

PAPERMAKING

by Stephanie Schrodetzki & Brooke Benham

Unit Title: From Earth to Art: Sustainable art making

Lesson 1: Paper Making

Number of Students: 8

Grade Level: Middle School 6th-8th

Length of each lesson: 3 Hours

UNIT RATIONALE

This unit is designed for students to explore and understand the idea of sustainability and engage students in artforms that practice this concept. The intention of the unit is to expose the students to the effects disposable culture has on our planet. The lesson intends to foster awareness of the impact we have on our environment and introduce the students to practices that promote eco-conscious decision making. The climate change of the Earth is rising, and actions must be made towards the survival of our planet. Teaching about the harmful effects that pollution and trash have on our environment and how it effects our own health, along with the health of other living organisms on Earth will reveal the relevance of the topic related to the students' life. Discussing the source of toxins and contaminants that cause air pollution and water pollution will encourage students to think of ways to resolve this issue. It is important to prepare students on how to respond to social and environmental challenges they may face in their future. Teaching students of the impact they can have on their planet when working together fosters community and group problem solving. Teaching students about sustainability helps them think of solutions that are both beneficial to humans, as well as the survival of our planet. Learning of ways to be creative with resources provided by nature is an important skill to practice in order to promote sustainability. Creating from naturally sourced materials teaches students how to be mindful of their effects on the environment and resourceful of the material they have at hand. Taking part in actions that support sustainability fosters consideration of the relations between the environment, culture, and society. The concept supports positive decision-making and self-awareness. The practice of art-making fosters emotions, criticism, and pushes the creators outside of their comfort zone. These cognitive

processes are partnered with thinking critically about the change required for a sustainable future.

LESSON RATIONALE

The paper making lesson is about taking used paper and turning it into new paper that can be used again to create another artwork. This lesson is important because it teaches students that they can be responsible for their own waste. They don't need to send their recycles to a plant to be recycled. The students can turn their own paper into new paper and also fill the paper with other objects to add interest and create artwork. Students will learn that fibers from the environment can be made into paper, also adding to the sustainability and the fact that these types of materials can be composted. Jane Kramer uses plants to make paper, specifically invasive species and then puts the shadows of the plants that are threatened onto the paper. She uses her skills as a photographer to bring awareness to the project. Paper is a common material used in everyday modern life. The process of papermaking shows students how the Earth has provided the materials to create such a useful object. The process of papermaking will also show the students how such a common item can be made into art.

PROCESS: Paper Making

ARTISTS:

-Jane Kramer, Hand Made paper, Big Idea - Invasive Species -

Kramer photographs the shadows of endangered and threatened Michigan plant species and transfers them onto handmade paper created from invasive plants.

Kramer harvests the invasive plants, cuts them up, and boils them with soda ash, and then rinses it to rid the fiber of impurities. She then uses a kitchen blender to pulp the fiber.

BIG IDEA: Sustainability

LEARNER OBJECTIVES:

Students will learn the importance of recycling and reusing materials to create art. Students will be able to make paper from start to finish and explain the process at each step.

3-5 National Standards for Visual Arts (VAS):

VA:Cr1.1.6a - Combine concepts collaboratively to generate innovative ideas for creating art.

VA:Cr2.1.6 - Demonstrate openness in trying new ideas, materials, methods, and approaches in making works of art and design.

VA:Cr2.2.6a - Explain environmental implications of conservation, care, and clean-up of art materials, tools, and equipment.

2-4 VA State Standards of Learning (SOL) in the arts:

- 1. 7.6 The student will apply elements of art and principles of design, including the following, to express meaning in works of art:
- 2. 7.11 The student will analyze how art and culture influence each other.
- 3. 7.16 The student will compare and contrast the processes artists use to create works of art.
- 4. 7.18 The student will analyze and reflect on the purposes and meaning of art.
- 5. 7.19 The student will describe personal responses to visual qualities of works of art.
- 6. 8.21 The student will describe and justify personal responses to visual qualities in works of art.

MATERIALS NEEDED FOR LESSON

1. **Art Supplies:** Big Plastic Tub, water, 3-gallon sized zip lock bags of paper pulp, Paper pulling frame and screen, clamps, 4 wooden press boards, drying racks, dried flowers

2. Additional Materials:

- -Power Point Presentation found at https://docs.google.com/document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZDdilt7M/ edit?usp=sharing
- -Teacher made samples
- -Handouts
- -Images and reading from "Art, Handmade Paper, Invasive Plants: New Photographs by Jane Kramer" *Paperslurry*. [online]. https://www.paperslurry.com/2017/02/23/art-handmade-paper-invasive-plants-new-photographs-by-jane-kramer/#more-2693

VOCABULARY/DEFINITIONS:

Deckle - the wooden frame that rests on top of a mold and defines the edges of a sheet during hand paper making.

Mold- a flat screen with wire mesh onto which the deckle is placed during hand paper making.

