

ARTS ENVIROCHALLENGER

EnviroFriends Reuse and Recycle

Teaching Environmental Sustainability, Visual Arts, and Science

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Grade Level: Kindergarten



Enduring Understanding

“Trash” materials and objects can be sorted and recycled or reused based on their properties. Reusing materials in artistic compositions can communicate ideas.

Students learn about reducing “trash” through recycling and re-using materials in art. “Trash” objects are observed, discussed, and sorted based on properties of shape, size, and texture, and separated into groups to reuse and to recycle. Organizing a composition is explored through arranging objects in an artwork, then combining it with other student art in a temporary installation. Next, students construct an EnviroFriend assemblage: an invented character face constructed out of reused materials - organized in symmetry. Last, student experiment with using lids and caps as drawing templates to draw shapes and EnviroFriends.

Learning Targets and Assessment Criteria

Target: Understands the EnviroChallenger message.

Criteria: Shares examples of ways to reduce, recycle, and reuse trash and show respect and responsibility for our environment.

Target: Sorts trash materials according to their properties.

Criteria: Describes and groups materials based on similarities in shape/form and surface.

Target: Organizes trash materials in an artistic installation.

Criteria: Glues cardboard or plastic materials into own assemblage, then combines with other student art to make larger shapes, lines, or patterns.

Target: Reuses trash materials in a balanced EnviroFriend assemblage.

Criteria: Organizes a symmetrical face constructed of plastic CDs, beads, or other repurposed materials.

Target: Uses craftsmanship in construction.

Criteria: Arranges materials in advance and applies enough glue to adhere surface to surface securely.

Vocabulary	Materials	Learning Standards
<u>Arts</u> Assemblage Character Composition Craftsmanship Installation Line Organize <u>Arts Infused:</u> Balance Cardboard Glass Pattern Plastic Shape Surface Symmetry <u>Science</u> Recycle	Artworks: Barbara DePirro: Installations Jeremy Meyer Assemblages Art Materials: An assortment of clean discarded materials: glass, paper, cardboard, metal, plastic containers, CD’s, and plastic lids and caps for sorting; medium box tops (shoebox size or smaller) or small pieces of cardboard; beads; crayons or oil pastels; Plates or trays; Tacky glue; Glue mats/cardboard; 9x12” recycled white drawing paper Adult use only: Hot glue gun and refill sticks for repair	State Visual Art Learning Standards 1.1.2 Elements: Shape/Form 1.1.7 Principles of Design: Balance/Symmetry 1.2.1 Skills and Techniques: 3-D Construction, Drawing 2.1.1 Creative Process 2.3.1 Responding Process 4.2.1 Connection between Visual Arts, Science, Math Next Generation Science Standards http://www.nextgenscience.org/next-generation-science-standards Topic: Interdependent Relationships in Ecosystems: Animals, Plants and their Environment Disciplinary Core Ideas: ESS3.A: Natural Resources ESS3.C: Human Impacts on Earth Systems Performance Expectations: K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air and/or other living things in the local environment. Crosscutting Concepts: Cause and Effect Systems and System Models Science and Engineering Practices:

ICON KEY:

📄 = Note or reminder for teacher

✂ = Materials preparation suggestions

☑ = Embedded assessment points in the lesson

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Pre-Teach

Class Reads: *The Earth Book* by Todd Parr or *Little Green Helpers Recycle* by Caroline Davis

Residency Steps Outline

Day One

TALK ABOUT THE ENVIROCHALLENGER MESSAGE

1. Introduce the 5 Rs through class discussion. Reduce, Recycle, Reuse, Respect, and Responsibility.

2. Discuss what trash is composed of and where it goes.

☑ Criteria-based checklist: Student shares examples of ways to reduce, recycle, and reuse trash.

INVESTIGATE AND SORT TRASH MATERIALS

3. Demonstrate and guide using the senses to analyze different properties of “trash” materials and objects.

☑ Criteria-based checklist: Student describes and groups materials based on similarities in shape/form and surface.

