



## Reduce, Reuse, and Create Art!

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### INTRODUCTION

In this lesson, students will use art to convey a message about an issue of their choice. Students will learn about green art supplies and create their own art project out of recycled materials. They will also write a reflection on their project and display their art for others to view.

### LESSON OVERVIEW

**Grade level and subject:** Grades 9-12; Art, Environmental Science

**Length:** 2 class periods, one for lesson and another for presentations

#### Objectives:

After completing this lesson, students will be able to:

- Understand the issues surrounding toxic art supplies
- Complete a project using environmentally friendly supplies and recycled materials
- Present and explain their project to their peers

#### National Standards Addressed<sup>1</sup>:

- **Content Standard:** [NA-VA.9-12.1 UNDERSTANDING AND APPLYING MEDIA, TECHNIQUES, AND PROCESSES](#)

Achievement Standard:

- Students apply media, techniques, and processes with sufficient skill, confidence, and sensitivity that their intentions are carried out in their artworks
- Students conceive and create works of visual art that demonstrate an understanding of how the communication of their ideas relates to the media, techniques, and processes they use

Achievement Standard, Advanced:

- Students communicate ideas regularly at a high level of effectiveness in at least one visual arts medium
- Students initiate, define, and solve challenging visual arts problems independently using intellectual skills such as analysis, synthesis, and evaluation

- **Content Standard:** [NL-ENG.K-12.12 APPLYING LANGUAGE SKILLS](#)

- Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information)

- **Content Standard:** [NS.9-12.6 PERSONAL AND SOCIAL PERSPECTIVES](#)

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<sup>1</sup> Education World (2008). *U.S. National Education Standards*. Retrieved March 30, 2009, from <http://www.educationworld.com/standards/national/>.

As a result of activities in grades 9-12, all students should develop understanding of

- Personal and community health
- Population growth
- Natural resources
- Environmental quality
- Natural and human-induced hazards
- Science and technology in local, national, and global challenges

**Materials Needed:**

- Items that could be turned into reusable art supplies (sock, newspaper, bags, jars, cans, plastic, toys, boxes, etc.)
- Reproducible #1- **Reduce, Reuse, Create Art Reflection**
- Access to computers or a computer with projector (optional)

**Assessment:**

Students will be assessed through the following activities:

- Recycled Art Project and presentation
- Recycled Art Project reflection

## LESSON BACKGROUND

**Relevant Vocabulary:**

- **Green Art:** Art that is created through a sustainable manner and that uses environmentally friendly supplies
- **Renewable Resource:** A resource that is replenished at an equal or comparable rate as its consumption i.e. soybeans
- **Non-Renewable Resource:** A resource that is not replenished at a rate to sustain its consumption level
- **Persistent Bioaccumulative Toxic Chemicals:** Toxic chemicals that persist in the environment for long periods of time and accumulate in cells and tissues as they move up the food chain.
- **Volatile Organic Compounds (VOCs):** organic chemical compounds which have high vapor pressures under normal circumstances; capable of entering the gas phase in normal conditions; participate in atmospheric photochemical reactions.

**Information:**

Though artistic endeavors can involve as many toxic chemicals as a chemistry experiment, students and teachers are often unaware of the hazards these materials pose to their own health and the health of the earth. Many art supplies used in the classroom contain Persistent Bioaccumulative Toxic chemicals (PBT's), or can generate or release PBT's into the environment when they are made,

used, or discarded<sup>2</sup>. PBTs persist in the environment and accumulate in tissue, increasing in concentration as they move through the food chain, posing a risk to human health and ecosystems<sup>3</sup>.

Exposure to dangerous chemicals in art supplies can cause acute or chronic illness in children such as: headaches, breathing problems, nausea, burns, lung and kidney damage, and even cancer<sup>4</sup>. The adverse effects of childhood exposure to toxic materials are compounded by children's smaller size, immature organ and immune systems, and higher metabolic rates. These factors lower children's tolerance for exposure to hazardous materials<sup>5</sup>.

A great way to solve this problem is to make sure your school is only purchasing sustainable, non-toxic art supplies. Another great approach is to incorporate items that might otherwise be destined for the landfill in your art projects. Using non-toxic art supplies makes art education safer for students and teachers. Also, incorporating recycled materials into art projects reduces the amount of new materials schools need to purchase for art education programs, reducing manufacturing and transportation energy and saving the school money. Reusing old materials stimulates creativity, teaching students to look for new uses for old things.

### Resources:

- Art and Creative Materials Institute's seal of approval for green art supplies: <http://www.acminet.org/>
- Information on PBTs: <http://www.epa.gov/pbt/>
- A few green art supply stores:
  - [Green Home Environmental Store](#) for everything from recycled construction paper to organic play-dough.
  - [EcoArt Works](#) for hemp paper, beeswax crayons and other natural products.
  - [TreeSmart](#), [O'BON](#), and [Smencils](#) for graphite and colored pencils made from rolled, recycled newspapers.
- Art Supply Safety: <http://www.healthychild.net/articles/sf44artsupply.html> and <http://oehha.ca.gov/education/art/artguide.html>
- The Heidelberg Project in Detroit, MI uses trash to make street art: [www.heidelberg.org](http://www.heidelberg.org)

## LESSON STEPS

### Warm Up: *From Trash to Treasure*

1. Split students into groups of 2-4 and give each group one of the reusable items you collected (sock, box, glass jars, cans, newspaper, etc.)

