
4. Use the **Discuss!** questions both during your Zoo visit and after you return to school to reflect on some of the most important issues conservation organizations face.

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

Chaperones, please keep your group together and supervise the students at all times.

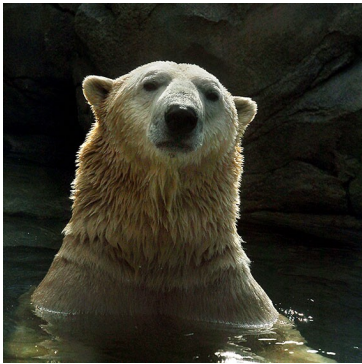
START YOUR TREK!

POLAR BEAR

Polar bears are great swimmers, but they don't hunt from the water like a shark or whale does. Polar bears use sea ice as a hunting platform. They sit and wait on the ice for their prey—seals—to come up for air.

The Problem

As the Arctic climate becomes warmer, ice melts earlier in the spring and re-freezes later in the winter. With sea ice available for fewer weeks of the years, many bears starve.



What You Can Do

Pull the plug for polar bears!

To decrease the amount of fossil fuels we burn for energy, you can

- Unplug phones and computers as soon as they finish charging.
- Plug electronics into a power strip, and turn the whole strip off when you are not using those items.
- Walk or ride a bike as much as possible for short trips rather than using a car.
- Wear a sweater instead of turning up the heat at home.
- Ask parents to turn the car off instead of idling.

Viewing Tip

Go inside the Tundra Buggy for a view over the polar bear yards.



Discuss!

When there is less sea ice the bears have to swim farther and farther to find another hunting platform.

How could this be a problem for the bears?

Saving Electricity and Polar Bears? What's the Connection?

Computers and cell phones that are turned off but plugged in are still using electricity.

Most electricity we use comes from burning fossil fuels such as oil and coal. Burning fossil fuels puts extra carbon dioxide into the atmosphere.

Using less electricity will decrease the amount of fossil fuels we burn. And burning less fossil fuel means less heat-trapping gases.

That's a big win for polar bears and all the species that rely on sea ice!

AFRICAN PENGUIN

Penguins in Africa? Definitely!

These are warm-weather penguins. They are native to a climate that is roughly similar to the climate in Baltimore.

The Problem

Question: What species do you think competes most strongly with African penguins for food?

Answer: Humans!

African penguins are an endangered species. As humans take more and more of the fish that the penguins need to survive, there are fewer fish for the penguins.

What You Can Do

Ask your parents for permission to download the app for the Seafood Watch Program. This app can help you and your family make seafood choices to ensure that penguins and other marine species have enough food.



WHITE RHINO

A rhino's horn is made up of keratin, the same material in your hair and fingernails.

The Problem

All species of rhino are killed for their horns. People in some cultures think crushed rhino horn is a medicine. In some other cultures, young men receive knives with handles made of rhino horn as a rite of passage.

What You Can Do

Visit the website of the International Rhino Foundation for ideas of how you can help in the effort to protect rhinos: <http://www.rhinos.org/>

Viewing Tip

Go inside the Penguin Education Center for the underwater viewing window.



Discuss!

How does a fast-growing human population affect the amount of resources available for other species?

What happens when humans in some parts of the world use many more resources than people in other parts of the world?

Viewing Tip

The rhinos tend to hang out at the far right of the exhibit.



Discuss!

Do you think telling people that rhino horn is "really just hair" will help stop poaching?

Think of some reasons why just telling people what rhino horn is made of might not solve the problem.

AFRICAN ELEPHANT

Elephant tusks are modified teeth. The white material that makes up most of each tooth is known as ivory. To get the ivory tusks, an elephant is killed.

The Problem

Many elephants are poached—killed illegally—for their tusks. People then use the ivory to make items such as jewelry or carvings.

Ivory is very expensive because it is rare. Many people who own ivory see it as a symbol of high status.

What You Can Do

Become part of the 96 Elephants campaign to help stop the trade in ivory! Snap the QR code to visit the 96 Elephants website.



Viewing Tip

The lower level viewing area gets you closer to the elephants, but the overlook generally gives a better view.

