Title: Bald Eagle Diet

Grade Level: K-6	**Lesson Time: 30-45** min	**Unit:** Adaptations

Lesson Objectives:

By the end of this lesson, students will be able to:

- Describe that bald eagles need food (like fish), water, air, and shelter to survive.
- Build or explain a simple food chain that includes a bald eagle and fish.
- Explain that if something changes in the food chain (like pollution harming fish), it can affect bald eagles and other living things.
- Use observations from a live nest cam to make simple claims about how bald eagles get food and care for their young.

Tennessee State And Next Generation Science Standards:

Kindergarten – Grade 2

- Tennessee Science Standards
- K.LS1.1
- Use observations to describe patterns of what plants and animals need to survive.
- K.LS1.2
- Recognize that animals obtain food from plants or other animals.
- 1.LS1.1
- Explain how plants and animals use their external parts to help them survive and grow.
- 2.LS2.1
- Develop and use models to represent the relationship between plants and animals in an ecosystem.
- 2.LS2.2
- Analyze data from observations to describe how plants and animals depend on each other.
- NGSS Performance Expectations
- K-LS1-1
- Use observations to describe patterns of what plants and animals need to survive.
- 1-LS1-1
- Use materials to design solutions that mimic how plants or animals use their external parts to survive.
- 2-LS2-1
- Plan and conduct an investigation to determine if plants need sunlight and water to grow.
- 2-LS2-2
- Develop a simple model that shows how plants and animals depend on each other.

Grades 3–4
Tennessee Science Standards
3.LS2.1
Construct an argument that some animals form groups that help members survive.
3.LS4.1
Analyze and interpret data from fossils and living organisms to describe environments.
4.LS2.2
Use evidence to explain how organisms interact with both living and nonliving parts of their environment.
4.LS2.3
Develop models of food chains that describe energy flow in ecosystems.
NGSS Performance Expectations
3-LS2-1
Construct an argument that some animals form groups that help members survive.
4-LS1-1
Construct an argument that plants and animals have internal and external structures that support survival.
4-LS2-1

Grades 5–6
Tennessee Science Standards
5.LS2.1
Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
5.LS2.2
Explain how organisms obtain energy and nutrients from their environment.
6.LS2.3
Develop models to describe cycling of matter and flow of energy through ecosystems.
6.LS2.4
Evaluate competing design solutions for maintaining biodiversity and ecosystem services.
NGSS Performance Expectations
5-LS2-1
Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.
5-ESS3-1
Obtain and combine information about ways communities use science ideas to protect Earth's resources.
MS-LS2-1
Analyze and interpret data to provide evidence for the effects of resource availability on organisms.
MS-LS2-4
Construct an argument supported by evidence that changes to ecosystems affect populations.

Three-Dimensional Learning Alignment/Science & Engineering Practices (SEPs)
Students will:
Develop and use models
(drawing food chains or food webs including bald eagles)
Obtain, evaluate, and communicate information
(observing nest cams, images, or videos to make scientific claims)
Crosscutting Concepts (CCCs)
Cause and Effect
Changes in fish populations influence bald eagle survival.
Systems and System Models
Aquatic ecosystems function as interconnected systems.
Disciplinary Core Ideas (DCIs)
LS2.A – Interdependent Relationships in Ecosystems
Organisms depend on living and nonliving parts of ecosystems.
LS2.B – Cycles of Matter and Energy Transfer
Energy moves through food chains.
LS4.D – Biodiversity and Humans
Human actions can help or harm ecosystems.

Materials:

K-2
- Coloring Sheets/ Worksheets with a water area environment
- Cutouts with bald eagles and fish

3-4
- Worksheets with a water area environment
- Cutouts with bald eagles and fish
- Cutouts ofArrows
- Cutouts of Predator and prey animals

5-6
- Cutouts Pollution- monofilament, lead sinkers, fish hooks.
- Worksheets with a water area environment
- Cutouts with bald eagles and fish
- Cutouts ofArrows
- Cutouts of Predator and prey animals
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Lesson Procedure