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<sup>2</sup> INFORM. *Art Departments: Products Containing Persistent, Bioaccumulative, Toxic Chemicals (PBTs)*. <http://www.informinc.org/fsart.pdf>

<sup>3</sup> EPA. *About PBTs*. <http://www.epa.gov/pbt/pubs/aboutpbt.htm>

<sup>4</sup> Co-op America. *Are Art Supplies Toxic?* <http://www.coopamerica.org/pubs/realmoney/articles/toxicart.cfm>

<sup>5</sup> California Office of Environmental Health Hazard Assessment. (2007). *Guidelines for the Safe Use of Art and Craft Supplies*. Sacramento, CA: Office of Environmental Health Hazard Assessment. [http://www.oehha.org/education/pdf\\_zip/GUIDE2007.pdf](http://www.oehha.org/education/pdf_zip/GUIDE2007.pdf)

2. Give students 10 minutes to brainstorm in their groups and come up with as many ways as possible that they could reuse their item and make it into something new. (*For example, a glass jar could be turned into a vase, a candleholder, bookends, storage for food, and a storage place for spare change.*)
3. Encourage students to be as creative and think of both practical and wacky uses for their item. When they have finished, have them share with the rest of the class what they came up with for their item.

### **Activity One: *Can a Purple Crayon be Green? An Introduction to Green Art***

1. Introduce students to the concept of green art. Green art means doing art in an environmentally sustainable and responsible manner. There are a variety of different ways to do this, including making art out of reusable materials, just like in the warm up! Ask students if they can think of ways to create art out of the items they saw during the warm up. What other recycled items can they think of that could be turned into art?
2. Provide students with these ideas for eco-friendly art supplies:
  - Use 100% post-consumer recycled paper
  - Choose crayons made from soybean oil instead of petroleum. These are biodegradable and made from a renewable resource, as opposed to petroleum, which comes from a non-renewable resource.
  - Buy pencils made from sustainably harvested wood and recycled newspapers
  - Make your own art supplies! Use scrap paper from around the house and create your own paint out of cornstarch, flour, and pudding to make a masterpiece.
  - Use non-VOC paints and other non-toxic supplies.See if your students can come up with any other ideas for eco-friendly supplies.
3. Ask students to think about what art supplies are traditionally made of, and how they might affect their health. Besides being environmentally friendly and using sustainable products, green art is about using supplies that are non-toxic and healthy for humans as well. Although it may not seem this way, art supplies can have chemicals in them such as VOCs and PBTs that are harmful to human health<sup>2</sup>. So, by buying supplies that are eco-friendly, you save both the environment and yourself!
4. Use The Heidelberg Project in Detroit, MI as an example of artwork that is done using old materials. Tyree Guyton started the Heidelberg Project in 1986 in response to the poverty and despair he witnessed on the street he grew up on. Using a paintbrush and the garbage he picked up out of vacant lots, Tyree transformed the street into an art extravaganza. This allowed him not only to make the street more aesthetically appealing, but he also used it as a message to bring attention to the abandoned and under-resourced areas of inner city Detroit. Pictures of the project and more information can be found here: <http://www.heidelberg.org/history.html> and <http://www.heidelberg.org/archives.html>. Project the pictures onto a screen and have students look at them to get inspiration for their own projects. Also ask them to consider how the images affect them emotionally. What type of message do they think Tyree is trying to send? What are some negative feelings they get from the art? What are some positive? Focus on art as a way to create a social message and instill emotion in others.

### **Activity Two: *Reduce, Reuse, and Create Art!***

1. Now that students have learned about green art, have them create their own! Instruct students to brainstorm a message or viewpoint they want their art to convey, and have them create their project through reusable items they find from home, school, work, etc. If they need to use items such as crayons, paint, or pencils for their project, suggest they use the non-toxic or recycled kind. Encourage creativity and originality!
2. Once they have finished their project, have students complete **Reproducible #1- Reduce, Reuse, Create Art - Reflection.**

### **Activity Three: *Peer Presentation***

1. Have students present their artwork to their peers, giving an explanation about why they chose to create it and what message they intended to send. (*There are many ways to accomplish peer presentation: students can present to their other classmates, their peers, parents, or faculty and staff. Have students set up a display outside the cafeteria during lunch, or invite another class to view their work. Or, have faculty, parents, or students that have time off come in during the class hour or after school to view their projects.*)

### **Wrap Up:**

1. Go around the room and have each student describe one item they used in their project that would have been thrown away otherwise. Did they use any other green art supplies, such as recycled pencils or soybean based crayons?
2. Ask the class if this project helped them see ordinary objects in a different light? From now on will they be able to find more uses for objects that they would otherwise throw away?

### **Extension: *Sharing with the Community***

Have students display their artwork at a community center or somewhere else where other community members can view it. Team up with local artists and set up a show dedicated to recycled artwork.

## **CONCLUSION**

Using green art supplies is important to both the environment and human health. Through their own creativity, students experience green art firsthand and use it as a way to convey social messages. They also learn how to present their art and articulate its message through a presentation to their peers.

## **Reduce, Reuse, Create Art Reflection**

Now that you've created your own original piece of recyclable art, write a 1-2 page reflection on your project. Consider some of the following questions to get yourself started:

- Where did you find inspiration for your project?
- What type of audience is your project aimed at?
- What do you want viewers to take away from your artwork?
- What type of materials did you use?
- Is there any significance to the items you chose?
- What did you learn while creating your art project?
- Would you expand your project at all if you had more time/resources?