



Habitat Destruction and Endangered Species

9

✓ Lesson Objectives

Core Content Objectives

Students will:

- ✓ Explain why living things live in habitats to which they are particularly suited
- ✓ Identify the characteristics of the bald eagles' habitat
- ✓ Explain why and how habitat destruction can cause extinction

Language Arts Objectives

The following language arts objectives are addressed in this lesson. Objectives aligning with the Common Core State Standards are noted with the corresponding standard in parentheses. Refer to the Alignment Chart for additional standards addressed in all lessons in this domain.

Students will:

- ✓ Identify the reasons the author of “Habitat Destruction and Endangered Species” gives for the classification of bald eagles as an endangered species (RI.1.8)
- ✓ Ask and answer *when* questions orally, requiring literal recall and understanding of the details or facts from “Habitat Destruction and Endangered Species” (SL.1.2)
- ✓ Prior to listening to “Habitat Destruction and Endangered Species,” orally identify how animals have adapted to various habitats

Core Vocabulary

destroy, v. To completely ruin something

Example: It would destroy the forest if someone cut down all the trees.

Variation(s): destroys, destroyed, destroying

endanger, v. To put in danger's or harm's way; to create a dangerous situation

Example: A forest fire would endanger all of the animals that make the forest their home.

Variation(s): endangers, endangered, endangering

endangered species, n. A species present in such small numbers that, in the future, it may no longer exist


Example: The bald eagle used to be an endangered species because there were very few alive and people were destroying their habitat.

Variation(s): none

extinction, n. The end of a species because of the death of all its members

Example: Dinosaurs once lived on earth but faced extinction because of changes to their habitat.

Variation(s): none

<i>At a Glance</i>	Exercise	Materials	Minutes
<i>Introducing the Read-Aloud</i>	What Have We Already Learned?		10
	Purpose for Listening		
<i>Presenting the Read-Aloud</i>	Habitat Destruction and Endangered Species	U.S. map	15
<i>Discussing the Read-Aloud</i>	Comprehension Questions		10
	Word Work: Destroy		5
 Complete Remainder of the Lesson Later in the Day			
<i>Extensions</i>	Brainstorming Links	chart paper, chalkboard, or whiteboard	20



Habitat Destruction and Endangered Species

9_A

Introducing the Read-Aloud

10 minutes

What Have We Already Learned?

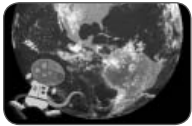
Ask students what it means if an animal or plant is *adapted* to its habitat. Tell students that it takes plants and animals a long time to adapt to their environment. Have them name several animals or plants they have learned about in the read-alouds and describe how they are well-adapted to their habitat and surroundings.

Tell students that the next read-aloud is about what happens to living things when their habitats change. Ask them what they think would happen to an animal or plant if its surroundings changed. Tell them to imagine, for example, what would happen if it got hot in the Arctic and all the snow and ice melted:

- Would the musk ox's heavy fur coat help it in the hot weather?
- Would the Arctic hare's white coat still help it blend in?
- Would walruses and seals still have a use for all that blubber?
- Blubber, heavy fur, and camouflage are all ways that Arctic animals have adapted to cold weather. Could any of these adaptations make it hard to live in the new, hot weather? Why or why not?

Purpose for Listening

Tell students to listen carefully to find out how habitat changes have affected the bald eagle.



Habitat Destruction and Endangered Species

◀ Show image 9A-1: Rattenborough in astronaut suit

Rattenborough here, delivering the final installment of our exciting habitats adventure. We have traveled all around the world, looking at some of the different habitats where plants and animals live. A lot of those habitats, such as the Arctic and the Sonoran Desert, have climates to which you and I would have a tough time adapting.¹ As we've seen, however, there are different living things in each habitat we have visited.

Because some living things are so well-adapted to the specific conditions of their specific habitats, any large change in their surroundings could make it hard for them to survive. Just think what would happen if it got even a little colder in the desert: some of those animals who are so good at keeping cool wouldn't know how to stay warm. Or what if it stopped raining in the rainforest? What would happen to all of those plants that need lots of water? Or what if something happened to disrupt the food chain of a certain animal? If that animal relied on a certain type of plant or animal to eat, and that food source was taken out of the habitat, that animal would no longer have food it needs to survive.

Sometimes habitats change because the temperature or the weather changes, but unfortunately, people often affect habitats as well. Whether they realize it or not, people can make it very difficult for plants and animals to survive.



