

# From Seed to Table: Mexican and Colombian Cultural Understanding through Food

**Author:** Jessica Kamphaus  
Old Town Elementary  
Round Rock, Texas

**Subject Areas:** English Language Arts (Reading and Writing), Science  
The following unit will primarily be centered on Language Arts, including both reading and writing. There will also be lessons integrating science into the investigation of farming, food, and plant life. As a means to navigate the instruction, each subject area will be listed by itself.

**Topic:** Food Justice through investigations in science, art, and literature

**Grade Level:** 3<sup>rd</sup> and 4<sup>th</sup> Grade

**Time Frame:** 3–4 weeks

## **Summary of Unit:**

Students will conduct research on fruits and vegetables grown in Mexico and Colombia. Through their research, they will learn about sustainable practices, farmers' rights, and food in art and literature. They will also learn the role food plays in Mexican and Colombian culture and the roles that food production and consumption plays when thinking of farmers' rights and the environment.

## **Established Goals:**

State of Texas TEKS (Texas Essential Knowledge and Skills)

Science:

4.7 Earth and Space. The students know that Earth consists of useful resources and its surface is constantly changing.

4.7 A Examine properties of soils, including color and texture, capacity to retain water, and ability to support the growth of plants.

4.7 C Identify and classify Earth's renewable resources, including air, plants, water, and animals; and nonrenewable resources, including coal, oil, and natural gas; and the importance of conservation

Reading and Writing:

4.3 A Summarize and Explain the lesson or message of a work of fiction and its themes.

4.6 A Sequence and summarize the plot's main events and explain their influence on future events.

4.7 Reading/Comprehension of Literary Text/Literary Nonfiction. Students understand, make inferences and draw conclusions about the varied

- structural patterns and features of literary nonfiction and provide evidence from text to support their understanding.
- 4.18 Writing/Expository and Procedural Text. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes.
- 4.23 Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them.
- 4.24 Research/Gathering Sources. Students determine, locate and explore the full range of relevant sources addressing a research question and systematically record the information they gather.
- 4.25 Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to improve the focus of research as a result of consulting expert sources.
- 4.15 Writing Process. Students use elements of the writing process.

**Essential Questions:**

- What is the relationship (or what **are** the relationships) between food, agriculture, and culture?
- How do these relationships between food, agriculture, and culture in Mexico and Colombia compare to our own here in the United States?
- What are the important agricultural crops in Mexico and Colombia?
- What cultural similarities and differences do we see in the foods eaten in Mexico, Colombia, and here in the United States?
- What are some challenges of small farmers?
- What is the environmental impact of food production?
- How is food culture related to literature?

**Assessment (summative and formative) items:**

- Research
- Soil Investigation
- Summaries
- Thick Questions
- Maps

**Lesson Map:**

Lesson 1.1: What role does food play in our lives?

Lesson 1.2: Building literature connections

Lesson 1.3: What the World Eats

Lesson 1.4: Model building interest and identifying a vegetable/crop to research

Lessons 2.1–2.4 simultaneous with 1.4–1.7 Mini-lessons on conducting research

Lesson 1.5: *The Good Garden*

Lesson 1.6: Story behind *The Good Garden*

Lesson 1.7: Farmer's Rights

Lesson 1.8: Narrative pantomime for *Cebolleros* (those who work in the onion fields)

Lesson 1.9: Walk about investigating various Mexican and Colombian cooking apparatuses

Lesson 1.10: Food in traditional literature

Lesson 1.11: Comparing traditional literature

Lesson 1.12: A Vegetable Expert Talk Show preparation

Lesson 1.13: A Vegetable Talk Show

Lessons 2.1–2.4 and Individual Research on Plant

Lesson 3.1: Soil introduction

Lesson 3.2: Soil investigation

Lesson 3.3: From the soil

Lesson 3.4: Resources

Harvest Festival

## Lesson 1.1

What role does food play in our lives?

**Objective:** Engage students and assess prior knowledge of culture in Mexico and Colombia.

**Time:** 45 minutes

**Materials:** Poster or chart paper, sticky notes for students, images for connections

### **Essential Questions To Deepen Student Learning and Build Connections:**

- What did we notice about the images or statements on the posters?
- What did we notice was written on the posters?
- Are there specific words/phrases that appear on multiple pages? Why do you think this happened?
- How do the various images connect? What is a theme we could choose for all the posters?
- Why do we think these images or statements were chosen to be put on posters?
- How do these images or statements relate to us?

**Learning Activity:** Prior to the activity, teacher writes open-ended statements or places images at the top of poster paper with one per page. Teacher provides each student a stack of sticky notes and pencil or marker to write with and asks that all students respond to each question/image in any order they like. This is a silent activity, where music could be played in the background. After students have put a comment on each page they are encouraged to read what their classmates have written.

After each student has written their thoughts on the posters and read the other responses, bring students back together to discuss and reflect.

After discussing teacher may review the responses and assess prior knowledge various students have and use this to build upon during the unit of study.

# Food is important to a culture because...







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# Food I eat comes from...











