

Student Discussion Worksheet

Directions: Read the online *Science News* article "[Baleen whales eat \(and poop\) a lot more than we realized](#)" and answer the following questions. A version of the article, "Whales eat more than we thought," appears in the December 4, 2021 issue of *Science News*.

Conserving cycles

1. What cycles through an ecosystem and how does it cycle? Explain and give a specific example from the article.
2. How does the law of conservation of mass support cyclical processes? How can a cyclical process in an ecosystem be disrupted? Give an example from the article.
3. What role does energy play in ecosystem cycling?

A whale of an ecosystem

1. What does it mean to talk about an organism's "role" in an ecosystem? What does the term "role" in this context mean? Give an example from the article.
2. When ecosystems experience a dramatic change, it can be challenging to determine why. Explain the unexpected impact of Antarctic whaling on the nutrient cycle as described in the article.
3. The article describes how whales' food consumption was quantified. How can putting specific numbers to animal behavior help scientists understand an animal's role in the ecosystem?
4. Given the complexity of ecosystems, how can scientists determine if one trend or event causes another trend or event?