◀ Show image 9A-2: Humans affecting the earth

From cutting down trees or starting forest fires, to dumping dangerous waste and chemicals into our rivers—people's actions can **endanger** lots of species of plants and animals.²

Sometimes people's actions **destroy** entire habitats.³ For example, someone walking in a forest might light a match and

1 Remember that *climate* means the kind of weather a place normally has. How would you have a tough time adapting to the Arctic? to the desert?

2 To endanger plants and animals means to put them in danger's way. So, people's actions can harm, or even kill, lots of plants and animals.

3 To destroy something means to ruin or break it.

4 Here the word *match* means a thin piece of wood with a special tip that produces a fire. The word *match* can also refer to a contest between two or more players or teams.

5 A species is a group of living things that are all similar. So an endangered species is a group of living things that could die out completely.

6 *Extinction* means dying out forever.



← **Show image 9A-3: Bald eagle in tree**

7 [Point to Washington State on a U.S. map.]



← **Show image 9A-4: Bald eagle in flight**

8 What is a scavenger?

drop it, and then the whole forest might burn.⁴ Even if they were not harmed by the fire itself, many animals that used to live in trees would no longer have a place to live. When they lose their homes, animals find it much harder to continue to live in a particular habitat. If they can't find new places to live, the animals will not survive. After a while, there will be fewer and fewer of these kinds of animals alive in the wild. When that happens, we say they have become an **endangered species**.⁵ We say these species are endangered for a very good reason: they are in danger of **extinction**.⁶ An animal or plant that is extinct has died out and does not exist *anywhere* in the world anymore.

I'm on a mission to tell you about one animal that can teach us a lot about endangered species and how to save them. I have come here to Washington State, in the northwestern part of the United States, to show you an amazing bird called a bald eagle.⁷ Look up at that tree there, and you will see one of these eagles perched on the very top branch. You may recognize the bald eagle because it is one of the national symbols of our country. Drawings of the eagle appear as a symbol on American money and in many other places. Believe it or not, the bald eagle was almost extinct in the United States several years ago! If that had happened, there would be no bald eagles still living. So, we're grateful to be able to spot this bald eagle today.

Bald eagles are scavengers, but they also eat rats and other small animals, so I'd better stay out of the way.⁸ I think that the bald eagle looks very grand, don't you? It is covered with dark brown feathers, and its head and tail are both white. Bald eagles are some of the largest birds living in this country. They can grow up to three feet tall, which is almost as tall as a first grader! Wow—this one has just taken off into the air, and you can see that it has huge wings. In fact, their wings can spread to about eight feet in length. While this eagle is flying around, let me tell you more about these special birds.



← **Show image 9A-5: Housing development**

9 Do you think it caused problems when people cut down trees that the eagles used to build their nests in? Why or why not?

10 Why do you think the eagles were dying out?

11 When scientists discover things, they learn new information.

There used to be thousands of bald eagles in the United States. But farmers started to hunt them because they thought the eagles were killing their farm animals. Then, later, people started to cut down the trees in which the eagles built their nests to make way for roads, houses, and shopping malls.⁹ With fewer places for them to make their homes, eagles found it harder and harder to survive, and they started to die out. Soon, there weren't very many bald eagles left in the whole United States. People started to notice that there were fewer and fewer bald eagles, and they decided to find out why.¹⁰

Scientists began to study the eagles, and they discovered two things.¹¹ The first was that a lot of eagles didn't have enough room to build their nests. Eagles do not like to live in the same area as other eagles, so they build their nests far away from each other. They like places that are very peaceful, and they need huge, strong trees that can hold nests big enough for the adults and their babies to live.

The scientists discovered that the eagles didn't have enough room in the areas where they had been living because people were chopping down trees in order to build more roads and buildings. People were destroying the bald eagles' habitat.



← **Show image 9A-6: Farmers spraying pesticide**

The other thing that scientists found out was that something bad was getting into the bald eagles' food supply. Farmers sometimes use chemicals to keep bugs from eating their crops. One chemical, though, made the eggs that the eagles laid much thinner and easier to break. Because of this, many eagle eggs were breaking before they could hatch. No one knew before then that the chemical was hurting the eagles, but it was.



← **Show image 9A-7: Bald eagle eggs**

Luckily, the scientists found out which chemical was harming the eagles' eggs. Using the scientists' information, the United States government made laws to protect the bald eagle and its habitat so that the eagles' food no longer contained the harmful chemical. Thanks to these laws, more eagles were born, and the numbers of eagles started to rise again.¹² Now, bald eagles have made an amazing comeback, but people must always be careful to protect their habitat.

