THE CONSORTIUM
in Latin American & Caribbean Studies at the University of North Carolina at Chapel Hill and Duke University

Salsa: Hub Farm Workshop Activities

Science

I. **Grades K-2**
   a. 1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.
   b. 1.L.2 Summarize the needs of living organisms for energy and growth.

Activity suggestion: At the Hub Farm (or can be adapted for your school) have students observe the following plants and complete the chart (separate page):

1. Tomato
2. Corn, squash, beans (Three sisters)
3. Cilantro
4. Sunflowers or marigolds
5. Peppers

The Hub Farm flashcards provide information about several of the plants. These plants are all different in type and appearance and location at the farm. Students should practice making observations about the plants. Refer to the end of *Salsa* and the reference to seeds and lime peels. Ask students: How do we get more plants?

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Plant Name	What does the plant look like? You may draw or describe.	Does the plant have flowers/fruits/vegetables? What do they look like? You may draw or describe.	Does the plant need any support to grow?	Does the plant come back each year?
Tomato				
Corn				
Cilantro				
Sunflowers /Marigolds				
Peppers				

Do these plants have seeds?
_____

What do these plants need to grow? _____

How can you tell if a plant is growing? _____

Science

II. **Grades 3-5 Nutrition**

a. 4.L.2 Understand food and the benefits of vitamins, minerals and exercise.

i. 4.L.2.1 Classify substances as food or non-food items based on their ability to provide energy and materials for survival, growth and repair of the body.

ii. 4.L.2.2 Explain the role of vitamins, minerals and exercise in maintaining a healthy body.

Activity Suggestion: At the Hub Farm (or can be adapted for your school) have students observe the following plants in pairs. Each pair can compare two plants.

1. Sunflowers and Tomatoes
2. Tomatillos and Squash
3. Marigolds and Corn

Example chart for students:

	Sunflowers	Tomatoes
Describe the plant's appearance.		
Is this plant a food or non-food item? How do you know?		
What does the plant produce?		
How is the plant used?		
How does the human body use this plant?		

Next, have students observe the Three Sisters (Corn, Squash, and Beans) at the Hub Farm or the image of them. Have the students answer the same questions about the Three Sisters.

	Corn	Squash	Beans
Describe the plant's appearance.			
Is this plant a food or non-food item? How do you know?			
What does the plant produce?			
How is the plant used?			
How does the human body use what this plant produces?			

Then, have students read about the Three Sisters to fill in the rest of the chart. Adapted for classroom use below.

Author Robin Wall Kimmerer on the nutritional value of the three sisters:

"The genius of the Three Sisters lies not only in the process by which they grow, but also in the complementarity of the three species on the kitchen table. They taste good together, and the Three Sisters also form a nutritional triad that can sustain a people. Corn, in all its guises, is a superb form of starch. All summer, the corn turns sunshine into carbohydrate, so that all winter, people can have food energy. But a human cannot subsist on corn alone; it is not nutritionally complete. Just as the bean complements the corn in the garden, it collaborates in the diet as well. By virtue of their nitrogen-fixing capacity, beans are high in protein and fill in the nutritional gaps left by corn. A person can live well on a diet of beans and corn; neither alone would suffice. But neither beans nor corn have the vitamins that squash provide in their carotene-rich flesh. Together, they are once again greater than alone."

Available at: https://earthlingopinion.wordpress.com/2018/07/06/full-chapter-the-three-sisters/

Adapted for elementary classroom use:

“The genius of the Three Sisters is not just how they grow, but also how the three plants work together when served at the kitchen table. They taste good together, and the Three Sisters also form a nutritional team that can fuel people. Corn is a superb form of starch. All summer, the corn turns sunshine into carbohydrate, so that all winter, people can have food energy. But a human cannot live on corn alone; it is not nutritionally complete. Just as the bean works with the corn in the garden, it works together in the diet as well. Beans supply the soil with nitrogen; beans are high in protein and beans fill in the nutritional gaps left by corn. A person can live well on a diet of beans and corn; neither alone would be enough. Neither beans nor corn have the vitamins that squash provide in their carotene-rich flesh. Together, they are once again greater than alone.”