Stock- pulp that is ready to be formed into sheets

Slurry- stock to which the proper amount of water is added to from a suspension in which you can form paper with a mold and deckle

Pulp- fibrous substance resulting from the pulping process, which still requires further beating before it is usable for forming paper.

Invasive Species - A non-native plant that is threatening native plant species in a region

ELEMENTS AND PRINCIPLES:

Elements: Line, Shape, Space, Texture

Principles: harmony, balance, contrast

MOTIVATING STUDENTS: PERSONAL and SOCIAL RELEVANCE

The Importance of reusing materials to create something new will be emphasized as a solution to benefit the environment. The teacher will present the material as a chance to benefit the environment in which the students live in and will emphasize the health benefits to creating objects from the natural world. Students will reflect on the use of paper in their everyday life. The cultural context of the material and the use of it in history will be related to contemporary culture.

LESSON PROCEDURES

- A. **Teacher/Classroom Prep:** The Paper making station needs to be set up completely before students arrive. The tubs need to be filled with water, the pulp needs to be standing by already mixed, the strainer frame needs to be set up near the tub, the pressing station needs to be set up with clamps and wooden boards. The drying paper and wooden boards should be set up near the tubs.
- B. **Pre-assessment:** Remind the students of the importance of respecting our planet and the things they learned about being good stewards of the earth.
- C. **Behavioral Expectations:** Students are expected to keep their masks on and keep a social distance of 6 feet between persons. Students are expected to wash their hands or use sanitizer upon arrival and before departure. Students will raise their hands to ask questions.
- D. **Organizer:** This lesson is accompanied by a power point
- E. Extension Activity: Students will make a list of plants they wish to press before next class and sketch out an example of what they want their book covers to look like

LESSON SEQUENCE.

Teacher Actions

10:35: Greet students

10:35 Teacher Introductions

10:45 Lesson Introduction and Pre-Assessment

10:55 Teacher plays Power Point and discusses Jane Kramer, the artist of the lesson. Teacher points out how Jane is not only making art but also being a scientist by identifying species that are invasive and those plants that it affects. Jane Kramer also uses the invasive species to include in her paper

11:10 Teacher will show the samples made and talk about the texture of the paper, how it is like a paper towel. The texture of the paper also rips like a paper towel.

- 11:15 Teacher will do a demo on how to make paper from start to finish
- 11:30 Teacher will have the students that are waiting to pull paper collecting flower specimens from outside to press
- 12:00 Teacher will instruct students to wash their hands in the bathroom for snack time
- 12:30 Teacher will instruct students on how to dye the paper in the vats and lead them to pull more paper in the colored vat

Teacher will explain to the students that they will have the opportunity to add plants onto their pages just like Jane Kramer and if there is any plants or flowers they would like to include in their books that they can collect them at

Expected Learner Actions

10:30: Enter classrooms and take seats

10:40 Student Introductions

10:50 Students will answer questions from Pre-Assessment

11:05 Students will have a discussion on the question portion of the power point

- 11:13 Students will pass around the teacher samples
- 11:30 Students will come up 2 at a time and pull paper with the aid of the teacher.
- 11:50 Students will organize and label their specimens
- 12:10 Students will wash their hands and have a snack.
- 1:00 Students will pull colored sheets of paper, just like the white pages.

home and start pressing them into a book for when they come back. Teacher will demonstrate how to press the flowers and leaves into a book for use next time.

2:00 Teacher will assist students with clean up

2:00 Students clean up and get picked up by their parents.

ADAPTATIONS AND RECOMMENDATIONS:

-Some students may experience sensory aversions. Offer students various options to overcome this situation. They may also choose to wear gloves or put the material inside a plastic bag, so they do not have to touch it directly.

-If students have a visual impairment, provide instruction through auditory, tactile, and kinesthetic perception

DIFFERENTIATION STRATEGIES:

Flexible grouping
Open-ended activities
Exploration by interests
Negotiated criteria
Anchoring/Extension activities
Independent studies
Tiered activities/products
Journal prompts
Multiple levels of questions
Scaffolding
Choice: Learner profile, Readiness, Interest

ASSESSMENT & DOCUMENTATION OF TEACHERT/STUDENT LEARNING

A. Assessment: Students will have a question slide in the power point where they can discuss different reasons to make their own paper and what impact paper has when it is single use

Teacher Samples and Handouts:



Image of the dry paper with found objects in it



Image of the paper over a light table to view the found objects in it **Handouts:**

EQUIPMENT AND MATERIALS

Kitchen Blender/extension cord
Mould and Deckle
Vat/tub oblong shaped (Must be larger than the mould and deckle)
Pulp (compressed sheets of cotton linter, abaca. Recycled paper).
Couching cloths/felts (Made from cotton, linen, handi wipes or woolen fabric)
Two wooden couching/pressing boards 12 x 9 inches – 3 ply
Two C-clamps
Large plastic cafeteria tray
Sauce bottle for size*
Extras: measuring jug, buckets, sponges, pegs, PVA white glue – size*, large plastic strainer, wooden spoon, scissors, newspaper, collage materials.

