Ideas with IMPACT

STEAM

ECO Sprouts: Recycled Plantable Seeded Paper
ECO Sprouts: Recyclable Seeded Paper
Susan Feliciano
Visual Art Educator
Miami Dade County Public Schools
Marjory Stoneman Douglas Elementary School
susanfeliciano@dadeschools.net
#1371

For information concerning Ideas with IMPACT opportunities including Adapter and Disseminator grants, please contact:
Audrey Onyeike
Ideas with IMPACT Program Director
The Education Fund
aonyeike@educationfund.org
www.educationfund.org
305.558.4544 ext. 113
TABLE OF CONTENTS

3  Dedication
4  Goals
5  Objectives
6  Florida State Standards
7  Course Outline
8  Overview
9  Inquiry Questions
10 Visual Arts Rubric
11 Educational Resources
12 Self-Assessment
13 Glossary of Terms
14 Materials List
15 Lesson Plan: Paper Making
16 Lesson Plan: Planet Earth
17 Lesson Plan: Planting and Documenting Wildflowers and Pollinators Chart
19 Gallery of Images
20 Galley of Images
21 Bibliography
22 Earth Day Flyer
23 Letter to the Parent/English
24 Letter to the Parent/Spanish
25 Final Note
DEDICATION

This curriculum packet is dedicated to ALL artists/scientists who are curious about the natural world, citizen scientists who are the caretakers of the planet, and educators who inspire their students to learn about their place in it.
GOALS

- To raise awareness of environmental issues
- To think like an artist/scientist
- To experiment as citizen scientist
- To examine the impact of planting on the environment
- To use materials made from nature
- To assess visual art skills and processes
- To explore ideas for biodiversity
OBJECTIVES

- Participants will explore paper making processes
- Participants will experiment with natural materials
- Participants will create recyclable seeded paper
- Participants will produce a min planet earth
- Participants will identify plants and pollinators
- Participants will plant wildflowers
- Participants will assess the project
FLORIDA STATE STANDARDS

Science Standards:
Nature of Science
SC. 5. N.11 / SC.68. N.11 / SC.912. N.11
The Practice of Science
Define problems, use appropriate reference materials to support scientific understanding.

Technology
Paper making production and sustainable practices.

Engineering
Phases of production include recycling, reusing, and reducing.

Visual Arts Standards:
Skills, Techniques, and Processes
VA.5. S.1 / VA.68. S.1 / VA.912. S.1
The arts are inherently experiential and actively engage learners in the processes of creating, interpreting, and responding to art.
Organizational Structure
VA.5. O.1 / VA.68. O.1 / VA.912. O.1
Understanding the organizational structure of an art form provides a foundation for appreciation of artistic works and respect for the creative process.
Historical and Global Connections
Connections among the arts and other disciplines strengthen learning and the ability to transfer knowledge and skills to and from other fields.
Innovation, Technology, and the Future
VA.5. F.1.1 / VA.68. F.1.1 / VA.912. F.1.1
Use divergent thinking, abstract reasoning, and various processes to demonstrate imaginative or innovative solutions for art problems.

Math
Cluster 2: Represent and interpret data.
COURSE OUTLINE

I. ECO Sprouts: Recyclable Seeded Paper
   A. Recycle Colored Paper
   B. Paper Making
   C. Explore Sustainable Practices like a Citizen Scientist

II. Planet Earth
    A. Reuse Plastic Lids
    B. Make a Mini Planet Earth
    C. Paper Molds

III. Planting and Documenting
    A. Reduce Carbon Footprint
    B. Plant Wildflower Seeded Paper
    C. Document Observations in Sketchbook/Journal Like an Artist/Scientist

IV. Wildflowers and Pollinators Chart
    A. Promote Biodiversity
    B. Provide Food and Habitat for Pollinators
    C. Identify Wildflowers and Pollinators of Florida
OVERVIEW

This Earth Day art project promotes biodiversity! In this eco-friendly workshop students will develop sustainable practices using the 3 R's, reuse, recycle, and reduce, as they create ECO Sprouts: Recycled Plantable Seeded Paper. Students get to make paper from recycled materials and use it to design a mini planet earth from molds reusing plastic lids. Additionally, students will add wildflower seeds to their paper pulp. Within a few days tiny sprouts will emerge. When the paper is planted a flower grows and leaves no waste behind.