4. Talk about categories of objects and what can be recycled in the City of Tacoma.

REFLECT ON SORTING MATERIALS

5. Reflect on sorting materials based on properties and preview art-making process.

EXPLORE MATERIALS

6. Encourage creative experimentation and play.

Day Two

LOOK AT ART INSTALLATIONS MADE FROM REUSED MATERIALS

1. Share images of art installations composed of common reused materials along with examples of the real objects or materials (milk jugs, plastic bags, caps, etc) used in the installations.

MAKE INDIVIDUAL ART ASSEMBLAGES FROM REUSED MATERIALS THEN COMBINE THEM INTO A GROUP INSTALLATION

2. Demonstrate and guide students in organizing small pieces (5-7) of different kinds and thicknesses of cardboard (or CDs and caps) and gluing on a box top (shoebox size or smaller) or background piece of cardboard for an assemblage.

Once individual assemblages are complete, facilitate students collaborating to arrange their assemblages into one large installation.

GO ON AN ARTWALK

3. Reflect on installations by having an art walk and talk.

Criteria-based self and group reflection: Student glues cardboard or plastic materials into own assemblage, then combines with other student art to make larger shapes, lines or patterns.

Day Three

MAKE SYMMETRICAL ENVIROFRIEND ASSEMBLAGES

- 1.** Introduce art assemblage faces and discuss symmetry.
- 2.** Demonstrate and guide selecting materials to create a symmetrical Enviro-friend assemblage.
- 3.** Demonstrate arranging EnviroFriend face in symmetry.

Criteria-based peer and teacher checklist: Student organizes a symmetrical face constructed of plastic CDs, beads or other repurposed materials.

- 4.** Demonstrate gluing EnviroFriend face in symmetry.

- 5.** Demonstrate adding additional details, and letting EnviroFriend dry.

Criteria-based checklist: Student arranges materials in advance and applies enough glue to adhere surface to surface securely.

Day Four

EXPERIMENT WITH USING CAPS AND LIDS AS DRAWING TEMPLATES

- 1.** Introduce idea of reusing objects as tools. Demonstrate tracing around caps and lids to create all different circle shapes using crayons. Encourage students to add lines or patterns to the inside of their shapes.
- 2.** Demonstrate using caps and lids as tools to create a symmetrical EnviroFriend drawing.

REFLECT ON STUDENT ART, SCIENCE AND ENVIROCHALLENGER MESSAGE

- 3.** Reflect on artistic process through a full class critique.
- 4.** Close with affirmation of the EnviroChallenger message.

Group reflection

LESSON STEPS

Day One

TALK ABOUT THE ENVIROCHALLENGER MESSAGE

1. Introduce the 5 Rs through class discussion. Reduce, Recycle, Reuse, Respect, and Responsibility.

We are learning about art, science, and ways that we can help take care of our planet earth through our choices and actions. Who can name the 5 Rs: lets talk about each of them!

Reduce means make smaller: "make less trash by using less" how can we make less trash?

Reuse means "use again" what can we reuse to make less trash?

Recycle means to us change the material through some sort of proces (heat, water, mechanical) then form into into something usable again. What are some things we can recycle?

Respect means to value, admire and take care of our environment and living things. How can we show respect for our environment?

Responsibility means a sense of doing your part in daily actions, or a job that needs to be done to help take care of our environment. Who is responsible? YOU!

2. Discuss what trash is composed of and where it goes.

- *Where does trash go after we put it in the garbage can? Why would we want to reduce the amount of trash we create?*
- *How is plastic, metal, or paper made? ...Does making these materials impact the environment? How does trash harm plants, animals, and other humans?*

Criteria-based checklist: Student shares examples of ways to reduce, recycle, and reuse trash.

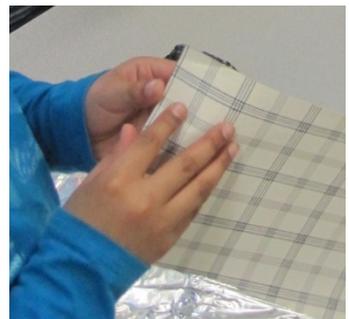
INVESTIGATE AND SORT TRASH MATERIALS

3. Demonstrate and guide using the senses to analyze different properties of "trash" materials and objects.

▣ Have students sit in a circle. Give each student a trash object (can, milk jug, CD, cap, magazine, cardboard/box, etc.) and ask them to think of a word to describe its shape/form or surface. Then have them place it in a category/pile in the center of the circle. This exercise can be simplified by using just cardboard and plastic items to sort.

