

Common Roots

Apples Through The Seasons



Introduction

Most Vermonters can tell you a story or two about the wonderful apple harvest traditions they have experienced. In this lesson we take a sensory walk through an apple orchard to learn about the hard work apple orchardists do each year to create a bountiful harvest in the fall. We also explore the health and wellness benefits apples provide our bodies while we learn some of the best ways to get a big serving of Vitamin V for vitality. After that we take a trip through history and figure out how apples started to grow all across the United States. Finally, in our Digging Deeper section of this lesson we focus on reciprocity and consider how we might give back to our community during the fall harvest time.

Recipes

Share the Harvest: Slow-Cooker Chai Apple Butter

Makes 28 servings (2 tablespoons each), roughly 1 pint

This Slow-Cooker Chai Apple Butter is the perfect gift to share with our loved ones and generous community members to strengthen community connections. Express your gratitude to others by sharing a jar of this delicious apple butter and a card with some kind words or meaningful drawings.

Ingredients:

- 5 pounds organic apples, cored and cubed
- $\frac{2}{3}$ cup packed dark brown sugar/coconut sugar

- 1 tablespoon vanilla extract
- 2 teaspoons ground cardamom
- 2 teaspoons ground cinnamon
- 2 teaspoons ground coriander
- 2 teaspoons ground turmeric
- ½ teaspoon salt

Tools:

- Paring knives/safety cutters
- Apple corer
- Measuring cups
- Teaspoon and tablespoon measuring implements
- Cutting board
- Mixing spoon
- Slow cooker/Crock-Pot
- Food processor/blender (optional)
- Pint jars for canning



Process:

1. Combine apples, brown sugar, vanilla, cardamom, coriander, cinnamon, turmeric, and salt in a 6-quart or larger slow cooker.
2. Cover and cook, stirring once or twice, for 5 hours on high.
3. Set the lid ajar and continue cooking, stirring occasionally, until the apples are almost broken down, about 2 hours more.
4. If desired, puree in a food processor until smooth.

Making the Recipe as a Group

This recipe makes enough for approximately 1 pint of apple butter. Increase the quantities to make more as gifts.

There are many ways to make this recipe as a group, but here is one suggestion. Allocate a few tasks to students in three different groups. There are a lot of apples to core and slice, so two groups can tackle that task. The other group can measure the other ingredients.

Safety Reminders:

- Remove any unnecessary items from the work space.

- Everyone needs to wash their hands before they prepare any food.
- The slow cooker can get very warm on the outside. Please be extra cautious when stirring. Also, be mindful of the power cord so that no one trips or knocks the slow cooker over.

Groups 1 & 2: These groups will divide the 5 pounds of apple and prepare their portion for the slow cooker.

- Using an apple corer, core each of the apples.
- Using a paring knife or safety cutter, cut the apples in half and then into cubes.

Group 3: This group will measure all of the other ingredients and add them to the slow cooker.

- Using the proper measuring tools, measure $\frac{2}{3}$ cup packed dark brown sugar/coconut sugar, 1 tablespoon vanilla extract, 2 teaspoons ground cardamom, 2 teaspoons ground cinnamon, 2 teaspoons ground coriander, 2 teaspoons ground turmeric, and $\frac{1}{2}$ teaspoon salt.
- Add these ingredients to the slow cooker.

Coming Together!

Have Group 3 tell their classmates about the ingredients they added to the slow cooker. Turn the slow cooker to high and cover. Allow the apple butter to cook for 5 hours. While the apple butter cooks, have the group make cards to go with this apple butter gift. If you are making this recipe in the classroom, it might take two days. If so, turn the slow cooker off at the end of the day and turn it back on the next day. After the apple butter has cooked for 5 hours, check out the consistency. If the group prefers smoother apple butter, then add the contents of the slow cooker to a food processor or blender and blend until it reaches your desired consistency. Add the final mixture to pint jars.