RECOMMENDED BOOKS TO READ

Couzins-Scott, Elizabeth: Papermaking.

Dawson, Sophie: The Art and Craft of Papermaking.

Hand Papermaking Newsletter www.handpapermaking.org

Heller, Jules: Papermaking

Hiebert, Helen: The Papermaker's Companion: The Ultimate Guide to Making and Using Handmade Paper.

Hunter, Dard: Papermaking: The History and Techniques of an Ancient Craft.

Premchand, Neeta: Off the Deckle Edge: A Papermaking Journey through India.

Plowman, John: The Craft of Handmade Papers: A Practical Guide to Papermaking Techniques.

Shannon, Faith: Paper Pleasures.

Watson, David: Creative Handmade Paper (How to make paper from recycled and natural materials).

Zmolek Smith, Gloria: Teaching Hand Papermaking: A Classroom Guide.

MAKING HANDMADE PAPER

Mary Sullivan

www.leftoverspaper.com | Email: marysullivan@leftoverspaper.com

Preparing work area

Wet couching cloths and mould and deckle before use.

Place a wooden couching board in tray. Cover couching board with two wet woolen couching cloths followed by a wet handi wipes cloth.

Fill tub two thirds full with water.

Tear paper into inch size pieces and soak for ½ an hour or overnight. Fill blender ¾ full with water. Add half a cup of soaked paper. Blend for 15 to 30 seconds.

Pour blended pulp into bucket. Repeat the above step until enough pulp is required for the papermaking session.

Making a sheet of paper

Add 3 cups of blended pulp to water in tub. For a thicker sheet of paper add more pulp and for a thinner sheet add less pulp.

Add a tablespoon of size and stir through water. (To make size: Fill a plastic sauce bottle ratio ¾ water to ¼ white glue – shake container to mix).

Agitate pulp in the tub every time a new sheet of paper is to be made. Place the deckle over the flat screen surface of mould. Grip both mould and

deckle at shortest sides and from the back of the tub at a slight angle lower the mould and deckle under the water and bring up vertically and level.

Gently shake the mould and deckle from side to side for fibers to settle. Tip mould and deckle on slight angle for water to drain away. Carefully remove the deckle from the mould to reveal the newly formed sheet of paper.

Removing sheet of paper from the mould to couching cloth

Line the mould up an inch in from the couching cloth. Gently tilt the mould towards the couching cloth. In one continuous movement press the mould firmly onto the couching cloth. Pressing on the back of the mould or sponging it causes the fibrous pulp to stick to the couching cloth. Lift the mould to reveal the new sheet of paper.

Place a wet couching cloth on top of the fresh sheet of paper and repeat the above steps until about 6-10 sheets of paper form a post. Place a wet couching cloth on the last sheet of paper in the post.

Pressing and drying

The post is now ready to be pressed between two pressing boards. Place C-clamps around the pressing boards. Leave between pressing boards until water ceases draining – 2 to 3 minutes. (Access to a bookbinders press is also ideal for pressing handmade paper.)

Remove top pressing board to reveal freshly pressed sheets of paper. Carefully remove each piece of paper from its couching cloth and lay paper on a clean flat surface to dry. Paper can also be dried on the couching cloth pegged to a clothesline or left on flat surface to dry.

Paper can also be ironed when dry.

PowerPoint found at

https://docs.google.com/document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZ_Ddilt7M/edit?usp=sharing

CLAY

By Brooke Benham and Stephanie Schrodetzki

Unit Title: From Earth to Art: Sustainable art making

Lesson 2: Sculpting from the Earth

Number of Students: 8

Grade Level: Middle School 6th-8th grade

Length of each lesson: 3 hours

UNIT RATIONALE

This unit is designed for students to explore and understand the idea of sustainability and engage students in artforms that practice this concept. The intention of the unit is to expose the students to the effects disposable culture has on our planet. The lesson intends to foster awareness of the impact we have on our environment and introduce the students to practices that promote eco-conscious decision making. The climate change of the Earth is rising, and actions must be made towards the survival of our planet. Teaching about the harmful effects that pollution and trash have on our environment and how it effects our own health, along with the health of other living organisms on Earth will reveal the relevance of the topic related to the students' life. Discussing the source of toxins and contaminants that cause air pollution and water pollution will encourage students to think of ways to resolve this issue. It is important to prepare students on how to respond to social and environmental challenges they may face in their future. Teaching students of the impact they can have on their planet when working together fosters community and group problem solving. Teaching students about sustainability helps them think of solutions that are both beneficial to humans, as well as the survival of our planet. Learning of ways to be creative with resources provided by nature is an important skill to practice in order to promote sustainability. Creating from naturally sourced materials teaches students how to be mindful of their effects on the environment and resourceful of the material they have at hand. Taking part in actions that support sustainability fosters consideration of the relations between the environment, culture, and society. The concept supports positive decision-making and self-awareness. The practice of art-making fosters emotions, criticism, and pushes the creators outside of their comfort zone. These cognitive processes are partnered with thinking critically about the change required for a sustainable future.

