



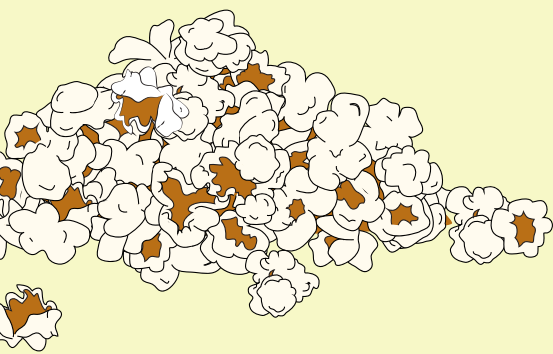
LA SEMILLA
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EDIBLE
EDUCATION

CORN

LESSON PLAN



BY LA SEMILLA FOOD CENTER



Introduction

Greetings, teachers! Welcome to this lesson on corn! This Lesson Plan offers you an overview of the activities, with additional information, sources, and optional activities that you might choose to include around the lesson. The lesson consists of a series of 15-20 minute activities lasting 60 to 120 minutes, depending on the child's reading speed and how many breaks they take. Students are encouraged to take breaks in between activities.

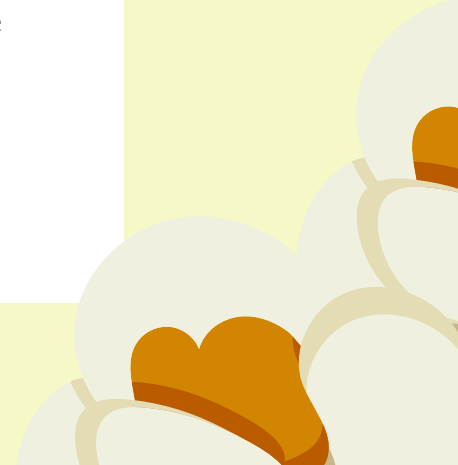
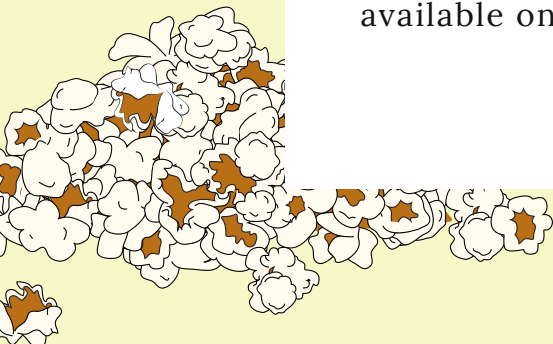
Optional Pre-Work: Intro to Corn

Prior to beginning this activity, consider having an initial conversation about corn. You might:

- Offer a teambuilding activity by setting a timer and working together to come up with a list of ways we can eat corn (tacos, tamales, etc).
- Ask them if they have seen a corn plant.
- Ask if their families use corn in any way other than using the kernels for food.

Similarly, you might have a conversation about a type of art called ephemeral art (described in detail on pages 5 and 6 of this packet). You might share some examples and ask them to come up with some of their own.

Activity ideas that you might choose to integrate before or after students receive their kit are available on page 8 of this packet.




CORN LESSON - CONTENT OVERVIEW

Learning Objectives

By the end of this lesson, students will be able to:

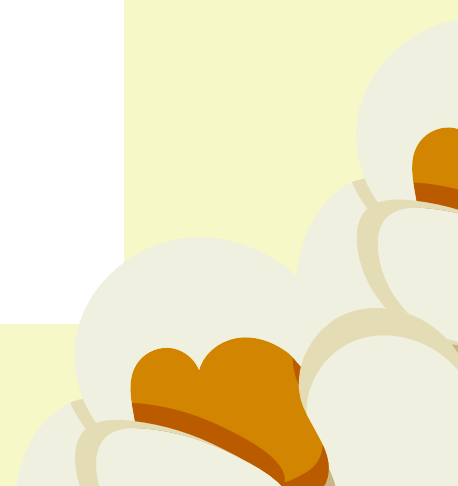
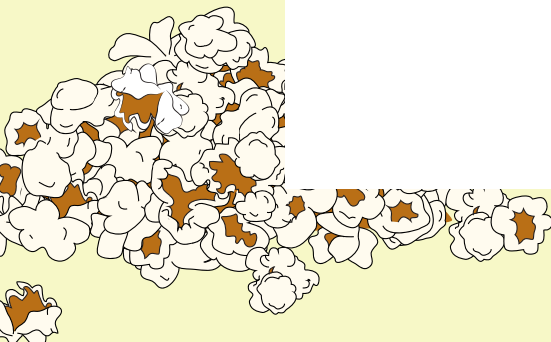
- Name one way corn is good for our bodies.
- Describe ephemeral art.
- Create ephemeral seed art.

