

Dr. Debrah C. Sickler-Voigt Presents...

# Biodiversity and Ecofriendly Design

Adolescence: 9th – 12th Grades

## Big Idea

### Biodiversity

## Learning Targets

- I can work with my team of classmates to create a collaborative artwork that focuses on a responsible ecofriendly design concept suited for the 21st century.
  - I can work with my team to select the media of our choice for our collaborative artwork.
  - I can work with my team to emphasize an environmentally inspired design concept in our artwork.
  - I can work with my team to create a unified composition.
- I can orally describe how artists and designers produce artworks that link environmental responsibility with quality design.
- I can write a one-page analytical art criticism response about an artwork by an ecofriendly artist or designer completing the four steps: reaction, description, interpretation, and evaluation (Anderson & Milbrandt, 2005).
- I can give a professional presentation with my team that explains the merits of our artwork and the inspirations for our design.

## Vocabulary

Biodiversity, Habitat (terrestrial, marine, and freshwater), Flora, Fauna, Natural Resources, Geosphere, Biosphere, Hydrosphere, Atmosphere, Environmental Artist, Environmental Art, Architecture, Interior Design, Ecotourism, Finite, Conservation, Form, Unity

## Essential Questions

1. How is biodiversity linked to human survival?
2. How can people protect the environment using ecofriendly design concepts?
3. What role and responsibilities do artists and designers have in creating eco-friendly products?

## Overview

This lesson focuses on ICEFA's theme biodiversity and the value of preserving biodiverse habitats. Biodiversity is a place in nature where many different living species coexist. Biodiversity thrives in environments that contain a wide variety of plants, animals, and microorganism. Our world contains a variety of biodiverse habitats including terrestrial (land), marine, and freshwater environments. Understanding the need to protect biodiversity, many contemporary artists and designers create ecofriendly artworks and products that teach society about sustainable living practices. They often work in teams to augment their specialized skills, share their knowledge, and develop ecofriendly products. For example, a design team can produce an ecofriendly community center or recreational space that integrates architecture, fine art, and interior design. Students will examine the meaning of biodiversity and ecofriendly design concepts through participation in class discussions, research, and a choice-based studio art project. To produce their artworks, they will look to the works of contemporary artists and designers whose environmental concepts promote, enhance, and maintain the Earth's biodiversity.

## Materials

Invite students to select among age-appropriate materials such as markers, coloring pencils, ink, acrylic paint, watercolors, collage supplies, printmaking supplies, sculpting supplies, and recycled objects as part of a choice-based curriculum.

## Procedures

### Presenting, responding, and connecting...

1. The teacher will (TTW) present the big idea biodiversity, environmental art and design, and the lesson's essential questions to the students. TTW identify and explain the lesson's objectives, vocabulary words, and assessment criteria and check for student understanding. *The students will (TSW) write down the lesson's objectives in their journals. TSW answer the essential questions orally as part of a class discussion. TSW ask questions if there is something they do not understand and acknowledge understanding at the appropriate time(s).*
2. TTW engage students in a discussion on biodiversity and finite resources. TTW will present ecofriendly design concepts using photographs and artworks as inspirations for students' research and artistic creations. *TSW actively examine the sample photographs and artworks on biodiversity. TSW discuss finite resources and ecofriendly design concepts. TSW identify ways to design products that sustain and enhance the Earth's natural resources to protect biodiversity using their collective research on the subject. TSW identify how they will collaborate with their peers to augment their individual strengths and prepare a collaborative product on biodiversity and ecofriendly design.*

### Creating and connecting...

3. TTW demonstrate various options for students to use art media and processes to communicate their ideas about biodiversity and ecofriendly design safely. TTW identify strategies for students to work in teams and develop preliminary artworks to prepare for their collaborative products. TTW explain how each group's final product(s) will focus on a different aspect of ecofriendly design concepts. TTW ask students to write a one-page analytical art criticism response about an artwork by an ecofriendly artist or designer completing the four steps: reaction, description, interpretation, and evaluation. *TSW produce their group's collaborative artwork on biodiversity and ecofriendly design concepts. TSW will meet the class objectives. TSW write a one-page analytical art criticism response about an artwork by an ecofriendly artist or designer completing the four steps: initial reaction, description, interpretation, and judgment.* TTW monitor and assist the students throughout the learning process. TTW facilitate students' final edits to their designs and provide them with feedback as they practice for their presentation of their work. TTW oversee student cleanup activities. *TSW make final revisions to their designs. TSW practice their presentation of their ecofriendly design concept. TSW be responsible and follow class procedures safely throughout the lesson, including cleanup.*

### Presenting and connecting...

4. TTW facilitate the class presentations and closure activities. *TSW present their teams' finished designs. TSW explain what they learned by studying biodiversity and artists' and designers' environmentally creations while talking about their completed artworks. TSW identify steps they can take to protect the environment and the natural resources during the lesson's closure. TSW complete the checklist.*