Discuss!

As the number of elephants in the world becomes smaller and smaller, do you think ivory will become more expensive or less expensive? Why?

PANAMANIAN GOLDEN FROG

These bright frogs are probably extinct in the wild. They have been wiped out by a disease called chytrid, which is caused by a fungus.

The Problem

Many PGFs have been born at the Maryland Zoo. But we can't just put them back into the wild. As long as chytrid remains in their ecosystem, the frogs are not safe in the wild.

What You Can Do

People have moved chytrid around the world through infected animals bought as pets or for food. To help prevent the fungus from spreading even more, be sure not to release any pet amphibians into the wild.



Viewing Tip

They are hard to miss!

Discuss!

What would be the benefits of removing the last members of a critically endangered species from the wild? What could be the drawbacks?

CHIMPANZEE

Palm oil is an ingredient in many products that we can find in the supermarket or drugstore. To clear land to grow more and more palm oil plants for these products, forests are being cut down.

The Problem

So what does the palm oil plant have to do with chimps?

A lot!

For a long time, cutting down forests to grow palm oil destroyed the habitat of species like orangutans that live in Asia. But to produce even more palm oil, growers are now planning to cut down forests in Africa. These forests are homes to chimps and gorillas.



What You Can Do

Be a smart shopper to help protect the homes of both Asian and African apes! Choose products that are not made with palm oil.

Or better yet, write to a company that uses palm oil and ask them to switch to another ingredient or to use a palm oil that was produced without harming the environment. Check out the following website for more ideas: <http://www.cmzoo.org/index.php/conservation-matters/palm-oil-crisis/>

Viewing Tip



If you can't see the chimps easily, they are probably resting. Look in the corners and back of the exhibit, where many of them make nests to nap in.

Discuss!

Work with your friends or family to examine the labels of your favorite snacks to see if they are made with palm oil.

But read carefully!

Companies use many different names for palm oil. You can find a list of palm oil's undercover identities at <http://www.cmzoo.org/index.php/conservation-matters/palm-oil-crisis/> (Look under "Palm Oil Names and Derivatives.")

OKAPI

These animals are close relatives of giraffes. Their coat patterns allow them to blend in to their forest habitat.

The Problem

Okapis are found in only one small part of the world. Where okapis live, wars have caused many people to destroy the forests. Many fighters and people fleeing the fighting hunt more and more wildlife—including okapi—for food.

What You Can Do

Scientists aren't the only ones who can protect animals.

Problems such as war and poverty can lead people to destroy habitats or to hunt illegally. People who work in law enforcement, education, business, and even photography and writing can all be part of the solutions to protect animals.

HELLBENDER

These amphibians live in streams with flowing water. Because they absorb oxygen through their skin, hellbenders need moving water to bring them a fresh oxygen supply.

The Problem

Amphibians are very sensitive to changes in the environment. As human activities—such as polluting, cutting down forests, and building dams—change streams, hellbenders are unable to survive and reproduce.

What You Can Do

These amazing animals are critical parts of their ecosystems. Help with a stream clean-up, and be aware of any chemicals your family uses that go down the drain or soak into the ground. A healthy home for hellbenders is also a healthy habitat for humans!

Viewing Tip

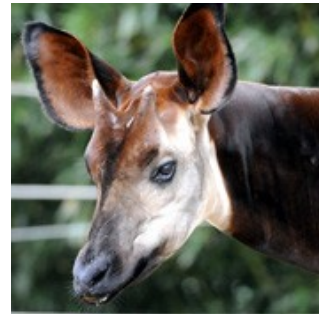
If you don't see the okapi outside, look inside the Giraffe House.



Discuss!

Some conservation groups work to help protect okapis by teaching local people newer ways of farming or new ways to earn a living.

How do you think helping people in this way protects okapis?



Viewing Tip

Look for wrinkled “rocks”—those are the sides of the hellbender’s body!



Discuss!

As humans dam streams or dump silt into them, what effect do you think that has on the flow of water in hellbender habitat?

Thank you for helping to protect wildlife and wild places!