From Kids Gardening:

“…corn supplies carbohydrates and a variety of important amino acids. Beans have protein, including two essential amino acids that corn lacks. Squash contributes vitamin A. Squash seeds also contain quality fats that corn and beans lack.”

Source: https://www.nal.usda.gov/collections/stories/three-sisters

Additional activity ideas and resources:
https://kidsgardening.org/resources/lesson-plans-three-sisters-garden/#background_information:

Final reflection:

What have you learned about plants?

_____

How do plants depend on people?

_____

How do people depend on plants?

_____

How do plants depend on other plants?

_____

Refer to the ending of *Salsa* and how the lime seeds and onion and garlic peels are saved to be planted. How do we get more plants?

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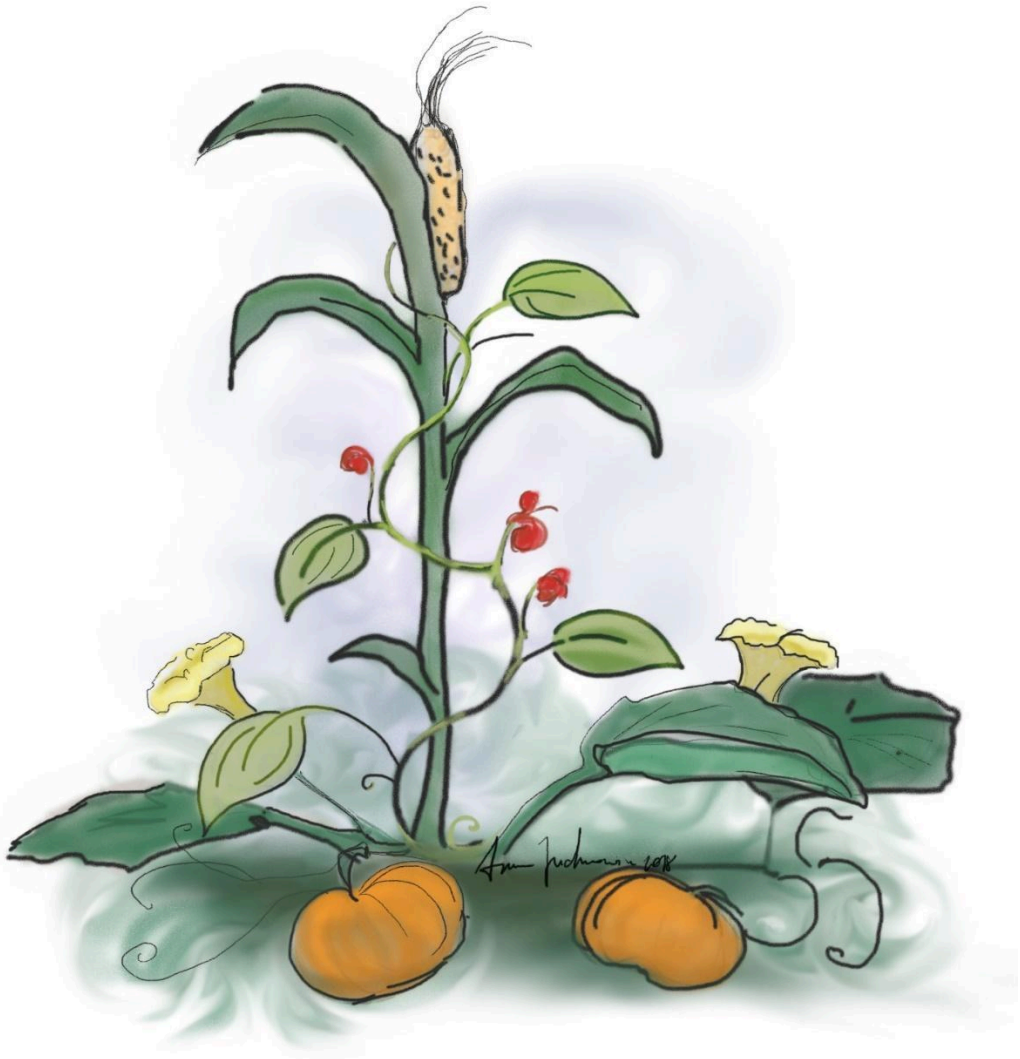


Image of the Three Sisters

Math

I. **Grades K-2**

a. NC.1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object.