Moment of Reflection

It is so easy to grab a jar of apple butter off the shelf at the grocery store. Now that we have spent many hours preparing this apple chai butter, let's take a moment to appreciate all of the convenience we take for granted on a daily basis. Let's challenge ourselves to think about the hard work that goes into making the prepared foods we eat. Ask yourself some mindful meal questions. Who grew the ingredients? Who prepared the food? How far did your food travel to your table? How long did it all take?

Kid-Friendly Baked Apple

Makes 4 apples / 4 servings

Ingredients:

- ¼ cup oats, dry
- ¼ cup flour, all-purpose
- ¼ cup brown sugar or coconut sugar
- ½ teaspoon cinnamon
- ¼ teaspoon ginger, ground
- ¼ teaspoon pumpkin pie spice
- 2 tablespoons butter, unsalted
- 4 medium organic apples
- Heavy cream (optional)



Process:

1. Have an adult preheat the oven to 350 degrees F.
2. Measure all of the ingredients besides the apple and optional heavy cream and add to a bowl. Use your hands to mix well.
3. Using an apple corer, core the apples. Then, using a paring knife or safety cutter, cut each apple in half.
4. Pack the mixture lightly into the cored apples and drizzle with the optional heavy cream. Place the apples on a baking sheet.
5. Have an adult put the apples in the oven and set a timer for 40 minutes.
6. After 40 minutes, have an adult take the baked apples out of the oven and allow them to cool for 10 minutes.
7. Enjoy your gooey delicious baked apples!

Refreshing Apple and Kale Juice or Ice Pop

Makes 2½ refreshing cups

Ingredients:

- A heaping handful of baby kale
- 2½ cups of water
- ½ fresh apple sliced, skin on
- 5 inches of cucumber sliced, peel on
- 1 heaping tbsp. ginger root, grated, or half a lemon, zested and juiced (seeds removed)

Process:

1. Freeze apple, cucumber, and ginger/lemon together overnight.
2. The next day, use a blender to combine the ingredients.
3. Serve cold as a morning juice or pour into popsicle containers and freeze.

4 Seasons of Apple Trees

In this section we will take an imaginary sensory walk through the four seasons of apple trees and reflect on the orchardist's diligent work.

Spring

The warm sun starts to fill the sky again in the springtime. Feel the crisp air on your skin and notice the dew making our boots damp beneath our feet. As we walk through our orchard, let's observe all of the new life. Young critters, green grass, and tiny buds are all around us. The buds on the tree's branches have rested for so long and are ready to open up in the warming spring temperatures. During the spring, orchardists pay close attention to the weather. Let's keep an eye out for frost that kills new blossoms. If the blossoms die, the tree will not produce apples. If the temperatures drop too low, orchardists might start bonfires to warm the trees up. Orchardists save the prunings from the winter for a no-waste solution for warming up their trees. Other piles of prunings may become homes for birds and other critters. Feel the warm heat on our skin during a bonfire to warm the apple trees.

At the beginning of spring, the tree's twigs are dormant. With warming temperatures, new growth called silver tips begin to emerge from the twigs. The silver tips eventually turn green and become tiny clusters of leaves. Then, small pink flowers emerge right before the fully blooming white flower.

The beautiful white color of the flower blossoms is a signal for bees and other pollinators to come and collect nectar and pollinate. Can you smell the flowers as they begin to bloom? Pollinators have the important job of carrying pollen from male flowers to female flowers. Listen for the hum of the honeybees. Wind can also carry pollen, but pollinators do most of the work. The apple tree provides sweet nectar to the bees, which is their main source of nourishment. The blossoming flowers start a story that weaves together an integral relationship between the tree, bee, and human health. During this time, the tree is also preparing more tiny buds that will rest until they open next spring. What story might you write to tell about this amazing process?



