

New Earth Classroom



ACTIVITY 4

CORN & COMPANION PLANTING: *Tortilla Making*

SUMMARY

Following are three activities that focus on corn as a staple food and companion plant. Each activity can stand alone, or students can rotate between them, spending 15-20 minutes at each activity station. We recommend having no more than 10 kids do each activity at one time.

Here is a summary of what each activity entails:

Four Friends Skit

Students participate in a short skit that shows how the Four Friends, also known as Four Sisters (corn, squash, beans and sunflower), have acted as companion plants for centuries. The adult leader narrates a story while students wearing simple costumes to represent the four crops demonstrate their dependency on each other. Students also fill the roles of the sun, earth, and sound effects for wind and rain.

Masa Grinding

Students take turns grinding corn into masa using a replica of a traditional stone metate and mano. If possible, they use corn native to the students' home region that has been soaked in water overnight, which is how corn for masa is customarily prepared. While students are grinding the masa, the adult leader talks about the meanings of "metate" and "mano," where corn comes from, how corn is grown, and how we use corn.

Corn Tortillas

Students flatten prepared masa balls in a tortilla press, or using a rolling pin or jar, and then the adult leader cooks their tortillas on a hot plate. As students prepare and eat their tortillas, the group discusses the translation of "tortilla," how masa harina is prepared, and how tortillas are used in regional cuisine.



TORTILLA MAKING

LEARNING OBJECTIVES

1. Students will shape masa into corn tortillas and eat the tortillas!
2. While making corn tortillas, students will discuss the process of making masa harina and recall the many uses of corn tortillas from their own culinary experiences.

KEY WORDS

Masa, masa harina, tortilla, maize

EQUIPMENT

- Masa dough (pre-made, see recipe below)
- Extra masa harina (dry) for sprinkling on dough to prevent tortillas from sticking & for students to examine
- Hot plate with extension cord
- Brightly colored masking tape to make a boundary around the hot plate which students should not cross
- Tortilla press, rolling pin or large jar
- Plastic sheets, parchment paper, or wax paper
- Spatula
- 2-Tbs. Cookie scoop
- Paper towels
- Mild salsa to put on tortillas (optional)
- Copies of recipe to hand out to students

TORTILLA DISCUSS

- I. Tortillas (background to discuss while making tortillas)
 - A. What is a **tortilla**? (translation: omelet)
 - B. Who has made tortillas before?
 - C. What is **masa**?
 1. **Masa is a maize dough** that is made from ground nixtamalized corn, or corn that is treated with lime water, which makes it more savory and easier to digest. This “lime” is not the citrus fruit! It is calcium hydroxide, a mineral also called limestone.
 2. **Masa harina** is corn flour made from dried maize that has been soaked in water containing lime or wood ash.
 3. **Masa** can be made by adding water to masa harina (as we are doing here) or by grinding corn soaked in water with lime using a metate and mano.
- II. What can we make with corn tortillas?
(We can make tacos, tostadas, enchiladas, tortilla chips, chilaquiles, nachos, quesadillas, tortilla pizza, flautas, migas, chimichangas, taquitos, wraps, soup, taco salad)

