Have Book

Will Travel

Activities to Complement: 2013 iREAD Summer Reading Program
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Johnny Appleseed

Recommended Reading:

*Johnny Appleseed* by Madeline Olsen. This book is a level 1 reader that discusses the lifestyle lived by John Chapman (aka Johnny Appleseed). This book is an amazing way to discuss the history of Johnny Appleseed. It captures his travels, love for apples, and teachings through wonderful illustrations.

Agriculture Facts:

- John Chapman was born in Massachusetts in 1774.
- He planted more than 10,000 square miles of orchards.
- He began his journey in Pennsylvania traveling by foot with a saucepan for a hat.
- Many claim he traveled barefoot or with rags over his feet.
- He planted his seeds in Ohio, Pennsylvania, Kentucky, Indiana, and Illinois.

Math Exercise:

Johnny had just picked some apples from some of his planted trees. In total, he picked 9 red apples and 3 green apples.

1. If Johnny were to put all the apples together in a basket and randomly select one apple, what is the probability that he picks a red apple?
2. If he puts the apple from question 1 back in the basket and picks again, what is the probability that he picks a green apple?
3. Write out the probability answer from question number 1 both as a fraction and as a percentage.
4. Write out the probability answer from question number 2 both as a fraction and as a percentage.

Johnny adds 6 yellow apples to his basket of apples from above.

5. If each apple in the basket contained 5 seeds, how many seeds are there in total?
6. If Johnny were to randomly select one apple, which color is most likely to be pulled? What is its probability?
7. If he puts the apple from question 6 back in the basket and picks again, which color is least likely to be pulled? What is its probability?
8. If he puts the apple from question 7 back in the basket and picks again, what is the probability that the apple is yellow?
1. Johnny Appleseed was born in the state of ______________. Color it yellow.

2. Johnny Appleseed had nurseries in 5 states: ______________, ______________, ______________, ______________, & ______________. Color them green.

3. Johnny Appleseed was buried in the state of ______________. Outline it in red.

4. Of the six different states above, which is farthest west? ______________

5. Of the six different states above, which is farthest north? ______________

6. If you went from Massachusetts to Pennsylvania, which direction would you go? _______

7. If you went from Illinois to New York, which direction would you go? _______

8. Using the key, about how many miles is it from Eastern Massachusetts to Western Illinois? _______

9. Which state is bigger, Massachusetts or Pennsylvania? ______________

10. Mark a black X on the state in which you live.

Source: http://www.enchantedlearning.com/school/usa/people/Appleseedindex.shtml
Recommended Reading:

*How to Make an Apple Pie and see the World* by Marjoire Priceman. This book tells the tale of a girl who went to the grocery store to buy items to make apple pie. Once she discovered the grocery store was closed, she decided to travel the world, visiting places that specialized in the various ingredients.

The ingredients below were used in the book along with the corresponding location it came from. Locate the countries and states below on a map. Draw each outline in the space provided on the right and write down its capital city.

1—Flour (Wheat from Italy)

2—Egg (Chicken from France)

3—Cinnamon (from Sri Lanka)

4—Butter (Cow’s milk from England)

5—Sugar Cane (from Jamaica)

6—Apples (from Vermont)

Write Away:

For this writing assignment, have each student choose another recipe and write out their directions, including travel, to gather all the ingredients (try not to reuse examples from this book). They will need to research locations that make the ingredients they need. For a younger class, do this as a class project and make a big book.
Apple Smiles

Recommended Reading:

*Bad Apple* by Edward Hemingway. This book tells the story of a happy friendship. Other apples call Mac a bad apple because he is friends with a worm. After facing hardships to keep their friendship, Mac decides to be a “bad apple” and have his friend rather than be a sad apple. In the end, they are happy and smiling.

Which apples don’t smile? CRAB APPLES!

Try this tasty snack that will keep you grinning. 1 apple (cut in 8 sections) makes 4 smiles.

Materials:

- Red apple (unpeeled)
- Peanut butter
- Miniature marshmallows

Directions:

1. Wash the apple(s).
2. Cut a crisp apple into wedges.
3. When laid on its side, each wedge should look like a lip.
4. Spread one side of an apple wedge with peanut butter.
5. Add three or four miniature marshmallow "teeth" along the edge.
6. Spread another apple wedge with peanut butter.
7. Place it on top of the marshmallows for a big, toothy grin.

Hints:

For this snack, choose a crunchy, red apple for the lips. Use plenty of peanut butter to stick the marshmallows to the lips. It doesn’t matter if the apple has missing or crooked teeth, the important thing is to laugh and have fun!

