



*Dedicated  
to Reducing  
Pesticides*

## Unit 1 Lesson 2: Time is Running Out

**Focus Areas:** Biodiversity; Science, Language Arts

**Focus Skills:** observing, thinking critically

### Objectives

- To identify plants and animals that are in danger due to illegal trading of wildlife
- To describe ways to stop the harmful practice of illegal wildlife trading

### Essential Questions

- What are some of the problems affecting the species of plants and animals of the Earth?
- Why are creatures becoming endangered or even extinct?

### Essential Understanding

Habitat loss, invasive species, population, pollution, and overconsumption are all problems that threaten species of plants and animals.

### Background

Ever since life began on the Earth, creatures have had to adapt and change to survive or they would become extinct. Species died due to natural causes such as changes in the Earth's climate, drought, competitions with new species, or the eruptions of volcanoes.

Today, as the human population has exploded and spread to every part of the world, changes to habitats happen at a rapid rate. Humans destroy forests, erode the soil, and hunt and kill animals for fur and trophies. People have polluted the water with millions of gallons of oil, poisoned the air, and damaged the protective ozone layer that is causing a dramatic change in our climate. The increasing population of six billion people competes for resources that continue to be depleted. The



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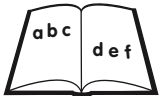
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number of species continue to decline as the number of extinct species continues to increase.

The extinction of species is no longer a gradual event. Today, species are becoming extinct one thousand times faster than before humans were on the Earth. In 1970, species became extinct at the rate of one per day. Today, it is one per hour. There are over one thousand endangered species recognized under the United States Endangered Species Act.

Once a species is lost, it can never be replaced. Humans must act responsibly to protect the endangered species and our planet.

### Vocabulary



- biodiversity** the mix and variety of life on Earth, including the diversity of genes, species, and ecosystems
- community** in ecological terms, a group of interacting plants, animals, and microorganisms living in the same area at the same time. Also referred to as a natural community.
- endangered species** a species that is in immediate danger of becoming extinct. The Florida panther, Illinois chorus frog, Atlantic sturgeon, and green pitcher plant are endangered species in the United States.
- extinct species** a species that is no longer living. The passenger pigeon and moa are examples of extinct birds.
- habitat** the area where an animal, plant, or microorganism lives and finds the nutrients, water, sunlight, shelter, living space, and other essentials it needs to survive. **Habitat loss**, which includes the destruction, degradation, and fragmentation of habitats, is the primary cause of biodiversity loss.



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**introduced species** an organism that has been brought into an area where it doesn't naturally occur. Introduced species often compete with and cause problems for native species. Introduced species are also called **exotic**, **non-native**, or **alien species**.

**threatened species** a species whose numbers are low or declining. A threatened species is not in immediate danger of extinction, but it is likely to become endangered if it isn't protected. The African elephant is a threatened species.

**umbrella species** a species that, by virtue of being protected, protects many other species. The spotted owl is an example of an umbrella species because, by protecting its habitat (old growth forests in the Northwest), many other species will be protected.

**wildlife trade** the sale of wildlife and wildlife products. The buying and selling of wild plants and animals or products made from these organisms threatens some species with extinction. The sale of wild parrots for pets and the use of ivory for jewelry, piano keys, and figurines are examples of the market that exists for certain species or products made from those species.

### Logistics

**Time:** 45 minutes

**Group Size:** 5 to 30

**Space:** a classroom

### Materials

Izzy puppet \*

Video *Going, Going, Almost Gone* \*

markers, crayons, scissors

"Wildlife for Sale" \*\*

"What You Can Do" \*\*

\* single copy provided

\*\* see *Going, Going, Almost Gone, Animals in Danger, An Educators Guide*





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### Preparation



1. Make copies of "Wildlife for Sale."
2. Obtain television and VCR.

### Activity

#### Introduction



Izzy the praying mantis says:

1. "While people have always cared about the Earth's health, it wasn't until 1970 that groups formed and laws were passed to protect the Earth. Even though thirty years sounds like a lot of time, the Earth has been here for millions of years."

"We have been using and abusing, or hurting the Earth for a long time. One day in 1969, the Cuyahoga River near Lake Erie caught fire from all the oil pollution dumped in it."

"People became very concerned. In 1970, our nation passed the Clean Air Act so that new cars would burn unleaded gasoline. Leaded gas pollutes the atmosphere."