Each person has something that is often thrown away:

- *What is the shape of the object?*
- *What is the surface (how does it feel?) of this object?*
- *What do you think it is made of? What are your clues?*
- *Which objects go together and why?*



Criteria-based checklist: Student describes and groups materials based on similarities in shape/form and surface.

4. Talk about categories of objects and what can be recycled in the City of Tacoma.

The City of Tacoma helps us by making it easy to recycle: they even come to us to pick up our recyclable stuff! We can recycle papers, cardboard, cans, bottles, and plastic bags.

- *What can we recycle?*
 - *What can't we recycle?*
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REFLECT ON SORTING MATERIALS

5. Reflect on sorting materials based on properties and preview art-making process.

- *What do you notice about some of these objects: do you like their colors, shapes or surfaces?*
 - *Why might an artist want to make something out of these materials?*
 - *Have you ever made something out of "trash" before?*
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EXPLORE MATERIALS

6. Encourage creative experimentation and play.

✂ Equity in materials distribution is important: Students or teacher can count out caps, CDs, and small boxes or pieces of cardboard at each table so that each student has an equal number (5-7).

- *How did you organize your CD's and caps/materials into a larger shape, line, or pattern?*
 - *Can you layer them on top of one another?*
 - *Can you combine forces with others in your group to build something bigger?*
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Day Two

LOOK AT ART INSTALLATIONS MADE FROM REUSED MATERIALS

1. Share images of art installations composed of common reused materials along with examples of the real objects or materials (CDs, milk jugs, plastic bags, caps, etc) used in the installations.

We are going to start thinking like artists by working to make installations — temporary artworks created for a special place that are an arrangement of objects in shapes, lines or patterns.

▣ Distribute an art installation photo to each student table group to analyze and compare with real objects. Next, show each installation analyzed by groups on document camera for whole class to look at and talk about.

- *Find lines, shapes, and patterns...*
- *Do you recognize any of the objects the artist used?*
- *Why do you think the artist chose them?*
- *What kind of lines do you see? Straight, curvy, zigzag? Name the shapes.*

MAKE INDIVIDUAL ART ASSEMBLAGES FROM REUSED MATERIALS THEN COMBINE THEM INTO A GROUP INSTALLATION

2. Demonstrate and guide students in organizing small pieces (5-7) of different kinds and thicknesses of cardboard (or CDs and caps) and gluing on a box top (shoebox size or smaller) or background piece of cardboard for an assemblage.

- *Artists take shapes, colors, and textures and organize them into art. What does it mean to organize? What is the opposite of organize?*
- *Take 5-7 pieces of cardboard and arrange them on the background.*
- *Now, using a dab of glue about the size of a dime each time, glue pieces to your big cardboard (or box top).*

Once individual assemblages are complete, facilitate students collaborating to arrange their assemblages into one large installation.

- *Place your art so that it touches, but does not cover up another artist's work.*

GO ON AN ARTWALK

3. Reflect on installations by having an art walk and talk.

- *Notice how all the artworks look together.*
- *Notice how combining all of our artworks changes how each one looks. What do you see?*

☑ Criteria-based self and group reflection: Student glues cardboard or plastic materials into own assemblage, then combines with other student art to make larger shapes, lines or patterns.



Day Three

MAKE SYMMETRICAL ENVIROFRIEND ASSEMBLAGES

1. Introduce art assemblage faces and discuss symmetry.

Assemblages are artworks that are not flat. They are also made out of real objects. Besides choosing objects for their properties, (shapes, colors, textures), artists also choose and arrange objects to communicate ideas.

Find matching symmetrical parts and check for symmetry through counting.