- **1. Engage (5 minutes) Teacher prompt**
- Show a large photo of a bald eagle catching a fish or a still image from your nest cam page. (visit Eagles.org)
- Ask: “What do you notice? What do you wonder?” Have students turn and talk, then share a few ideas.
- **Key question for all grades:**
- “How does a bald eagle get the food it needs to survive?”
- **Optional:** Briefly share that AEF operates live HD cams on wild bald eagle nests so people can observe their daily lives, including hunting and feeding behaviors.
- **2. Explore: Food chain mini-lesson (10 minutes)**
- Use a simple story with provided worksheets
- Sun → aquatic plants → small fish → larger fish → bald eagle.
- Point out that each arrow means “is eaten by.”
- **Teacher talking points:**
- Bald eagles are predators that often eat fish.
- Fish eat plants or smaller animals; plants need sunlight to grow.
- All parts are connected; if one part changes, the whole chain can change.
- **Adapt your language by grade band:**
- K–2: “Who eats what?” “What does the eagle eat?”
- 3–4: Introduce terms like predator, prey, and food chain.
- 5–6: Mention food web and human impacts like pollution or overfishing that might change the chain.
- **3. Explain: Grade-banded activity with the worksheet (10–15 minutes)**
- All students use the same student packet with additional pieces with grade band
- Teacher directions vary by grade band
- **4. Extend (optional): Nest cam viewing at eagles.org (10–20 minutes)**
- Ask students to look for: What the adult eagle brings to the nest.
- How often the eaglets are fed.
- How the eaglets behave when food arrives.
- Add explicit permission line in teacher guide:
- Teachers are welcome to stream American Eagle Foundation’s live bald eagle cams in their classrooms for educational purposes. Visit eagles.org
- **5. Evaluate / Reflect (5 minutes)**
- Use one or two exit prompts:
- K–2: “Draw or circle what bald eagles eat.”
- 3–4: “Write one complete sentence explaining how energy moves in your food chain.”
- 5–6: “Explain one way humans might harm or help the food chain that bald eagles depend on.”

Lesson Procedure Cont.

All grades use the same worksheet pages, but teachers get banded guidance so it's easy to differentiate.

K–2 focus:

- "What do bald eagles eat?"
- Instruction: Have the students color the worksheet with trees, sun, water etc, add fish and bald eagles.
- Emphasize basic needs: food, water, air, shelter.
- Help students connect picture icons in the food chain (teacher can pre-cut cards or use the printed images).
- Use sentence stems on the board:
- "A bald eagle eats _____."
- "Fish need _____ to live."

Worksheet use:

- Students color the bald eagle and fish and circle the food
- Optional: Students write down their observations from the nest cams of food brought to the nest.

Grades 3–4 focus: "What is a food chain?"

- Instruction: Have the students color or create a food chain with predators going after prey.
- Introduce vocabulary: food chain, predator, prey.
- Have students label each part of the chain on the worksheet and write one or two sentences about who eats whom.
- Students fill in blanks: "Sun → _____ → _____ → _____ → Bald Eagle."
- Students answer 2–3 short questions, such as:
- "What happens to the bald eagle if there are fewer fish?"
- "Is the bald eagle a predator or prey in this food chain? Explain."
- Optional: Students note at least one observation from the cam and one question they still have.
- Support ideas:
- Provide a word bank (sun, plants, fish, bald eagle, predator, prey).
- Allow oral responses that a teacher or peer can scribe.

Grades 5–6 focus: "How does the food chain affect bald eagles, and how do we protect them?"

- Instruction: Have the students create a food web and how the environment interacts with the predator, prey and pollution.
- Expand the idea into a simple food web (e.g., bald eagles may also eat waterfowl, small mammals, or carrion).
- Connect to human impacts (pollution that affects fish, habitat loss, conservation actions).
- Worksheet use:
- Students modify the basic chain into a branching "mini-web" (e.g., add another prey species).
- Writing Prompts:
- "Describe one way a change in fish populations could affect bald eagles."
- "Describe one action people can take to protect bald eagles and the food chains they depend on."
- Observation Page:
- Students record 2–3 evidence-based statements from the cam (e.g., "I observed an adult eagle bringing what appears to be a fish to the nest") and connect to the food chain concept.