Activity suggestion: Compare three plants from the farm and in *Salsa*. For example, tomato, habanero chile pepper, and an ear of corn.

b. NC.1.MD.4 Organize, represent, and interpret data with up to three categories.
   • Ask and answer questions about the total number of data points.
   • Ask and answer questions about how many in each category.
   • Ask and answer questions about how many more or less are in one category than in another.

Activity Suggestion: Using page 6 of *Salsa* have students look at the number of tomatoes and tomatillos on the top and bottom border.

How many tomatoes are there? _____

How many tomatillos are there? _____

How many total tomatoes and tomatillos are there? _____

Are there more tomatoes or tomatillos? What is the difference between them? _____

To make one serving of salsa verde, you will need 3 tomatillos. How many servings of salsa verde can you make from the tomatillos shown on page 6?

_____

To make one serving of salsa roja, you will need 5 tomatoes. How many servings of salsa roja can you make from the tomatoes shown on page 6?

_____

Can you make more servings of salsa verde or salsa roja based on the images shown on page 6?

_____
_____

c. NC.1.G.3 Partition circles and rectangles into two and four equal shares.
   • Describe the shares as halves and fourths, as half of and fourth of.
   • Describe the whole as two of, or four of the shares.
   • Explain that decomposing into more equal shares creates smaller shares.

   Activity suggestion: Refer to page 18 and the tomato halves. This will be enhanced if you can use whole tomatoes in front of the students.

Ask students to cut the halves above in half (drawn on page or can be modeled on real tomatoes). What is it called when a half is cut in
half?_____