LESSON RATIONALE

The lesson engages students in projects that are actively sustainable and introduces them to artists that practice this as well. The process of creating with clay has been historically and contemporarily used for various reasons. Ceramics is an art from that is sourced directly from nature and can be created without the use of modern technology. It is important to learn how the material can be used for sculpting useful objects while as well as a form of artistic expression.

PROCESS: clay sculpting and molding

ARTISTS

Jody Folwell is recognized internationally for her pottery art. She was born in 1942 She is from Santa Clara Pueblo, New Mexico and is a Native American potter. She grew up from a family of pottery artists. She digs the clay from the reservation to feel intact with her history. The designs she incorporates into her pottery blend traditional symbolism with elements of contemporary culture, such as political response.

BIG IDEA: Sustainability

LEARNER OBJECTIVES:

Students will learn how to make art using materials found in nature and explore the history and heritage of ceramic making. Through the clay-making processes, students will learn of the qualities of clay. They will create a structure out of clay by using the coiling and molding techniques demonstrated in class.

3-5 National Standards for Visual Arts (VAS):

VA:Cr2.1.7a Demonstrate persistence in developing skills with various materials, methods, and approaches in creating works of art or design.

VA:Re8.1.7a Interpret art by analyzing art- making approaches, the characteristics of form and structure, relevant contextual information, subject matter, and use of media to identify ideas and mood conveyed.

VA:Cn11.1.7a Analyze how response to art is influenced by understanding the time and place in which it was created, the available resources, and cultural uses.

2-4 VA State Standards of Learning (SOL) in the arts:

- 1. 7.2 The student will refine media techniques to demonstrate craftsmanship.
- 2. 7.9 The student will create three-dimensional works of art, using various processes to include clay hand-building techniques.
- 3. 7.11 The student will analyze how art and culture influence each other.

MATERIALS NEEDED FOR LESSON

A. Art Supplies:

Clay, cups to hold water, water, found objects that the students will collect outside, clay carving tools

B. Additional Materials:

- -PowerPoint Presentation found at https://docs.google.com/document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZDdilt7M/edit?usp=sharing
- -Teacher made samples
- -Images "Susan & Jody Folwell Santa Clara Pueblo 'Dogs in Heat' Bill & Monica Art Pottery" from: (2020), "Susan & Jody Folwell Santa Clara Pueblo 'Dogs in Heat' Bill & Monica Art Pottery", *WorthPoint Corporation*. [online]

VOCABULARY/DEFINITIONS:

Coil- Rope like pieces of clay that are stacked to form a wall and build the object. **Mold-** to knead or work (a material, such as dough or clay) into a desired consistency or shape.

Texture- the feel, appearance, or consistency of a surface or substance.

ELEMENTS AND PRINCIPLES:

Elements: Form, shape, texture

Principles: contrast, balance, harmony

MOTIVATING STUDENTS: PERSONAL and SOCIAL RELEVANCE

Students will learn of the environmental challenges and how they can make efforts towards a better world using materials found from nature. The teacher will present the material as a chance to benefit the environment in which the students live in and will emphasize the health benefits to creating objects from the natural world. The cultural context of the material and the use of it in history will be related to contemporary culture.

LESSON PROCEDURES

- F. **Teacher/Classroom Prep:** Divide 4 x 4 in. balls of clay. Fill water cups. Divide the materials and place each item at the student's seats so everyone has access to one of each item. Get the slideshow prepared for presentation.
- G. **Pre-assessment:** Have students think of bowls, mugs, and containers that they have at home and discuss the uses for them
- H. **Behavioral Expectations:** Students will respect one another's space and be respectful other's ideas and artwork. Students will listen while instructor is talking.
- I. **Organizer:** Teacher will display slideshow for the discussion and visuals.
- J. Extension Activity: Students will create beads out of clay. Teacher will demo how to create beads out of clay. Students will roll up small balls of clay, make designs on them, and make a hole in them with a ceramics tool.

LESSON SEQUENCE.

Teacher Actions

10:35- Greet students. Tell students that we are going to learn about sustainable art making today. Sustainability is avoidance of the depletion of natural resources in order to maintain an ecological balance. Our goal today is going to be able to create art from the earth that is sustainable.

Expected Learner Actions

10:30- Enter classrooms take seats, and listen

10:35-10:38- Discusses environmental challenges we are facing today. Asks students some concerns they may have for the future of the planet. Asks students ways that society can chance to help the Earth. Asks students what objects that can be made from the earth that are useful to humans.

