



LESSON PLAN

The Consciousness of Nature



RELATED ARTICLE

**“Small Talk: Life
on a Farm”**

BY LUANNE ARMSTRONG



Class: 60 minutes

Key Idea

Animals, plants, and even fungi are more “aware” than people previously thought, which raises questions about how that might change our relationships with other living beings.

Background

In this story, farmer and author Luanne Armstrong describes her observations about the various ways that plants and animals are “aware.” In fact, a growing body of scientific evidence points to the idea that other living things are more conscious than people once believed.

In 2012, an international group of prominent scientists signed the “Cambridge Declaration on Consciousness” asserting that many animals—including mammals, birds, and even the octopus—are conscious in the same way that humans are. They wrote, “Convergent evidence indicates that nonhuman animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors.” As for plants, botanists such as author Daniel Chamovitz affirm that while plants may not be able to think as humans do, they exhibit many elements of consciousness: they can see, smell, feel, mount a defense, warn their neighbors of danger, and even remember.

The issue of nonhuman animal and plant awareness raises many questions for people. For example, what moral or legal standing these organisms should have, and how we might redefine the concept of “humane.”

Connections to National Standards

Common Core English Language Arts. RH.11-12.4. Determine the meaning of words and phrases as they are used in a text, including analyzing how an author uses and refines the meaning of a key term over the course of a text.

SUBJECT AREAS

HIGH SCHOOL

- Biology
- English Language Arts
- Environmental Science
- Philosophy

COLLEGE

- Animal Biology
- Botany
- Communications
- Ecology
- Philosophy
- Psychology

THEMES

- Nonverbal communication
- Human relationships with other living things
- Empathy toward nature
- Conscious awareness in animals and plants

MATERIALS

- Printed copies of the story, one per student (or access to story online)

PREPARATION

- Make copies of the story. Students will read the article as homework.



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College, Career, and Civic Life (C3) Framework for Social Studies State Standards. D2.Geo.6.9-12. Evaluate the impact of human settlement activities on the environmental and cultural characteristics of specific places and regions.

Next Generation Science Standards. HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.

Lesson

SETTING THE STAGE

Introduce the story by telling students that they will be reading an article written by a farmer who has a nontraditional take on the emotional and intellectual capacities of nonhuman animals and plants. Ask students: How many of you think nonhuman animals possess intelligence and experience emotions? How many of you think plants possess intelligence and experience emotions? What evidence do you have for your position?

ENGAGING WITH THE STORY

Point out that scientists have long assumed that plants and nonhuman animals don't really have consciousness, or, as the author puts it, that nature is "passive, unfeeling, and mechanical." However, there is a bounty of new research that raises questions about that assumption. Invite students to read the story, underlining the various animals and plants the author offers as examples challenging that notion.

Delving Deeper

1. After they read the story, give students a few minutes to jot down thoughts about their own relationships with animals or plants, and whether they have had any experiences that would support or refute the author's thesis.



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2. Lead a discussion with your class about the article, asking such questions as:
 - The author has over 60 years of experience living and working on a farm. From your own experience, would you agree or disagree with her perspective that plants and nonhuman animals are capable of awareness?
 - If she were proved right, how might that change your behavior toward plants and animals? How might it change our culture or society?
 - The author uses the word “translation” to describe her communication and connection with other living things. How might this word contribute to a new or deeper understanding of human–animal or human–plant relationships?

Reflecting and Projecting

Give students the following reflective writing prompt to demonstrate their understanding of the story:

1. In the article’s opening quote, Gregory Rabassa says, “Every act of communication is an act of translation.” After reading the article, write a paragraph describing what you think Rabassa means in this statement and how it relates to the article. (CCSS.ELA.RH.11-12.4)

Resources

Daniel Chamovitz, *What a Plant Knows: A Field Guide to the Senses* (New York: Scientific American/Farrar, Straus and Giroux, 2012).

Frans de Waal, *The Age of Empathy: Nature’s Lessons for a Kinder Society* (New York: Broadway Books, 2010).

Stephen Budiansky, *If a Lion Could Talk* (New York: Free Press, 1998).