ECO Sprouts: Recycled Plantable Seeded Paper works on three levels. First it lowers paper waste by recycling paper. Second, students will prevent carbon dioxide gasses from entering the atmosphere by planting seeds that sprout into flowers. Third, the wildflowers increase biodiversity by providing food and habitat for pollinators.

The aim of this workshop is to have students of all ages and skill levels invest in their planet through sustainable practices. The ultimate goal is to teach students that they are caretakers of the planet and planting seeds makes a positive impact on the environment and in a cyclical manner their personal achievement. Best of all ECO Sprouts: Recycled Plantable Seed Paper can be molded or adapted to any SHAPE commemorating any DAY.
INQUIRY QUESTIONS

1. What do artists/scientists make?
2. Why is observation essential?
3. How does science and art connect?
4. Why is it important to think like an artist?
5. Why are ECO friendly products critical to the environment?
6. What are ways this project explores citizen science ideas?
<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>QUESTION</th>
<th>CRITERIA</th>
<th>4 Excellent</th>
<th>3 Good</th>
<th>2 Fair</th>
<th>1 Limited</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composition</td>
<td>How is it organized?</td>
<td>Elements of Art</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Principles of Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completion</td>
<td>How is it finished?</td>
<td>Realized</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accomplished</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Content</td>
<td>How is it communicated?</td>
<td>Subject</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Media</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creativity</td>
<td>How is it innovative or new?</td>
<td>Unique</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interesting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Craftsmanship</td>
<td>How is it made?</td>
<td>Presentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEEDBACK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
EDUCATIONAL RESOURCES

**apps**
iNaturalists

**bookstores**
books and books  booksandbooks.com
barnes and noble  barnesandnoble.com

**field trips**
fairchild tropical botanic garden  fairchildgarden.org
pinecrest gardens  pinecrestgardens.org
miami beach botanic gardens  mbgarden.org

**materials**
ocean bank warehouse  educationfund.org

**museums**
frost art science museum  frostartsciencemuseum.org

**organizations**
national art education association  naea.org

**supplies**
jerry’s art-a-rama  jerrysartarama.com
blick art materials  blick.com

**videos**
met kids  metkids.org
tate kids  tatekids.org
ted ed  teded.org

**visuals**
davis publications  davis.org
scholastic arts  scholasticarts.org
<table>
<thead>
<tr>
<th>Questions</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe three things you enjoyed about this project?</td>
<td></td>
</tr>
<tr>
<td>Explain what part of this project you would like to learn to do better?</td>
<td></td>
</tr>
<tr>
<td>Discuss what part of this project was the most difficult?</td>
<td></td>
</tr>
<tr>
<td>Identify three new ideas, skills, or information you learned?</td>
<td></td>
</tr>
<tr>
<td>State what you would do differently if you could do this project again?</td>
<td></td>
</tr>
</tbody>
</table>
GLOSSARY OF TERMS

- Assessment • to evaluate an outcome.
- Botany • the scientific study of plants.
- Citizen Scientist • conduct experiments, collect data, results, and solve problems.
- Color • the hue, value, and intensity.
- D
- Earth • the planet, the world.
- Eco • not harming the environment.
- F
- G
- H
- Inquiry • to ask information.
- J
- K
- Lid • top of a container.
- Mold • a hollow container that gives a form.
- Natural Materials • plants, animals, stones, minerals, or metals.
- O
- Paper • material made from the pulp of wood.
- Plant Based • fruits, vegetables, grains, beans, nuts, seeds, herbs, or spices.
- Pollinator • carries pollen from one plant to another.
- Pulp • wet, soft, mass of a material.
- Question • to ask.
- Recyclable • transform into a reusable material.
- Reuse • use more than once.
- Reduce • less in amount.
- Rubric • set of guidelines.
- Seeded • having seeds.
- Sprouts • a shoot of a plant.
- Sustainability • to maintain a balance.
- Techniques • the way to perform a task.
- Tool • an instrument or device used by the hand.
- U
- V
- Wet • saturated with water.
- X
- Y
- Z
<table>
<thead>
<tr>
<th>Natural Materials</th>
<th>Supplies</th>
<th>Tools</th>
<th>Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Paper</td>
<td>Plastic Bags</td>
<td>Scissors</td>
<td>Blenders</td>
</tr>
<tr>
<td>Green Paper</td>
<td>Sharpie Markers</td>
<td>Measuring Cups</td>
<td>Food Processors</td>
</tr>
<tr>
<td>Brown Paper</td>
<td>Manilla Paper</td>
<td>Stainless Steel Pots</td>
<td></td>
</tr>
<tr>
<td>White Paper</td>
<td>Newsprint</td>
<td>Bowls</td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Paper Towels</td>
<td>Wire-Mesh Strainers</td>
<td></td>
</tr>
<tr>
<td>Flower Seeds</td>
<td>Plastic Lids</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Plastic Containers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sponges</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ask parents to donate the flower seeds.
Ask parents to donate the plastic containers, lids, and sponges.
Get these items from the Dollar Store or Thrift Store.
Get them from a Thrift Store.