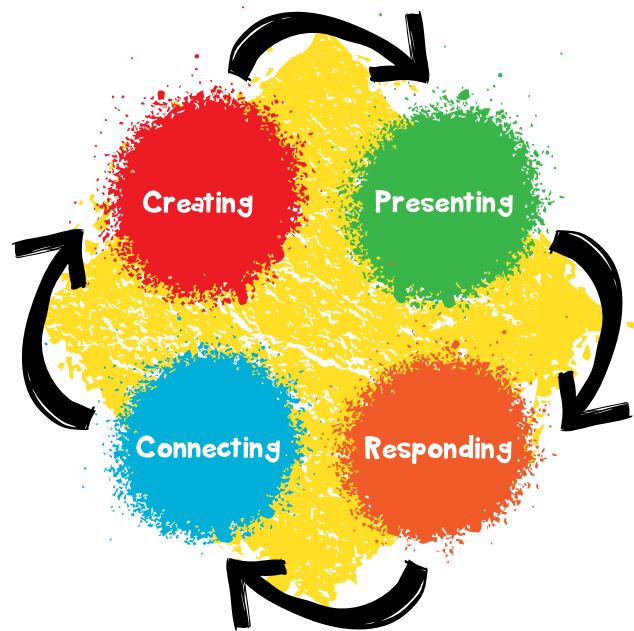
## Accommodations

### The teacher will:

1. Break down academic vocabulary and the steps necessary for students to participate in all class activities.
2. Provide hands-on demonstrations to show students how to participate in the choice-based studio art production activity.
3. Meet with students individually to review key information and check for understanding.
4. Brainstorm possible ways to augment class assignments with advanced learners.

## National Visual Arts Standards

- Standard #2—**Creating**: Organize and develop artistic ideas and work.
- Standard #4—**Presenting**: Select, analyze, and interpret artistic work for presentation.
- Standard #7—**Responding**: Perceive and analyze artistic work.
- Standard #10—**Connecting**: Synthesize and relate knowledge and personal experiences to make art.



## Inspiration Artists

- Thea Alvin
- Andy Goldsworthy
- Gabriele Meneguzzi and Vincenzo Sponga (Verde Vivo)
- Edith Meusnier
- Ysabel LeMay
- National Geographic and Smithsonian Flora and Fauna Photographs
- Sustainable Architecture Firms (such as Studio Gang Architects and Leddy Maytum Stacy Architects)
- ICEFA Lidice 38th Exhibition Children's Artworks
- (Right) Honourable mention: Common work of children (14 - 16 years), ZUŠ, Sedlčany, Czech Republic. ICEFA Lidice 40th Exhibition



## Assessment: Checklist

---

### The student will meet all six criteria.

- I created a collaborative artwork with my team using the media of our choice that focuses on a responsible ecofriendly design concept suited for the 21st century.
- I worked with my team to emphasize an environmentally inspired design concept in our artwork.
- I created a unified composition with my team.
- I orally described how artists and designers produce artworks that link environmental responsibility with quality design.
- I wrote a one-page analytical art criticism response about an artwork by an ecofriendly artist or designer completing the four steps: reaction, description, interpretation, and evaluation.
- I participated in a group critique to present and assess the characteristics and merits of my team's artwork.

## Group and Self-Assessment

---

The students will participate in a class critique of the finished collaborative artwork. The students will discuss the process of making the collaborative work and how they applied professional skills, like teams of creative individuals do, to complete their collaborative products. They will identify the most successful parts of their artwork and identify if there were any areas that they would want to work on some more or change during a class critique.

## References

---

- Anderson, T. & Milbrandt, M. (2005). *Art for life*. Boston, MA: McGraw Hill.
- ICEFA Lidice. (2015). *International Children's Exhibition of Fine Arts Lidice*. Retrieved from <http://www.mdvv-lidice.cz/en/>
- National Coalition for Core Arts Standards. (2014). *National Core Arts Standards: A conceptual framework for arts learning*. Retrieved from [http://www.nationalartsstandards.org/sites/default/files/NCCAS%20%20Conceptual%20Framework\\_4.p](http://www.nationalartsstandards.org/sites/default/files/NCCAS%20%20Conceptual%20Framework_4.p)
- Sickler-Voigt, D. C. (2020). *Teaching and learning in art education: Cultivating students' potential from pre-k through high school*. New York, NY: Routledge.
- State Education Agency Directors of Arts Education. (2014). *National Core Arts Standards*. Dover, DE: State Education Agency Directors of Arts Education.

## Acknowledgements

---

MTSU NIA Grant [www.mtsu.edu](http://www.mtsu.edu) and [www.arted.us](http://www.arted.us) supported research. With kind permissions from ICEFA Lidice [www.mdvv-lidice.cz/en/](http://www.mdvv-lidice.cz/en/). Copyright © 2019 Debrah C. Sickler-Voigt, Ph.D from the website [www.arted.us](http://www.arted.us). All Rights Reserved.