OVERVIEW

Grades:
Grades 2 – 3; adaptable to all grade levels (See Adaptation Suggestions)

Subjects:
Visual Art, Science, Social-Science

Duration:
Allow 1 hour from start to completion.

Lesson synopsis:
How do you create a landscape collage representing the use of clean energy? Students will create a collaged tissue paper landscape and add graphic, man-made elements representing clean energy options.

Museum Connection:
The Garden Project’s "Green Car"

This lesson was inspired by The Garden Project’s "Green Car," funded in part by SDG&E’s Power Your Drive campaign. This space, located in the Museum Park, focuses on the importance of renewable energy sources in support of the natural environment. With this piece, we ask students to explore the relationship between man and nature and how humans impose necessary elements of modern life on the environment around them. In this lesson, students will have the opportunity to design their own unique landscape and add man-made elements on top of it, encouraging them to think about their own impact on the natural world and how we can incorporate clean energy into our landscapes.

LEARNING OBJECTIVES

Students will:

  o create an abstract landscape or seascape using tissue paper
  o add realistic man-made elements, thinking about the way humans interact with their environment and how alternative energy can fit in with the landscape
  o discuss related visual art and science vocabulary
  o discuss why they created their piece and the choices they made
HOW-TO

Materials Needed:

- Watercolor paper (one piece per student)
- Brushes (one piece per student)
- Glue and water (to be mixed and divided in bowls between students)
- Small bowls (one for every four students)
- Brads (one per student)
- Tissue paper torn into small pieces
- Containers for tissue paper (one for every four students)
- Sharpies (one per student)
- Newsprint (one sheet per student)
- Pencils (one per student)
- Transparencies (one per student)
- Rags (to remove Sharpie marker from transparencies)

Vocabulary:

**abstract** – art that does not represent things exactly, but instead focuses on visual art elements such as shape, form, color, and line

**collage** – a piece of art made by gluing different materials onto a backing

**contour line** – a line which defines a form or an edge; the outline of an object

**graphic** – art based on line rather than color

**landscape** – all the visible features that you can see in an outdoor area; an environment

**layering** – placing one item on top of another

Science Vocabulary:

**clean energy** – energy collected from renewable resources

**energy** – the ability to do work. It’s how things change and move!

**hydroelectricity** – electricity produced by water’s currents and waves

**geothermal energy** – energy made by heat inside the Earth’s crust

**man-made** – made or caused by humans; artificial; manufactured

**natural** – existing in or caused by nature; not made or caused by humans

**pollution** – the introduction of a substance or thing in the environment that has harmful effects

**renewable** – from a natural resource or source of energy that is not depleted when used

**solar energy** – energy derived from the radiant light and heat from the sun

**wind power** – air flow through wind turbines used to mechanically power generators for electricity
**STEPS**

**Project Summary**
1. Design a natural landscape or seascape using tissue paper pieces.
2. Discuss what man-made things might exist in this place (e.g. windmills, power plants, dams, etc.), thinking about how renewable energy sources can be incorporated.
3. Add a graphic element on top of the abstract landscape using transparencies and Sharpies.

**Pre-Class Prep**
- Arrange a visit to The New Children's Museum to view the installation The Garden Project's “Green Car” by SDG&E's Power Your Drive campaign.
- Gather materials needed.
- Prep materials:
  a. Mix glue with water and put into small bowls.
  b. Put tissue paper in larger containers.

**Introductory Discussion (10 minutes)**
1. Today we’re going to make a project inspired by The Garden Project. With this piece, artist Isabel Halpern and The New Children's Museum explore the relationship between man and nature, and how humans impose necessary elements of modern life on the environment around them. We rely on energy sources to do things like power our cars, make our lights turn on, and bring water to our homes. Today we’re going to design our own landscapes and add man-made elements on top, thinking about how we can incorporate clean energy into our environments.

2. Define key terms by asking questions:
   a. Does anyone know what **clean energy** is?
      i. Sometimes energy production can cause **pollution**
      ii. What is pollution? Is it good for our planet?
      iii. Clean energy is energy that is **renewable**, meaning that it doesn’t create as much pollution and comes from sources that won’t get used up
      iv. Can anyone give me an example of a type of clean energy?
         1. Solar
         2. Wind
         3. Hydroelectric
         4. Geothermal
   b. We have to capture those forms of energy, with man-made cells, plants, and structures. Who knows what **man-made** means? What about **natural**? What’s the
difference?
c. Who knows what a landscape is?
   i. Can somebody give me an example of a natural environment (forest, rainforest, desert, etc.)?
   ii. We can even make a seascape if we want! What do you think that would be?