- *Why do you think this artist chose this object for a nose, eye, eyebrow?*
- *On a face, what do we have one of, and what do we have two of?*
- *What is symmetry?*
- *Can you show me symmetry with your bodies?*
- *Can you show what is not symmetrical with your bodies?*

2. Demonstrate and guide selecting materials to create a symmetrical EnviroFriend assemblage.

We are going to make EnviroFriend faces: assemblage characters that help us remember the 5 R's. You need one CD for the face, and then think about...

✂ Small scrap cardboard under each CD (for EnviroFriend face) makes a good work surface.

- *If your EnviroFriend is symmetrical, how many matching shapes do you need for eyes?*
- *If your EnviroFriend is symmetrical, how many matching shapes do you need for ears?*
- *If your EnviroFriend is symmetrical, how many matching shapes do you need for eyebrows?*



3. Demonstrate arranging EnviroFriend face in symmetry.

We will be organizing and gluing the parts of a face on a CD—something that cannot be recycled. Where will you place eyes in symmetry?

- *Where will you place the nose?*
- *Where will you place the mouth?*
- *Where will you place the eyes? Ears? Eyebrows?*

Criteria-based peer and teacher checklist: Student organizes a symmetrical face constructed of plastic CDs, beads or other repurposed materials.



4. Demonstrate gluing EnviroFriend face in symmetry.

Once I have had my neighbor and teacher check for symmetry. I am going to glue each piece one at a time, slowly and carefully. I want my Enviro-friend to be sturdy and not fall apart: this is called craftsmanship in art.

- *Each glue drop needs to be about the size of a dime.*
- *We want the surfaces of the objects we are gluing to really squish into the glue.*



5. Demonstrate adding additional details, and letting EnviroFriend dry.

If you have space to add more details to your EnviroFriend like a moustache or glasses or hair, you can glue them also as long as your face stays symmetrical. The last, most important step, is when all parts are glued down, we leave our friend alone to dry.

Criteria-based checklist: Student arranges materials in advance and applies enough glue to adhere surface to surface securely.

Day Four

EXPERIMENT WITH USING CAPS AND LIDS AS DRAWING TEMPLATES

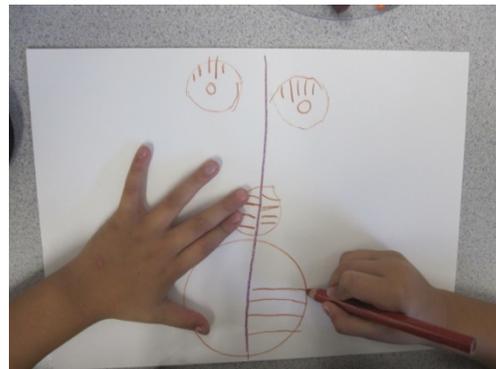
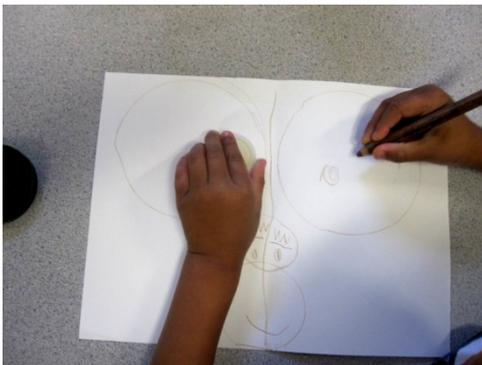
1. Introduce idea of reusing objects as tools. Demonstrate tracing around caps and lids to create all different circle shapes using crayons. Encourage students to add lines or patterns to the inside of their shapes.

- *Name an example of a tool: Hammer, can opener, saw....*
- *Lids and caps can be tools! They can be templates to help us draw beautiful shapes.*
- *Use the hand you do not draw with to anchor down a cap or lid (top/flat side down works best). Now slowly trace around it. Draw seven shapes*
- *Practice and experiment: now add lines or patterns of lines: straight, curvy, zigzag to the inside of your shapes, and connecting your shapes.*

2. Demonstrate using caps and lids as tools to create a symmetrical EnviroFriend drawing.

✂ Lightly fold 9x12" drawing paper in advance to create a line of symmetry to guide students.