## Lesson 1.2

### Building Literature Connections

**Objective:** Connect students to the importance of food and how it is related to cultural and familial experiences.

**Time:** 45–60 minutes

**Materials:** *The Hungry Woman: Myths and Legends of the Aztecs*, edited by John Bierhorst (or other Aztec or Mayan myth or legend involving food); ample traditional literature books or stories for students to read; paper or notebook and pencils for students

**Essential Questions To Deepen Student Learning and Build Connections:**

- Why is food important and central in this story?
- What did you notice about how food was portrayed?
- What does the story have in common with your journal entry on the importance of food in your life?

**Learning Activity:** Begin by reflecting on yesterday's activity with students. Ask them what the major theme of the posters was. Food and culture.

Ask them what the importance of food is in their own lives. Have them journal for 5–10 minutes, freely jotting down how food is important in their lives. After students have had time to journal their ideas, have them share their thoughts with a partner. After partners have shared, have students share something important they heard from their partner (as opposed to students sharing about their own writing).

After students have shared their own thoughts on how food is important to their lives (ideas should emerge around holidays, celebrations, daily life, sustenance, etc) read aloud a traditional literature myth or legend where food is prominent. If using *The Hungry Woman*, "True Corn" on page 32–33 is a good story to have students infer the symbolism of the food. After reading, students may journal again about the importance of food. This time, how food is important to this story. This may also be discussed as a whole class.

Next show students how the theme or message in this story can be inferred.

After you have read the traditional literature story to students, have them choose a traditional literature book on their own and see if other stories have food

playing a prominent role as well. Even if their story does not have food in it, have students focus on the theme or message of the stories.

After students have had time to read independently have them share with a partner a theme they noticed in their reading. Ask students if anyone noticed food playing a prominent role in their story as well.

### Lesson 1.3

#### What the World Eats

**Objective:** Analyze consumption and amounts of food eaten in different parts of the world (compared to the United States). This lesson is adapted from <http://learning.blogs.nytimes.com/2008/05/19/clean-your-plate/>.

**Time:** 1 hour

**Materials:** "What the World Eats" by Faith D'Aluisio, ([http://www.time.com/time/photogallery/0,29307,1626519\\_1373675,00.html](http://www.time.com/time/photogallery/0,29307,1626519_1373675,00.html)) pictures and captions printed out and posted around the room; questions for students to use when conducting the gallery walk component at the beginning of the lesson; notebooks and pencils for students

#### Essential Questions To Deepen Student Learning and Build Connections

- Were you surprised by anything that you saw in the pictures? Why or why not?
- How does your own family's diet compare to those depicted in these pictures?
- Which questions on your handout were easy to answer? Why?
- Which questions did you have more difficulty answering? Why?
- Do you disagree about the answers to any of the questions? If so, which ones, and why?
- What did you notice about the American diet in comparison with diets from around the world?
- Why would a diet vary across different regions? How does food play into a culture?

**Learning Activity:** When starting the lesson, have students walk around the room to look at each picture and read the captions. Have them reflect and write about the following questions while they look at pictures:

- Which family spends the most on food every week?
- Which family consumes the most food per week?
- Which family's weekly food consumption includes the most packaging? Which family's diet looks the healthiest? Why?
- Which family's diet looks the least healthy? Why?
- Which family's diet looks the most wasteful? Why?

After a few minutes, have students share their responses. Then lead a discussion on the findings students observed from the photographs.

Have students think about all the foods they have eaten in the past week and jot these down. How do these foods compare to the foods they observed from around the world? What does this tell us about the ways in which we eat? Tell students that many of these foods we eat (tomatoes, chocolate, corn, etc.) were discovered in the Americas and brought to the rest of the world by way of European explorers and conquistadors. Many foods brought back by these explorers were met with suspicion. Why? Have you ever been less than willing to try a new food? Why? Discuss with class.

## Lesson 1.4

Model building interest and identifying a vegetable or crop to research

**Objective:** Students begin to think about a plant or crop he or she would like to spend the time to research for the Harvest Festival.

**Time:** 45 minutes

**Materials:** Poster with a K-NK T-chart to create a path in our research to help us create the Harvest Festival.

K-NK T-chart: \*What do we KNOW? \*What do we NEED TO KNOW?

**Essential Questions To Deepen Student Learning and Build Connections:**

- We discussed yesterday how food is important to our lives, so how can we learn about how food plays into the lives of people in Mexico or Colombia?



- How can we better understand the people in these countries through food?
- How can we better understand how the food is grown?

**Learning Activity:** Bring students together to discuss the research that we as a class are going to conduct. Tell students we are planning a Harvest Festival to celebrate foods grown in Colombia and Mexico. We are going to invite our families and other students at the school. Our goal is to understand some important crops grown in these countries. Then we will teach others and give them the opportunity to understand these countries in a new way. Our goal is also to understand these countries in a deep way, so that we're not just sharing food but we are also sharing knowledge with others during our Harvest Festival.

To create investment in this project from students, have them decide what we know about what we need for the Harvest Festival. First pose the question to students. Give them a minute to think or write down their thoughts alone. Then, have students turn and talk to a partner and discuss what they know we need for the Harvest Festival. Next, have students share out. While students share, jot down their ideas on the chart.