3. We won’t be drawing or painting our landscape today, instead we’ll be creating it using a technique called collage.
   a. Can anybody tell me what collage means, or what a collage is?
   b. Give a brief history of collage (See Resources).
   c. Ours will be made entirely out of tissue paper!

4. Because we’re using tissue paper, we’ll have to get a little creative with the way we make our shapes
   a. Think about the basic shape of whatever you’re making – what shape is a tree? Is a pine tree a different shape than a palm tree?
   b. Think about the colors of your landscape.
   c. Because we’re using tissue paper, our landscapes are probably going to look a little bit abstract – has any one heard that word before? What does it mean?

**Sketch (5-7 minutes)**

1. Explain to students that they’ll be creating their abstract landscape collages using tissue paper and glue, but first they will need to plan them. Their sketches should focus on just shapes, no details, and just the pieces of the landscape (nothing man-made yet).

2. Pass out a piece of newsprint and a pencil to each student. When sketches are complete, ask them to share them with a neighbor. Allow about two minutes for this discussion.

**Collage (20 minutes)**

1. Demonstrate how to tear the tissue paper to create different shapes, as well as how to use one’s sketch as a guide for their design. Also, show students how they can create darker colors by layering the tissue paper.

2. Demonstrate for students how to go about creating their collage in steps, beginning first with the background and then blocking out areas for each piece of their landscape.

3. Collect pencils. Pass out watercolor paper and brushes to each student, and place glue and tissue containers on the table. Invite students to begin working on their collage.
Transparencies (10 minutes)

1. Once collages are complete, it’s time for students to add man-made elements to their works using transparencies. First, have everyone wash their hands, if time allows.

2. Facilitate a discussion about human’s needs and the resulting structures we build. Encourage students to think about those items that take advantage of the natural environment (e.g. windmills, power plants, dams, oil rigs, etc.) as well as those which make it easier for people to live (e.g. roads and houses). Discuss how we might go about honoring the natural environment and finding a healthy balance with modern life.

3. Explain to students that they will be adding man-made elements to their landscapes by drawing them on top of transparency paper and placing that transparency paper on top of their collage. This method will allow them to view the landscape with man-made elements as well as without them. Encourage students to think about their own individual impact on the natural world and how they might incorporate a clean energy source into their landscapes to represent a positive change to their environment. Encourage them to consider the advantages as well as disadvantages to the environment and human life made by their choice and to be prepared to share their thoughts in the later sharing session when they present their project to their classmates.

4. Demonstrate how to attach the transparency sheet in the corner of their landscape paper using a brad. Then, draw over the top using a Sharpie. Tip: If they make a mistake, a wet rag will help remove the Sharpie marks. Any glue that gets on the transparency can be easily wiped off once the project is dry.

5. Pass out a brad, a Sharpie, and a transparency to each student. Put a cup of pencils on each table if students want to practice on their scratch paper. Invite students to begin working on their drawings.

6. Once complete, place student works in a safe space to dry, and encourage everyone to help clean up from the day’s project.

Sharing Session

Have students display their work and have a discussion about what they chose to make and why. Suggest to students that they take time to describe their own decision making process and the successes and challenges they experienced. Encourage each student as well to speak to the man-made object(s) they included in their work and what they feel might be the advantages as well as disadvantages to the environment and human life made by including them in their landscape.

ADAPTATION SUGGESTIONS
For a struggling student:
Ask the student to explain to you what they are trying to make. Encourage them to break their idea down into pieces, and then discuss how to make each piece with them - what shape is it? If a student is unsure what to make, consider prompting them:
  o Think about a landscape you're familiar, and how would you make it?
  o What kinds of natural elements grow in the desert, or near a lake, etc.?
  o What kinds of man-made items might be put in that environment?

For younger students:
Focus on simple drawings and/or limiting their work to include just one man-made item. If tearing the tissue paper proves difficult for students, consider inviting them to use scissors. Demonstrate to students how to lightly apply glue to their work (in light coats), so as to prevent them from using too much glue.

For older students:
Challenge students to create their landscapes using only primary colors – how can they layer the tissue paper to create new colors? Introduce additional visual arts vocabulary (e.g. contour lines, background, middle ground, and foreground). Have students research and learn more about a renewable energy source. Then, guide them to consider the environmental requirements of their energy source and includes these elements in their landscape design (e.g. dams producing hydroelectricity located near a water source).