- *Draw a light line of symmetry over the fold in the paper to help you draw.*
- *Remember: two eyes, one nose, one mouth.*
- *When you trace a shape for an eye on one side of the line of symmetry, use the same, matching symmetrical color on the other side for the second eye.*
- *Add additional colors, lines and details, but keep your symmetry!*



REFLECT ON STUDENT ART, SCIENCE AND ENVIROCHALLENGER MESSAGE

3. Reflect on artistic process through a full class critique.

▣ Have students sit in a circle with their *EnviroFriends* and/or *drawings* in front of them on the floor, or display all artworks as a group and gather around them for critique.

- *Describe making your EnviroFriend symmetrical. Was it challenging?*
- *Describe your process in arranging your shapes in symmetry. Did you move them around a lot before deciding on how you wanted to glue them?*
- *Describe what captures your attention in another EnviroFriend you see.*

4. Close with affirmation of the EnviroChallenger message.

- *What are the EnviroChallenger 5 R's?*
- *Name one way you can protect our environment using the 5 R's at home or school.*
- *What did you discover about reusing materials in art?*
- *Will you reuse materials to make something in the future?*
- *Why do artists choose to reuse materials in art?*

Group reflection

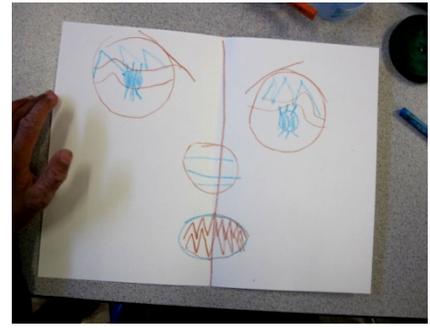


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EnviroFriends Reuse and Recycle

Assessment Checklist

Disciplines	ENVIRONMENTAL SUSTAINABILITY	SCIENCE	ART			Total
Concept	Awareness/Action	Properties	Installation	Assemblage	Craftsmanship	5
Criteria	Shares examples of ways to reduce, recycle, and reuse trash and show respect and responsibility for our environment.	Describes and groups materials based on similarities in shape/form and surface.	Glues cardboard or plastic materials into own assemblage, then combines with other student art to make larger shapes, lines or patterns.	Organizes a symmetrical face constructed of plastic CDs, beads or other repurposed materials.	Arranges materials in advance and applies enough glue to adhere surface to surface securely	
Student						



ARTS ENVIROCHALLENGER

EnviroFriends Reuse and Recycle

Teaching Environmental Sustainability, Visual Arts, and Science

- We worked with a **teaching artist** and learned about art, science, and ways that we can help take care of our planet earth through our choices and actions. We learned about the **5 R's** of the **EnviroChallenger message**:
 - **Reduce** means make smaller: "make less trash by using less".
 - **Reuse** means "use again" instead of throwing away.
 - **Recycle** means to us change the material through some sort of process (heat, water, mechanical) then form it into something usable again.
 - **Respect** means to value, admire, and take care of our environment and living things.
 - **Responsibility** means a sense of doing your part in daily actions, or a job that needs to be done to help take care of our environment. Who is responsible? YOU!
- We talked about what trash is composed of, where it goes, and why it is a threat to our planet.
- We talked about different **properties** of "trash" materials and how we might identify and sort them according to shape and surface.
- We looked at art made out of reused materials. We saw **art installations**—temporary artworks created for a special place composed of many reused objects. We worked to create our own art and then combined our own art with other's art into a larger installation.
- We looked at **assemblages**—artworks that are not flat that are made by combining real objects. We made our own EnviroFriend assemblage faces in **symmetry** by reusing plastic lids and CDs.
- We also explored using caps and other materials as tools to help us draw shapes. We used our knowledge of symmetry and different kinds of lines to help us make these artworks.

Enduring Understanding

"Trash" materials and objects can be sorted and recycled or reused based on their properties.
Re-using materials in artistic compositions can communicate ideas.