Do the same thing for "What do we Need to Know?" This should be used throughout the research process as a means to help us move towards the Harvest Festival. The main ideas can be put in general groups of:

- How the crop is grown
- Crop's historical roots
- How the crop is distributed
- How the crop is consumed and eaten

If time allows give students time to search on the Internet for the major crops in Colombia and Mexico. If not, give this as a homework assignment.

Students need to make a list of the major food crops. Put the list together as a class. Once students have decided on the top choices, have students decide which crop they would like to choose. Have only 6 or so choices for students to choose from, so they may share resources on their crops and be in informal groups to discuss their crop research throughout the unit.

Sites like these have agricultural information for students to peruse:

<http://kids.nationalgeographic.com/kids/places/find/colombia/>

<http://kids.britannica.com/comptons/article-204556/Mexico>

<http://www.timeforkids.com/destination/mexico>

<http://kids.britannica.com/elementary/article-345667/Colombia>

(Note: the Britannica articles are accessible by subscription only.)

## **Lessons 2.1–2.4 and Individual Research on Plant** (simultaneous with Lessons 1.4–1.12)

**Time:** Mini-lessons for Language Arts, 15 minutes each so students have time to research their plant after teacher has modeled.

**Learning Activity:** Teacher will model the research process for students with coffee beans. The general foci on the research and these mini-lessons will revolve around: (1) understanding how the plant is grown, (2) its historical roots, (3) how the crop is distributed, and (4) how it is consumed. The idea is to take a “tour” of the food from soil to table. This will be occurring simultaneously with Science and Reading instruction. After these 4 mini-lessons, students will be given time to continue research and complete their product for the final celebration.

Each mini-lesson will follow the format: Connection: Introduce to students what you will be doing; Teaching: Model how to do the research with coffee using the resources to which students have access: websites, books, etc.; Active Engagement: Have students turn and talk to partners once during the lesson to better understand if students are prepared for work on their own. When students are working on their own research, teacher is going around to students and helping, probing, and questioning their individual research.

After these four mini-lessons, students should have 6–7 more days to continue research and finalize their Harvest Festival product. Lesson 1.13–1.14 will be used to prepare students for the Harvest Festival and to give students the opportunity to begin reflection.

### **Lesson 1.5**

*The Good Garden*

**Objective:** Read a narrative nonfiction book and model asking “thick” questions that go beyond the text to really understand what is going on in the text, better understand the plight of small farmers in Latin America

**Time:** 1 hour

**Materials:** *The Good Garden: How One Family Went from Hunger to Having Enough* by Katie Smith Milway (Toronto: Kids Can Press, 2010); paper and pencil; self-chosen “just right” narrative books for each student; a copy of Thick Question Stems for each student (listed below)

**Essential Questions To Deepen Student Learning and Build Connections:**

- What types of questions would dig deeper into the text and let you better understand it?
- What questions would be best for discussion?
- What other types of deep questioning could we ask about *The Good Garden* to better understand Maria Luz’s situation?

**Learning Activity:** Start by telling students that we have been reading a lot of text this year, and since we have started our food unit we are going to read more books with a focus on food, farming, etc. *The Good Garden* is a good example of a text from which we can learn a lot. Today we’re going to focus on asking deep, thinking questions about the text so we can have discussions about the text tomorrow.

Teacher adds: While I am reading *The Good Garden* I am going to model for you how you can ask thick questions. A good way to do this is to stop reading when your brain is full, reflect on what you’re thinking, and write down any questions on a sticky note or in your reader’s response notebook.

Teacher reads *The Good Garden* aloud and models asking thick questions with the question stems. Teacher records these on sticky notes or on a chart paper for future reference. Towards the end of the book, have students turn and talk to a neighbor asking their own thick question about Maria Luz and her family. Teacher monitors conversation and after 2–3 minutes of discussion in pairs, calls on volunteers to share 2–3 other thick questions. Record these as well.

After reading *The Good Garden* send students off to read their own text and think about thick questions as they read and jot them down. Tell them that anytime we read, asking these thick questions will help us to think deeply about our text and better understand what we are reading.

**Thick Question Stems**

- Why...?
- What if...?
- What might...?
- How would I feel...?
- How does \_\_\_ feel about...?
- I wonder why...?
- How come...?

- How could...?
- What is happening...?
- So what...?
- How does this relate to...?

## Lesson 1.6

Story behind *The Good Garden*

**Objective:** Better understand *The Good Garden* and the plight of small farmers in Latin America through discussion

**Time:** 1 hour

**Materials:** *The Good Garden: How One Family Went from Hunger to Having Enough* by Katie Smith Milway, paper and pencil, video at <http://www.thegoodgarden.org/LearnTheStory.php>, thick question stems

**Essential Questions To Deepen Student Learning and Build Connections:** Use the thick questions from yesterday.

**Learning Activity:** Show students the real life video clip of Maria Luz, the inspiration for the book. Have students jot down thick questions during the video.

After the video, share out thick questions students had while watching. Add these to the list from yesterday.

