



# Teacher Guide

## UNIT 4 LESSON 4: HUMAN - NATURE DEFICIT DISORDER

### Theme

Lack of outdoor play and frequent exposure to nature is shown to lead to a decrease in appreciation and knowledge of environmental importance.

### Missouri Science Standards: ESS3.C.1

### Vocabulary



**Nature Deficit Disorder** - The term 'nature-deficit disorder' was introduced by Richard Louv in 2005 with his publication, "Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder." He coined the phrase to serve as a description of the human costs of alienation from nature. It is not meant to be a medical diagnosis, but as a way to talk about a growing problem that we had no language to describe. The term caught on and is now connected to an international movement to connect children to nature.

**Literature review** - A comprehensive summary of previous research on a topic. The literature review surveys scholarly articles, books, and other sources relevant to a particular area of research.

**Yield** - To produce or furnish as return

**Statistically significant** - A determination made by an analyst that the results in the data are not explainable by chance alone. Statistical hypothesis testing is the method by which the analyst makes this determination. This test provides a p-value, which is the probability of observing results as extreme as those in the data, assuming the results are truly due to chance alone.

### Video 1: Why Does Nature Make You Feel Better?

*Video Description: It's not a huge surprise that nature is beneficial to our mental health. But why? Hosted by: Hank Green. Made by SciShow Psych.*

Video Link: <https://www.youtube.com/watch?v=P5vXvgX535g>

Teacher Notes:

- Video is 5 min and 44 seconds long.

Follow-Up Questions:

1. True or False? The idea that nature is healing is a new developed in the past decade.
2. Fill in the blank. Studies have shown that being exposed to \_\_\_\_\_ can improve well-being in a bunch of ways, both in those with and without clinical conditions.
3. Fill in the blanks. A study from 2012 found that walking through nature for \_\_\_\_ minutes provided a mood boost and other cognitive benefits for 20 participants with \_\_\_\_\_.
4. True or False? Time in nature is good for you.

## **Article: "Mental health benefits of interactions with nature in children and teenagers: A systematic review"**

*Article Description: This article is a scientific literature review of the mental health benefits for children and teenagers interacting with different types of nature.*

Article Link: <https://research.childrenandnature.org/research/interactions-with-nature-may-positively-influence-the-mental-health-of-children-and-teenagers/?h=knz2hyGH>

Teacher Notes:

- *Some terms may be advanced for students. Make sure to encourage them to look up words they are unfamiliar with.*

Follow-Up Questions:

1. What is the specific objective of the review?
2. What were the four criteria for studies to be included in the review?
3. Of the eight categories of mental health outcomes that were addressed, which two were studied the most often? What was not studied at all?
4. How many studies reported statistically significant positive relationships between nature and mental health outcomes?
5. Which form of interaction with nature was the most likely to yield positive results?
6. What does the overall finding of the review support?



## Activity: Interview Another Generation

*Activity Summary: In this activity students will reflect on their own connection to nature and interview someone from another generation to understand their experiences and how they may be different or like the student's own.*

*Teacher Notes:*

- *Recommended to be assigned as homework.*
- *The activity asks the students to interview someone two generations older than them. Some students may have difficulty finding someone to interview. It might be a good idea to have a few back-up people that you can assign to the students who don't know anyone.*

## Concluding Questions/Assessment

\*Student worksheet included in packet.

1. Reflect on your thoughts from the "Why Does Nature Make You Feel Better" video. Do these ideas align with your own experiences in nature? In other words, does spending time in nature help you feel restored? Give an example of one of your outdoor experiences in your answer.
2. What additional research would YOU like to see done on this topic? What are you curious to know more about? Why?
3. What did you find challenging about conducting an interview? Be specific.
4. What was your main takeaway from your conversation with another person from an older generation? Again, be specific.

