Facilitation Guide

Looking & Planning (The Explanation Game)

SABES Lesson 1

EXPERIENCE OVERVIEW

The SABES Earth's Systems unit begins by introducing 5th-grade students to **Environmental Engineers** and looking at the role that Environmental Engineers play in developing solutions to environmental problems. At the start of the unit, we introduce students to artists who, like Environmental Engineers, are making work that looks at the impact of environmental problems.

These artists are referred to as **land artists**. They make a variety of work using objects from an environment, usually in a site-specific environment to demonstrate and teach others about the impact of environmental problems. The form of Land Art becomes a natural vehicle for teaching and learning the different parts of the earth's systems (geosphere, biosphere, hydrosphere, and atmosphere) and observing the ways that these different spheres interact and affect each other.

Students will begin looking at examples of Land Art and using some of **Harvard Project Zero's thinking routines** to observe and come to their conclusions about why artists make land art. These observations will encourage students to begin divergent thinking that will be useful to them in their Engineering Design Challenge. After observing, teachers can further the conversation by showing students additional examples of Land Art in the provided slides.

Finally, teachers can introduce the concept that in this arts-integrated approach, students will be **making their own Land Art** and observing it over time. This introduction will allow students to start thinking, planning, and gathering materials if needed. Through brainstorming, planning, and gathering of materials, students will begin to form a personal connection with the content, motivating and engaging them in both their science and art content.

Standards

SCIENCE

- SEP 2: Developing & Using Models
- ESS2.A: Earth Materials & Systems
- CCC 4: System Models

MARYLAND STATE ARTS STANDARDS

- I:3-5:1: Make judgments and decisions to justify which works of art express ideas about self, other people, places, and events that will be meaningful in presentations.
- I:3-5:1: Make judgments and decisions to determine ways in which works of art express ideas about self, other people, places, and events.
- E:3-5:1: Analyze components in visual imagery that convey messages and compare personal interpretations.

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Getting Ready

SABES LEARNING OBJECTIVES:

- Understand the engineering design challenge for the unit, including the criteria and constraints, and the related STEM career.

RECOMMENDED MATERIALS

- Environmental Engineer Artist Workbook
- Land Art slides
- Items collected from local biosphere/geosphere: Rocks, mud, seed pods, leaves, flowers, plants, bark, sticks.

TEACHER BACKGROUND

Teachers should have an understanding of **Land Art.**

- Included in these resources are materials for both students and teachers to learn more about Land Art and Artists.
- The 15 minute video "How Climate Changes Art" is a great overview for teachers who want to learn more about this art form.
- Teachers also have access to a Land Art slideshow, Land Art printables, a Land Art artists resource list as well as a teacher edition of the Environmental Engineer Land Art Workbook that includes information about teaching land art.

STUDENT PREREQUISITES

Students should have some general knowledge of **sculpture** as a three dimensional form of art.

- They do not have to have worked on a sculpture before but just have an understanding that artists make three dimensional art using a variety of materials.

ACCESSIBILITY NOTES

- Outdoor spaces vary from school to school, so materials can be gathered from home or the surrounding neighborhood—they do not need to come from the school environment itself.
- Students may draw or write their observations in their Environmental Engineer Artist Workbook.
- Teachers can be purposeful about groups and include group roles that lend themselves to student strengths. The Teacher Edition of the workbook provides space for teachers to jot down notes and observations while outside.

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ARTS EVERY DAY IN BALTIMORE CITY PUBLIC SCHOOLS

ARTS INTEGRATION MATERIALS

CONCEPT MAP

SLIDES

VIDEO PLAYLIST

HANDOUT

WORKBOOK
TEACHER EDITION

WORKBOOK
STUDENT EDITION

RESOURCES

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TEACH

Engage

- Pages 1-2 of the Workbook walk students through The Explanation Game – a Harvard Project Zero Thinking Routine that encourages students to observe and then question while looking at an image.
  - Page 1: Take 30 seconds to observe a picture of Spiral Jetty and list 10 things you observe.
  - Page 2: Brainstorm explanations for what you think is happening in this image of the Spiral Jetty

VIDEO TUTORIAL

HANDOUT

SLIDES

Experience

- Page 3: Write or draw definitions for the following vocabulary words:
  - Land Art
  - Art Installation Site
  - Land Art Materials
- Page 4: Brainstorm – List as many reasons as you can think of as to why artists might make land art.
- Materials/outdoor exploration & selection of materials and site for land art:
  - Depending on the classroom, teachers or students will then collect materials for their land art sculptures. Students should have time to explore and observe materials before starting their Land Art.

WORKBOOK

Reflect & Assess

- Page 5: Draw or write about the materials you are using for your land art
- Page 6: Draw or write about the site you have chosen for your land art
- Review students' contributions to their Environmental Engineer Land Art Workbook