

Lesson 2.4: Nature-Culture Connections on the School Grounds

In this lesson, students will understand the importance of our connection with nature, and how this connection can be expressed on the school grounds to reflect the cultures of their school and community.

Grade Level: 6 - 12 or equivalent

Subjects: Science, social science, communications

Concepts/Vocabulary: Nature, culture, nature-culture connection

NGSS Performance Expectations:

Middle and high school:

- Asking questions and defining problems
- Developing and using models
- Constructing explanations and designing solutions
- Engaging in argument from evidence
- Obtaining, evaluating, and communicating information

5E Unit: Explore

ESA 4DEE:

- Human-Environment Interactions
- Cross-cutting Themes

Universal Design for Learning Connections

Key knowledge (Students will know that):

- As biodiversity declines, the loss of culture also occurs, along with information about those ecosystems that is valuable to all of us
- Different cultures relate to nature in various ways and these connections can be expressed on the school grounds

- Through biocultural design we can reflect the nature-culture priorities of our community

Key skills (Students will be able to):

- Connect their research to their own lives
- Comprehend information and use it to envision a different future

Key dispositions (Students will value):

- The connection between their culture and nature
- The potential of ecological school grounds to reflect the cultures present at their school
- The necessity of a bioculturally diverse planet for the essential functions of Earth's ecosystem that all living things rely on

Technology Connections: Internet resources

Materials:

- Notebooks/electronic journal for each student to be used throughout the project as observation journals
- Large paper for presenting student answers (or other means of displaying the information)
- Supplies for making models and artworks

Estimated Time for Lesson: 3-4 45-minute class periods

Lesson Objectives

Students will:

- Make meaning of how different cultures connect with nature and how these connections impact our relationships with nature.
- Incorporate elements of their own cultural relationships with nature into models for ecological school grounds at their own school.
- Document their thoughts about the activities in this lesson in a journal.

Assessment Opportunities

- Contributions to class discussion
- One-Minute Format worksheet guide
- Presentation boards
- Biocultural design research product
- Small group work

- Whole class discussion
- Journal entries describing key takeaways from this lesson
- Preparation of slide(s) for presentation in Lesson 5

Background

In this lesson, students will engage in activities to better understand the relationship between nature and culture. As biodiversity declines, a loss of culture also occurs as people living closest to the lost habitats can no longer engage in their traditional activities with those spaces. As cultures disappear, so does information about those ecosystems that is valuable to all of us. While schools exist in nearly every community, most do not manage their grounds for biodiversity, and the cultures of their students are not represented. These are missed opportunities that this curriculum seeks to change.

The terms "school grounds" and "schoolyards" are used interchangeably in this lesson.

Getting Ready to Teach

This lesson follows a sequential step pattern and requires background knowledge (see above). A One-Minute Format will be used in Part I (although students will be given longer than that to do their work). In an fascinating and enlightening video, landscape researcher Mariia Ermalova Terada is interviewed about biocultural diversity and nature journaling (this part of the interview starts at 10:36). This article on Traditional Ecological Knowledge and the SDGs has excellent graphics and charts that can be shared with your students.

Students will write their own poem based on elements of their own culture and patterned off a poem by George Ella Lyon in Part II. Read this information about her life prior to teaching that part of the lesson.

During Part IV, students will explore biocultural design as it applies to their school grounds. Read this interview to learn more about this type of design, which prioritizes the connection between nature and culture, and the role of landscape architects.

Students should be prepared to spend time outdoors on their school grounds for part of this lesson.

Please open the links prior to teaching the lesson. You may also refer to additional resources at the bottom of this page. If there is time, please consider doing at least one of the extensions to give your students another perspective on the nature-culture connection.

The Lesson

Part I. Defining Nature and Culture

1. In small groups of three or four, ask students what the words "nature" and "culture" mean to them. Give them five minutes to come up with their answers. They should note their answers in their journals and can use this [worksheet](#) to guide their conversation.
2. Once the time is up, ask each group to report out. Write the answers where they are visible to everyone.
3. As part of the whole group discussion, ask students about our social relationships with the natural world. All social relationships with nature are cultural, and include political, scientific, economic, subsistence, environmental, governance, and civic engagement.
4. There are also different ways of thinking about human relationships with nature, including whether we are **apart from** or **a part of** nature. Introduce your students to Traditional Ecological Knowledge by having them read this [article](#) and discuss it in their small groups. Here are some questions to guide the discussion: **"Does this perspective on nature lean toward being apart from it or a part of it?" "What can we learn from this perspective?"**
5. Expressions of these relationships with nature find themselves within our decisions about use of natural resources. They also find themselves expressed through cultural symbols such as artwork, written word, landscape design, food, language, values and traditions, and other ways. We can express our cultural values through design and activities on our school grounds. Spend just a couple of minutes asking students for their ideas about how this expression of nature and culture could occur on their school grounds (ideas could include planting certain food plants or native plants that are symbolic or used for medicine, having spaces for specific family or community activities, artworks, etc.). Capture their thoughts on large paper and post so that everyone can see them. Students should add them to their journals.