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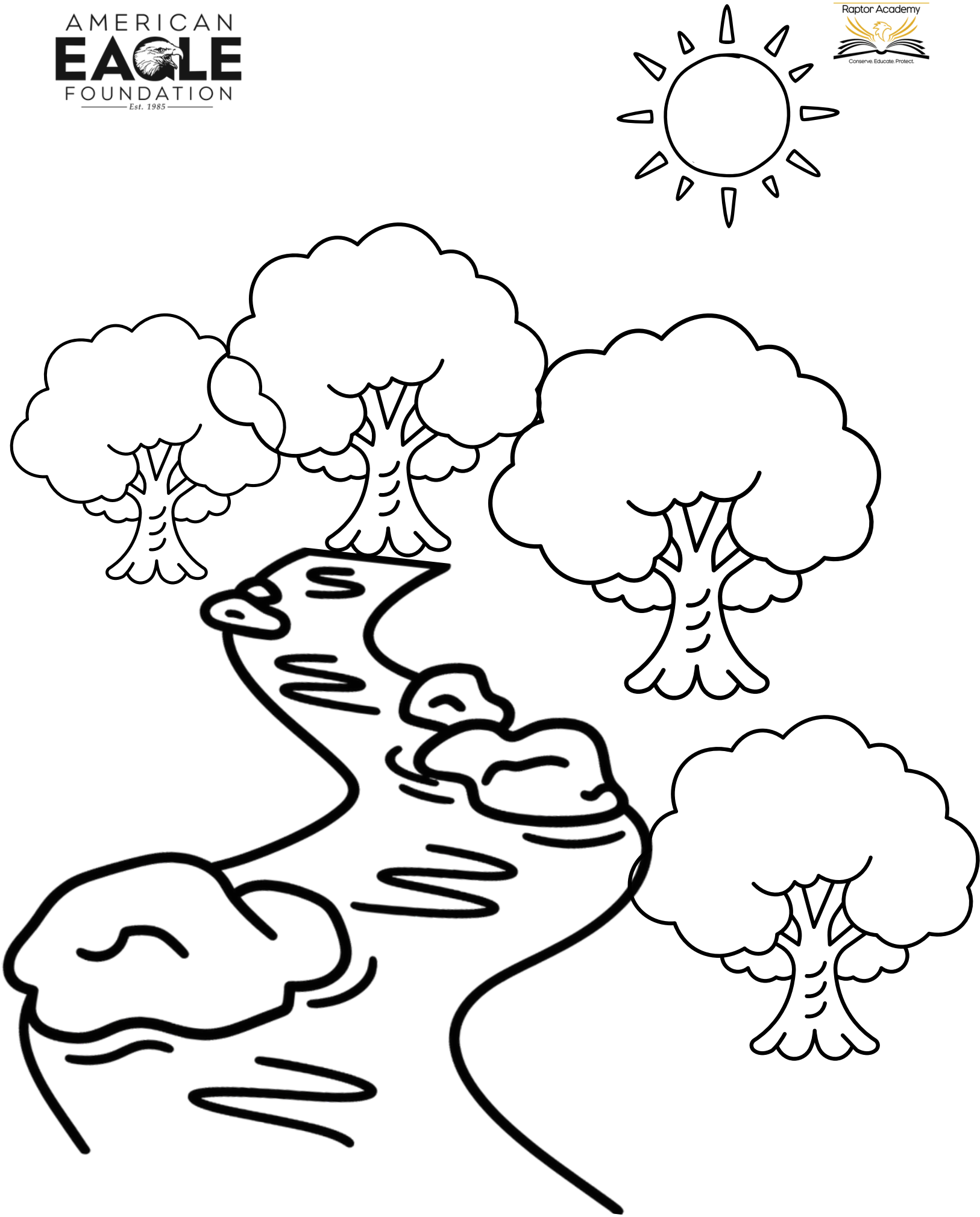

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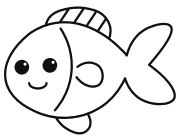