Summer

The sun becomes very hot in the summer. It warms our bodies in this orchard. We might also feel some summer hail in our orchard. How does the hail sound as it taps the leaves and apples on the

tree? Keep an eye out for small hail kisses on the apples. Tiny green apples begin to grow. Orchardists hope for rain and warm temperatures during the summer to promote fruit production. As we walk through the orchard, we might see some apples that the trees have dropped. Apple trees help prune themselves by dropping some of their apples to make sure the branches don't become too heavy. Pick up one of the apples that the tree has dropped. We don't eat these apples, but we can use them to make cider! Make sure to check the apples first for any Nature Neighbors, like slugs and wasps, that might be feasting on these apples. Throughout the summer the green apples continue to grow in size. Depending on the variety of apple tree, the green skin will become red or yellow. Some apples are ready to pick by the end of August!

Fall

As the summer comes to an end, we begin to cool down from the strong summer heat. In late summer and early fall, the apples ripen and fill with sugary goodness. Apples are ready for harvest between late August and early November in Vermont. Have you ever picked an apple before? How do you know which apples are ready to harvest? Like many other fruits, we know apples are ready to harvest when they separate easily from the tree. To test if an apple is ready to harvest, hold the apple and gently twist it. If it pulls away from the tree easily, then it is ready to harvest. Some orchardists with large orchards might use machines to harvest many apples at once. Wave hello to farm workers as they begin to harvest some of the early apples of the season. Be sure to thank them for their hard work.



Orchardists keep an eye out for frost at the end of fall too. The first frost stops fruit production on the trees. After the harvest, the leaves begin to turn brown and fall off the tree. The leaves feed the Earth and its amazing soil microbiome by providing it with rich nutrients. How do the crunchy fallen leaves feel on your feet?

Winter

Put on your hats, gloves, and boots because it's about to get very cold in our orchard! After a sweet abundant apple harvest, these trees need a long rest. During the winter, apple trees conserve energy to open their buds in the spring. The trees might get a rest during these cold months, but the orchardists stay busy. In the winter, usually in February and March, orchardists venture out into deep snow to prune and remove dead branches from the trees. We are trudging through the deep snow to remove dead branches to save for the spring bonfires. Remember how wonderful the warm bonfire felt last spring? It's tough work in the orchard, isn't it?

Health and Wellness

Why might an apple a day keep the doctor (and dentist) away? In this section we will discuss how to enjoy apples while maximizing our doses of health, wellness, and Vitamin V for vitality!



Ages 4-7

Apples are a great fruit to keep our tummies full. Apples are so great at keeping our bellies full because they have lots of fiber. How else can fiber help our bodies? Fiber helps food move from your mouth to your stomach and out of your body without getting stuck along the way. Fiber can also balance out the sugar found in apples and other fruits so you don't get a sugar shock. Fiber and sugar are a good team that can bring your body energy without the sleepy sugar crash you might feel a little bit after eating a bunch of candy.

There are so many ways to eat apples! Let's name some of our favorites. Raw apples with the skin on give our bodies the biggest wellness boost of all the ways to enjoy apples. The skin of the apple gives your body double the wellness power and has a bunch of fiber that we just talked about. Apple cider and apple juice have a bunch of sugar but hardly any fiber. What happens when we only have sugar instead of the whole sugar and fiber team? We will probably have a little sugar shock and then feel very sleepy shortly after an energy boost. Apple juice may taste yummy, but there are plenty of other ways to get that sweet apple taste without having a sugar shock and sleepy crash right after.



Let's talk about "apple scab." What is it? A healed-over wound on the apple? No. Just a slight blemish on the skin of an apple that some shoppers feel is not an appealing look and avoid buying at the grocery store. While the most perfectly formed apple is certainly something of great beauty, we might come to appreciate all those "bad apples" that are tossed in the cider-making bin instead of being sold on market shelves. Who knew? Imperfect apples have even more wellness power than perfect apples. Wow. An apple a day might, in more ways than we knew, keep the doctor away. So polish one up and be amazed.

Apple Lovin' Animals

Sometimes we forget that we aren't the only species that enjoy munching on delicious fruits, vegetables, and herbs. For many creatures, the apple orchard is a delicious restaurant for them to have a feast. Can anyone think of an animal that likes to munch on yummy apples? How about a worm? Have you ever seen a worm inside a cartoon or real-life apple? Other animals like birds, slugs, bears, deer, racoons, turkey, chimps, pigs, and many more love snacking on apples too. Did you know that your pet hamster or rabbit also likes apples? Ask a grown-up if you can share an apple snack with your fluffy hamster or rabbit! Remember that our fuzzy friends have much smaller bellies than us, so they will only need a tiny nibble of our apple snack.