Part II. Writing a Poem to Express Our Culture

6. In this part of the lesson, students will try their hand at writing a poem that reflects their culture.
7. As a class, read the poem "[Where I'm From](#)" by George Ella Lyon. This author from the Appalachia Region in the United States writes in her own voice, not trying to sound like anyone else. You may listen to the author read the poem [here](#) or watch a video of her reading the poem [here](#).
8. Working in their small groups, give students a copy of the poem (or project it or otherwise post it so that all can see it). Ask them to identify different cultural

features of the poem, such as food, items, plants, sayings, family references, religious references, and memories.

9. Engage in whole class discussion to share what the student groups found, and add any that come to mind during the conversation.
10. Ask each student to make their own list of elements in their journals that can be the basis for their own poem that features their culture. One at a time, ask them to list:
 - a. Favorite foods or those that are traditional in their family
 - b. Plants that they like or are familiar with, especially native plants
 - c. Wild animals that are common around their homes or school
 - d. Domestic animals that they or others have had as pets or that they know about
 - e. Important people in their lives
 - f. What kind of music they like as well as music that is traditional in their family
 - g. Memories they have of family or community that are special to them
 - h. Sayings that they or family members often use
11. Give students at least 15 minutes to write their own poem in their journals patterned off "Where I'm From," using their lists as the foundation. Once they are finished, ask them to share in their small groups. The point is not to write a fabulous, polished poem in 15 minutes. It is to think about how all of these elements make up our own culture and traditions, and to learn from those of others.
12. Invite students to share their poems with the whole class.

Part III. Express Our Nature Connection Visually

13. In this part of the lesson, students will create a graphic organizer that answers the question, **"What's Your Nature Connection?"**
14. Using large pieces of paper, ask students to use drawings, photos, text, or even items collected (responsibly) from the school grounds to illustrate their connection with nature. They can use their poems as inspiration, and may wish to use part of their space on the paper to think about what they would like their connection to nature to be in the future.
15. Place the presentations around the room so everyone can see them. You may also place them where others in the school can see them as well. Give students two minutes each to explain their creations to the class or set aside a time where the students can be available to explain them to others.

16. In a full sheet in their journals, students should draw or symbolize their nature connection, or take a photo of their visual expression to include in their slides or other way of making the presentation in Lesson 5.

Part IV. Exploring Biocultural Design as Applied to School Grounds

17. Next, students will explore biocultural design as it applies to the school grounds. They can work in groups.
18. Using print and digital resources, as well as interviews with community members and/or professionals, research the school community's connections between nature and culture. This [article](#) could be a good place to start.
19. Answer these questions:
 - a. **What nature-culture connections can we observe on our grounds school now?**
 - b. **What connections could we envision and express on our school grounds in the future?**
 - c. **How would you like to feel when you are on your school grounds?**
20. Students can note the answers to their research in their journals.
21. Report out to the whole class and note responses in a place visible for all to see.
22. With the information produced in the different parts of this lesson, create a model or artwork reflecting the nature-culture connections students have researched. These models/artworks could be prototypes to include in the design of an ideal school grounds, which will be the subject of Lesson 5. They may be sketches, 3D models, computer models, miniature artworks that could be upscaled for the school grounds such as mosaics or art made from recycled materials, or other ideas! Students can work in groups.

Part V. Presentation Preparation

23. Have students open their journals and record their main takeaways from this lesson, including big ideas, relationships, and goals.
24. Remind them that this overall project culminates in a presentation or other means of advocating for more ecological and culturally diverse school grounds.
25. Using the [Presentation Rubric](#), ask students to record some ideas in the "Presentation Ideas" section of their journal for the slide(s) or piece(s) of information to be included from Lesson 2 in the project presentation, if you will not be using slides. Label these ideas "Lesson 2.4" or with some other label that helps organize the information to align with the rubric. Students can work in their groups (which you may keep for the duration of the project) or individually.

26. Collect the journals to keep for assessment and to ensure that all students are collecting the information needed for their presentations.

Additional Resources

- [Why Cultural Diversity Matters](#) video
- [Biocultural Diversity Combats Climate Change](#) video
- [Indigenous STEAM](#) resources

Extensions

- Use [Learning in Places Storyline Frameworks](#) to do a deep dive into nature-culture connections, the histories of place and thinking across timescales, and to investigate socio-ecological relationships.
- Explore another viewpoint on the nature-culture connection by engaging with Traditional Ecological Knowledge (TEK). The Ojibwe people's [Guiding for Tomorrow](#) curriculum brings Native perspectives, tribal knowledge, and involvement to addressing issues of climate change, which impacts biocultural diversity.
- Do a deep dive into [biophilic design](#) (video) and [biomimicry](#) (video). This [video](#) with biomimicry guru Janine Benyus is well worth watching.
- Team teach this lesson so that science/ecology and language arts teachers can both contribute ideas.

In the Next Lesson (L 3.1)

Students will undertake a field investigation on their school grounds.

Acknowledgments

- The activity in Part II is adapted from Rob Linne, Professor in the School of Education at Adelphi University.

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