2021-2022 Ideas With IMPACT

idea packet sponsored by:

ECO Weaving: Mandalas
ECO Weaving: Mandalas

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#1371

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goals

to raise awareness of real-world issues
to examine the impact of plastic on the environment
to reuse, reduce, and recycle materials
to transform single use plastic bags into an art project
to experiment with a variety of weaving techniques
to create a sustainable woven textile
to explore ideas for a large-scale installation
to assess art making skills, techniques, and processes
objectives

participants will explore ecological issues

participants will look for ways to reduce the negative impact of plastic

participants will make a circular loom from recycled cardboard

participants will develop Plarn, yarn from single-use plastic bags

participants will learn weaving techniques: Tabby, Egyptian, Soumac and Interlocking

participants will create ECO Weaving Mandalas using single-use plastic

participants will explore fence weaving ideas at their school site or work location

participants will assess their woven textile project experiences
florida state standards

Science
Nature of Science
1 SC.5.N.1.1
The Practice of Science
Define a problem, use appropriate reference materials to support scientific understanding.

Technology
Textile production and the use of portable looms.

Engineering
Design new and innovative textiles made of fibers and polymers.

Visual Art
Skills, Techniques, and Processes
VA.5.S.3.5, VA.68.S.3.5, VA.912.S.3.5
Create multiple works that demonstrate thorough exploration of subject matter and themes.
Organizational Structure
VA.5.O.2.4, VA.68.O.2.4, VA.912.O.2.4
Concentrate on a particular style, theme to develop artwork for a portfolio, display, or exhibition.
Historical and Global Connections
VA.5.H.1.1, VA.68.H.1.1, VA.912.H.1.1
Analyze the impact of social, ecological, economic, religious, and/or political issues on the function or meaning of the artwork.
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.

Mathematics
Measurement
MA.5M.1.1
Convert measurement units to solve multi-step problems.
course outline
I. ECO Weaving Mandala
   A. Environment
   B. Art Project
II. Circular Loom
   A. Cardboard
   B. Notches Odd Numbered
III. Plarn
   A. Single-Use Plastic
   B. Strips/Yarn
IV. Weaving Techniques
   A. Tabby
   B. Egyptian
   C. Soumac
   D. Interlocking
V. Fence Weaving
   A. Installation
   B. Collaboration
VI. Self-Assessment
   A. Reflective Writing
Overview

This workshop serves as an introduction to ECO Weaving: Mandala, a sustainable woven textile project. Participants will weave an eco-friendly Mandala, a circle design and make their own circular loom from recycled cardboard. Together we will create Plarn, yarn from single use plastic bags and experiment with a variety of weaving techniques including Tabby, Soumac, Egyptian, and Interlocking to achieve form, texture, and pattern. Participants will examine the impact of plastic on the environment and raise awareness of this important social issue. We will investigate ways to extend the ECO Weaving Mandala textile project to a large-scale installation to execute a fence weaving mural at their school site or work location.
**Title:** ECO Weaving: Mandalas

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**School:** Marjory Stoneman Douglas Elementary  
**County:** Miami-Dade

**Level of Lesson:** Elementary/Middle/High/Museum  
**Lesson Length:** 90 minutes

**Essential Questions**
1. How do objects, places, and design shape lives and communities?
2. How do artists and designers determine goals for designing or redesigning objects, places, or systems?
3. How do artists and designers create works of art or design that effectively communicate?

**Objective**
Participants will engage in a sustainable woven textile project ECO Weaving Mandala, explore circular looms, employ plarn, experiment with weaving techniques, examine the impact of plastic on the environment, extend textile weaving project and execute fence weaving mural at a site or location.

**Procedures:**
1. Trace and cut circular template onto cardboard with a pencil and scissors.
2. Measure and cut an odd number of notches into the circular loom 1 inch apart.
3. Fold plastic bags lengthwise and cut handles and ends.
4. Cut plastic bags into 1-inch strips.
5. Open each strip and cut loop now you have plarn.
6. Tie one end of the plarn with a knot and thread it through a notch on the loom.
7. Wrap the plarn over the front and slip into a notch then bring it over to the next notch.
8. Wrap warp crossed over the front and side stitch it on the back side.
9. Continue until the front looks like a starburst.
10. Gather the center threads and tie with a small piece of plarn.
11. Tie a new piece of plarn to one thread and begin weaving using the different techniques.
12. Continue weaving in a circular fashion starting from the inside
13. To add more plarn tie two ends together.
14. When you reach the outer edge tie a knot.
15. You can slip the woven textile off the loom by pulling at the side stitched threads.