12 What two things were hurting bald eagles?



← **Show image 9A-8: Bald eagle nest**

This bald eagle has returned to its nest up in that tree. Maybe it has some chicks up there that it needs to feed, or maybe it's just trying to keep warm. It is pretty chilly!

And speaking of returning to the nest, I'm afraid it's time for me to go home now. I've really enjoyed our trip around the world's habitats, and I hope that you have, too! Mrs. Rattenborough and my kids miss me, and to tell the truth, it's been a dangerous expedition for me. I'll be glad to get out of danger and into the safety of my lovely home under the steps. Home, sweet home—or maybe I should say, “Habitat, sweet habitat!”

Discussing the Read-Aloud

15 minutes

Comprehension Questions

10 minutes

1. *Literal* What is an endangered species? (a species that could die out because there are so few still living)
2. *Literal* What is extinction? (when an animal or plant dies out completely)
3. *Inferential* Why do changes in an animal's habitat make it hard for it to survive? (Animals are already so well-adapted to the habitat they live in. They can't adapt or make changes to the new conditions of their habitat.)
4. *Inferential* What can cause a habitat to change? (changes in temperature, changes in weather, people's actions)

5. *Inferential* How do people affect habitats? (They can hurt them by building cities and roads, cutting down trees, etc. They can protect them by making careful laws about where to build, and by avoiding chemicals that harm animals like the bald eagle.)
6. *Inferential* The author of the read-aloud said that bald eagles were becoming an endangered species. What reasons did the author give for the statement that eagles were becoming endangered? (They didn't have enough space to build their nests, and a chemical in their food supply was making their eggs very breakable.)
7. *Evaluative* Why do you think it is important to protect animals' habitats? (Answers may vary.)

[Please continue to model the *Question? Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

8. *Evaluative When? Pair Share:* Asking questions after a read-aloud is one way to see how much everyone has learned. In a moment you are going to ask your neighbor a question about the read-aloud that starts with the word *when*. For example, you could ask, "When is an animal considered extinct?" Turn to your neighbor and ask your *when* question. Listen to your neighbor's response. Then your neighbor will ask a new *when* question, and you will get a chance to respond. I will call on several of you to share your questions with the class.
9. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these questions.]

Word Work: Destroy

5 minutes

1. In the read-aloud today you heard, “Sometimes people’s actions *destroy* entire habitats.”
2. Say the word *destroy* with me.
3. To *destroy* something means to ruin, break, or end it.
4. If I built a big tower of blocks, I could destroy it by knocking it over.
5. What are some ways you can help to NOT destroy the habitat? Try to use the word *destroy* when you talk about it. [Ask two or three students. If necessary, guide and/or rephrase the students’ responses: “By doing _____, I will not destroy a habitat.”]
6. What’s the word we’ve been talking about?

Use a *Making Choices* activity for follow-up. Directions: I am going to give you several examples of people doing things. If the action describes someone destroying something, say, “That would destroy something.” If it does not, say nothing.

1. tearing up your homework (That would destroy my homework.)
2. coloring in a coloring book
3. shaking hands with a new friend
4. throwing a glass on the floor (That would destroy the glass.)
5. throwing a sandwich into a puddle (That would destroy the sandwich.)



Complete Remainder of the Lesson Later in the Day



Habitat Destruction and Endangered Species

9_B

Extensions

20 minutes

Brainstorming Links

Remind students that the read-aloud showed how people's actions have an effect on animals' habitats. Explain that you are going to talk about the read-aloud and that you are going to write down what they say, but that they are not expected to be able to read what you write because they are still learning all the rules for decoding. Emphasize that you are writing what they say so that you don't forget, and tell them that that you will read the words to them.

Draw a large circle on chart paper, a chalkboard, or a whiteboard. Label the circle "Eagles." Read the label to students and tell them you want them to think of words that relate to the eagles from the read-aloud.

Ask, "What sort of things do eagles need to survive?" To start them off, you may want to say something like, "The eagles like to build nests for their young." Write the word *nests* inside its own circle on chart paper, a chalkboard, or a whiteboard, and draw a line from the "Eagles" circle to the "Nests" circle. Ask, "What else was important to the eagles?" (eggs, food, land, large numbers, etc.) As students respond, write each of their answers in its own circle surrounding the main "Eagles" circle, and draw a line to connect the two.

When the class has created a substantial word map, reread the words that students brainstormed. Discuss both negative and positive ways in which people can affect these aspects of the eagles' lives. Feel free to encourage speculation, but also review the explanations provided in the read-aloud, emphasizing the impact of habitat destruction.