Plastic is best in the classroom.
### LESSON PLAN: ECO Sprouts: Recyclable Seeded Paper PAPER MAKING

<table>
<thead>
<tr>
<th>Visual Art</th>
<th>Level</th>
<th>Grades 2-5, 6-8, 9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson</td>
<td>Title</td>
<td>ECO Sprouts: Recyclable Seeded Paper</td>
</tr>
<tr>
<td>Theme</td>
<td>Topic</td>
<td>Environment</td>
</tr>
<tr>
<td>Media</td>
<td>Medium</td>
<td>Paper Making</td>
</tr>
<tr>
<td>Genre</td>
<td>Subject</td>
<td>Landscape</td>
</tr>
<tr>
<td>Objective</td>
<td>Outcomes</td>
<td>This eco-friendly Earth Day art project factors in the 3 R's- Recycle, Reuse, and Reduce where participants explore sustainable practices. The students will recycle colored paper blue, brown, green, and white and make pulp. Then infuse the pulp with wildflower seeds to make recyclable seeded paper.</td>
</tr>
</tbody>
</table>
| Procedure  | Steps | 1. COVER workspace with newsprint  
2. SET UP blenders  
3. DIVIDE students into 4 groups  
4. EACH group receives a plastic container and colored paper  
5. CUT colored papers into smaller pieces with scissors  
6. MEASURE a cup of water in each container  
7. PLACE colored paper in container  
8. ALLOW the papers to soak for 2 or 3 minutes  
9. HAVE each group pour paper mixture into a blender  
10. ADD more water as necessary  
11. SUPERVISE blender use  
12. BLEND until paper turns into pulp  
13. PLACE a large bowl/pot under wire mesh strainer  
14. POUR pulp onto strainer  
15. USE strainer to separate excess water from pulp  
16. PUT pulp into plastic containers  
17. ADD a handful of seeds to pulp and mix |
<p>| Essential Question | Big Idea | How does engaging in creating art enrich people's lives? |
| ESOL Strategies | English Learners | Visual Clues, Model Tasks, Hands-on Art Activities, Cooperative Learning |
| Assessment/Rubric | Evaluation | Self Assessment, Observation, Visual Art Rubric |
| Sketchbook/Journal | Practice Skills | Note Taking, Recording Observations, Drawing Pictures |</p>
<table>
<thead>
<tr>
<th>Visual Art</th>
<th>Level</th>
<th>Grades 2-5, 6-8, 9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson</td>
<td>Title</td>
<td>Planet Earth Project</td>
</tr>
<tr>
<td>Theme</td>
<td>Topic</td>
<td>Environment</td>
</tr>
<tr>
<td>Media</td>
<td>Medium</td>
<td>Paper Molds</td>
</tr>
<tr>
<td>Genre</td>
<td>Subject</td>
<td>Landscape</td>
</tr>
<tr>
<td>Objective</td>
<td>Outcomes</td>
<td>This eco-friendly Earth Day art project factors in the 3 R's- Recycle, Reuse, and Reduce where participants explore sustainable practices. The student will reuse plastic lids as molds to make a mini planet earth. They will design the earth’s surface using blue, green, white, and brown pulp made from recycled paper. They will press it into plastic lids that serve as circular molds. Within a few days tiny sprouts will emerge.</td>
</tr>
</tbody>
</table>
| Procedure | Steps | 1. COVER workspace with newsprint  
2. DIVIDE students into 4 groups  
3. EACH group receives plastic containers colored pulp  
4. SHOW students images of the planet earth from space  
5. PRESS small amounts of pulp into the lid  
6. DEMONSTRATE how to recreate the earth’s surface  
7. START with blue for the water  
8. ALLOW students to soak up any excess water with a sponge  
9. MOVE into green for the land  
10. PINCH the blue and green pulp to make it bind together  
11. SUPERVISE how much pulp each group uses  
12. FOLLOW with brown for the desert  
13. PLACE white in small amounts on top to create clouds  
14. SOAK up water in and around the lid with sponges  
15. USE a separate container to squeeze out excess water  
16. DISTRIBUTE paper towels to dry hands and table surfaces  
17. KEEP pulp in lids to dry over the next 3 days  
18. USE rubric to assess students works |
| Essential Question | Big Idea | How do objects, places, and design shape lives and communities? |
| ESOL Strategies | English Learners | Visual Clues, Model Tasks, Hands-on Art Activities, Cooperative Learning |
| Assessment/Rubric | Evaluation | Self-Assessment, Observation, Visual Art Rubric |
| Sketchbook/Journal | Practice Skills | Note Taking, Recording Observations, Drawing Pictures |
### LESSON PLAN: PLANTING and DOCUMENTING