Source: http://family.go.com/food/recipe-ak-836893-apple-smiles-t/
Recommended Reading:

*Apples to Oregon* written by Deborah Hopkinson. In the book, the father decides to move from Iowa to Oregon. However, he can't bear to leave his precious apple trees behind. Or his peaches, plums, grapes, cherries, and pears, not to mention his family! The trail is harsh. First there's a river to cross, then there are hailstones, and there's even a drought. Luckily, Delicious (the apple of Daddy's eye) is strong and won't let anything stop her father's darling saps from tasting the sweet Oregon soil.

Agriculture Facts:

- Oregon leads the nation in production of Christmas trees, blackberries, loganberries, onions, and hazelnuts.
- Nyssa, Oregon is home to the Oregon Trail Agriculture Museum.
- The apple tree originated in an area between the Caspian and the Black Sea.
- More than 7,500 apple varieties are grown throughout the world.
- In 1847, Henderson Luelling left Salem, Iowa for Milwaukie, Oregon. The near 2,000 mile trek took about 8 months.

Apple Faces:

Apples rot and turn brown because they take in oxygen and give off carbon dioxide. If apples are stored in cool temperatures, they will rot slower than they would at room temperature. Other conditions, such as humidity and the storage atmosphere also affect how quickly apples rot. Try this activity to discover how lemon juice changes and helps preserve apples!

Directions:

1. Peel and core apples.
2. Carve faces into apples with a plastic knife.
3. Add 2 tablespoons of lemon juice to 2 cups of water.
4. Soak the apple faces in the mixture for 10 minutes.
5. Hang the apples to dry, running a string through the opening where the core was removed.
6. Observe! Over the next 10 days, the apple heads will shrink by a third of their original size. Have your students make a *hypothesis* about what will happen to the apple heads. Have them make daily observations of the apple heads. Besides shrinking, ask questions such as, what else will happen to the heads? Does mold and fungus grow? Why or why not? (Think lemon juice.)

Source: [http://aitc.oregonstate.edu/teachers/handson.htm](http://aitc.oregonstate.edu/teachers/handson.htm)
Apple Chain

Use the activity to learn more about the life cycle of an apple!

Materials Needed:

- 2 red paper plates per student (or plain white plates to be colored)
- Crayons
- Glue
- Scissors
- Yarn
- Construction paper (yellow, pink, brown and green)
- Hole punch
- Tape
- Stapler
- Apple Chain templates from http://www.agintheclassroom.org

Directions:

1. Cut each item out of construction paper: seed, tree, blossom, bee, and the green apple. Punch a hole on each side of the items you made with construction paper. The brown seed only gets one hole punch.
2. Glue two red paper plates together around 2/3 of the edge. Leave the other 1/3 open. Allow time for it to dry. Can also skip glue and staple plates together depending on age of student.
3. Tape or staple a piece of yarn to the inside of the paper plates and extend the yarn out of the opening.
4. Add a stem and leaf to the red paper plates to make them look like an apple.
5. Tie the little green apple to the yarn coming out of the apple. Tie the bee to the little green apple. Tie the blossom to the bee. Tie the tree to the blossom. Tie the seed to the tree. These should all form a chain.
6. Tuck the green apple, bee, blossom, tree, and seed into the apple. Starting with seed, slowly pull shapes out of the apple and tell the story of how apples grow.

Do the Research:

1. Which U.S. state has the highest apple production?
2. What is the official state fruit of Illinois?
3. How many trees did Luelling bring with him on his journey?
4. Name a few states that Luelling and his family crossed.
5. How long does it take an apple seed to turn into a fruit bearing tree?
Recommended Reading:

*The Scrambled States of America* by Laurie Keller. In this book, Kansas wakes up grumpy. The other states are going about their mornings like usual, but Kansas decides to bring up how boring it is being in the same place all the time. This wacky story takes us on an adventure of mixed geography with funny detail and amusing stories throughout.

Agriculture Facts:

- U.S. farmers produce about 40 percent of the world's corn, using only 20 percent of the total area harvested in the world.
- Illinois leads in the production of pumpkins and horseradish.
- Iowa ranks 1st in the U.S. in corn and soybean production.
- South Carolina is home to the only tea farm in North America producing black tea commercially.
- Texas is #1 in the nation in cattle, cotton, sheep & goats, wool & mohair and hay production.

Activity:

The book indirectly mentions some important things specific to each state. Use a map to identify the states below based on the outline. Then, research agricultural information about the state and provide 2 facts on each.

Note: The states are not sized proportionally.
Agriculture Production by State

The states are numbered with the corresponding crop produced. Choose a color for each number and color in all the states. Write down any trends you see and facts you learn as you go!