Ground Rules & Safety

This brief section is titled “Get Ready to Explore Corn.” It lists behavioral and safety expectations. A flame symbol [] appears wherever students are asked to work with hot elements.

Baseline Assessment

This optional activity aims to engage students by identifying what they already know. The lesson will then reaffirm, complement, and clarify their existing knowledge. In this case, the activity (“Corn and Me”) invites students to draw or write what they know about corn. This can include how it is used, eaten, and grown.



Background for teachers: Corn

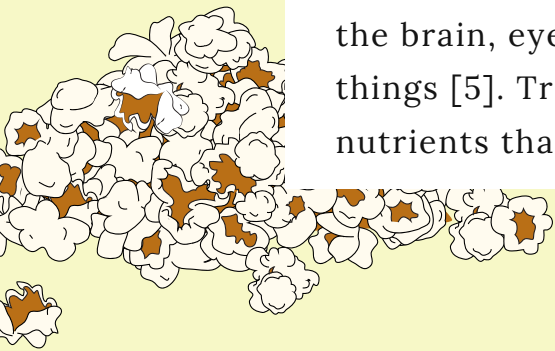
This is an extended version of the "Story and Uses of Corn" section in the student booklet. Have students read the "Story and Uses of Corn" independently or out loud with the class.

Humans have eaten grains for thousands of years, first foraging them and later growing them [1]. Corn is the key grain of the Americas. People of Mexican origin and other Latin American cultures depend on corn. It is not only a food, but a foundational part of these cultures. An ancient Tlatelolca saying calls corn "the sustenance of life" [2].

Corn as we know it evolved from a wild grass called teocintle in the region of the Balsas River that we currently know as the state of Guerrero, Mexico [3]. Teocintle is a skinny, spindly cob with very few kernels. People gnawed on the sweet stalk and learned how to select and plant the starchiest seeds [2,3]. This domestication process took centuries. When corn planting was established, once nomadic cultures became more connected to land, settling and developing complex political, social, and cultural societies [3]. Today, there are hundreds of types of corn [4].

Uses & Benefits of Corn

Corn is good for our bodies. It has fiber, minerals, and anti-oxidants. It also has B vitamins, which benefit the brain, eyes, blood, and energy – among other things [5]. Traditional corn varieties have even more nutrients than conventional corn [6].



Thousands of years ago, Indigenous people of the Americas created the process of nixtamalization: cooking dried corn kernels in an alkaline solution. This process softens the kernels; it also adds calcium and niacin. Without nixtamalization, Indigenous peoples of the Americas would not have survived. Nixtamalization is needed to make some foods like tortillas, tamales, and pozole.

Nixtamalization is not needed to make other foods like grits, polenta, and popcorn. Popcorn is considered a healthy snack if it is air popped and lightly seasoned [7]. It has more fiber than whole wheat bread. Fiber can help protect our heart health. Once we start adding too much salt, butter, or oil, popcorn is not as healthy.

[1] Grain. National Geographic Resource Library. Available [online](#).

[2] Beas, JC. (1982). Los Libros del Maíz: Como lo usamos. Arbol Editorial.

[3] Vela, E. (2011) “El Maiz.” Arqueología Mexicana. Edición Especial 38. Editorial Raíces.

[4] Neff, L. (2018). “Types of Corn.” Native Seeds Search Blog. Available [online](#).

[5] Carruthers, L. “Cash in on the health benefits of corn.” Mayo Clinic Health System. Available [online](#).

[6] Sarkar, D, JW Walker-Swaney, and K Shetty. (2020). “Food Diversity and Indigenous Food Systems to Combat Diet-Linked Chronic Diseases.” Current Developments in Nutrition. V.4 (Suppl1). Available [online](#).

[7] American Heart Association News. (2019) “Popcorn as a snack: Healthy hit or dietary horror show?” Available [online](#).

Ephemeral Art

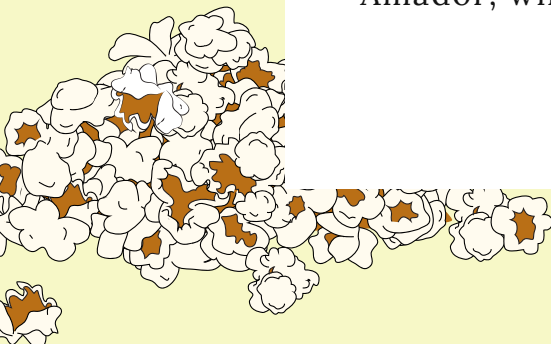
This is an extended version of the section "Ephemeral Art" in the student handouts.