<table>
<thead>
<tr>
<th>Visual Art</th>
<th>Level</th>
<th>Grades 2-5, 6-8, 9-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesson</td>
<td>Title</td>
<td>Planting and Documenting</td>
</tr>
<tr>
<td>Theme</td>
<td>Topic</td>
<td>Environment</td>
</tr>
<tr>
<td>Media</td>
<td>Medium</td>
<td>Drawing and Journaling</td>
</tr>
<tr>
<td>Genre</td>
<td>Subject</td>
<td>Landscape</td>
</tr>
</tbody>
</table>

#### Objective
Outcomes
This eco-friendly Earth Day art project factors in the 3 R’s-Recycle, Reuse, and Reduce where participants explore sustainable practices. The student will plant their mini planet earth seeded paper in their neighborhood to reduce their carbon footprint and help combat the causes of environmental climate change. They will document their observations in a sketchbook/journal referring to the wildflower and pollinator chart for identification purposes.

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. DIVIDE students into 4 groups</td>
</tr>
<tr>
<td></td>
<td>2. EACH group receives their mini planet earth</td>
</tr>
<tr>
<td></td>
<td>3. DISTRIBUTE plastic bags, flyer, and planting instructions</td>
</tr>
<tr>
<td></td>
<td>4. LABEL plastic bags with students name</td>
</tr>
<tr>
<td></td>
<td>5. HAVE students carefully place mini earth in plastic bag</td>
</tr>
<tr>
<td></td>
<td>6. ADD flyer and planting instructions</td>
</tr>
<tr>
<td></td>
<td>7. SUPERVISE packing making sure everything lies flat</td>
</tr>
<tr>
<td></td>
<td>8. EXPLAIN planting wildflowers reduces carbon footprint</td>
</tr>
<tr>
<td></td>
<td>9. GO over planting instructions</td>
</tr>
<tr>
<td></td>
<td>10. HANDOUT the wildflower and pollinator chart</td>
</tr>
<tr>
<td></td>
<td>11. REVIEW names of wildflowers and pollinators on the list</td>
</tr>
<tr>
<td></td>
<td>12. PASS out Sketchbooks/Journals</td>
</tr>
<tr>
<td></td>
<td>13. DIRECT students to record observations in their journals</td>
</tr>
<tr>
<td></td>
<td>14. SHOW students how to note take and draw pictures</td>
</tr>
<tr>
<td></td>
<td>15. EXPLAIN that artists and scientists document observations</td>
</tr>
<tr>
<td></td>
<td>16. ASSESS students journal entries</td>
</tr>
</tbody>
</table>

### Essential Question
Big Idea
How does art preserve aspects of life?

### ESOL Strategies
English Learners
Visual Clues, Model Tasks, Hands-on Art Activities, Cooperative Learning

### Assessment/Rubric
Evaluation
Self-Assessment, Observation, Visual Art Rubric

### Sketchbook/Journal
Practice Skills
Note Taking, Recording Observations, Drawing Pictures
WILDFLOWERS AND POLLINATORS CHART

**DIRECTIONS**
In your Sketchbook/Journal practice drawing pictures, note taking, and recording observations of the wildflowers and pollinators that grow in your neighborhood, backyard, or garden. Develop your artist/scientist skills by using this chart to help identify your findings and to label your drawings.