1. Barley
2. Corn
3. Peanuts
4. Potatoes
5. Rice
6. Sorghum
7. Cotton
8. Soybeans
9. Sugarcane
10. Tobacco
11. Wheat
12. Citrus
13. Maple Syrup
14. Oats
15. Broilers
16. Dairy
17. Livestock
18. Hay

Source: U.S. Department of Agriculture 2007
What the World Eats

Recommended Reading:

Hungry Planet: What the World Eats by Peter Menzel. This book contains photos and essays about families from countries around the world. Each family shares the food they eat in one week.

Take a look at the pictures of the families and the corresponding information to the right. Use this to complete the activity on page 13.

Aboubakar family of Darfur, Sudan

One week’s food in November:
Grains & Other Starches* $0.00
Dairy $0.00
Meat, Fish & Eggs $0.58
Fruits, Vegetables & Nuts $0.51
Condiments $0.13
Beverages* $0.00
Total

The family pictured left in front of their tent in a refugee camp. D’jimia Ishakh Souleymane, 40, holds her daughter Hawa, 2; the other children (left to right) Acha, 12, Mariam, 5, Youssouf, 8, and Abdel Kerim, 16. Cooking method: wood fire. Food preservation: natural drying.

*Ayme family of Tingo, Ecuador

One week’s food in September:
Grains & Other Starches $17.40
Dairy* $ 0.00
Meat, Fish & Eggs $ 0.00
Fruits, Vegetables & Nuts $11.25
Condiments $ 2.90
Beverages* $ 0.00
Total

Ermelinda Ayme Sichigalo, 37, and Orlando Ayme, 35, sit flanked by their children (left to right): Livia, 15, Natalie, 8, Moises, 11, Alvarito, 4, Jessica, 10, Orlando Jr. (held by Ermelinda), 9 months & Mauricio, 30 months. Not pictured: Lucia, 5, who lives with grandparents to help them out. Cooking method: wood fire. Food preservation: natural drying.

*Home grown
Mendoza family of Todos Santos Cuchumatan, Guatemala

One week’s food in November:
- Grains & Other Starches: $11.49
- Dairy: $4.87
- Meat, Fish & Eggs: $53.97
- Fruits, Vegetables & Nuts: $8.67
- Condiments: $25.66
- Snacks & Desserts: $54.25
- Prepared Food: $35.66
- Beverages: $36.40
- Miscellaneous: $23.49
- Total: $232.94


Madsen family of Cap Hope, Greenland

One week’s food in May:
- Grains & Other Starches: $34.07
- Dairy: $4.87
- Meat, Fish & Eggs: $53.97
- Fruits, Vegetables & Nuts: $8.67
- Condiments: $25.66
- Snacks & Desserts: $54.25
- Prepared Food: $35.66
- Beverages: $36.40
- Miscellaneous: $23.49
- Total: $232.94

Standing by the TV are Emil Madsen, 40, and Erika Madsen, 26, with their children (left to right) Martin, 9, Belissa, 6, and Abraham, 12. Cooking method: gas stove. Food preservation: refrigerator-freezer.

Revis family of Raleigh, North Carolina

One week’s food in March:
- Grains & Other Starches: $17.92
- Dairy: $14.51
- Meat, Fish & Eggs: $54.92
- Fruits, Vegetables & Nuts: $41.07
- Condiments: $12.51
- Snacks: $21.27
- Prepared Food: $24.27
- Fast Food: $71.61
- Restaurants: $6.15
- Beverages: $77.75
- Total: $399.45

The family in the kitchen of their home. Ronald Revis, 39, and Rosemary Revis, 40, stand behind Rosemary’s sons from her first marriage, Brandon Demery, 16 (left), and Tyrone Demery, 14. Cooking methods: electric stove, toaster oven, microwave, outdoor BBQ. Food preservation: refrigerator-freezer.
What the World Eats—Quiz

Complete the activities that follow using the information from pages 10 & 11.

1. Add up the weekly expenses for each family and write the total value in the space provided on the previous pages. Which family has the most expensive budget? Which one has the least?

2. Find the difference between the budget of the Revis family and the Madsen family.

3. Name two types of food you recognize and two you do not.

4. Identify some beverages in each photograph.

5. Distinguish between foods the Ayme has purchased in a store or supermarket and foods they may grow or make themselves. Place the foods into two categories: “store bought” and “homemade.” How does this compare to the Revis family?

6. Name the foods in the Mendoza family by the following categories: grains & starches, fruit and protein.

7. Imagine that you visit the Madsen family and they ask you what you would like for dinner. Plan the menu based on what you see in the photograph.