Put students in groups of 3–4. Tell them they are going to focus on 2–3 questions from the list that we created together from yesterday’s reading and today’s video. Have them begin to discuss the questions in their groups.

After groups have discussed debrief as a whole class, ask how the thick questions helped us to better understand this story. Do we still have questions after discussion? (Students should answer yes, so you can discuss how these questions sometimes propel even more thought and question.) Ask if any of the questions we still have can be answered through our research on the crops we are studying. Have students write down questions they might still have in case they are some about which they can continue to think.



## Lesson 1.7

### Farmer's Rights

**Objective:** Investigate rights of farmers and examine what is just. Become more aware that many things we consume, including coffee, are not produced in Texas or the United States

**Time:** 1 hour

**Materials:** Nourishlife.org's Fair Trade video: <http://www.nourishlife.org/2011/05/video-fair-trade/>; paper and pencil for students to reflect; "Just a Cup of Coffee?" article by Alan Thein Durning (from *Rethinking Globalization: Teaching for Justice in an Unjust World*, edited by Bill Bigelow and Bob Peterson; Milwaukee, WI: Rethinking Schools, 2002); world maps for each student; colored pencils or crayons for illustrating

#### **Essential Questions To Deepen Student Learning and Build Connections:**

- How does the "Just a Cup of Coffee" article relate to your crop?
- What can we do as, as consumers, to make choices that would be beneficial for farmers?
- What are some of the environmental impacts from the cup of coffee about which the author writes?

**Learning Activity:** Read "Just a Cup of Coffee" with students. After reading, relate this to *The Good Garden*. Many of the things we consume in the United States, including some things students are researching, come from around the globe. Have students find the locations on the map from "Just a Cup of Coffee" and illustrate their map. Take a grade on this.

After students have finished the map, discuss all the places around the globe necessary for "just a cup of coffee." How can we ensure that all the people that have a hand in this cup of coffee are treated justly?

Watch the Fair Trade video from Nourishlife.org. Have students reflect in their journals about why it's necessary for farmers to have fair prices for their crops and safe working conditions.

## Lesson 1.8

Narrative Pantomime for *Cebolleros* (those who work in the onion fields)

**Objective:** Students see the perspective of a boy who works in an onion field with his family, think about how the boy feels when he is a man and hears women talking about the “beautiful and cheap onions,” understand some of the repercussions of “cheap” food.

**Time:** 1 hour

**Materials:** paper and pencil, narrative pantomime based on *Cebolleros* (attached) from *Rethinking Globalization: Teaching For Justice in an Unjust World*

### Essential Questions To Deepen Student Learning and Build Connections:

- What worked in the narrative pantomime? What could have been better?
- How did you feel playing the role of the narrator?
- How was the character’s summer?
- What did you notice about how the other groups played their scenes?
- How does the work affect the narrator and his family?
- Was it wrong that he went to work?
- How does this compare to any work experiences you have had?

**Learning Activity:** Describe to students that we are going to take a journey through the eyes of a character’s summer as a child in 1967 and then as a man in his 30s in 1985. We’re going to do this through a narrative pantomime. Ask students what a narrative is. They should be aware that a narrative tells a story. Tell them a narrative pantomime is movement to a story without using words and only using movements of the body. Tell students they are going to work the story in 5 different groups for the 5 scenes of the story. Put students in groups.

Arrange the entire group in a large circle, so the group that is working a scene may “perform” in the center of the circle and all students may see. Read the scenes while each group pantomimes their scene.

After the narrative pantomime, discuss with the class.

**Extension:** Have students write the main character’s interior monologue (or inner thoughts) as he hears the white women talking about the cheap and beautiful onions. Students might also write a poem or interior monologue from the standpoint of an onion, or the crop they are researching. Focus on the human labor embedded in the “cheap” food.

## **Cebolleros Narrative Pantomime**

**Scene 1:** It's 1967. You wake up early in the morning one spring day. Your father has recently lost his job so you wake up feeling pretty worried when you hear your parents whisper in the kitchen. You slowly walk to the bedroom door, being careful not to wake up your little brothers also asleep in the bedroom. You lean close to the door and you can hear your parents better. They are saying how your mom's work at the factory wasn't enough. The summer wouldn't be too great without money. This would mean no swimming, no money. You walk back to your bed and try to read one of the books you love to read. You read all the time and love how it lets you go on adventures. But the worry you have is keeping you from getting lost in the book that morning. You hear your parents finally decide that the whole family would pick onions; there isn't very much money in it though. You would start to pick the onions on the Monday after school is out.

**Scene 2:** The Monday comes. Your mom wakes up you and your brothers with a whisper. You open your eyes and it's still dark outside. You're so sleepy you can barely eat your breakfast burrito. As you eat you watch your mom make the rest of the burritos. You see her wide-awake face and those lines around her eyes; you wonder what she is thinking. Your father finally comes in and says it's time to go to the fields. You think about those fields in the books you read... green, luscious fields full of beautiful trees. Your father reminds you and your brothers that this job is serious. There will be absolutely no playing involved. As you walk outside to get in the old truck the sky is already turning blue. Your dad hands you a five-gallon paint bucket and a pair of scissors...you had a feeling in your gut this job was going to be difficult.

