THE EDUCATION FUND

FOR EXCELLENCE IN MIAMI-DADE PUBLIC SCHOOLS

2022-2023

Ideas with IMPACT

Idea Packet Sponsored by:

FORD MOTOR COMPANY FUND

ASSURANT

Tree of Senses

Tree of Senses

STEAM Lesson

Silvana Soriano

silvanasoriano@dadeschools.net

Morningside K-8 Academy
School code:3501
Phone (305)758-6741
Fax: (305) 751-2980

For information concerning Ideas with IMPACT opportunities including Adapter and Disseminator grants, please contact:
The Education Fund 305-558-4544, Ext. 113 Email: audrey@educationfund.org
www.educationfund.org

Table of Contents

- Goals and Objectives …….. 1
- Course Outline and Overview……..2
- Lesson plan……3
- Resource List ……9
- Material List……10

Goals and Objectives:

This project aims to talk about the environment and make students aware of the importance of recycling. The sooner children learn about the environment, the sooner they can contribute to protecting it. This STEAM project's primary goal is to prepare students to understand the importance of recycling and promote environmental awareness. The interdisciplinary approach fosters critical thinking, problem-solving, and collaboration throughout all the steps. This project's sensory and interactive scaffolding strategies provide teachers with a great source to explore math, science, and environmental education.

Florida State Standards:

VA.2.C.1 : Cognition and reflection are required to appreciate, interpret, and create with artistic intent.

(Observe and create leaf shapes)

VA.2.C.2.2 identifies skillful techniques used in works by peers and others.

(Working in a group to build the tree and use engineering skills to make it stand.)

VA.2.H.3 Connections among the arts and other disciplines strengthen learning and the ability to transfer knowledge and skills to and from other fields. (Students will connect art and ecology)

SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration

SC.1.L.14.2 Identify the major parts of plants, including stem, roots, leaves, and flowers.

and systematic observations, and generate appropriate explanations based on those explorations.

MAFS.2.MD.1.2 Describe the inverse relationship between the size

MAFS.2.G.1.1 Recognize and draw shapes having specified attributes.

Engineering Demonstrates an understanding of the attributes of design. .

Course Outline and Overview:

The Tree of Senses:

Students will explore the five senses through each stage of the project, be it the sound of water, the texture of paper fibers, or the smell of mint, flowers, and other natural elements. Students will observe different leaf shapes, and to give colors to the paper, they use fruits that will complete the tasting sense.

Students learn to make handmade paper by recycling papers that usually go to waste. They create them in the form of tree leaves, adding natural materials like onion skin and cinnamon to talk about each part of the tree: seed, root, trunk, leaves, fruit, and flower. After students create the leaves, they will build a cardboard tree, using engineering skills to make it stand, and they will then hang the leaves on it.

Students will develop ethics and social responsibility through basic notions of sustainability, cooperation in working together to solve problems such as making the tree stand, and self-awareness through activities that require calm and observation.

This is a multi-step project involving various disciplines. The timeline for this project is about six to seven one-hour classes

Lesson Plan

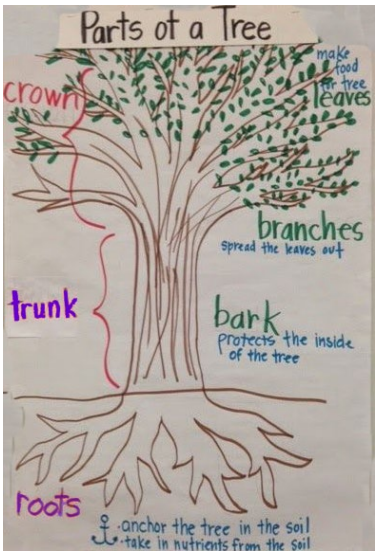
Week one:

Objective: Students will be able to name the main parts of a tree and identify different ways trees benefit other living things.

Students will learn parts of the trees and their uses of a tree.

They will watch a video about how paper is made.

Students should do a pencil sketch of a tree with emphasis on the observation of parts of a tree. The instructor will help them use the smartboard or, if possible, go outside to make an observation drawing.



Week Two:

Students will learn to make handmade paper by recycling papers that usually go to waste.

It is necessary to reserve a place near the sink to facilitate the use of the blender to make handmade paper. It is essential to prepare the room in stations, one for blending, another to pour the mixture to make each paper sheet, and the last for pressing and drying.

