



## Unit Essential Question

**How does pollution affect people from different cultures in different ways?**

### PROJECT DESCRIPTION

In this project, students will learn about air, water and land pollutants from around the world. Students will express how they feel emotionally about pollution through movement. They will respond to images addressing pollution using dance. The culminating activity for students is creating an environmental awareness brochure that synthesizes all of their knowledge around pollution.

### LEARNING TARGETS

**“I Can...”**

- I can identify types of pollution around the world
- I can analyze the effects that pollution has on human life
- I can express feeling towards pollution using movement

**[www.artsnowlearning.org](http://www.artsnowlearning.org)**

Units provide differentiated ideas and activities aligned to a sampling of standards.

The units do not necessarily imply mastery of standards, but are intended to inspire and equip educators.

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Cherokee County (GA) School District and ArtsNow, Inc.

Approx. Duration of Project: 2 days of 45 minutes each day

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### ESSENTIAL QUESTIONS

How does pollution affect people from different cultures in different ways?

### STANDARDS

Curriculum Standards.	Arts Standards
<ul style="list-style-type: none"><li>• <b>S3L2.</b> Obtain, evaluate and communicate information about the effects of pollution (air, land, and water) and humans on the environment.</li></ul>	<p><b>D3CR.1:</b> Demonstrates an understanding of creative and choreographic principles, processes and structures. e. Responds through movement to a variety of stimuli (eg. literature, visual art, props)</p> <p><b>D3CR.2:</b> Demonstrates an understanding of dance as a way to communicate meaning.</p> <ul style="list-style-type: none"><li>• Uses a combination of improvisations and choreographic tools to create movement based on one's own ideas, feelings, concepts and kinetic awareness</li><li>•</li></ul>

### KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
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<ul style="list-style-type: none"><li>• Pollution</li><li>• Reduce</li><li>• Recycle</li><li>• Reuse</li><li>• Garbage</li><li>• Litter</li><li>• Smog</li><li>• Smoke</li><li>• Water Vapor</li><li>• Acid Rain</li><li>• Oil Spills</li><li>• Run off</li><li>• Pesticides</li><li>• Fertilizers</li><li>• Emission (ex: car, airplane)</li></ul>	<ul style="list-style-type: none"><li>• Mood: emotion or feeling</li><li>• Locomotive Movement: movement traveling through space</li><li>• Non-locomotive movement: movement standing in one place</li><li>• Body Levels: the plane in which your body is moving, including high, mid and low levels</li><li>• Movement Pathways: the path a dancer travels through space, such as curved or straight</li></ul>
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### TECHNOLOGY INTEGRATION

<https://jr.brainpop.com/science/conservation/reducereuserecycle/>

<https://www.brainpop.com/science/ourfragileenvironment/airpollution/>

<https://www.brainpop.com/science/ourfragileenvironment/waterpollution/>

<https://www.brainpop.com/technology/scienceandindustry/wastemanagement/>

<https://www.brainpop.com/science/ourfragileenvironment/humansandtheenvironment>

### ASSESSMENTS

Formative	Summative
<ul style="list-style-type: none"><li>• Brainpop quiz: Effects of humans on the environment</li><li>• Graphic organizer while watching video</li></ul>	<ul style="list-style-type: none"><li>• <b>Project 1 Rubric (See Downloads)</b></li></ul>

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### MATERIALS

- Microsoft SWAY program
- Chart paper
- Markers
- Pollution Articles (located in Main Activity Part 2 below)
- Computer/tablet for Padlet (if chosen)
- Post it Notes
- If doing extension, old t-shirts

### Activating Strategy

- Students will view a slide show: <https://sway.com/IT9ZpXuLI9nUt7Gy> including images regarding pollution and discuss the images as a class.
- After each slide, students will stop to interpret a movements to show how each image makes them feel. The teacher will ask students to explain their rationale for choosing each movement.

### Main Activity

#### **PART 1**

- Introduce to students the concept of "Ego vs. Eco" (human advancement at the expense of nature vs. caring for the ecosystem): Use this website resource to explore/ research <https://recyclingsustainability4a.weebly.com/ego-vs-eco.html>
- Students will create digital journal entries on Padlet/Post it notes (teacher's choice) to explain possible causes of and solutions for pollution viewed in the images from the slideshow.

#### **PART 2**

- Students will share journal entries from Part 1 with partners. Students will share their partner's entry with the class.
- The teacher will provide students with newspaper articles about pollution. Teachers may use the following articles or chose an article from GA Studies Weekly.