MAKING TORTILLAS

III. Making tortillas

- A. On a table, have a pre-heated hot plate set to medium-high temperature, a spatula, prepared masa balls, a small bowl of dry masa, a tortilla press lined with plastic, parchment or wax paper (or a rolling pin or large jar), paper towels, salsa and a spoon.
 - B. Using the masking tape, delineate a boundary on the table around the hotplate (about 8-12 inches from the hotplate). For their safety, students should not reach across this boundary.
 - C. The adult leader will demonstrate how each masa ball is coated with masa harina, flattened and cooked. **The students will ONLY do the flattening of the tortillas.** This makes the process more hygienic and safer.
 - D. **Demonstrate for students:** take a masa ball and roll it in the small bowl of dry masa to coat. Set it in the center of the open tortilla press, which should be lined with sheets of plastic, parchment, or wax paper to prevent sticking. Close the press and gently but firmly press the tortilla until you have a tortilla that is 4 or 5 inches in diameter. If the tortilla is too thick, it can be pressed again.
 - E. If you don't have a press, you can roll out the balls between sheets of plastic, parchment, or wax paper. Flatten the tortillas with a rolling pin or jar on its side. You can also use your hands to press the ball flat.
 - F. Gently peel the tortilla off the plastic sheet, parchment, or wax paper and place the tortilla on the hot plate. Cook for about two minutes on each side, until the top of the tortilla gets bubbles, and there are small brown flecks on the bottom.
 - G. While the tortilla is cooking, the adult leader takes another masa ball, rolls it in dry masa to coat and sets it between the sheets of plastic, parchment, or wax paper for pressing. A student does the pressing. The adult removes the tortilla and puts it on the skillet.
 - H. Once the tortillas are cooked, remove them from the skillet with the spatula and place them on paper towels. After cooling for one to two minutes, offer them to students with optional salsa.
 - I. Repeat until each student has pressed a masa ball and eaten a tortilla.
- IV. After every student has made and eaten a tortilla, pass out copies of the recipe to students who want them so they can make corn tortillas at home.

V. The Recipe:

TORTILLA RECIPE

HOMEMADE CORN TORTILLAS

INGREDIENTS:

2 c. masa harina (translates to corn flour; has corn (maize) & hydrated lime)
1.5 - 2 c. hot water
½ - 1 tsp. fine sea salt (to taste)

RECIPE ADAPTED FROM:

gimmesomeoven.com/homemade-corn-tortillas/#tasty-recipes-72274

INSTRUCTIONS:

Mix the dough: In a large mixing bowl, briefly whisk together masa harina and salt. Gradually add 1.5 cups hot water, and stir the mixture with a wooden spoon or silicone spatula until an evenly-mixed dough begins to form. Use your hands to knead the dough for 2-3 minutes in the mixing bowl until it is smooth and forms a cohesive ball. The dough's texture should feel springy and firm, similar to Play-Doh. If the dough feels too wet and is sticking to your hands, add a few extra tablespoons of flour, one at a time. If it feels too dry and crackly, add in an extra tablespoon or two of hot water.

Rest the dough. Cover the bowl with a damp kitchen towel (or paper towel) and let the dough rest for 10 minutes.

Portion the dough. Use a spoon or a medium ice cream scoop to portion the dough into a 2-tablespoon ball (35-40 grams, or about the size of a golf ball), then use your hands to roll the ball until it is nice and round.

Press the dough balls. Place the dough ball between two pieces of plastic, parchment paper, or wax paper in a tortilla press. Then gently press the dough ball until it forms a 4- to 5-inch tortilla.

If you don't have a press, you can roll out the balls between plastic sheets, parchment or wax paper, or using a rolling pin or jar on its side. You can also use your hands to press the ball flat.

Cook the tortilla. Heat a non-stick skillet or comal over medium-high heat. Once the pan is nice and hot, gently peel the tortilla away from the plastic wrap and lay the tortilla flat in the skillet. Cook the tortilla for about one to two minutes on each side, flipping it once speckled brown spots begin to appear on the bottom of the tortilla. The tortillas will likely bubble up while cooking, especially on the second side, which is a good sign! Once it is cooked, transfer the tortilla to a tortilla warmer or a bowl wrapped in a clean kitchen towel, so that the tortillas do not dry out.

Repeat with the remaining tortillas. Once you get the hang of it, you can try keeping the cycle going by cooking one tortilla while pressing the next dough ball at the same time. If you notice that the skillet begins to seem too hot, just turn down the heat a bit.

Serve. The tortillas will continue to soften a bit more as they sit in a stack in your tortilla warmer (or wrapped in a towel). You may want to use the tortillas at the bottom of the stack first — they will be the softest. Serve however you would like and enjoy!