

A L I C E H A R G R A V E

Lesson Plan: *Loss of Biodiversity and Habitats - Data Visualization*

Topic/Theme Eco-Activism and Data Visualization

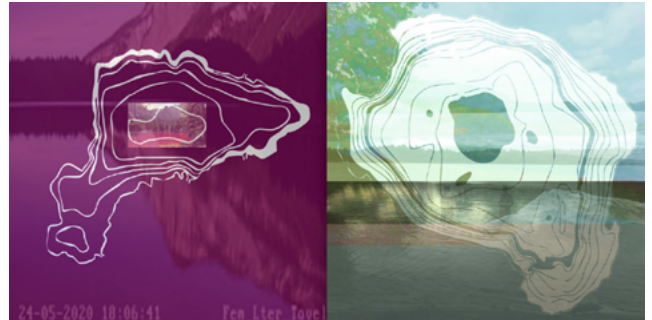
Grades K-12

Subject Areas Visual Arts, Language Arts, Science, and Social Sciences

Lesson Objectives

Students will be able to:

- interpret intent and meaning in artworks by Alice Hargrave.
- conduct research on loss of biodiversity and habitats by generating ideas and questions, and by posing problems.
- relate knowledge of loss of biodiversity and habitats and synthesize with personal experiences to create art.
- gather, evaluate, and synthesize data from a variety of sources to communicate in a written artist statement their discoveries and understandings of how human actions impact biodiversity and habitats.
- curate an exhibition that conveys the meaning of their artistic work.



Alice Hargrave, (left) *Lake Tovel, Italy, Bathymetry, warming and decreased magenta algal blooms, 2020*, and (right) *Palette Lake, Wisconsin, USA, Bathymetry, water rising and loon loss, 2020*. Pigment prints. 18 x 17 inches each. Both works courtesy of the artist.

NATIONAL LEARNING STANDARDS

Visual Arts

- NA-VA-8.1 Interpret intent and meaning in artistic work
- NA-VA-10 Synthesize and relate knowledge and personal experiences to make art.
- NA-VA-6.1 Convey meaning through the presentation of artistic work

Language Arts

- NL-ENG.K-12.7 Evaluating Data

Science

- NS.K-12.6 Personal and Social Perspectives

Social Sciences

- NSS-G.K-12.5 Environment and Society

Artworks

- Selected works from Alice Hargrave's exhibition, *The Canary in the Lake*, on view March 4 through May 16, 2021

Questions for Viewing

- What mediums and processes has Hargrave used and how do they impact the messages conveyed?
- Look closely for contextual information. What do you know about the setting and subject matter based on what you see?
- Describe ways Hargrave has combined photography with data to communicate complex information about climate change-related loss of biodiversity and habitats.
- How does reading the title(s) impact your understanding of the work?

Vocabulary

- **Biodiversity:** the variety of life in a particular area
- **Curate:** select, organize, and display artworks to convey meaning
- **Data visualization:** a visual representation of information such as a graph, map, or chart
- **Subject matter:** what is being depicted in an image or an artwork
- **Context:** the situation in which something occurs
- **Data:** collected information
- **Habitat:** natural home or environment of an animal or organism

Materials

- Informational texts, videos, and websites (see resources at the bottom of page 2)
- Data visualization tools such as Voice Memo, Google Forms, Google Earth, and/or hand-drawn graphs, charts, or maps
- Variety of artmaking materials such as pencils, paper, transfer paper, markers, colored pencils, fabric, paint, or clay
- Internet access
- Computer(s)
- Camera(s)
- Printer
- Projector

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Activity

- Read a story, watch a video, and/or listen to news coverage about local and/or global loss of biodiversity and habitats. Provide students with prompts for posing problems and generating questions about how human actions contribute to the causes and effects of these issues.
- As a class or in small groups, view and interpret artworks by Alice Hargrave. Refer to the “questions for viewing” listed on page 1.
- Encourage students to consider a location with personal significance and engage in research about loss of biodiversity and habitat(s) in that area. Create visual representations such as graphs, charts, and/or maps to analyze gathered data. Consider collaborating with another class so students can gather data together and learn from one another as Alice Hargrave and Dr. Catherine O’Reilly did for *The Conference of the Lakes, After Farid Attar*.
- Engage students in brainstorming ideas for combining photography with their data visualizations. Students will then individually or collaboratively create artwork that synthesizes their knowledge of biodiversity and habitat loss in the area with personal experiences.
- Assist students to write a statement about their discoveries, creative choices, and visual communication of information through their artwork.

Extension Activity

National Learning Standard: NA-VA-6.1 Convey meaning through the presentation of artistic work

- Plan and curate an exhibition that showcases students’ work in either a physical or virtual space with supplementary materials (such as artist statements and contextual information) that inform viewers. Consider showcasing student work on [Earth Day](#) and/or using this exhibition as a means to raise funds for an organization that works for local or global climate change-related issues.



Alice Hargrave, *Lake Abiyata, Ethiopia, shrinking lake, habitat loss*, 2020-2021. Solvent print on fabric. Courtesy of the artist.

RESOURCES

Books

- [Read, Watch, and Listen](#) list by Alice Hargrave
- [Lake Information and Reading](#) list by Catherine O’Reilly
- [K-12 Reading](#) list by Caitlin Stewart
- [Endangered and threatened species children’s books](#)
- [Endangered and threatened species books](#)

Free Virtual Exhibition Software

- [Artsteps.com](#)

Planning an Exhibition

- [How to Let Your Students Lead an Art Show](#)
- [Virtual Art Show Resources](#)

Conservation organizations

- [The Nature Conservancy](#)
- [GLEON](#)
- [National Audubon Society](#)
- [Ecology Action Center](#)
- [Parklands Foundation](#)

News articles

- [NY Times](#)
- [Live Science](#)
- [Center for Biological Diversity](#)
- [US Fish and Wildlife Service](#)



Alice Hargrave, *The Conference of the Lakes, After Farid Attar*, 2020-2021. Installation of 20 lake portraits made in collaboration with Dr. Catherine O’Reilly. Solvent prints on fabric. Courtesy of the artist.

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