8. For each of the following categories, calculate the amount of food each family member eats in one week: fruit, beverages, meat and dairy.

9. Choose two families. Compare and contrast the amount of food and beverages each family member consumes in a week and the types of foods that are most prevalent in the families’ diets.

10. What do the families food supply in question 9 reveal about their standard of living and the circumstances of the family members’ lives?

11. Imagine that the Aboubakar family joins you and your family for dinner at your home. Predict what the members of their family would say to each other about this meal when they returned home.

12. Choose two families. Imagine that these two families could cook a meal together. This meal would include some of the foods each family customarily eats and would allow the families to educate one another about their culture and lifestyle. What do you think would be on the menu? What might this meal teach each family about the other family’s culture and lifestyle?
Recommended Reading:

*Michael Recycle* by Ellie Bethel. This funny story delivers an important message about recycling and environmental awareness.

Recycle Facts:

- Recycling one aluminum can saves enough energy to run a television, or operate a computer for three hours.
- Every glass bottle recycled saves enough energy to light a 100-watt light bulb for four hours.
- Each year, Illinoisans use and dispose 1.1 billion foam cups; enough to encircle the Earth 19 times.
- In America alone, there is enough plastic film produced every year to be able to package the entire state of Texas.

Recycling Project:

To introduce the lesson, hold up different objects, one at a time and ask the class what it is and what it is used for. Proceed with several of the items. Explain that when we see things frequently, we know what they are and their uses. However, some things have many other uses that don't automatically come to mind when we first see them.

Tell the students they will be thinking of ways everyday items can be used in new or creative ways. They will work in groups to brainstorm ways those everyday objects can be reused or recycled after they have been used for their intended purpose.

Assign the students into as many groups as you have objects. Give each group the object, a piece of paper, and a pencil. Tell the students to list as many uses as they can think of for their item. Give the groups approximately 10 minutes and then have them switch objects with another group and generate another list for the new object. Ask the students to share some of their creative ways to reuse the items.

After introducing the topic of recycling, explain that as students, they too can be responsible for recycling. Have each student reuse and/or recycle items from their home into something usable. During the process, write a descriptive and time-ordered paragraph about the project.

Make sure to explain:

- The project must be completed at home.
- Students are not permitted to purchase anything to complete their project.
- Provide the students with the date the project is due as well as the letter for parents.
Potatoes on Rooftops

Recommended Reading:

*Potatoes on Rooftops—Farming in the City* by Hadley Dyer. This book discusses the concept of urban farming. It also takes us on adventures to different places around the world to help us understand how we can start growing fruit and vegetables at home, in a community garden, or at school.

For city dwellers, farming can take place in the form of a community garden. These are places in a city where people can get together to grow food and other plants.

Many community gardeners share tools that stay on-site, so people don’t have to bring their own, and they can split the cost. Another benefit is to grow alongside friends and share information.

How You Can Make a Difference:

In 2012, it’s estimated that 40% of all food in the U.S. goes uneaten. It’s just thrown away or left to rot. This is the equivalent of $165 billion each year of food wasted!

Composting is a simple and natural process in which food and plant scraps are broken down into nutrient rich fertilizer. Many cities collect scraps, fallen leaves, twigs, grass cuttings and weeds for composting in large facilities.

Activity:

Try making a composter for your very own yard! Place fresh food scraps containing a lot of nitrogen in the composter. Every week turn the pile over to circulate air and moisture. After a few months, the compost looks like soil. Mix it with the top layer of soil in a garden or a pot.

Do you think composting is a good idea? Write a paragraph to explain your answer.
Lily’s Garden

Recommended Reading:

*Lily’s Garden* by Deborah Kogan Ray. The book creates a calendar of the year seen through the lens of things planted, grown, and harvested. Meanwhile, Lily fills her grandparents in on things going on while they have moved out to California.

Maine Ag Facts:

- More blueberries grow in Maine than in any other state.
- Potatoes are the state’s most valuable crop.
- Maine is famous for its lobsters, harvesting over 47 million pounds each year!

California Ag Facts:

- California is the leading dairy producer.
- California is the nation’s sole producer of many specialty crops, such as almonds, artichokes, garlic and pistachios.
- California produces half of the U.S. grown fruits and vegetables.

At the farm where Lily’s Grandmother shops, they have fresh picked vegetables all year round. Match the pictures of the vegetables with the corresponding name.

Place the corresponding number under the vegetable below:

1. Lettuce
2. Eggplant
3. Beans
4. Broccoli
5. Garlic
6. Carrots
7. Tomatoes

The book mentions that the vegetables above grow year round in California. Lily lives in Maine. Can she grow these vegetables year round in her state? Write a paragraph to explain why or why not.
Teach students about seed germination using gloves and cotton balls.