**Scene 3:** You pull up to the fields. You see the onions in neat rows. They have been turned up by a machine and are lying on the ground waiting to be picked up. The smell of soil and onions digs into your skin. Everyone around you is talking, but there is no English. Everyone talks in Spanish, which makes you happy and reminds you of the songs your grandfather would sing. Your father shows you how to use the scissors. He says that you need gloves, but the family can't afford them right now. You are scared of blisters. Your dad rubs your head and that makes you smile. Then you get to work. You bend down and scoop up a smooth onion. You cut it with the scissors like your father has taught you. One onion. Another onion. You keep cutting. Your bucket gets full and you put the onions in a bag. Your back starts to hurt. You pretend you are filling a basket with Easter eggs on Easter day. It gets hard to pretend because your hands start to blister.

**Scene 4:** By the end of the day you are exhausted. You don't even know how many sacks of onions you have picked. You are so glad the work is over. You walk back to the truck. Your sunburned nose is hurting. Your back feels like you have been carrying bricks all day. Your hands are stinging. You don't care how badly you smell, you just want to go home and fall into bed. When you get home your mom kisses your cheeks and tells you to take a shower and eat dinner. As you eat dinner, you are so tired you can't even taste your mother's wonderful cooking. Your dad says we'll have to work harder; we only got 30 sacks. Not enough. Your summer goes on like this. You wake up. You work all day. You eat. You wake up. You work all day. You eat. There is no time to read, which is your favorite pastime. You're exhausted. But by the end of the summer, you feel proud you helped your family.

**Scene 5:** It's 1985. You get in your car and drive to the grocery store. The afternoon sun is so hot it seems to be melting everything, but you are not so bothered by the heat. You are thinking of a Mexican song in your head and your body starts to sway to the internal rhythm. You get to the grocery store and check your list. You head straight for the fresh vegetables with your cart. You feel the round heads of the lettuce. You talk to the lettuce, to find just the right one. You toss it in your basket as though it were a ball going through a hoop. You smile. You pick up cilantro, tomatoes, jalapeños and put them in your cart. You head towards the onions. There are two women in front of the onions and you hear them talking, "Goodness these onions are absolutely beautiful. What would we do without onions!?" The other woman responds with, "Eat boring food, I guess. Who invented them anyway?" You stand behind waiting patiently to get to the onions. The first woman responds with, "No one invented them—the farmers grow them! It's amazing how farmers can grow things, isn't it? And the nice thing about onions is that they're SO cheap." For a moment you are not the happy man skipping into the grocery store, throwing your lettuce into the basket like a basketball. You look like a lost child, fenced in, a little boy who is lost in the fields of a summer.



## Lesson 1.9

### Walk About Investigating Various Mexican and Colombian Cooking Apparatuses

**Objective:** Become familiar with a variety of customary cooking tools from Colombia and Mexico through a hands-on investigation.

**Time:** 1–1.5 hour(s)

**Materials:** Tools: molcajete and chiles for students to smash, plantain smasher (tostonera) and plantains, tortilla press and tortilla dough, molinillo and hot chocolate (instructions for making the hot chocolate with the molinillo: <http://homesicktexan.blogspot.com/2006/12/mexican-hot-chocolate-and-molinillo.html>). For arepas: corn flour, water, salt, butter, vegetable oil, griddle or skillet, hot plate or stove

\*Note: since students are preparing food products like tortillas, arepas, plantains, and hot chocolate it would be useful to have an adult to supervise each station. If one or more of the tools are unable to be obtained, just make more of one of the stations.

#### Essential Questions To Deepen Student Learning and Build Connections:

- How do these tools help prepare the crops we have been studying for consumption?
- How do these utensils compare to items found in the kitchens in our houses?
- Most of these tools have been used for generations—what does this tell us about the utensils?

**Learning Activity:** Warm-up: Teacher will have items for investigation laid out ready for students to explore the various items. Before students investigate, introduce the various items as a chance to experience cooking in a different way.

Show students each utensil one at a time. While showing students the various cooking utensils have them jot down their predictions on how that tool would be beneficial in preparing food or what it might be used for. Make sure students keep in mind the various crops and foods we have been researching, as these are tools used in Mexico and/or Colombia. Record these predictions.

Tell students they will rotate through five stations to learn how different items are used with food.

Introduce the five stations and briefly describe what will happen at each one:

- At the molcajete station, students will crush chiles and grind them.
- At the plantain smasher station, students will smash the plantains.
- At the tortilla press station, students will prepare tortillas.
- At the molinillo station, students will prepare hot chocolate.
- At the arepa station, students will prepare arepas (before putting them in the skillet).

Ask that students be prepared to share one thing they learned today at any of the various stations. Divide students into five groups and rotate the groups through each station.

After everyone has had an opportunity to go through each station, teacher (or another adult) can fry the plantains, tortillas, and arepas so students may try them. As these are being made students can reflect in a journal on their experience: What was something that was difficult to prepare? What was interesting about their experiences with the various tools? Were any of their predictions correct about the use of the utensils?