**Self-Assessment/Rubric:**
Self-Assessment/ Visual Arts Rubric

**Supplies/Resources:**
Plastic Bags / Cardboard / Rulers / Scissors / Pencil / Circular Template

**ESOL Strategies:**
Visual Clues / Model Task / Hands-on Activities / Cooperative Learning / Use Graphs
inquiry questions

1. what do artists make?
2. why are recycling practices essential?
3. why is design thinking important?
4. how would you define sustainability?
5. why are eco-friendly products critical?
6. If you could create a new material, what material would it be?
## Visual Art Rubrics

<table>
<thead>
<tr>
<th>Category</th>
<th>Essential Question</th>
<th>Criteria</th>
<th>0 No Work</th>
<th>1 Needs Work</th>
<th>2 Average</th>
<th>3 Meets</th>
<th>4 Exceeds</th>
<th>Score</th>
</tr>
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<tbody>
<tr>
<td>Composition</td>
<td>How is it organized?</td>
<td>□ Color/Texture □ Pattern</td>
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<td></td>
<td>How is it finished?</td>
<td>□ Mastery</td>
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<td></td>
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<td>□ Participation</td>
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<tr>
<td>Completion</td>
<td>How is it organized?</td>
<td>□ Color/Texture □ Pattern</td>
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<td>□ Participation</td>
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<tr>
<td>Content</td>
<td>How is it communicated?</td>
<td>□ Soumac □ Egyptian □ Tabby □ Interlocking</td>
<td></td>
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<tr>
<td>Creativity</td>
<td>How is it different or new?</td>
<td>□ Originality □ Impact</td>
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<tr>
<td>Craftsmanship</td>
<td>How is it made?</td>
<td>□ Quality</td>
<td></td>
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<td></td>
<td></td>
<td>□ Presentation</td>
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**GRAND TOTAL**
self-assessment

1. describe **three** things you liked about this learning activity.

2. explain what part of this activity you would like to learn to do better.

3. discuss what part of this learning activity was the most difficult.

4. identify **three** new ideas, skills, or information you learned.

5. if you could do this activity over again state what you would do differently. Why?
glossary of terms

- Assessment • to evaluate
- b
- circular • the shape of a circle
- Cardboard • a thick paper
- Craftsmanship • skilled work made by hand
- d
- Egyptian Knot • wrapping threads under and over
- Eco • not harming the environment
- f
- g
- Horizontal • level to the ground
- Interlocking • threads that overlap one another
- Installation art • large scale construction in a specific location
- j
- Knot • tie a piece of thread
- Loom • a device to create fabric
- Mandala • circle with geometric designs
- Materials • cloth or fabric
- n
- o
- Plarn • plastic yarn
- Plastic • synthetic material made up of polymers
- q
- Recycle • transform into a reusable material
- Reuse • use more than once
- Reduce • less in amount
- Soumak • wrapping threads over and under
- single use plastic • used once then thrown away
- Sustainability • to maintain an ecological balance
- Tabby • plain weave
- Techniques • the way to perform a task
- u
- Vertical • top to bottom
- Weaving • interlacing threads to form fabric
- Warp • the horizontal or weaving threads
- Weft • the vertical threads
- x
- Yarn • spun thread
- z
# educational resources

## books
- books and books: booksandbooks.com
- barnes & noble: barnesandnoble.com

## visuals
- davis publications: davis.org
- scholastic arts: scholastic arts.org

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

## materials
- Ocean Bank Warehouse: educationfund.org

## museums
- Museum of Contemporary Art: mocanomi.org
- Frost Art Museum: frost.fiu.edu
- Perez Art Museum Miami: pamm.org
- met: met.org
- museum of modern art: moma.org
- Guggenheim museum: gugenheim.org

## fieldtrips
- Miami Dade Public Library System: mdpls.org
- Fairchild Tropical Botanic Garden: fairchildgarden.org
- oolite arts: oolite.org

## organizations
- National Art Education Association: naea.org
- Florida Art Education Association: faea.org
- Dade Art Educators Association: daea.org

## videos
- art21: art21.org
- ted ed visual art: teded.org
weaving techniques

egyptian knot weave

tabby plain weave

soumac weave

interlocking weave
weaving procedures

**Egyptian knot weave**
Pull weft thread **UNDER** warp thread and bring around **OVER** and **UNDER** the same weft thread. **UNDER/OVER/UNDER/PULL** each warp thread.

**Tabby/plan weave**
Pull weft thread **UNDER** the first warp thread then **OVER** the second warp thread, and **UNDER** the third warp thread. **UNDER first/OVER second/UNDER third/ and so on** until you complete a complete circle.

**Soumac weave**
Pull weft thread **OVER** warp thread and bring it **UNDER** and **OVER** the same weft thread. **OVER/UNDER/OVER/PULL** each warp thread.

**Interlocking**
Pull weft thread like tabby. To add another color thread, you can interlace or interlock it alongside another tabby weave. Begin above one thread and weave across. The next row begins under the other colors row. Continue until both sides reach the end.
materials

circular loom
cardboard
pencil
scissors
circular template
ruler

plarn
plastic bags
scissors
student work

2nd Grade

3rd Grade

4th Grade
Students made over 200 mandalas from plastic bags. They wove each mandala onto the fence using plarn and weaving techniques. This area leads to the outside garden and is located near the parking lot. When parents or guests arrive at the school, they see the mural. Not only is this work beautifying the school it is telling a story. This large-scale installation is a reminder of the transformative power of creativity turning trash into works of art.