The word ephemeral comes from the Greek word *ephemeros*, which means “living but a day or short-lived” [1]. Ephemeral art pieces are temporary works that only occur once; they are not not meant to be lasting objects housed in museums or galleries [2]. Most often, they do not take place inside those spaces. Ephemeral art can include sculpture, visual art, and performance art.

Some say that ephemeral art began in the 1960's [1]. However, traditional cultures around the world have been practicing ephemeral art for centuries. The ancient people of what is currently Mexico, known as Mexica (sometimes called Aztec), created edible sculptures from puffed amaranth seeds that were displayed during festivals and then eaten [3,4]. Another example is the art of Sand Mandalas - a part of Tibetan culture [5].

In the Paso del Norte region, the City of El Paso’s Chalk the Block Festival offers an opportunity to view ephemeral art - with its sidewalk art competition for amateurs and professionals [6].

Another recent example is the work of Andres Amador, who prints sand patterns on beaches [7].



Often, ephemeral art is made of natural elements such as leaves, branches, and stones; sometimes the artist remains anonymous, creating the work somewhere in nature where others may stumble upon it [8].

Children practice ephemeral art when they:

- Draw on sand with a stick or a finger
- Make mud pies
- Build sand castles
- Stack stones
- Make a snowman

This section invites students to view two examples of ephemeral art lasting 8 minutes combined - linked in the references below [9,10].

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- [1] Anapur, E. (2016). "Remembering Ephemeral Art and All Its Faces." Widewalls. Available [online](#).
- [2] "Ephemeral Art." Tate Galleries. Available [online](#).
- [3] "Amaranth and the Tzoalli Heresy." Masa Americana. Available [online](#).
- [4] Maistro, M. (2011). "Rediscovering Amaranth, the Aztec Superfood." Forbes. Available [online](#).
- [5] Tenphel, S. (2019). "Sand Mandala in Tibet and Its Profound Philosophy." Tibest Vista. Available [online](#)
- [6] City of El Paso, Texas. Museums and Cultural Affairs Department. Chalk the Block. Sidewalk Chalk Art Competition. Available [online](#).
- [7] Neira, J. (2020). "andres amador prints ephemeral sand patterns on beaches around the world." designboom. Available [online](#).
- [8] Gillings, M. (2018) "What is ephemeral art?" The Lighthouse. Macquarie University. Available [online](#).
- [9] Gustavus Adolphus College. "Traditional Tibetan Sand Mandala Time Lapse." YouTube video. Available [online](#).
10. KQED Arts."Andres Amador's Earthscapes: ART that Goes Out with the Tide."YouTube video. Available [online](#).

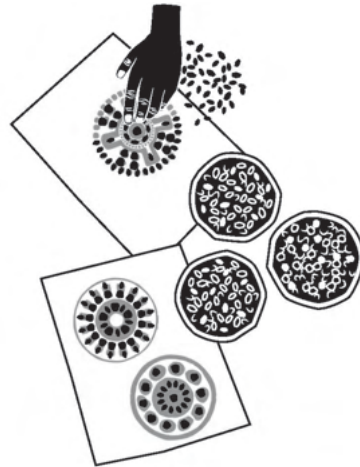
Activity - Ephemeral Art

Supplies needed:

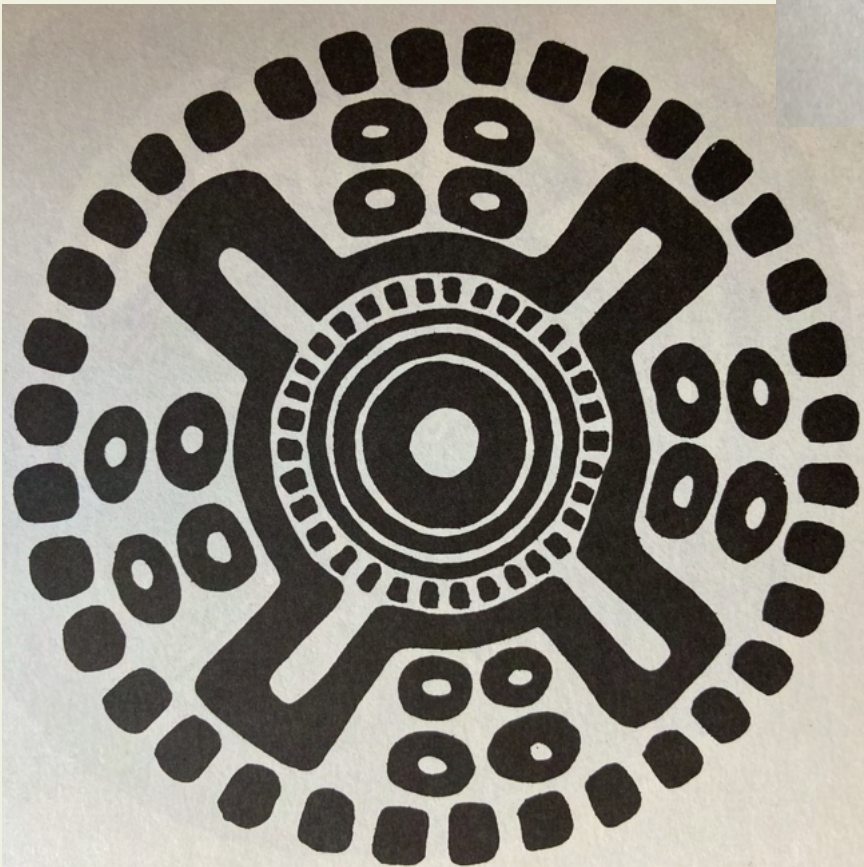
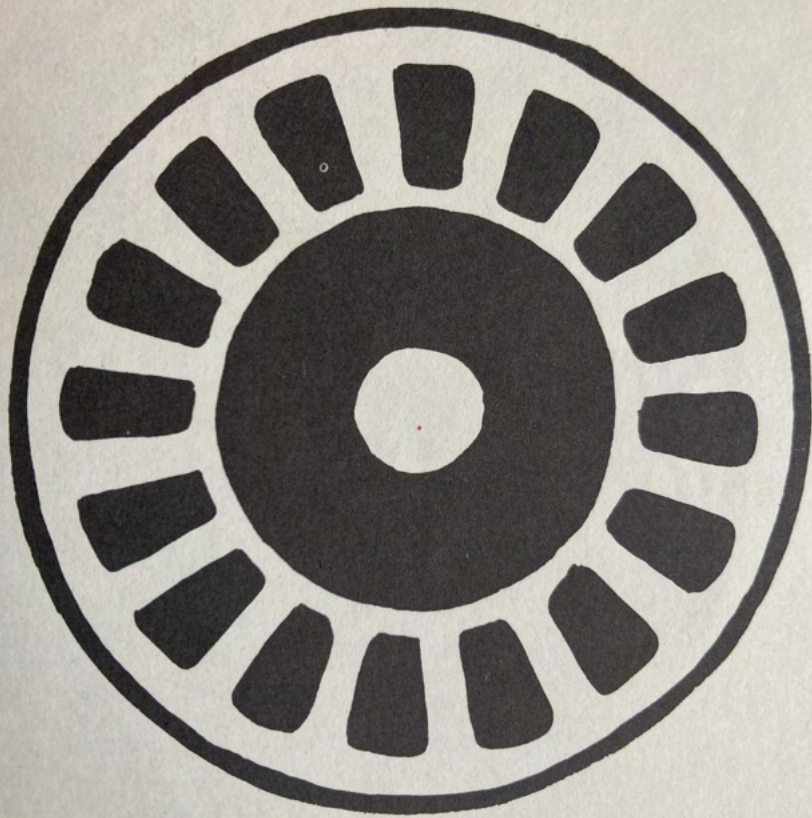
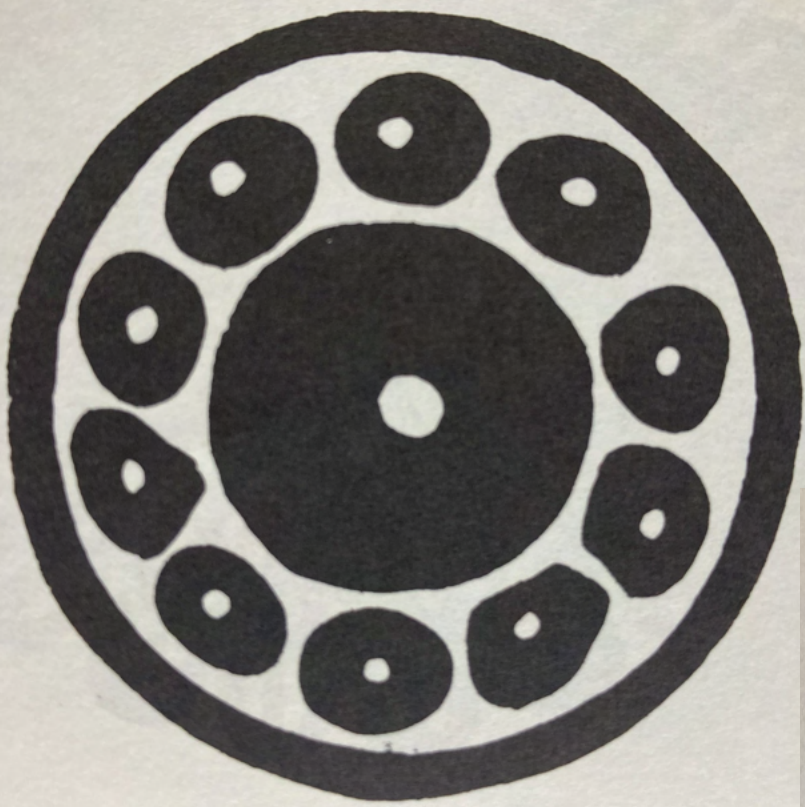
- ½ cup of rainbow popcorn (encourage students to use more popcorn kernels from their home if they have it)
- 1 pre-columbian figure printout