## Lesson 1.10

### Food in traditional literature

**Objective:** Compare and contrast two traditional literature stories that are both versions of “Stone Soup” or “Nail Soup.” Students will also summarize these two stories and understand the theme or message of the stories.

**Time:** 1 hour (if enough books cannot be gathered for students to read independently, the activity could be done with the whole class on two separate occasions)

**Materials:** One copy of *Cactus Soup* by Eric Kimmel (NY: Marshall Cavendish, 2004) and copies for each student of a “Stone Soup” that takes place in the United States (for example, *Stone Soup* by Heather Forest; Little Rock, AR: August House Littlefolk, 1998), paper and pencil for students to write, chart paper

### Essential Questions To Deepen Student Learning and Build Connections:

- What does this story tell us about food in Mexico?
- Why are the stories different?
- How are they similar?

- Do you think these stories are culturally accurate (meaning, could they have really taken place?)
- What is the theme, or message, of these two stories?

**Learning Activity:** Teacher tells students: We've talked about folktales and traditional literature before. Folktales are stories that are passed down from generation to generation and oftentimes teach us something about human nature or about the world. Today we are going to start an investigation into two different versions of the same story. One takes place in Mexico and one takes place in the United States. We are going to read the story that takes place in Mexico as a whole class and then you'll have the opportunity to read the version that takes place in the United States on your own.

Read *Cactus Soup* to students. Model how you would write a summary of this book after you have finished on chart paper. Example: thinking of *Somebody, Wanted, But, So...* Making sure to reiterate to students how the summary should only be the main events in the story.

Have students on their own, or in pairs, read *Stone Soup*. Have students also make a summary of this story in their notebook. Students will then share with a partner the summaries they came up with for *Stone Soup*.

## Lesson 1.11

Comparing traditional literature

**Objective:** Further compare the two stories.

**Time:** 1 hour

**Materials:** Same as Lesson 1.10, plus other traditional literature books for students to read and practice finding the theme or messages.

### Essential Questions To Deepen Student Learning and Build Connections:

- What does this story tell us about food in Mexico?
- Why are the stories different?
- How are they similar?
- Do you think these stories are culturally accurate (meaning, could they have really taken place?)
- What is the theme, or message, of these two stories?

**Learning Activity:** Gather students to go over yesterday's summaries. First share the *Cactus Soup* summary, then have multiple students share their summaries for *Stone Soup*. Decide what would best fit the summary. Write on chart paper.

Start a Venn Diagram comparing and contrasting the two books. Have students share out ideas to add. Think about the foods in both books and also discuss how the cultures are portrayed in the books.

Next, model for students sharing the theme or message of the book. Put on chart paper.

Have students go back and read traditional literature books and find the themes or messages. They should jot these down on sticky notes or in their notebooks.

### Lesson 1.12

A Vegetable Expert Talk Show preparation

This day is primarily for students to prepare themselves by reviewing and finalizing their research and project for tomorrow's talk show and subsequent Harvest Festival.

### Lesson 1.13

A Vegetable Expert Talk Show

**Objective:** Interview students about their plant/crop to show their learning and teach others in the class about their plant.

**Time:** 1 hour–1.5 hour(s)

**Materials:** Student-made questions, chairs for students to sit on who are currently on the "show"

**Essential Questions To Deepen Student Learning and Build Connections:** Listed below in lesson plan

**Learning Plan:** *Note: Prior to this lesson, it is a good idea for students to have experience with role-playing or the “talk show” format for both familiarity and comfort. Here is a link from the Drama Based Instruction Network at the University of Texas on how this lesson goes <https://www.utexas.edu/cofa/dbi/content/talk-show>*

Prior to this lesson, set up a “stage” area with chairs—enough for each group of vegetable experts.

Tell students they are going to be experts on their vegetable or crop. They will be taking turns in their groups to sit on the stage area to answer questions from the teacher, who is the facilitator and plays the host of the talk show. After the teacher scaffolds higher level thinking questions, students from the “audience” will ask questions.

Before starting, discuss with students what would make a “good” audience for the talk show. List these things on the board, so they may be referred back to if students need to be reminded during the talk show.

Then ask students to the stage based on their vegetable/crop. Tell students they are going to become the experts on the vegetable or crop they have been researching. Teacher will ask the first three questions, scaffolding for depth and complexity. As teacher is facilitating, he/she is making sure to get all students on the stage. After teacher has facilitated, questions from the audience are elicited. Keep with this until every group has had a chance to be on the “talk show” and been able to answer questions as an expert.

Example questions to scaffold into higher level thinking. The idea is to lead students from describing their research to analyzing, and subsequently relating it to what the students know:

- Describe what it is like to work with the \_\_\_\_\_ (example: tomato, jalapeño, etc).
- Why is the \_\_\_\_\_ an important crop in Mexico or Colombia?
- How has this crop become important in the United States?

### Lesson 3.1

#### Soil Introduction

**Objective:** Activate students' prior knowledge about soil and introduce key vocabulary.

**Time:** 45 minutes

**Materials:** Paper (or science notebooks) for students to reflect in, chart paper to write down key words associated with soil

**Essential Questions To Deepen Student Learning and Build Connections:**

- Why is learning about soil important when thinking about food and plants?
- How is soil important in our daily lives?