☆ *Wellness Star* ☆

Apples have a special way of reminding us that they are wellness stars. On the inside of an apple, there is a star that lets us know apples are wellness stars. Let's cut an apple in half so we can see the wellness star inside! (Instructors, cut an apple in half by laying the apple down on its side and cutting down the middle between the stem and blossom end of the apple. Let it shine around so all can see. Save these apples for a fun No-Waste Wreath Craft. For more information, see the Ages 4–7 activities in the Digging Deeper section of this lesson.



Ages 8-12

Apples are a great source of fiber, vitamin C, and other nutrients. Apples are so filling because they contain a lot of fiber. Can anyone remind us how fiber helps our bodies? Fiber is a digestion assistant; it makes sure that everything is moving through your digestive tract with ease. If you're feeling constipated, you might want to eat an apple and invite in some digestion assistant fiber. Apples can also give your immune system a boost. The immune system controls the guest list to your body party, and if any unwanted bacteria guests come to the party, the immune system will tell them to leave.

There are many ways to enjoy delicious and nutritious apples; however some ways have much more of a wellness boost than others. The biggest wellness boost comes from raw apples with the skin on. Apple skin boosts the wellness power by twice because much of the fiber and other great nutrients are found in the skin of the apple. Both apple juice and apple cider contain a lot of sugar and little to no fiber. Let's take a moment to discuss the difference between apple cider and

apple juice. What do they each look like? How do you think each apple drink is made? Apple juice and apple cider start out the same. People take raw apples and mush them until they make a juice. Most all the pulp is removed, yet a little remains in the cider-making process. Check out the photo to the right of pressed apple mush from the cider-making process. To make apple juice, there are two more steps. The juice is filtered to remove all the apple pulp and then heated to kill harmful bacteria. A lot of apple juice also has some added sugar. Remember to read the ingredient labels to see how much



wellness is in a product. Apple juice may taste great, but there are plenty of other ways to get that sweet apple taste without missing out on all of the wonderful nutrients apples offer our bodies. Eat apples with the skin on and discover the saying “an apple a day keeps the doctor away”—and the dentist too!

Let's talk about “apple scab.” What is it? A healed-over wound on the apple? No. Just a slight blemish on the skin of an apple that some consumers feel is not an appealing look and avoid purchasing. While the most perfectly formed apple is certainly something of great beauty, we might come to appreciate all those “bad apples” that are tossed in the cider-making bin instead of being sold on market shelves. Who knew? What looks like a defect in the apple skin might be yet another of Nature’s mysterious and amazing offerings. Apple scab is caused by fungus and can be hard to control in apple orchards. Yet apple scab can actually offer four times more wellness benefits than the “perfect” apple. Wow. An apple a day might, in more ways than we knew, keep the doctor away. So polish one up and be amazed.

Chef Zach’s Apple Switchel

Makes approximately 1 quart

Need an extra kick of energy without a sugar shock or caffeine crash? Try this Chef Zach’s Apple Switchel instead of Red Bull or other energy drinks!

Ingredients:

- 2- to 3-inch piece of ginger
- 2¼ cups of water
- ½ cup apple cider vinegar
- ½ cup + 2 tablespoons honey
- Sparkling or still water to finish

Process:

1. Peel the ginger and slice into $\frac{1}{4}$ inch coins.
2. Add ginger and remaining ingredients (except for sparkling or still water to finish) into a mason jar with a lid. Shake until combined.
3. Refrigerate overnight.
4. Shake the jar before serving over ice. Top with a few inches of sparkling or still water.

** If you don't want to refrigerate overnight, boil the initial $2\frac{1}{4}$ cups water before adding to the mason jar. Give it a shake and allow the mixture to cool for 10 minutes. Enjoy over ice and topped with sparkling or still water.