10:38-10:48- Gives presentation on Native American ceramics. Discusses the various uses for the ceramics that they made. Ask students how they would make food if they didn't have grocery stores and electricity. How would they cook and store their food? Native Americans would make pottery from earth clay to use for these purposes.

10:48-10:58- Use slideshow to introduce the artist Jody Folwell and view her ceramic artwork. Tell students that she is recognized internationally for her pottery art. She was born in 1942 She is from Santa Clara Pueblo. New Mexico and is a Native American potter. She grew up from a family of pottery artists. She digs the clay from the reservation to feel intact with her history. Discuss how the designs she incorporates into her pottery blend traditional symbolism with elements of contemporary culture, such as political response. Ask the students what they think about her pottery.

10:58-11-10- Introduce the art project through process images of teacher samples and a demo on how to create a coil pot. Coil pots are made by attaching coils of clay together to form a container. Roll small balls of clay into sausage shapes. Slip and score the

10:35-10:38- Listens and gives answers of pollution, responsibly sources material for the Earth, and different objects that can be made from natural resources.

10:38-10:48- Listens to the presentation and gives answers to the teacher's question

10:48-10:58- Students listen and answer what visual elements used in Folwell's pottery means to them.

10:58-11:10- View the teacher samples and demo on coil pots and listen to instructions on how to accomplish the artwork

coil and then attach it together. Keep coils ¼" to ½" thick. Smooth the wall of the pot down. Press found object into the clay. Draw design into the clay using ceramic tool.

- 11:10-11:20- Allow students to work on coil pots
- 11:50-12:10- Once students have got a start of their coil pots, tell students that we will go outside to collect found objects from nature to incorporate into their coil pot through pressing the objects and drawing designs inspired by the objects. Take students outside to look for found objects.
- 12:10-12:25-Allow students to collect objects from nature.
- 12:25-12:30- Take students back to the studio space and have them continue to work on their coil pot
- 1:19 Give the students a 5-minute warning
- 1:24: Give the students a 1-minute warning
- 1:55: Tell the students that time is up and to clean their hands
- 1:55-1:59: Check to make sure every student created art. Have students share their artwork among their table. Observe and evaluate if the students are able to communicate their artwork to their classmates.
- 1:59-2:00: Bring up big question: "What can we do to help the environment?" Have the students discuss what they have learned in class and have them

- 11:10-11:20- Students will create coil pots out of clay
- 11:50-12:10- Students will listen and follow the teacher outside
- 12:10-12:25- Students will collect items from nature to use in their coil pot design.
- 12:25-12:30- Students will go back inside and continue to create their coil pot
- 1:19-1:25 Working to finish up their coil pot
- 1:55- Students will wash their hands one by one
- 1:55-1:59- Students will share their pots with their table and explain their ideas to their classmates.
- 1:59-2:00- Students will discuss what they have learned in class and ideas they have to foster a sustainable future.

ADAPTATIONS AND RECOMMENDATION	ONS:
-If students have a visual impairment, prov kinesthetic perception	vide instruction through auditory, tactile, and
-If students can create coils but are not ab the student to create a design with the coi	ple to build them on top of each other, allow ils on a slab of clay.
-For students with difficulty using motor sk student to use a slump mold to form their	kills, rolling coils may be difficult. Allow the shape instead.
	aversions to the clay. Offer students various may also choose to wear gloves or put the hey do not have to touch it directly.

discuss ideas they have to foster a sustainable future.

DIFFERENTIATION STRATEGIES:

Flexible grouping
Open-ended activities
Exploration by interests
Negotiated criteria
Anchoring/Extension activities
Independent studies
Tiered activities/products
Journal prompts
Multiple levels of questions
Scaffolding
Choice: Learner profile, Readiness, Interest

ASSESSMENT & DOCUMENTATION OF TEACHERT/STUDENT LEARNING

- A. Assessment: After the project is complete, students will discuss their ideas and their artwork with the class. Students will discuss what they learned during the class.
- B. Documentation: Teacher will ask students if they can take pictures of their work. Teacher will take pictures of the student's artwork.

Teacher sample and process images:



Create ball of clay and then press it down to form a platform for your coils to be added to. Create coils by creating a ball of clay and then rolling it on the table to form a long cylinder. Score the platform and coil where they will attach to each other.



Slip the platform and the coil on top of where it was scored.



Lay the coils on top of each other and press down slightly. Smooth them together by rubbing the coils down where there is no longer a visible line between the two.



Press found objects into the surface. Draw designs on to the surface with ceramic drawing tools.



Final teacher sample.