**Learning Activity:** Have students get out their science notebooks, spiral or notebook paper. Ask students why vegetables or edible plants are found in many places in the world. Have students brainstorm independently, and then in groups, things that vegetables or edible plants may use to survive. Items such as sunlight, soil, water, nutrients, etc. may come up in their brainstorming.

Then give students 5 minutes to write about what they think the plant they are researching might need in order to survive. Make sure they give supporting details to defend their answers. Stop students after 5 minutes and then have them focus only on what elements of soil they think would be important for their plant to survive. Give an addition 3–5 minutes. Share out.

After sharing, create a web together as a class with key words associated with soil. Put this on chart paper. Leave up for the duration of the unit as a reference.

### Lesson 3.2

#### Soil Investigation

**Objective:** Explore various types of soil and understand what is good for plants to grow. Students make connections to the soils they investigate to the soils best for the vegetable they are researching.



**Time:** 1.5 hours (or two 45-minute sessions)

**Materials:** Lab sheets (attached), science notebooks, sample of five different types of soil, tweezers, toothpicks, handheld magnifying glass, nylon stocking pieces, graduated cylinders (at least 5 for each soil type), rubber bands

**Essential Questions To Deepen Student Learning and Build Connections:**

- Do you think that every type of soil supports plant growth equally?
- Do all plants thrive in the same type of soil?
- Which soil would be best for the plant you are researching?
- How do we think farmers and gardeners could try to get their soil better for planting?
- Are all soils good for the growth of vegetable plants? What about succulents, like cactus?

**Learning Activity:** Teacher gathers the materials and makes sure each group has access to the various tools for investigating the soils. Explain that students are going to be investigating five different types of soils in groups. They are going to record what they notice and their thoughts as they go. Students should be thorough in the observations they record.

First students will record their observations of the properties of the five types of soil. Students should work on one soil at a time. After they have recorded all the properties they will conduct the three tests.

Test 1 is “Roll it in a Ball”: students will put a tablespoon of the soil in their hand and add about 5mL of water. They will see what happens when they roll it in their hand to see if it sticks together. Do this for each soil type.

Test 2 is “Smear it”: Students will write the number of the soil type on the top of a note card. After they have written the number, they will take a small amount of soil and smear it across the note card. Using the hand lens, students can describe the particles, texture, water retention aspects and anything else noticed from the small smear. They will do this for each soil type as well.

Test 3 is “Soil and Water Retention”: Students will wrap the open end of a nylon stocking over five beakers or graduated cylinders and secure each stocking with a rubber band. Then they will place 150 mL of different types of soil in the stocking in each graduated cylinder. They will then pour 200 mL of water over each type of soil. Let the water drain for one minute, while making sure the soil sample does not sink into the drained water. They will then pick up the stocking full of soil and hold it over the beaker until it stops dripping, making sure not to squeeze the soil. They will measure the water left in the beaker. Students will record observations in the chart provided.

Properties of Soil	Particle Size	Texture	Color	Smell
Soil 1				
Soil 2				
Soil 3				
Soil 4				
Soil 5				

**Roll it into a Ball:** This experiment tests soil texture by adding water and seeing how well it rolls into a ball. Put the soil in your hand and mold it. Check to see if the soil will stay together when you squeeze it. Does it feel sticky? Can you roll it into a long snake without breaking it? Does it stain your hands? Record your observations below.

Soil Number	Your Observation
Soil 1	
Soil 2	
Soil 3	
Soil 4	
Soil 5	

**Smear It!** This experiment tests what additional features you observe about the soil when you view it under a hand lens. Get 5 note cards and label them 1–5. After you have done that, smear a sample of each soil on its corresponding note card. Compare what you see here with what you recorded in your observations in the table on page 1. Record your observations in the table below.

Soil Number	Your Observation
Soil 1	
Soil 2	
Soil 3	
Soil 4	
Soil 5	

**Soil and Water Retention!**

Soil Number	Amount of water left in the beaker	Water Retained	Describe the water (color, sediments, etc.)
Soil 1			
Soil 2			
Soil 3			
Soil 4			
Soil 5			

### **Soil and Sustainability Assessment**

- 1) Remind me (briefly: 2–3 words is okay): What does “water retention” mean when talking about properties of soil?
  
  
  
  
  
  
  
  
  
  
- 2) Clay soil contains tiny particles of sand, which means that they are very, very close together and do not have much air between the particles. If there is very little air between the particles, what do you think this means for the ability of clay to retain water?
  
  
  
  
  
  
  
  
  
  
- 3) Sandy soil has larger particles than clay, which means there is more air between the particles. Do you think sand is a good soil for retaining water? Explain using complete sentences, your existing/prior knowledge and proof from our experiments.
  
  
  
  
  
  
  
  
  
  
- 4) You have now seen that soils can be sorted by looking at the various properties of soil. Imagine you are going to build a farm. The place you intend to build on has rough soil that is difficult to move. Would this soil be a good place to build your garden? Explain using complete sentences, your existing/prior knowledge and proof from our experiments.