Materials Needed:

- Clear plastic glove
- 5 cotton balls
- 5 types of seeds, 3-4 seeds of each (examples: lettuce, carrot, cucumber, tomato, broccoli)
- Pencil
- Water
- Marker

1. Write your name on a clear plastic glove.
2. Wet five cotton balls and wring them out.
3. Place 3-4 seeds of the same type on each cotton ball (or dip the cotton balls in the seeds to pick them up). You may want to keep track of which seed is in which finger.
4. Put a cotton ball with the seeds attached into each finger of the glove. Hint: You may have to use a pencil to get the cotton ball all the way to the tips of the glove fingers.
5. Blow up the plastic glove and close it with a twist tie.
6. Tape the glove to a window, chalkboard, or wall. You may want to hang a clothes line under a chalk tray and use clothes pins to hold the gloves on.
7. The seeds will germinate in 3 to 5 days. Keep a plant diary and look at the seeds under a microscope.
8. Transplant the seeds about 1 ½ to 2 weeks by cutting the tips of the fingers off the glove. Transplant the cotton ball and small plants into soil or sphagnum moss.
9. After growing to full size, plants can be made into a salad.

Recommended Reading:

*A Fruit is a Suitcase for Seeds* by Jean Richards. As the title suggests, the author compares fruit to suitcases because of the many ways that seeds travel. The book provides a wonderful introduction to seeds and their purpose while comparing different types of fruits.
Soil Sammy

Recommended Reading:

*Planting the Wild Garden* by Kathryn O Galbraith. This book discusses the many ways in which seeds are spread around and planted. The book takes on various landscapes, times of the month and encounters different animals while telling a tale that planting has no boundaries.

Materials Needed:

- Knee-High Stocking
- Water
- Grass Seeds
- Jiggle Eyes
- Potting Soil
- Fabric
- Baby Food Jar

1. Using a stocking, place some grass seeds in the toe where you want it to grow. The toe of the hose is the head of Soil Sammy and the grass looks like hair when it grows.

2. Pack a handful of soil in the end of the stocking on top of the seeds. Make sure the ball of soil is slightly bigger than the opening of the baby food jar.

3. Tie a knot in the stocking under the ball of soil.

4. Completely wet the head of Soil Sammy. Place the top of the hose (which is the bottom of Soil Sammy) in a baby food jar filled with water making sure the head is above the mouth of the jar. The end of the hose will absorb the water to feed the grass seeds, which will germinate through the hose. (You may have to cut a few small holes in the hose to help.)

5. Now you can decorate! Suggestions are a round piece of fabric to fit over the mouth of the jar for a shirt. You can add buttons to the shirt or jiggle eyes on the face and cut out felt for a mouth.

6. Water as needed and be sure to cut the grass “hair” and style as desired. Will the grass hair grow better or faster with fertilizers? Try it and find out. Add different fertilizers to the soil and water and see which grows best.
An Orange in January

Recommended Reading:

*An Orange in January* by Dianna Hutts Ashton. This book tells the tale of an orange’s life journey—from spring blossom to bright, round fruit, from tree to truck to grocery store. And then into our hands!

Agriculture Facts:

- Brazil grows the most oranges in the world, with Florida being second.
- If left on the tree, oranges are one of only a few fruits that won't over ripen.
- Oranges are rich in Vitamin C: an antioxidant boosting the body’s immune system.
- Oranges can be stored at room temperatures for 2-3 days comfortably. If refrigerated, they can be stored for up to 14 days.

Orange Float Experiment:

Materials Needed:

- A whole orange fruit
- A large bowl filled with water

Before you begin, do you think the orange will float in water? Why or why not? Use your estimates to begin filling out the KWL (know—want—learn) sheet on the next page.

Instructions:

- Fill the bowl with water.
- Let each student try to immerse the orange in the water.
- What happens to the orange. Ask the students to observe whether it is floating or sinking.
- The orange will float in the water.
- Now ask each student to take the orange out. Now peel off the skin of the orange.
- Again, ask the students to try to immerse the orange in the water.
- What happens now?
- Briefly try to explain why you think the orange now sinks.

Explanation:

The rind (or peel) of the orange is full of tiny air pockets. This gives the orange a lower density than water, causing it to float to the surface. Removing the rind (and the air pockets) from the orange increases its density higher than that of water, causing it to sink.

