SN EDUCATOR GUIDE

April 24, 2021

Elusive Killer in Eagle Die-Offs ID'd

Student Discussion Worksheet

Directions: Read the online *Science News* article "A toxin behind mysterious eagle die-offs may have finally been found." Discuss the first set of questions with your class and then work with a partner to answer the second and third sets of questions. A version of the story, "Elusive killer in eagle die-offs ID'd," appears in the April 24, 2021 issue of *Science News*.

Defining invasiveness

1. What is an invasive species? Are all non-native species considered invasive? Explain.

2. How can invasive species enter an ecosystem? Give examples to explain your answer and state whether the species was intentionally or accidentally brought to the ecosystem.

3. Brainstorm ways an invasive species can impact an ecosystem. Consider impacts on the physical environment and living organisms, as well as possible effects on human health, economics and disruption of resources or processes.

A cascade of harm

1. What nonnative species is described in the *Science News* article?

2. Why is this nonnative species considered invasive? What impacts did it have on the ecosystem's physical environment and the animals that live there?

3. Explain the cascade of ecosystem events that the invasive species triggered, starting with the introduction of the nonnative species to the ecosystem. Try to list them in chronological order as much as possible.

Ranking invasiveness

1. What are some invasive species in your local area? Choose one to focus on, and write down the impacts it has on its ecosystem. The USDA National Invasive Species Information Center lets you look for invasive species in your region.

2. Once a species has been identified as invasive, think through characteristics that the species has that may affect its ability to damage the ecosystem. For example, some characteristics could be rate of spread or reproduction, difficulty to control and longevity. Discuss how damaging the species could be to the ecosystem based on these characteristics.

3. Based on the class brainstorm and other group discussions, create three or four main categories for impacts that invasive species have on ecosystems. Define a scale for ranking the species' level of impact in each category you create. Then, rank your chosen invasive species for each category and come up with an overall rating of the threat the invasive species poses to the ecosystem.

4. If time allows, compare your rating scale with another group's. How were your scales similar and different? Rank each other's invasive species using your rating scale. Does it work for another species, or do you need to adjust your rating scale?