### Lesson 3.3

#### From the Soil

**Objective:** Watch Michael Pollan's video and make conclusions about growing crops. This is to further hone in on how integral soil health is to a farmer and gardener.

**Time:** 45 minutes

**Materials:** Video (<http://www.nourishlife.org/2011/04/video-michael-pollan-from-the-soil/>); video quotes (attached)

**Essential Questions To Deepen Student Learning and Build Connections:**

- How is the soil important to vegetables? To other plants?
- How can we make the soil as healthy as possible?
- Is healthy soil important to us? If so, how?

**Learning Activity:** Watch the Michael Pollan video from Nourishlife.org.

Put the students in groups. Give each group a quote from the Michael Pollan short clip. Have each group discuss and make a "quick" poster with graphics and words to show the rest of the class based on their quote. Teacher roves around and discusses the quotes with each group, helping them to dig deeply.

Do a gallery walk of the various posters, where everyone can observe and see the other groups.

Discuss the posters as a whole class.

**Extensions:** Discuss composting as a class. Create a compost as a class for healthier soil in the garden.

Quotes:

- We really do eat from the soil. If the soil is healthy the food will be healthy.
- In our system the soil is depleted or unhealthy so the soil either needs lots of chemicals or the food will be unhealthy.
- The last thing we think about when we're eating is the soil.
- Eating connects you to the soil.

### Lesson 3.4

#### Resources

**Objective:** Decipher the differences between renewable and nonrenewable resources in Mexico and Colombia

**Time:** 45 minutes

**Materials:** A set of resource cards (attached) per group, science notebooks or paper and pencil for students to write at the end of lesson

**Essential Questions to Deepen Student Learning and Build Connections:**

- What are renewable resources and what makes them renewable?
- What are nonrenewable resources and what makes them nonrenewable?
- What are responsible decisions concerning the conservation of renewable and nonrenewable resources?
- Why should we conserve resources?
- What kind of resource would we classify soil as?

**Learning Activity:** Give students the set of resources cards. In groups, have students sort them. Tell them they need to put the cards into two separate categories. Give students 5–10 minutes.

Once students have sorted their cards, put on the board a big T-Chart without labels. Put two cards on the T-Chart, one renewable and one nonrenewable. Then invite other students to add cards from their pile to the chart until all 8 cards are included. Discuss resources with them.

Ask students what the cards have in common with each other in each category. Have students label the T-Chart.

Reflection: have students choose one question to write about in their science notebook (5–10 minutes).

- Which do you think are more important, renewable or nonrenewable resources? Why?
- What did you learn about Earth's resources in this activity?
- What else do you want to know about renewable and nonrenewable resources?

Man standing next to a solar panel on a farm in Mexico



Coal from a Mexican coal mine



A wind turbine on a Colombian farm



A gas station in Mexico City



An oil rig in Colombia



A cow and her calf





A farmer picking corn in Mexico



A worker picking bananas in Colombia





**Harvest Festival Projects:** Choose one option from each row to create your presentation.

Write a persuasive letter to farmers as if you were your plant. Present reasons why taking care of the environment is important for you to be grown.	Write a protest speech as a small farmer explaining to a big company trying to buy your land why you do not agree with them trying to take your farm.	Write a journal entry as a farmer of your crop. Describe the hardships, benefits, and importance of your daily job.
Create a map detailing where your vegetable or crop was initially discovered. Use words and pictures to describe the important areas on your map.	Create a photo album (either printed or on photo story) of the life of your vegetable from seed to table. Include photos, illustrations, and captions to tell about the vegetable's journey.	Create a news program telling people the life of your vegetable from seed to table and how this is important to the people in Mexico or Colombia.
Write a poem about your vegetable and its importance in Mexican or Colombian cuisine.	Write a story from the first-person (you as the vegetable) telling about being used in a native dish in Mexico or Colombia.	Write a nonfiction, expository piece about your vegetable and it being used in cooking and culture in Mexico or Colombia.

Each tri-fold display board must include:

- A title
- Your name
- At least 3 illustrations or pictures
- One recipe created by you using your vegetable—must not include sugar
- The three options you chose above (if your choices are digital, they will be shown on a laptop in front of your display board on the Harvest Festival day)

Name \_\_\_\_\_ # \_\_\_\_\_ Date \_\_\_\_\_

## Harvest Festival

TOPIC: \_\_\_\_\_

	Expert (5)	Apprentice (3)	Novice (1)
Research on plant	Student used a variety of resources and thoroughly answered the four guiding research questions.		
Creativity	Graphics are original and well-chosen. Product includes an element of fun and interest. Student did personal best.		
Content	The content presented is focused, clear, and specific.  The report is clear and concise. Student has gathered and included relevant, accurate, and important information.		
Communication	All information is neat and easy to read. Product shows significant effort. Oral presentation (if given) was easy to understand and presented with fluency.		

COMMENTS:

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My Self-Assessment:

\_\_\_ I followed all directions and included all requirements.

\_\_\_ My information is relevant, accurate, and important.

\_\_\_ I did my personal best on my project and it shows.

\_\_\_ I practiced presenting my project.

\_\_\_ I checked over my work with editing and revising.