PowerPoint found at https://docs.google.com/document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZ https://document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZ https://document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZ https://document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZ https://document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZkeZ https

FELTED BOOKS

by Stephanie Schrodetzki and Brooke Benham

Unit Title: From Earth to Art: Sustainable art making

Lesson 3: Field Guidebooks with Felted Covers

Number of Students: 8

Grade Level: Middle School 6th-8th Length of each lesson: 3 Hours

UNIT RATIONALE

This unit is designed for students to explore and understand the idea of sustainability and engage students in artforms that practice this concept. The intention of the unit is to expose the students to the effects disposable culture has on our planet. The lesson intends to foster awareness of the impact we have on our environment and introduce the students to practices that promote eco-conscious decision making. The climate change of the Earth is rising, and actions must be made towards the survival of our planet. Teaching about the harmful effects that pollution and trash have on our environment and how it effects our own health, along with the health of other living organisms on Earth will reveal the relevance of the topic related to the students' life. Discussing the source of toxins and contaminants that cause air pollution and water pollution will encourage students to think of ways to resolve this issue. It is important to prepare students on how to respond to social and environmental challenges they may face in their future. Teaching students of the impact they can have on their planet when working together fosters community and group problem solving. Teaching students about sustainability helps them think of solutions that are both beneficial to humans, as well as the survival of our planet. Learning of ways to be creative with resources provided by nature is an important skill to practice in order to promote sustainability. Creating from naturally sourced materials teaches students how to be mindful of their effects on the environment and resourceful of the material they have at hand. Taking part in actions that support sustainability fosters consideration of the relations between the environment, culture, and society. The concept supports positive decision-making and self-awareness. The practice of art-making fosters emotions, criticism, and pushes the creators outside of their comfort zone. These cognitive processes are partnered with thinking critically about the change required for a sustainable future.

LESSON RATIONALE

This lesson is about making a field guidebook using the handmade paper from unit 2 to document different trees and flowers that are found around the student. The leaves and flowers can be dried and pressed and put into the field guide with common names made up by the students and the official title underneath with some facts about the plants and flowers included in the author's own words. It is important for students to become aware of their surroundings in nature. Students will connect with the plants that are immediately around them to better be connected to the earth and their surroundings. With the new knowledge gained about the plants around them, they can be stewards for the earth and raise their level of care towards their environment. The art processes include pressing flowers, constructing a book, using fiber arts to decorate their covers. It is important for the students to conceptualize a multistep project and the work it takes to put something this complex together and the satisfaction that comes from putting a multistep project together. It will give students a new appreciation for the time and effort that goes into a book such as a field guide that also crosses into science. The artist, Julia Rothman has put together 2 field guides so far that help tie her into her surroundings. She talks about the importance of being aware of what plants are around us and her field guides are a testament to her research and hard work.

PROCESS: book construction, journaling, plant identification and labeling, creative thinking, cover construction, felting

ARTISTS:

Julia Rothman is the author of Nature Anatomy: The Curious Parts and Pieces of the Nature World. She is also a nature Photographer, illustrator, author.

BIG IDEA: Sustainability

LEARNER OBJECTIVES: Students will be able to identify the plants and flowers in their immediate environment. Students will develop an appreciation for the plants and flowers around them. Students will become aware of the uses of the flora in their lives. Students will create their own field guides and understand what work it takes and what research it takes to construct their own field guides. Students will conceive that everyone will have a unique field guide to what they are impacted by. Students will attach plants to handmade paper using a variety of techniques (sewing in, gluing in,

tying on). Students will construct a cover for their field guidebooks and use felting and embroidery to decorate it.

3-5 National Standards for Visual Arts (VAS):

<u>6th VA: Cr1.2.6a</u> – Formulate an artistic investigation of personally relevant content for creating art

 7^{th} VA: Cr2.3.7a – Apply visual organizational strategies to design and produce a work of art, design, or media that clearly communicates information or ideas.

2-4 VA State Standards of Learning (SOL) in the arts:

- 6.4 The student will examine and apply ethical decisions in art making
- 6.17 The student will respond to questions about why artists create works of art

MATERIALS NEEDED FOR LESSON

A. **Art Supplies:** Handmade Paper 5 sheets pressed leaves and flowers 10 or more, 2 pieces of corrugated cardboard for making the covers, glue sticks, felting needles, felt, foam insert, twine for binding, hole punch

B. Additional Materials:

- a. -Power Point Presentation found at <u>https://docs.google.com/document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZDdilt7M/edit?usp=sharing</u>
- b. -Hermitage Museum Website, https://www.pbs.org/newshour/arts/an-artists-field-guide-to-natures-overlooked-wonders

VOCABULARY/DEFINITIONS:

Field Guide: noun a book for the identification of birds, flowers, minerals, or other things in their natural environment.

Specimen - noun an individual animal, plant, piece of a mineral, etc., used as an example of its species or type for scientific study or display.