Complete the KWL chart on the next sheet. Try doing this experiment with other fruits such as: watermelons, bananas, kiwis etc.
<table>
<thead>
<tr>
<th>What I Know...</th>
<th>What I Want to Know...</th>
<th>What I’ve Learned...</th>
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All About Maps

Recommended Reading:

_There’s a Map on My Lap!_ by Tish Rabe (Dr. Seuss Enterprises). The Cat in the Hat introduces readers to various kinds of maps, including: city, state, world, topographic, temperature, and terrain. It also includes several formats, like flat, globe, atlas, and puzzle. The book also covers tools we use to read maps, including symbols, scales, grids, and compasses.

Fill in the compass rose. Come up with your own acronym to remember the four directions.

Place the answers from the words list after the corresponding definitions below.

1. The relationship between the actual size of an area and its size on a map.

2. An imaginary line that circles the middle of the earth between the North and South poles.

3. A sign or drawing that stands for something else.

4. A representation of the earth in the shape of a ball.

5. Imaginary lines on the earth that run east and west, parallel to the equator.

6. Imaginary lines on the earth that run north and south and meet at the poles.

7. A person who makes maps.

8. A city where the government of a state or country is located.

9. A flat representation of the earth or a part of the earth that shows the relative position of places.

10. The part of a map that lists and explains the symbols, colors, and scale used for the map.

11. A pattern of lines on a map usually running north-south and east-west that is used for giving positions.

Word List:

- Capital
- Cartographer
- Equator
- Globe
- Grid
- Latitude
- Legend
- Longitude
- Map
- Scale
- Symbol
Navigating Illinois

Suggested Reading Materials:

Illinois AITC Specialty Crops Ag Mag
*There's a Map on My Lap* by Tish Rabe

After completing this exercise, students will have a better understanding of reading maps, as well as the diversity of specialty crops in Illinois.

What You Will Need:

Access to the Internet
Illinois Maps
Markers or crayons

Using the Illinois county map on the next page, follow the directions below:

- Using dark blue markers or crayons, draw the Illinois and Mississippi Rivers on the map. These rivers are used to ship many agricultural products.
- The Pumpkin Capital of the World is located in Morton, IL. Find the county that Morton is located in and draw a pumpkin inside of it.
- Agri-tourism is a growing industry in Illinois. The Country Corner Farm Market is located in Alpha, IL in the northwest part of the state. Find the county that Alpha is located in and color it brown.
- Apple orchards are very popular destinations in the fall because they offer u-pick apples, cider and other homemade treats. Almost Eden Orchard is located in Hancock County. Find Hancock County on the map and color it red.
- The Horseradish Capital of the World is located in Collinsville, IL. Find the county that Collinsville is located in and color it gray.
- Many of the peaches grown in Illinois are grown in the southern half of the state. Rendleman Orchards is located in Alto Pass, IL. Find its county and color it orange.
- Bees are very helpful in the pollination of specialty crops. Sasse’s Apiary is located in Chestnut, IL. Find Logan County and color it yellow.
- Many of Mason County’s specialty growers, like Ron Armbrust from Manito, use irrigation to help keep their crops watered. Find Mason County and color it light blue.
- Many consumers flock to Christmas tree farms to cut their own tree for the holidays. Richardson’s Christmas Trees is located in Spring Grove, IL. Find its county and color it green.
- Olthoff Farms and Dutch Valley Growers, Inc. grow onion sets for stores like Wal-Mart and Farm & Fleet. They are located in Kankakee County. Find it on the map and color it pink.
- Siemer Milling Company in Teutopolis, IL mills wheat into flour to be used in cookies, cakes, crackers and other goodies. Find the county it is located in and color it purple.
All about Chocolate

Recommended Reading:

Chocolate: Riches from the Rainforest by Robert Burleigh. This book takes its journey through the rainforest teaching about the history and process of making chocolates. The three main questions answered are: where chocolate comes from, who discovered it, and what changed.

Agriculture Facts:

- The Cacao tree, native to South America, contains seeds that are the source of cocoa and chocolate.
- The Olmecs (1500 - 400 B.C.), were probably the first users of cacao.
- Cacao beans were so valuable in ancient Mexico that ancient civilizations used them as a means of currency to pay for commodities.
- As of 2006, consumers spent more than $7,000,000 a year on chocolate related products.

Making the Chocolate:

Chocolate is produced from a long refining process that begins with the cacao beans of the tropical tree. The beans are fermented, dried, roasted, and ground, and the resulting products include cocoa butter (a smooth, solid fat used in both food and cosmetics) and chocolate liquor (ground roasted cocoa beans). The type of chocolate is determined by the various amounts of cocoa butter and chocolate liquor the chocolate contains. Other ingredients, like sugar, milk, and butter, are added as well.