[http://www.ducksters.com/science/environment/air\\_pollution.php](http://www.ducksters.com/science/environment/air_pollution.php)

[http://www.ducksters.com/science/environment/water\\_pollution.php](http://www.ducksters.com/science/environment/water_pollution.php)

<http://kids.nationalgeographic.com/kids/stories/spacescience/water-bottle-pollution/>

<http://www.clean-air-kids.org.uk/airquality.html>

<http://teachingkidsnews.com/2013/11/06/3-pollution-shuts-chinese-city/>

<http://easyscienceforkids.com/all-about-pollution/>

<https://kids.niehs.nih.gov/topics/pollution/index.htm>

- Students will locate key vocabulary or unknown words from the text (text rendering).
- Students will combine their words to create a class vocabulary list and define the words together

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on an anchor chart.

- Students will reread the article independently, or with a partner, to increase their understanding of the academic language in context.
- The class will review the slideshow together again now and describe the images using their newly acquired vocabulary.
- Students get into small groups of 4-5 students. Review the research and make a list of 6 verbs used to describe pollution. Direct students to work together to choreograph movement for the 6 verbs and string them together to form a dance. Direct students to select music that they connect to and rehearse their dances.

**PART 3:**

Student will create an environmental awareness brochure using six facts from the articles they have read and their science resources (books, texts, etc...). They must accurately use the science vocabulary in their persuasive video. A word bank will be provided from the class discussion.

**Students will then summarize the project by answering the following questions:**

- *How does pollution make us feel and why?*
- *What is something new you learned about pollution while participating in this project?*
- *How can we further reduce the amount of waste that we have?*

\*Extension activity to create a reusable shopping bag by recycling an old t-shirt- instructions provided in the link below.

<http://www.scatteredthoughtsofacraftymom.com/2015/09/how-to-make-tote-bag-from-t-shirt-no-sewing.html/2>

**REFLECTION**

**Reflection Questions**

- *Name the different types of pollution you saw and describe the effects it has on our world.*
- *How does it make you feel seeing pollution around the world?*
- *Where have you seen pollution in your own environment?*
- *What could you do to help the environment? Can your family do anything together to positively impact the environment?*

**DIFFERENTIATION**

**BELOW GRADE LEVEL:**

- Provide sentence starters for students' journal entry writing.
- Provide a template for the brochure.
- Allow for peer tutor and pairings.

**ABOVE GRADE LEVEL:**

- Turn and talk with partners: *How would you feel if you were in the same situation or you were in that environment?*
- In partners, what do you think caused the pollution in the environment? Come up with possible

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solutions.

- Create electronic brochure in Microsoft Word with template and share within Office 365.

**EL STUDENTS:**

- Include picture support on the vocabulary anchor.
- Allow students to copy their articles into Microsoft Word Online and use the "Immersive Reader" feature to hear their articles read aloud. (Office365 Student Account>Word Document Online>View>Immersive Reader)
- Provide sentence starters for students' journal entry writing.  
Use first language support to clarify unknown academic vocabulary.
- Provide a template for the brochure.

**ADDITIONAL RESOURCES**

- Sway PowerPoint of images: <https://sway.com/IT9ZpXuLI9nUt7Gy>
- Ego vs Eco Picture: <http://recyclingsustainability4a.weebly.com/ego-vs-eco.html>

**APPENDIX**

- Project 1 Rubric

**CREDITS**

U.S. Department of Education  
Arts in Education--Model Development and Dissemination Grants Program  
Cherokee County (GA) School District and ArtsNow, Inc.  
Ideas contributed and edited by:  
Jill McNally, Alisa Moore, Julie Palmieri, Edited by Dr. Carla Cohen, Edited by Jessica Espinoza

### Pollution Matters Brochure Rubric

**TASK: Persuasive Writing Against Pollution**

Task	4	3	2	1
<b>Content Accuracy</b>	All 6 facts in the brochure are accurate.	4-5 of the facts in the brochure are accurate.	2-3 of the facts in the brochure are accurate.	Fewer than 2 of the facts in the brochure are accurate.
<b>Use all vocabulary words for pollution: compost, biodegradable, recycle, reuse, reduce, non biodegradable, littering, pollution, exhaust, aerosol, paper, plastic, aluminum, Ozone Layer</b>	The author correctly used all vocabulary words and defined words unfamiliar to the reader.	The author correctly used at least 10 vocabulary words and defined words unfamiliar to the reader.	The author used at least 6 vocabulary words, but used 1-2 words incorrectly.	The author did not incorporate any vocabulary related to content area or vocabulary is used incorrectly throughout the brochure.
<b>Attractiveness and Organization</b>	The brochure was well produced including attractive formatting and well-organized information throughout.	The brochure was mostly well produced including attractive formatting and well-organized information throughout.	The brochure was somewhat produced including attractive formatting and well-organized information throughout.	The brochure was incomplete and minimal effort was put into producing it.
<b>Sources Cited</b>	Careful and accurate records were kept to document the source of all of the facts and graphics in the brochure.	Careful and accurate records were kept to document the source of most of the facts and graphics in the brochure.	Careful and accurate records were kept to document the source of some of the facts and graphics in the brochure.	Sources were not documented accurately or are not kept on many facts and graphics.