ELEMENTS AND PRINCIPLES:

Balance, Unity, Contrast, Space

MOTIVATING STUDENTS: PERSONAL and SOCIAL RELEVANCE Students will be invested in this project because it is personal. From the specimens they collect to the personal relevance of the subject matter, this book will be personalized to their lives. This book will expand their knowledge of their surroundings and give them a feeling of connection which is new and exciting. Peoples who live in a common place will have a common field guide; this gives them a sense of community.

LESSON PROCEDURES

- A. **Teacher/Classroom Prep:** The handmade paper needs to be divided among students, the flowers and leaves need to be divided among students. The needles and felt need to be passed out in addition to the glue sticks and the cover materials. The power point needs to be loaded into the projector.
- B. **Pre-assessment:** Remind the students of the importance of respecting our planet and the things they learned about being good stewards of the earth.
 - -Questions for the group: Does anyone know what a field guide is? Why do we need a field guide? Where would you find field guides on sale? Who would use a field guide to lead a group through nature?
- C. Behavioral Expectations: Students are expected to keep their masks on and keep a social distance of 6 feet between persons. Students are expected to wash their hands or use sanitizer upon arrival and before departure. Students will raise their hands to ask questions.

- D. **Organizer:** This lesson is accompanied by a power point, a short video of the hermitage grounds and plant list on their website to be shown on the projector and shown the artist, Julia Rothman's artwork from her field guide.
- E. Extension Activity: Students will write in their journals on what they would like to add to their field guides when they return home.

LESSON SEQUENCE.

T	I	A _1!	
Teac	ner	ACTIO	ons

10:35: Greet students

10:35 Teacher Introductions

10:45 Lesson Introduction and Pre-Assessment

10:55 Teacher plays Power Point

11:10 Teacher will show the sample made and passes it around the classroom, Teacher will engage students by asking them to share what trees and plants are in their backyard and what plants they may use in their home for eating or cooking.

11:15 Teacher will instruct and remind students on going out to collect 10 specimens from the hermitage grounds. Reminding students to be respectful and keep in mind what we covered in the power point about leaving things in nature for the wildlife and only taking a few.

11:30 Teacher will settle the students back in and ask the students to share what they

Expected Learner Actions

10:30: Enter classrooms and take seats

10:40 Student Introductions

10:50 Students will answer questions from Pre-Assessment

11:05 Students will have a discussion on the question portion of the power point

11:13 Students will pass around the teacher sample

11:15 Students will go out and collect 10 specimens from the hermitage gardens

11:45 Students will go around and share what they collected

collected and why. Ask the students if they knew what the plants were before picking them and if they recognized them from another encounter

- 11:45 Teacher will instruct the students to lay out each page on the table and roughly lay out where they want the specimens and begin to label them and writing down any characteristics that they would like to include in the book, how they smell, if they are edible, where they found it. If it lives all winter or it sheds, it's leaves.
- 11:50 Teacher will remind students to write whether the plant is fragrant or edible or a fact about their plant
- 12:10 The Teacher will walk around to assist students in attaching their plants. Students may find that scotch tape works the best, or they may want to use washi tape to attach specimens. Sewing the sturdier stems into the page with needle and embroidery thread, as Brooke will demonstrate
- 12:15 Teacher will demonstrate how to mark out where the holes will go and demonstrate how to sew the pages together
- 12:30 Teacher will demonstrate how to felt onto the book cover
- 1:00 Teacher will demonstrate how to attach the pages and the book covers together
- 1:15 Teacher will lead the students in a discussion about their field guide books, using a series of pre-planned questions
- 1:20 Teacher will lead the students in sharing their field guide books with the class 1 by 1
- 1:35 Teacher will lead the students in writing down 3 things that they learned today
- 1:40 Teacher will have students play musical chairs. The students who doesn't have a chair

- 11:50 Students will organize and label their specimens
- 12:10 Students will glue or sew or tie their plants onto the pages.

- 12:15 Students will line up the pages and put a small mark to indicate where the holes will go
- 12:20 The students have their pages gathered and the holes are punched
- 12:50 Students will felt their book covers by following the directions
- 1:05 Students will put pages and covers together in a sandwich and sew them together
- 1:15 Students will discuss and answer questions about their field guide books.
- 1:35 Students will have shared their field guide books with the group
- 1:40 Students will write down 3 things they learned today

must tell the group one thing that they learned from their list.	1:45 Students will play musical chairs and share 1 thing they learned from the class
2:00 Teacher will assist students with clean up	2:00 Students clean up and get picked up by their parents.
overcome this situation. They may also chinside a plastic bag, so they do not have to	aversions. Offer students various options to hoose to wear gloves or put the material
DIFFERENTIATION STRATEGIES: Flexible grouping	

ASSESSMENT & DOCUMENTATION OF TEACHERT/STUDENT LEARNING

Open-ended activitiesExploration by interestsNegotiated criteria

____ Independent studies ____ Tiered activities/products

___Scaffolding

____ Anchoring/Extension activities

____ Journal prompts
____ Multiple levels of questions

____Choice: Learner profile, Readiness, Interest

- A. Assessment: Students will have a question slide in the power point where they can discuss different reasons to why the artist chose to make her field guide. The students will have a chance to present their field guides
- B. Documentation: Photographs will be taken of the creative process