Test Yourself:

Taste test a couple varieties of chocolate. Try eating chocolate with various cocoa content (50% cocoa, 75% cocoa, 85% cocoa, etc). You can also try different chocolate varieties, such as: milk chocolate, dark chocolate, and white chocolate. Write down similarities and differences of each tasted.

Make a List:

Have students make a list of everything they can think of that has chocolate in it. Some examples can include: cake, brownies, cookies, etc.

Sort the list with your favorite items first! Share your favorites with the class.
Cocoa from Farmer to Consumer

The words below are very important steps to get cocoa from the farm to the consumer. Place the names in the correct order of occurrence. Use the resources and website below to help you along the way! Be sure to check out the cocoa value chain.

http://worldcocoafoundation.org/

Fermenting & Drying  Consumer  Chocolate Making  
Pressing  Roasting & Grinding  Marketing  
Packing & Transporting  Growing  Harvesting  

1.  
2.  
3.  
4.  
5.  
6.  
7.  
8.  
9.  

Do the Research:
Research to find out what happens at each phase and explain why it’s a significant part of the process.

Extension Activity:
Make some flash cards. On the front of the card, draw illustrations to describe the process. On the back of the card, write down the name of the step, some facts you learned about the step, and why it’s an important part of the process. Quiz yourself and a friend on each step to help remember the process of cocoa from farm to consumer. This activity can be done with other agricultural products as well!
Cacao Around the World

Using the internet, atlases, encyclopedias, almanacs and other resources available, find the information needed to complete the geographical activity that follows.

The cacao plant grows beans that are crushed and ground to make chocolate with other processes that come in to play. This activity is designed to research and determine where the chocolate in your candy bars comes from. Use the following 4 steps to complete the chart below. Some hints will be provided.

1. The four countries in the world producing the most cacao.
2. The name of the capital cities of those four countries.
3. The name of their most populous city.
4. Approximately how far is each country from Hershey, Pennsylvania, America’s #1 producer of candy bars?

Try checking out this site: http://www.daftlogic.com/projects-google-maps-distance-calculator.htm

<table>
<thead>
<tr>
<th>Name the Country</th>
<th>Its Capital</th>
<th>Its Most Populous City</th>
<th>Approx. Distance from Hershey, PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country in Northwest Africa</td>
<td>Yamoussoukro</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country Directly East to the country above</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country North of Australia</td>
<td></td>
<td>Accra</td>
<td>9,600 miles</td>
</tr>
<tr>
<td>Country in Northwest Africa</td>
<td>Abuja</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Recommended Reading:

*A Life Like Mine: How children live around the world* by DK Publishing. This book profiles children from all over the globe, capturing the different and fascinating lifestyles. The book also discusses the challenges of nations, both developed and developing, through stories and photographs.

The first segment of the book discusses the concept of survival and mentions some of the things we need to survive.

1. **Water:**

   Without water, there would be no life on Earth. A human being can only survive a few days without water.

   Monitor a day’s use of water: Write down all the water you use—bathing, drinking, swimming, playing, planting, using the restroom, etc. Write a paragraph explaining how reliant our lives are on water and cite some of the examples you came up with.

2. **Food:**

   Food is our fuel; we eat it to survive. Most holidays and celebrations involve eating together. Eating a balanced diet gives us growth, good health, strength and energy.

   Extension Activity:

   Monitor the foods that you eat for lunch. Research the foods that are eaten in various countries around the world. Write a few paragraphs comparing and contrasting your diet with the other countries. An example of lunches from other countries with number of calories can be found on the next page.
<table>
<thead>
<tr>
<th>Lunch Around the World</th>
<th>Guatemala</th>
<th>Greece</th>
<th>Vietnam</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicken 275</strong></td>
<td>4 oz. Protein</td>
<td><strong>Grilled Lamb 300</strong></td>
<td>4 oz. Protein</td>
</tr>
<tr>
<td><strong>Rice 130</strong></td>
<td>4 oz. Grains</td>
<td><strong>Pita Bread 125</strong></td>
<td>4 oz. Grains</td>
</tr>
<tr>
<td><strong>Guacamole 35</strong></td>
<td>1 oz. Vegetables</td>
<td><strong>Garden Salad 20</strong></td>
<td>3 oz. Vegetables</td>
</tr>
<tr>
<td><strong>Tortilla 80</strong></td>
<td>1 medium</td>
<td><strong>Rice Noodle 130</strong></td>
<td>4 oz. Grains</td>
</tr>
<tr>
<td><strong>Water 0</strong></td>
<td></td>
<td><strong>Rice Noodle 130</strong></td>
<td>4 oz. Grains</td>
</tr>
<tr>
<td><strong>Water 0</strong></td>
<td></td>
<td><strong>Broccoli 25</strong></td>
<td>5 oz. Vegetables</td>
</tr>
<tr>
<td><strong>Tea 5</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Guatemala, Greece, Vietnam*
The book also discusses the importance of development in children’s lives. To expand on the concept of development, the book introduces two important topics: education and play.

