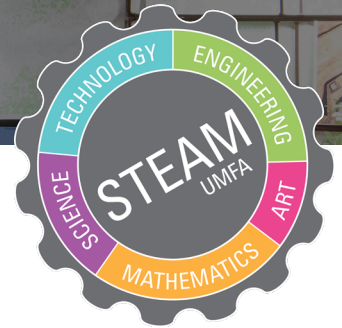


LESSON PLAN:

Cultural and Ecological Importance of Native Seed Bombs

by Fiona Summers



This lesson will explore the cultural and ecological significance of native plants by creating seed bombs.

Objectives:

Student will...

- learn about the importance of native plants
- explore how native plants are culturally important to Indigenous communities
- create a seed bomb of native plants to their area

Grade level:

4th grade – though adaptable to any grade level

Duration:

45 minutes

Materials:

- Images of Will Wilson's *Air Lab* in the UMFA
- Cups
- Popsicle Sticks
- 3 tablespoons of Native Seeds (for Utah check resources below) per student
- 1 cup soil/compost per student
- ½ cup Powdered Clay per student
- Water
- Small paper bags
- Coloring utensils (markers, crayons, etc.)

Vocabulary/Key Terms:

- Native Plants: Occur naturally their ecoregion where over time they have adapted to the habitat (University of Maryland)
- Invasive Plants: A plant that is both non-native and able to grow quickly, and spread to the point of disrupting plant communities or ecosystems (USDA)
- Non-Native Plant: A plant introduced with human help (intentionally or accidentally) to a new place or new type of habitat where it was not previously found (USDA)
- Seed Bomb: a mixture of soil, clay, and wildflower seeds
- Ecosystem: all living and nonliving things that interact in an area

Activity**Part 1 | Artwork as Inspiration**

- Look at the two images of Will Wilson's *Air Lab* at the UMFA
- Discuss with students what they see and think about the artwork
- Talk about the importance of plants for air and how Indigenous Peoples knowledge of these plants can help our own understanding
- Research and/or look at native plants for your own area

Part 2 | Make Seed Bombs

- Have each student mix together their seeds, soil, and clay powder in a cup with a popsicle stick.
- Once it's evenly mixed, slowly add water until everything starts to stick together.
- Begin rolling your mixture into small, firm balls.
- Leave the seed bombs to dry in a sunny spot.
- Meanwhile, have students decorate their paper bag with information and pictures about the native seeds and plants in their seed bombs.
- Once the seed bombs have dried students can take them home in their paper bag with a note for their parents.
- Students will then be able to throw them into bare ground areas (preferably a garden)
- Once they have been planted, just wait for the plants to grow!

Methods for Assessment:

- Gage students understanding through their participation in the discussion and in their final product.

Additional Resources**Links:**

- <https://www.visitutah.com/things-to-do/Wildflowers>
- <https://slco.org/watershed/stream-friendly-practices/choosing-native-plants/>
- <https://extension.usu.edu/cwel/native-other>
- <https://www.nps.gov/care/learn/nature/wildflowers.htm>
- <https://www.wildlifetrusts.org/actions/how-make-seed-bomb>

Note to send home to parents:

Hi Parents!

Inside this paper bag are seed bombs. Seed bombs are a mixture of clay, soil, and native wildflower seeds. Today in class your child made these to learn more about the importance of native plants. Now that they have dried, it is time for the fun part! You and your child can throw these seed bombs into any area containing soil but would do best in a bare garden bed. Now comes the easy part, you just need to wait while the seeds do their magic and grow into beautiful wildflowers native to Utah!

State Core Standards:**SEEd**

- Strand 2.2: Living Things and their Habitats
- Strand 4.1: Organisms Functioning in their Environment
- Strand 5.3: Cycling of Matter in Ecosystems
- Strand 6.4: Stability and Change in Ecosystems

Social Studies - 4th Grade

- Standard 1: Students will understand the relationship between the physical geography in Utah and human life.
- Standard 2: Students will understand how Utah's history has been shaped by many diverse people, events, and ideas.

Visual Arts

- Strand: Create
- Strand: Respond
- Strand: Connect

Artwork Spotlight:

Installation views from UMFA's *Air* exhibition of Will Wilson (Diné, born 1969, lives Santa Fe, NM), *AIR Lab* (Auto Immune Response Laboratory), 2005–ongoing, steel, wood, plants, lights, books, and various media



Artwork Spotlight cont:

- This artwork explores an apocalyptic future in a toxic environment
- The artist emphasizes how mining practices, such as uranium extract, disproportionately affect Dine people
- However, these very people also hold knowledge about the native plants that are apt at removing toxins from the soil
- While this artwork is highlighting the environmental injustice Indigenous people experience, it is also representing resilience and the importance Indigenous peoples, and their knowledge, will serve for climate change adaptation
- “AIR Lab is a sanctuary that symbolizes survival, resourcefulness, and hope”

Contributer Bio:

I am Fiona Summers, a student and teacher at the University of Utah. On the weekends, I can be found working as a park ranger at Antelope Island State Park in the Education and Interpretation department. My thesis is currently working on redesigning and illustrating the Junior Ranger booklet in collaboration with the Northwestern Band of the Shoshone Nation. When I am not studying or working I can be found getting lost on a hike, climbing a rock face, collecting insects, or catching up with friends and family.

This Lesson Plan was created for the October 5, 2022 UMFA Evening for Educators: *STEAM is in the Air*. The evening and activities were inspired by the special exhibition *Air*, on view from July 16–December 11, 2022.



BEVERLEY TAYLOR
SORENSEN FOUNDATION

Heading image | Detail of installation views from UMFA's *Air* exhibition of Will Wilson, (Diné, born 1969, lives Santa Fe, NM) *AIR Lab* (Auto Immune Response Laboratory), 2005–ongoing, steel, wood, plants, lights, books, and various media. Courtesy the artist.