Sometimes seed art involves gluing seeds on a piece of paper. In this case, students will not glue the seeds. In order to make ephemeral seed art, they will simply arrange the seeds over a design of their choice, deciding where to place different color kernels.

Students are encouraged to play some relaxing music while they work if that is available to them.



After the piece is completed, students can take some moments to enjoy it and invite people in their home to view it. If a camera is available, students can take a photograph of their creation. Then they will undo their art, gathering the kernels and saving them for the recipe. The kernels should be rinsed with clean water and allowed to dry before preparing them for food.



Recipe - Popcorn

Ingredients:

½ cup dry popcorn kernels

1 teaspoon vegetable oil

½ teaspoon salt

Supplies:

Small bowl

Spoon

Paper bag

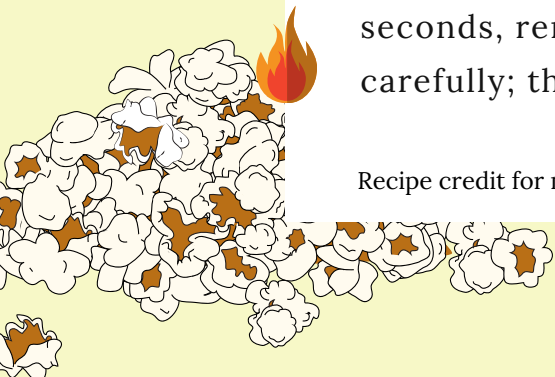
Microwave Instructions: Pour the kernels into the bowl. Add the oil and use the spoon to mix them. Transfer the oiled kernels into the paper bag. Fold the top of the bag twice to seal in the kernels. Microwave the bag for 2½ to 3 minutes or until pauses between popping sounds last 2 seconds. Open the bag carefully; the contents will be hot.



Stovetop Instructions: Ask an adult for help. Find a pot with a lid that seals well. Place 2 teaspoons oil in the pot. Set it on the stove over medium/high heat. After a minute or so, when the oil is hot but not smoking, add the kernels and cover the pot. When the kernels start to pop, hold the pot with the lid firmly in place and shake it around a bit to allow the unpopped kernels to settle at the bottom of the pot. When gaps between pops last more than 2 seconds, remove them from the stove. Open the pot carefully; the contents will be hot.



Recipe credit for microwave popcorn: Allrecipes.com Available [online](#).



Closing Activity

In the final handout "Amazing Corn," three questions assess if Learning Objectives were met:

- Name one way popcorn is good for our bodies.
- What is ephemeral art?
- What foods do we have because indigenous people developed the process of nixtamalization?

Additional Activity Ideas

The topic of corn is vast and offers many opportunities for exploration in any subject.

Art Activities

Theater & Storytelling. Learn creation stories that include corn, and create a puppet show that tells a story. Puppets can be made by pasting cutouts on popsicle sticks or decorating old socks.

Corn Husk Sculptures. Dried corn husks are typically used to wrap tamales. They can also be used to create sculptures large and small. Ideas and examples abound online.

Language Arts Activity

Interview & Report. Ask students to interview someone who knows about corn. They can ask how the person grows it, which parts of the plant are useful, and how to prepare it as food.