1. Education:

   Human beings are always learning. School allows us the opportunity to gain skills such as reading, writing and math. Additionally, it allows the development of our personality, talents and abilities. Just as importantly, it teaches us our rights and responsibilities and guides us so we can learn to respect others and to live peacefully together.

   Education is so important that when a child cannot go to school, the school must come to the child. In Australia, some children are hundreds of miles from the nearest school and the only way to talk to the teachers is by two-way radios.

   Research what school is like in other countries around the world. Compare and contrast these with your school.

2. Play:

   Playing is very important. You don’t need expensive toys, just a good imagination. Sports exercise your body, team games teach you to work with other people, and play that involves pretending, lets you use your imagination and creativity.

Write it Out:

Make a list of your favorite ways to play. Make sure to include ways of playing by yourself and with others. Write a paragraph explaining why play is important to you.
Page 3: 1: 3/4 | 2: 1/4 | 3: 3/4 & 75% | 4: 1/4 & 25% | 5: 90 seeds | 6: Red, 1/2 or 50% | 7: Green, 1/6 or 16.66% | 8: 1/3


Page 9: Left to Right: Washington, Louisiana and Florida

Page 13: 1: Family totals in order of appearance: $1.22, $31.55, $277.04, $75.70, $341.98 | Revis from America (most), Aboubakar from Sudan (least) | 2: $64.94

Page 16: Numbers from left to right: 4, 3, 1, 5, 7, 2, 6

Page 25: In order of occurrence: Growing | Harvesting | Fermenting & Drying | Marketing | Packing & Transporting | Roasting & Grinding | Pressing | Chocolate Making | Consumer

Page 26: (From top to bottom) Countries: Cote d’Ivoire, Ghana, Indonesia & Nigeria | Capitals: Yamoussoukro, Accra, Jakarta & Abuja. | Most populous city: Abidjan, Accra, Jakarta & Lagos | Distance from Hershey: 4,900 miles, 5,100 miles, 9,600 miles, 5,800 miles
<table>
<thead>
<tr>
<th>Activity</th>
<th>Illinois Learning Standards</th>
<th>Illinois Assessment Framework</th>
</tr>
</thead>
<tbody>
<tr>
<td>How to Make an Apple Pie</td>
<td>3.A.2</td>
<td>3.B.2a</td>
</tr>
<tr>
<td>Heading West</td>
<td>11.A.1a</td>
<td>11.A.1e</td>
</tr>
<tr>
<td>Apple Chain</td>
<td>12.A.2a</td>
<td></td>
</tr>
<tr>
<td>Where in the USA</td>
<td>17.A.1a</td>
<td>17.A.1b</td>
</tr>
<tr>
<td>Agricultural Production By State</td>
<td>17.A.2b</td>
<td></td>
</tr>
<tr>
<td>What the World Eats</td>
<td>15.B.2b</td>
<td>15.D.1a</td>
</tr>
<tr>
<td>Recycling</td>
<td>3.B.1a</td>
<td>3.C.1a</td>
</tr>
<tr>
<td>Potatoes on Rooftops</td>
<td>17.C.1b</td>
<td>17.C.4b</td>
</tr>
<tr>
<td>Lily’s Garden</td>
<td>3.B.1a</td>
<td>3.C.1a</td>
</tr>
<tr>
<td>An Orange in January</td>
<td>3.B.1a</td>
<td>3.C.1a</td>
</tr>
<tr>
<td>All About Maps</td>
<td>17.A.1b</td>
<td></td>
</tr>
<tr>
<td>Navigating Illinois</td>
<td>11.A.2b; 11.A.2c; 13.B.2f; 15.A.2a; 17.A.2b; 17.C.2b</td>
<td>11.4.04; 13.4.11</td>
</tr>
<tr>
<td>Chocolate</td>
<td>3.A.1</td>
<td>3.A.2</td>
</tr>
<tr>
<td>Cacao Around the World</td>
<td>17.A.1a</td>
<td>17.A.1b</td>
</tr>
<tr>
<td>Children Around the World</td>
<td>3.A.1</td>
<td>3.C.1a</td>
</tr>
</tbody>
</table>