Teacher Samples and Process Images

Stitching Method 1:



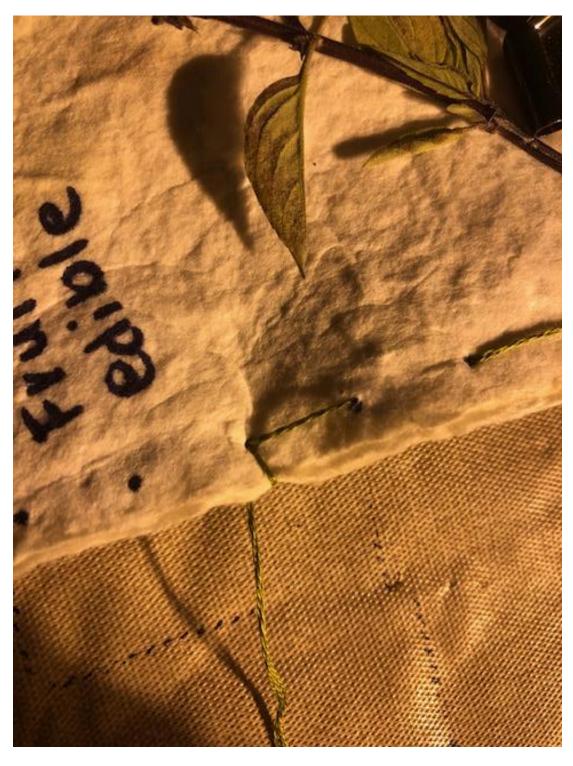
Clipped the pages together and created holes for the binding



Inserting the needle in the first hole to begin binding the book



Stitching the pages together



Looping the string around the edges of the pages for aesthetic effect



Completed binding of the field guide

Stitching Method 2:



Binding the book freehand, without established holes made in the paper. The image depicts tying a knot at the beginning of stitching the book bind.



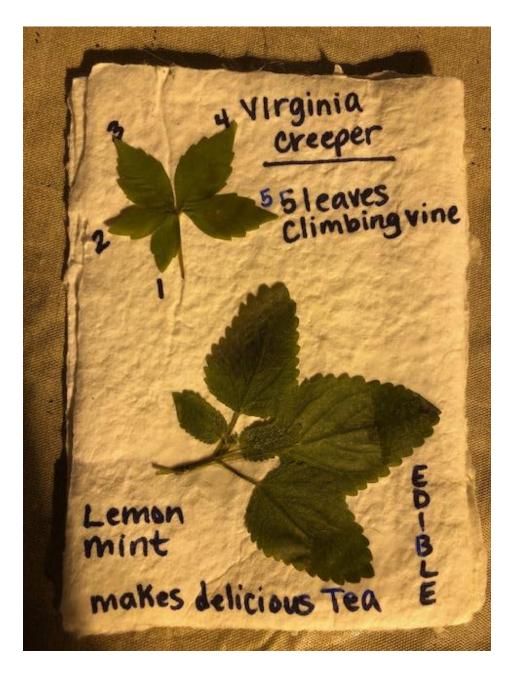
The cover page felted and embroidered with the binding complete



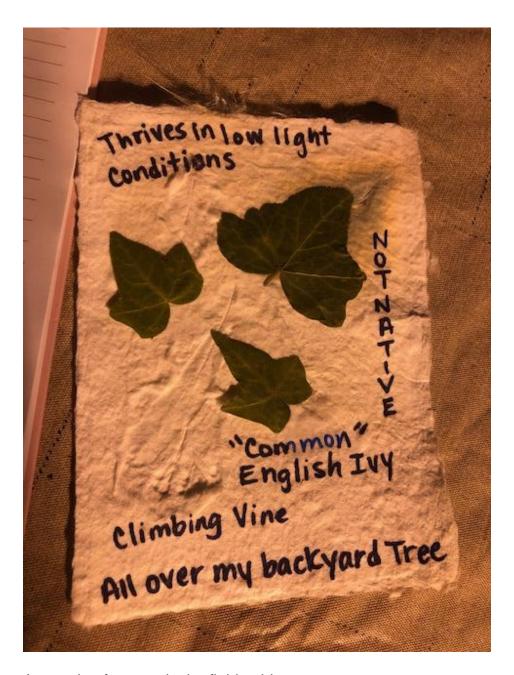
The back of the cover page: the back of the felted and embroidered page



A sample of a page in the field guide



A sample of a page in the field guide



A sample of a page in the field guide

PowerPoint found at https://docs.google.com/document/d/1TZaURwN_hAKwt7toM2yxZbtBQe_3KWnmZKeZ Ddilt7M/edit?usp=sharing

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