"In 1972, the Clean Water Act was passed to prevent the dumping of pollutants, chemicals, and waste in water. In 1973, the Endangered Species Act was passed."

"What does **endangered** mean? (a species that could become extinct) What word do you see in it? (**danger**)"

"All of these laws have helped to protect the Earth, but Earth is still in danger."

2. Write the word **HIPPO** on the board. Ask the children to say the word.

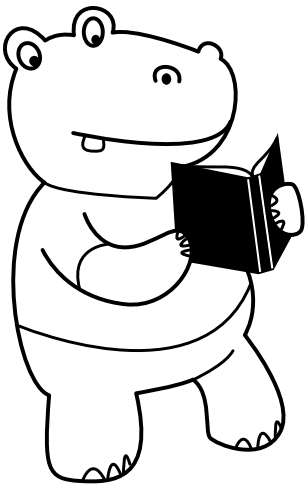


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3. Have Izzy tell the children that each letter in the word “**HIPPO**” stands for a problem that is making the Earth sick. Guide the children to understanding the following:

### “H” = Habitat Loss

What is a habitat? (The special place a plant or animal lives where it can find everything it needs to survive.)



### “I” = Introduced Species

A plant or animal that is brought into an area where it doesn't usually live. Purple loosestrife crowd out other plants. Zebra mussels found their way to the Great Lakes where they ate all the tiny green plants called plankton that other animals needed to survive.

### “P” = Population

There are too many people who need the Earth's water, plants, food, and clean air.

### “P” = Pollution

People pollute the air and water with chemicals. They leave litter all around and bury trash in the ground.

### “O” = Overconsumption

Consume means to use up. We are using up the Earth's resources faster than they can be cleaned or made again.

All of these problems are making the Earth sick. When the Earth is sick, **all** of the people, plants, and animals that live on it are affected.

### Involvement

Show the video *Going, Going, Almost Gone*. (If you want to shorten the time, show the portion entitled, “*Dressed to Kill*.”)



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### Follow Up

1. Pass out copies of “Wildlife for Sale.”
2. Explain that the plants and animals displayed are all endangered or threatened for a variety of reasons.
3. Next, pass out markers, crayons, and scissors. Have the children color the pictures.
4. Have the children match the picture of the products the animals are hunted and sold for to the picture of the animal.
5. More advanced children could do additional research to determine the population numbers of some endangered species.
6. You might want to provide reference books so the children can find pictures and other additional information.
7. Review the additional information in the Supplement, “What You Can Do.” One suggestion is for the group to adopt an endangered species.

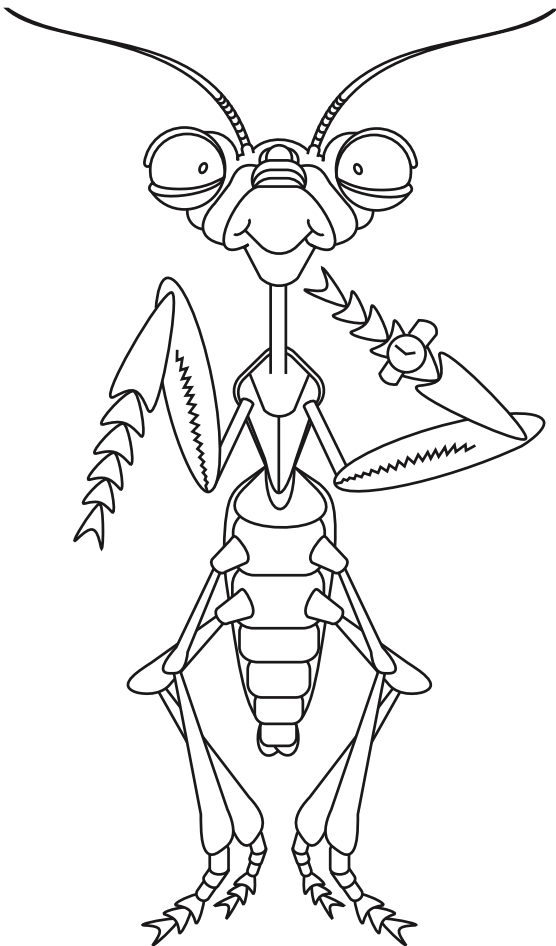
### Additional Resource:

*The Wump World* by Bill Peet



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## Notes





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