Total Score: \_\_\_\_\_

## Suggested Collected Items

*\*From the website: <https://www.onegreenplanet.org/lifestyle/home-items-you-can-reuse-over-and-over-again/>*

### 1. Glass Jars, Containers or Cans

Glass and metal are easily recycled, but why not cut down on excess packaging and waste by reusing them? Glass jars and old coffee canisters make great containers for bulk pantry items, desk organizers or bathroom containers. And there are a million ways to [reuse mason jars](#) beyond food [canning](#) — even many pasta sauce brands use jars that are ideal for food preservation. Got a lot of leftover narrow necked beer bottles? Make them into a [set of drinking glasses](#)! Or how about a [wine rack](#), or display shelves out of coffee cans?

### 2. Gallon Jugs, Plastic Soda Bottles, Takeout and Other Plastic Containers

Beyond using jugs and bottles to store homemade natural cleaners, with a little modification, you can turn those plastic containers into useful household items like this [plastic bottle broom](#)! Make [bird feeders](#) out of old soda bottles, or food bins, shoe cubbies and dustpans/scoops out of [plastic jugs](#). How about making reusable [self watering seed pots](#) or a [cell charging station](#) out of a shampoo bottle? And don't throw out the takeout containers! Many are sturdy, dishwasher safe and excellent for reuse in the kitchen.

### 3. Newspapers, Magazines, and Paper Bags

Over run by paper? There are lots of [great ways to re-purpose all the paper in your life](#). Get creative and create amazing and useful woven [baskets](#) and [trays](#) out of [magazines](#) and [newspapers](#). Recycle newspapers, grocery bags and magazines as wrapping paper. How about some compostable [seed pots](#)? Or [DIY envelopes](#) out of outdated calendar pages? And if you're really ambitious, make a gorgeous [wood-like flooring with paper bags](#).

### 4. Clothes, Towels, and Bedding

Don't toss out old towels, clothes and bedding! Cut them up into washable cleaning rags! Or check out these excellent Pinterest ideas for ways to [upcycle old clothes](#) into new! Why not turn those torn t-shirts into beautiful [braided rugs](#)? If you've got sewing skills, turn old flannels into [resuseable dusters](#).

### 5. Seeds

At the end of the growing season, let a couple of your veggies and flowers go to seed, collect the seeds and save them for next season for free! Here's [everything you need to know about harvesting and saving seeds](#) to reuse again and again!

### 6. Laundry Waste



If you use them, don't toss out those old dryer sheets! They make excellent dusting rags, especially for sucking up pet hair. They work great for scrubbing off soap scum and polishing chrome too! You can even make them into a [dress](#) if you're really determined. Collect the lint from the dryer to make [recycled paper](#) or [paper mache](#), or even [compostable seed pots](#).

## 7. Plastic Bags

When the box of cereal is empty, save the inner bag, wash, dry and cut to wrap sandwiches. Plastic bags can be used as pet waste bags, or trash bins, or you can reuse them at the grocery store. Better yet, upcycle those plastic bags into nice-looking, sturdy [reusable grocery totes](#)!

## 8. Bathroom Items

Save old toothbrushes to scrub hard to reach places, like grout and underneath the fixtures on faucets. Or clean old toothbrushes and reuse as eyebrow brushes, hair color applicators or for cleaning tools, electronics or other delicate or hard to clean items. Empty toothpaste tubes can be re-purposed as a funnel by cutting off the bottom, or as a frosting tube for icing cakes. Empty deodorant bottles are perfect for refilling with this [DIY Deodorant Recipe](#)!

## 9. Broken Dishes

Collect broken china to re-tile outdoor tables, [flower pots](#), paths, or as a unique border for your garden. Use broken china to make a [key fob](#) or jewelry. Plant small plants in old stained coffee mugs.

## 10. Old Furniture

Refinish or repair rather than tossing old furniture. Re-purpose broken furniture or disassemble and [reuse the wood](#). Hang drawers on the wall to create shelves, shadowboxes or bulletin boards.