How many total pieces of tomato are there now?
_____

Are there more whole tomatoes or more pieces?
_____

Is the whole tomato bigger or smaller when it is cut in half?
_____

What happens to the pieces of the tomato halves when they are cut in half?
_____

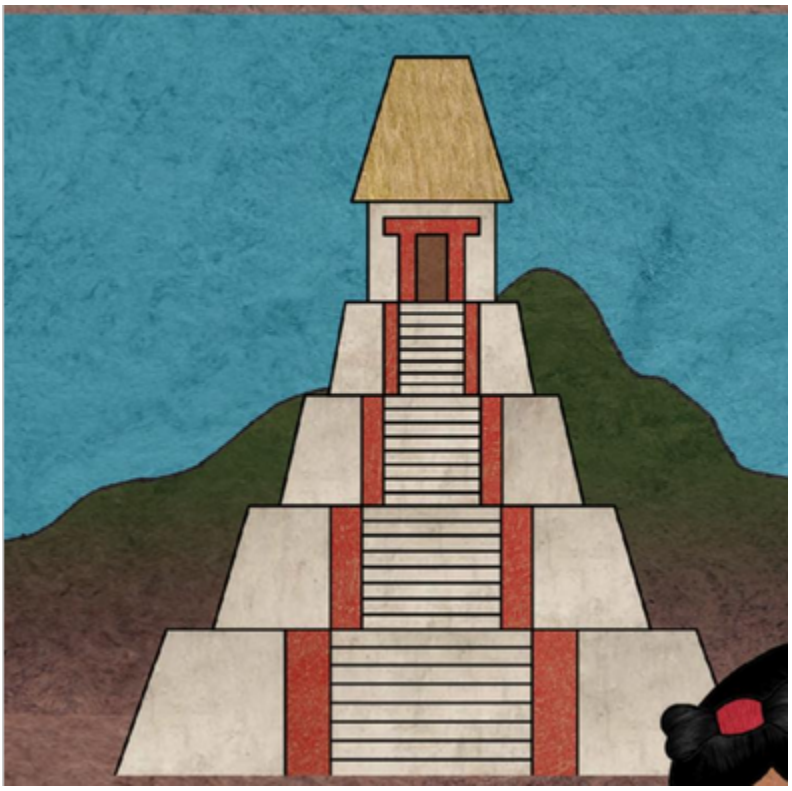
Math

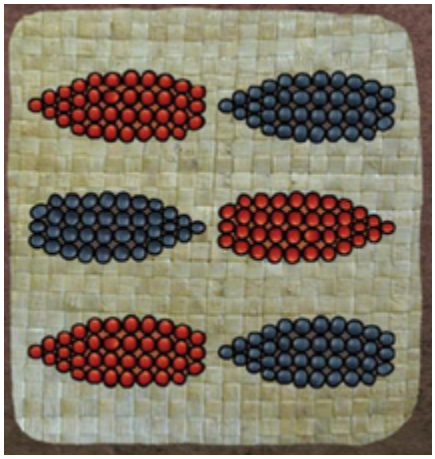
II. **Grades 3-5**

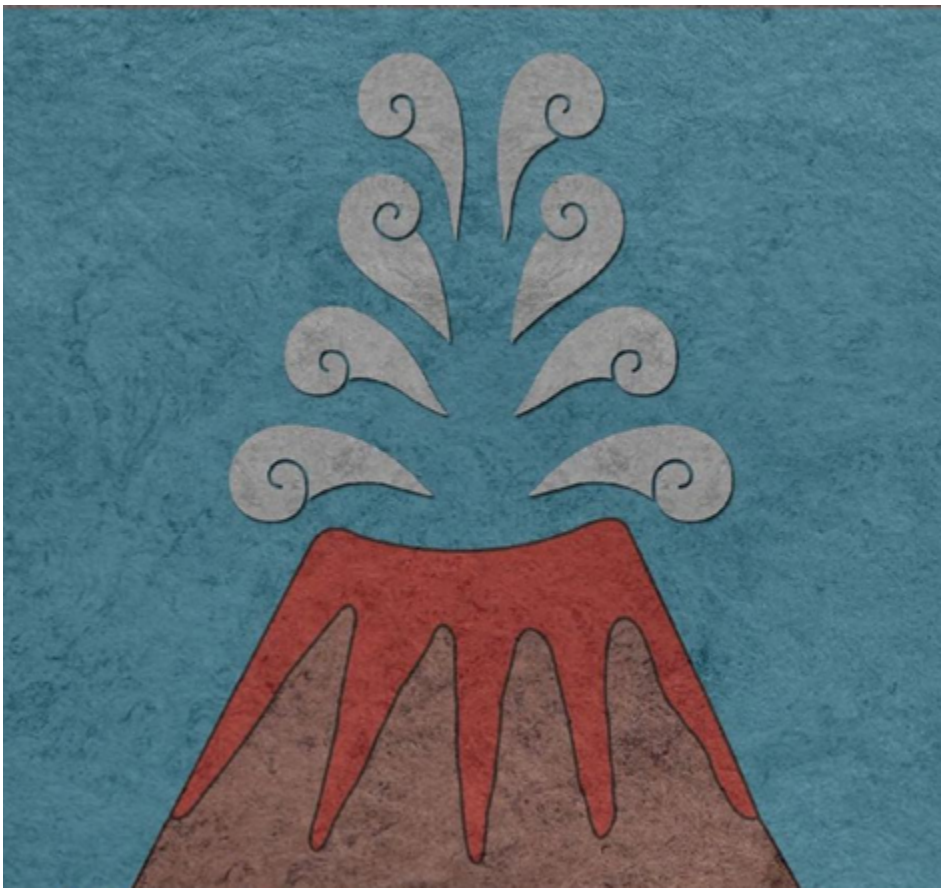
a. NC.4.G.1Draw and identify points, lines, line segments, rays, angles, and perpendicular and parallel lines.
b. NC.4.G.3 Recognize symmetry in a two-dimensional figure, and identify and draw lines of symmetry.

Activity Suggestion: Using illustrations from the book, *Salsa,* and plants located at the Hub Farm find examples of points, lines, line segments, rays, angles, perpendicular lines, and parallel lines. Then, draw the lines of symmetry.

Some examples from the book:







See the cilantro, tomato, and onion images throughout the story for more examples within the book.

Ex: page 18 The border includes tomatoes and onions cut along different lines. How does this change the lines of symmetry?

Social Studies

I. Grades K-2

a. K.B.1 Understand cultural practices in local communities and around the world.