EXTENSION ACTIVITY

Environmental Cause Poster
SDG&E's Power Your Drive campaign focuses on putting in place electric vehicle (EV) charging stations in apartments, condos and businesses to encourage electric vehicle usage. Share this information with students and let it serve as inspiration for them to work in teams to create a poster using images and text that conveys a call to action message about a current environmental issue (e.g. energy conservation or recycling), and display them in the classroom or school.

STANDARDS

CALIFORNIA STATE STANDARDS

Visual Arts Standards

Grade 2
1.3 Identify the elements of art in objects in nature, the environment, and works of art, emphasizing line, color, shape/form, texture, and space.
2.1 Demonstrate beginning skill in the use of basic tools and art-making processes, such as printing, crayon rubbings, collage, and stencils.
2.3 Depict the illusion of depth (space) in a work of art, using overlapping shapes, relative size, and placement within the picture.
4.3 Use the vocabulary of art to talk about what they wanted to do in their own works of art and how they succeeded.
Grade 3
1.3 Identify and describe how foreground, middle ground, and background are used to create the illusion of space.
1.5 Identify and describe elements of art in works of art, emphasizing line, color, shape/form, texture, space, and value.
2.3 Paint or draw a landscape, seascape, or cityscape that shows the illusion of space.

4.2 Identify successful and less successful compositional and expressive qualities of their own works of art and describe what might be done to improve them.

**COMMON CORE STANDARDS (covered during tour discussion)**

SL 1.2 1. Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.
SL 3.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 3 topics and texts, building on others’ ideas and expressing their own clearly.

**Next Generation Science Standards**

Grade 2
K–2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

Grade 3
3-LS3-2 Cause and effect relationships are routinely identified and used to explain change.
3-LS4-4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

**History – Social Science Standards**

3.1.2 Trace the ways in which people have used the resources of the local region and modified the physical environment (e.g., a dam constructed upstream changed a river or coastline).

**COMMON CORE STANDARDS**

SL: 2.3: Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.
SL: 3.1: Engage effectively in collaborative discussions (one-on-one, in groups, and teacher-led) building on others’ ideas and expressing their own clearly.
SL: 3.1d: Explain their own ideas and understanding in light of the discussion.
RI 2.7 7. Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.

**RESOURCES**
HISTORY OF COLLAGE

The techniques and materials needed for collage were first used in China, with the invention of paper around 200 BCE. It wasn’t until the 10th century in Japan, however, that the process became more widespread, when calligraphers began to use glued paper to create poetry. Photo collage became popular during the Victorian era in the early 1860s. Collage rose to artistic prominence with the onset of the modernist period in the early 1900s, when Cubist painters Georges Braque and Pablo Picasso began to utilize the technique. Collage became an important part of the Surrealist and Dadaist movements in the first half of the 20th century, as artists like Max Ernst, Marcel Duchamp, and Hannah Hoch explored the possibilities of the art form. Contemporary artists like Vik Muniz (who was a part of The New Children’s Museum’s exhibition TRASH) continue to use collage in their practice.

RESOURCES FROM THE SAN DIEGO PUBLIC LIBRARY

Our Earth: Clean Energy (2009), by Peggy Hock  
333.794/HOCK  
Using solar power helps keep Earth clean. Look inside to learn more about solar power, and other kinds of clean energy.

Energy from Wind: Wind Farming (2016), by Megan Kopp  
333.92/KOPP  
Wind farms tap into this clean, sustainable, and renewable form of energy. Find out how wind power works, where in the world it is being used, and how this green energy supply could be one answer to the energy problems that face us today.

What’s the Big Idea: Activities and Adventures in Abstract Art (2008), by Raimondo Joyce  
709.04052/RAIMONDO  
What’s the Big Idea?: Activities and Adventures in Abstract Art, the fifth book in the series, draws children into the intriguing, involving world of abstract art by highlighting the work of six famous artists. Easy-to-follow activities provide hands-on experience with the artist’s techniques, subject, and media, each illustrated with examples by real kids.

WEB RESOURCES

Information about SDG&E’s Power Your Drive Campaign:  
http://www.sdge.com/clean-energy/electric-vehicles/poweryourdrive  
Power Your Drive is an exciting new pilot program that authorizes SDG&E® to install 3,500 electric vehicle (EV) charging stations across in apartments, condos and businesses within their service area. At least 10% of the charging stations will be installed in disadvantaged communities.

Information on The Garden Project, currently installed at The New Children’s Museum:  
https://thinkplaycreate.org/explore/art-studios/the-garden-project/