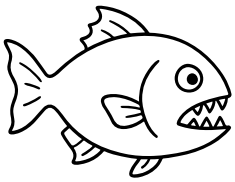

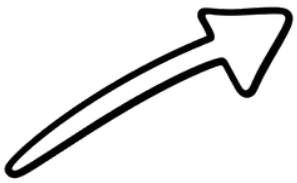

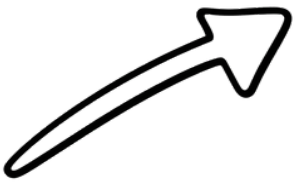

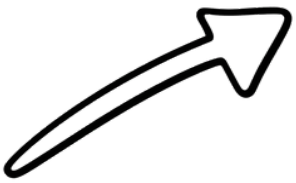

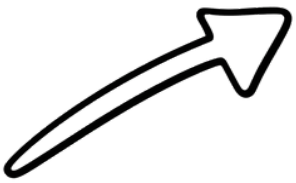

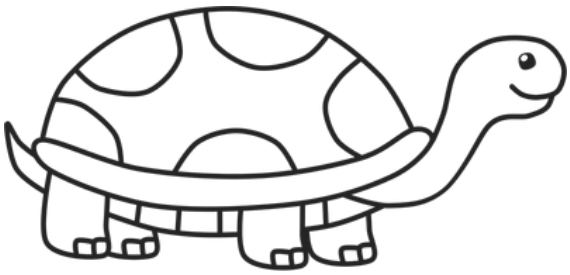

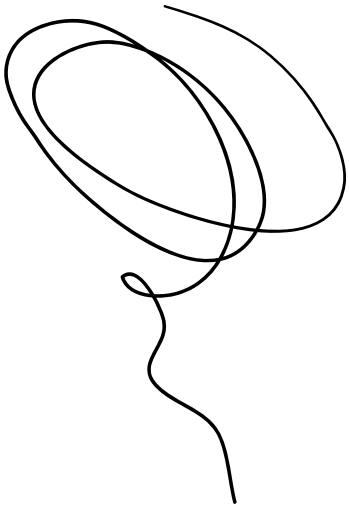

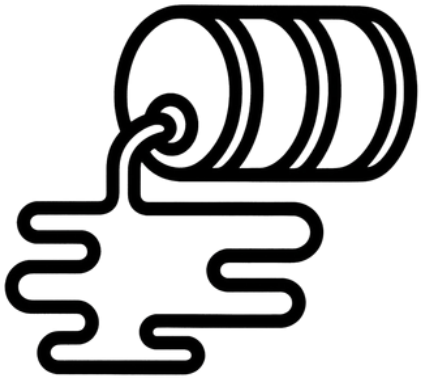

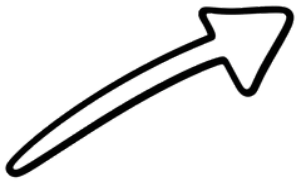

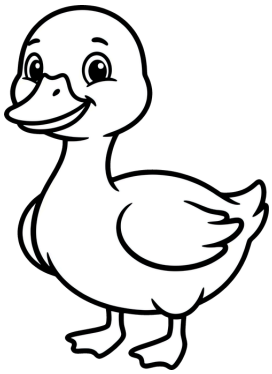

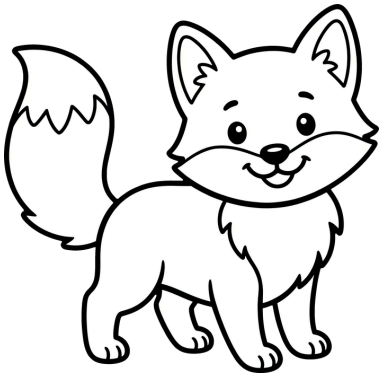

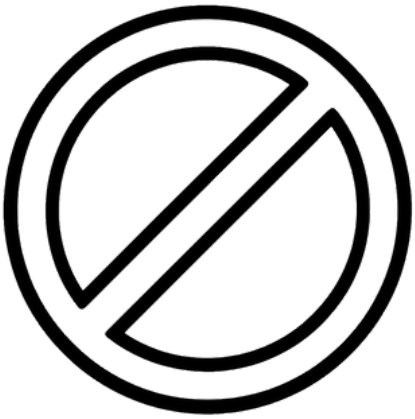

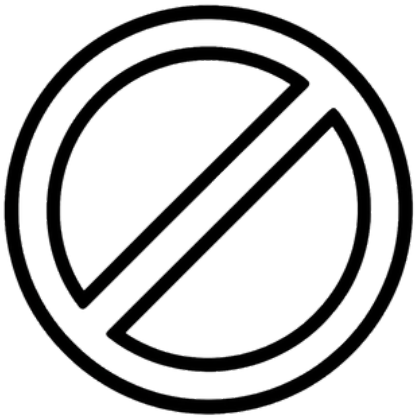

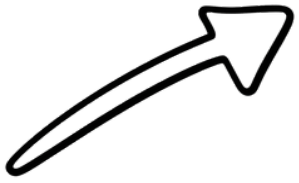

Bald Eagle Diets

1. What do you observe the eagles eating?

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2. What do you see in the nest/ what is it made of?

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3. What do the fish eat?

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4. Which animals are predators?

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5. Which animals are the prey?

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6. What is a food chain?

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7. What is a food web?

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8. Why are food webs important to understand?

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9. What happens when humans leave pollution behind?

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10. What is a pollutant?

Notes of observation from the Bald Eagle Nest Cam

**Please note this is intended to be modified per grade level as an editable document.