K.B.1.1 Identify cultural practices in local communities and around the world.
K.B.1.2 Compare cultural practices of people in local communities and around the world.
K.B.1.3 Summarize stories that illustrate how positive character traits such as empathy, resilience, and respect help people contribute to their communities.

Activity Suggestion: Talk about how salsa the food item originated in the Americas and locate the Americas on a globe or a map. Have students explain how making salsa in the book was a group effort and required respect of all the people and plants involved in making the salsa.

Then, talk about how music and dance is referenced in the book. Talk about Salsa the music and dance style. What musical instruments do students see in the book? What does salsa music sound like? Where did salsa music originate? What does salsa dancing look like? Have students locate Puerto Rico and Cuba on a world map or globe. How does playing salsa music require the musicians to respect each other and work together to create salsa music?

Suggested resource: ¡Bailamos! Salsa Culture and Dance Lesson video linked.

Brain break/movement freeze dance: Freeze Dance - Salsa Music with Celia Cruz

Explain that cultural practices are things that a certain community of people share. They can be behaviors or activities or beliefs.

Making salsa is an example of a cultural practice from the people of Mesoamerica using ingredients that are commonly found there.

Salsa music and dance is an example of a cultural practice from the Caribbean using instruments and sounds that are commonly found there.

What are some cultural practices that students know about from their own local communities?

Ex: Fireworks at Durham Bulls games; BBQ food; wearing hats or shirts with sports teams;

Social Studies

II. **Grades 3-5**

a. 3.G.1 Understand how geography impacts the development of regions and communities.

i. 3.G.1.1 Explain how the absolute and relative location of places impacts the development of communities.

ii. 3.G.1.2 Explain how climate and physical characteristics affect the ways in which people live in a place or region.

iii. 3.G.1.3 Explain how movement of goods, people, and ideas is impacted by the geography of a place or region.

Activity Suggestion:

1. Mapping Origins: Using the Hub Farm flash cards, have students map the location of where Habanero Chile Peppers, Tomatoes, Poblano Chile Peppers, and Tomatillo plants originated by drawing the ingredient on the map of Latin America. Locate where the tropical region of Latin America is and map where Jalapeño Chile Peppers originated.

   Then read about onions. Where do onions grow now versus where they originated? What do students know about the climate for growing plants in Durham or NC and the climate in Central America? Or, the climate in South America. What do students know about the physical characteristics of Durham/NC? What do students know about the physical characteristics in parts of Central America or in South America? How do the physical characteristics of places affect the plants that are eaten and the foods that are grown?

Link to map of Latin America with country names:
https://acrobat.adobe.com/id/urn:aaid:sc:VA6C2:f2a4d7a1-18bd-4499-bd5c-16f5cc9efefc

2. Flash Card Jigsaw: Use the Hub Farm flash cards. Each teacher has a set of 8 cards (English and Spanish versions = 16 total cards). One set consists of 7 plants found in the Hub Farm and in *Salsa*. Depending on your class size, you can have two pairs work on one set of cards or you can have one pair of students work on a full set of cards. A class set of flash cards will be available for use at the Hub Farm for any teachers who wish to bring their students to the farm for a field trip.

   Using the Hub Farm flash cards, have students pair up. Give each student pair 2-4 of the flash cards and have them become “experts” on their card. Students should find the references to their plant in S*alsa* and the growing location at the Hub Farm. Students can find other pairs to exchange their expertise and to hear from classmates. This activity can be done in Spanish or in English. The students should be able to complete a jigsaw by gathering information from their fellow experts who have different cards than the original pair had at the start.

Example Chart that students can complete during the Jigsaw activity

Plant name	**Other Common Names**	**Origins**	**Type of Plant**	**Benefits to Humans**	**Common recipes or uses**
Cilantro/Coriander					
Jalapeño Chile Pepper					

Habanero Chile Pepper					
Onion					
Tomatillo					
Poblano Chile Pepper					
Tomato					

Nombre de la verdura/hortaliza	**Otros nombres communes**	**Origen**	**Tipo de planta**	**Beneficios y usos medicinales**	**Recetas y usos comunes**
Cilantro/Culantro					
Chile Jalapeño					

Chile Habanero					
Cebolla					
Tomatillo					
Chile Poblano					
Tomate/Jitomate					