In this week students will learn the simplest way to make paper, that is the pour method. It's easy to set up, and each sheet made can be different. Students will use stencils on the hand mold and need a big can (a coffee can is the best size) to set the stencil and pour the pulp. Since we set up the three stations, students need to make a rotation to be able to practice the three steps.

1. They will first blend recycled paper with water, and students must shred the paper before putting it in the blender.
2. Place mold and deckle over the coffee can. Pour about 1/4 a blender full into the inside of the deckle. Take off the deckle and pull the mold.
3. Cover the paper with a screen and press using a sponge to get off a bit of excess water. Flip and transfer to a couching sheet as a felt.

Once the class has a stack of wet papers, they will take it outside. One easy way to press is to use a piece of board and stand on it for a minute to remove the excess water. Next, students will remove each sheet (keeping them on their couch sheets still) and lay them in the sun to dry or on the rack.

Week Three:

Students will learn how to use different natural materials to add to the handmade paper. Students will experience adding in the pulp elements related to the parts of trees. In this session, they will focus on the seed and roots and use onion and garlic skins for the roots. They can use poppy seeds, chia, quinoa, and sesame for seeds. I prefer to use edible elements because it could be a connection to talking about good nutrition.

1. Onion skin 2. Garlic skin 3. Chia seed 4. Annatto 5. Poppy seed 6. sesame

Week Four:

Students will learn the pull method.

The traditional method of papermaking is to pour your pulp into a large vat of water and pull sheets from it. The paper from the pull method is also thinner than that of the Pour Method.

To get the right consistency of the pulp in the vat, we need to add three or so blenders full of pulp to the vat.

Once you have added the pulp, swish it with your hand to get any that may have settled, and then slip your mold and deckle into the pulp. Hold the mold and deckle together, ensuring that the mold (the part with the screen) has the screen facing up. Pull the mold and deckle straight up (moving the mold and deckle together back and forth to swish around the pulp and water a bit to even it out as you pull). Stop moving the mold and deckle once most of the water drains out.In this session students will focus on bark, branches and leaves

1.Dill 2. Lemongrass 3.Mint 4.Oregano 5.Kali 6.Cinnamon

Week Five:

In this session, the instructor can use both methods, just adding an extension for the vat of water and the coffee can. Since some students could show more difficulty holding the mold, the pouring process could be an excellent alternative to keep them engaged.

Now they will focus on flowers and fruits. It is interesting to choose the most colorful fruits and edible flowers.

1.Jasmine 2.Lavender 3.Chamomile 4.Pomegranate 5. Blueberry 6. Pitanga

Week Six:

After students create the leaves, they will build a cardboard tree, use engineering skills to make it stand, and then hang the leaves on it. The instructor will first give small thick paper for groups to find a solution to make the tree stand.

Using two big sheets of corrugated cardboard, students should open a slit in the cardboard to form a cross that will allow the tree to stand. After the assembly of the two pieces, they will hang the papers on the tree.

Resource List

Internet : Miami Paper Museum

Paper Museum (Japan) https://papermuseum.jp/en/

How To Make Paper: Basic Steps in Papermaking How To Make Paper: Basic Steps in Papermaking

Paperslury https://www.paperslurry.com/2014/05/19/how-to-make-handmade-paper-from-recycled-materials/

Material List

The great advantage is that the material cost is low, and the materials acquired, blender, frames, and felt, can be reused many times.

Materials :

1.Blender Amazon around $40.00

2.Arnold Grummer Pour Hand Mold Kit - 5-1/2" x 8 1/2" (3 units) Blick Art and Materials $120.00

3.Felt (30 units) Blick Art and Materials $20.00

4.Containers (3) – plastic or metal container such a large coffee can (the opening must be smaller then 81/2 to hold the hand mold. This is a no cost reusable material.

5. Corrugated Plastic Panel (20 x 30 cut in 5 x 8) 2 sheets Blick Art and Materials $14.00 to make the stencil (leaf shape)

6. Corrugated Cardboard 2 per class) Blick Art and Materials $4.00 (could be reusable too)

7. Seeds, cinnamon, flowers and fruits - supermarket around $20.00

8. Natural dye craft kit NatureColorsEU $40.00