<table>
<thead>
<tr>
<th>WILDFLOWERS</th>
<th>POLLINATORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aster</td>
<td>Ant</td>
</tr>
<tr>
<td>Black Eyed Susan</td>
<td>Bat</td>
</tr>
<tr>
<td>Blazing Star</td>
<td>Beetle</td>
</tr>
<tr>
<td>Coreopsis</td>
<td>Bumble Bee</td>
</tr>
<tr>
<td>Cornflowers</td>
<td>Cloudless Sulphur Butterfly</td>
</tr>
<tr>
<td>Cosmos</td>
<td>Firefly</td>
</tr>
<tr>
<td>Dune Sunflower</td>
<td>Green Metallic Bee</td>
</tr>
<tr>
<td>Florida Green Eyes</td>
<td>Gulf Fritillary Butterfly</td>
</tr>
<tr>
<td>Goldenaster</td>
<td>Hawk Moth</td>
</tr>
<tr>
<td>Marigold</td>
<td>Honey Bee</td>
</tr>
<tr>
<td>Milkweed</td>
<td>Hummingbird</td>
</tr>
<tr>
<td>Purple Coneflower</td>
<td>Lady Bug</td>
</tr>
<tr>
<td>Purple Passion Flower</td>
<td>Monarch Butterfly</td>
</tr>
<tr>
<td>St. John’s Wort</td>
<td>Queen Butterfly</td>
</tr>
<tr>
<td>Verbena</td>
<td>White Peacock Butterfly</td>
</tr>
<tr>
<td>Wild Petunia</td>
<td>Zebra Longwing Butterfly</td>
</tr>
</tbody>
</table>
Students recycled blue, green, brown, and white paper into pulp.

Students created ECO Sprouts packets to commemorate Earth Day.
Seeds began to sprout from the mini planet earth seeded paper.

Parents donate packets of wildflower seeds for the ECO Sprouts project.
BIBLIOGRAPHY


Earth Day.org, https://www.earthday.org/

Fairchild Tropical Botanic Garden, https://fairchildgarden.org/

Florida Museum, https://www.floridamuseum.ufl.edu/wildflowers/wildflower-search/

Florida Wildflower Foundation, https://www.flawildflowers.org/

National Core Arts Standards, https://www.nationalartsstandards.org/

National Geographic, Plant a Pollinator Garden, https://www.youtube.com/watch?v=M76sB_YPoU0


EARTH DAY
April 22, 2023

INVEST IN OUR PLANET
Dear Parents,

In celebration of Earth Day, students will be making recycled plantable seed paper. Students will recycle items made of natural materials and turn it into plantable seed paper. *When the paper is planted a flower grows and leaves no waste behind.* This art lesson teaches students to reduce their carbon footprint, help the environment, and invest in our planet.

We need your help to make this project a success. If you would be willing to donate towards our wish list, your contribution will be very much appreciated.

Wish List:
1. Packet of Flower Seeds
2. Sponges
3. Plastic Containers with Lids

Please note that your contribution is *optional.*

Thank you in advance.

Susan Feliciano
Art Educator
DÍA DE LA TIERRA
22 de abril de 2023

INVIERTE EN NUESTRO PLANETA

Estimados padres,

En celebración del Día de la Tierra, los estudiantes harán papel reciclado con semillas para sembrar. Los estudiantes reciclarán artículos hechos de materiales naturales y los convertirán en papel con semillas para sembrar. Cuando se planta el papel, crece una flor y no deja residuos. Esta lección de arte les enseña a los estudiantes a reducir su huella de carbono, ayudar el entorno e invertir en nuestro planeta.

Necesitamos tu ayuda para que este proyecto sea un éxito. Si está dispuesto a donar a nuestra lista de deseos, su contribución será muy apreciada.

Lista de deseos:
1. Paquete de semillas de flores
2. Esponjas
3. Contenedores de Plástico con Tapas

Tenga en cuenta que su contribución es opcional.

Gracias de antemano.

Susan Feliciano
Educador de Arte
FINAL NOTE

I hope you enjoyed this eco-friendly Earth Day art project. I would love to hear how you used the 3 R’s- Recycle, Reuse, and Reduce and how you adapted this project to explore sustainable practices. What are the ways that you designed a project to reduce your students' carbon footprint? What response did you receive from your students about planting wildflower seeded paper in their neighborhood? Do you have photos of the mini planet earths, sprouts, flowers, or pollinators? Did you adapt this project to commemorate another day? Would you kindly share your ideas, thoughts or photos?

Please contact me at my school email address at: susanfeliciano@dadeschools.net