

Lesson One: Green and Gray Structures

Elementary teachers may prefer to use only the "Unit Preview" activities from this lesson and replace the remaining activities with the abbreviated version incorporated into Lesson Four, which is designed for younger learners.

Objectives:

1. Students will be able to compare how parts are organized in natural and built structures.
2. Students will be able to analyze relationships between natural and built structures.

Visual Arts Standards

CONNECTING #10: Synthesize and relate knowledge and personal experience to make art.

CREATING #1: Generate and conceptualize artistic ideas and work.

Preparation

Preview Green and Gray Exhibition Preview and Green and Gray Structures PowerPoints. Assemble sample structures made by people (such as a pop-up book, a tinker toy construction, or a music box) and sample natural structures (such as a bird's nest, a branch with twigs, or an artichoke). Explore your school and its campus to look for large and small natural and human-made structures students could compare or interesting juxtapositions of natural and human-made structures (potted plant on a metal desk or weeds encroaching on sidewalks or fencing). Consider whether you might collaborate with a science teacher interested in biological structures or in principles of physics involved in building structures. Perhaps a social studies teacher would be interested in political issues that have arisen, in the past or today, when people hold different views about human structures built in the natural environment.

Resources

[Green and Gray Exhibition Preview PowerPoint](#)

[Green and Gary Structures PowerPoint](#)

Sample human-made structures (such as a pop-up book, a tinker toy construction, or a music box)

Sample natural structures (such as a bird's nest, a branch with twigs or an artichoke).

Activities

Unit Preview: Introduce the theme in life, that "We all have relationships with both natural and built structures every single day" by directing students' attention to the natural structure of their hands and the human-made structure of their desks. Define structures as things made up of organized parts. Explain that some structures are natural and others were made by people. Show sample human-made structures and sample natural structures. Ask students to name large and small structures made by people, like office buildings, highway bridges, cars, computers, skateboards and lamps. Then ask them to name structures made by nature, like mountains, trees, caves, plants, and spider's webs. Ask students to describe any structures they have built themselves, such as a *Lego* structure, a sand castle, a furniture fort or a model airplane.

Introduce the theme in art, that "Artists connect and contrast the relationships between the "green" (natural) and "gray" (human made) in our world" using everyday examples, like a spider making its web in the corner of a room, or a housing development on a hillside. If you decide to walk about the school and campus, you might ask students to find and compare natural and human-made structures and also look for instances of "green" and "gray" interaction, such as weeds encroaching on sidewalks or fencing, or a potted plant enlivening a metal office desk.

Introduce the key questions students will be working with throughout the unit:

SEEK: What ideas can I get from my own life and times? (natural & human-built structures)

LOOK: What can I see in the artwork? (organization of parts)

CHOOSE: How do I want my artwork to look? (organization of parts)

COMPARE: What other artworks are associated with the big idea underlying this artwork? ("green" and "gray" theme)

Definition and Examples: Display Green and Gray PowerPoint slides 1-7 to:

- define structures
- help students distinguishing natural and human-made structures.

Guided Practice: Display Green and Gray PowerPoint slides 8-11 to:

- guide students in comparing how parts are organized in natural and human-made structures.
- (Slide 10: tree bark matches tire tread; cloud formations match domed house; exposed roots match pipes mounted on wall.)
- Slide 11: (Mud dauber insect nest matches optometrist's instrument; insect web matches baby lace; broken rock formation matches building.)

Practice: Display Green and Gray PowerPoint slide 12-15 to:

- focus students' attention on relationships between natural and human-made structure.
- guide students in analyzing how natural and human-made structures relate to each other.

Critical Reflection: Display Green and Gray PowerPoint slides 16 and 17:

- explain that when human and natural structures interact political conflicts can arise, for example, a coal plant generates electricity and creates jobs while also obscuring the visibility of the Grand Canyon and adding carbon to the atmosphere.
- OPTIONAL: assign students to teams to argue the pros and cons of bringing together human and natural structures in controversial situations such as building an island on a coral reef in the China Sea, building dams and levees on the Mississippi and in New Orleans, building tourist hotels in lion habitat or building zip lines in a rainforest canopy.
- show artworks inspired by natural and human-made structures.

Transfer to Art Making: Display Green and Gray PowerPoint slide 18 to:

- introduce art making projects in lessons 3 (secondary).
- ask students to start thinking of ideas for their own art about "green" and "gray"

Assessment: Display Green and Gray PowerPoint slides 19 and 21 to:

- lead a discussion of various relationships between natural and human structures to assess students' understanding of a variety of relationships.

Transfer to TCA: Display Green and Gray PowerPoint slide 22 to:

- invite students to visit the Green and Gray exhibition at the Tempe Center for the Arts. NOTE: Many of the works in the exhibition are also viewable on the Green and Gray exhibition PowerPoint.

Art Vocabulary

parallel
 arch (arches)
 radial (radially)
 pyramid
 dominate
 complement
 mixed media

Other Vocabulary

structure (natural and human-made)
 erosion
 merge (merging)
 co-exist
 resemble
 generating plant

butte
overcome
relationship

Extension Activities

Activities in biology, physics, engineering, history, or political science might spring from this unit's theme in life: We all have relationships with both natural and built structures every single day.

Assessment Checklist

__ 1. Students will be able to compare how parts are organized in natural and built structures.
(Student participation in discussions of Green and Gray Structures PowerPoint slides 8-11).

__ 2. Students will be able to analyze relationships between natural and built structures.
(Student participation in discussions of Green and Gray Structures PowerPoint slide 13-16).