Teens/Adults

Apples are a great source of fiber, vitamin C, and other nutrients found in red, yellow, and green skin pigmentation. The fiber found in apples makes this fruit a very filling snack despite being pretty low in calories. An apple is a great alternative to other sugary snack choices. The soluble fiber found in apples can also help with constipation. Apples can support cardiovascular health by lowering LDL cholesterol, boost your immune system, and prevent cell damage.



There are many ways to enjoy apples; however some ways provide more health benefits than others. The best way to get the most nutrients from an apple is to eat it raw with the skin on. Apple skin boosts the wellness power by twice because much of the fiber and other great nutrients are found in the skin of the apple. Remember to wash and rub the skin to remove any pesticides on nonorganic apples. Dried and dehydrated apples lack much of the vitamin C that raw apples offer. Both apple juice and apple cider contain a lot of sugar and little to no fiber. The difference between apple cider and apple juice is the filtration and pasteurization process. Apple cider is made by mashing raw apples to make juice. Since the juice is not filtered or pasteurized, cider contains pulp and sediments and therefore contains more of the nutrients found in raw apples. Apple juice, on the other hand, is filtered to remove pieces of the raw apple and then heated to kill harmful bacteria. Apple juice may taste great, but there are plenty of other ways to get that sweet apple taste without missing out on all of the wonderful nutrients apples offer our bodies.

Let's talk about "apple scab." What is it? A healed-over wound on the apple? No. Just a slight blemish on the skin of an apple that some consumers feel is not an appealing look and avoid purchasing. While the most perfectly formed apple is certainly something of great beauty, we might come to appreciate all those "bad apples" that are tossed in the cider-making bin instead of being sold on market shelves. Who knew? What looks like a defect in the apple skin might be yet another of Nature's mysterious and amazing offerings. Apple scab is caused by fungus and can be hard to control in apple orchards. Yet apple scab can actually offer four times more wellness benefits than the "perfect" apple. For example, brix tests that measure the sugar content in our food created by the absorption of sunshine during the chlorophyll process measures higher in apple scab apples. What? An even sweeter apple? Some pharmaceutical companies are now exploring its benefits as a health product. It seems that apple scab might prevent chronic disease, help control inflammation, and hold benefits for our heart and nervous system. Wow. An apple a day might, in more ways than we knew, keep the doctor away. So polish one up and be amazed.



Prenatal

Apples are safe and provide wellness benefits to pregnant people and the fetus. In addition to many general health and wellness benefits, apples can help to reduce heartburn that some pregnant people experience. Eating apples during pregnancy can also have possible long-lasting benefits for your baby, including a lower likelihood of developing asthma, eczema, and allergies later in life. Apples are a great source of fiber, vitamin C, and other nutrients found in red, yellow, and green skin pigmentation. The fiber found in apples makes this fruit a very filling snack despite being pretty low in calories. The soluble fiber found in apples can also help with constipation. Apples can support cardiovascular health by lowering LDL cholesterol, boost your immune system, and prevent cell damage



Elders

Apples are a great source of fiber, vitamin C, and other nutrients found in red, yellow, and green skin pigmentation. The fiber found in apples makes this fruit a very filling snack despite being pretty low in calories. The soluble fiber found in apples can also help with constipation. Apples can support cardiovascular health by lowering LDL cholesterol, boost your immune system, and prevent cell damage. In addition to these wellness benefits, some studies indicate that apple intake can have a positive effect on people experiencing dementia. In studies conducted on mice and rats, apple intake resulted in improvement in cognitive and memory performance.

Balanced Apple Sandwich Snack

Adding a bit of protein and/or fat to a tasty raw apple helps to balance the sugar found in apples to avoid a huge sugar shock. Try these apple sandwiches to add another dimension of flavor to that familiar apple taste.

Nut Butter Sandwich Process:

1. Core and slice an organic apple.
2. Spread your favorite nut butter on an apple slice. Add any other toppings you like such as raisins, granola, chocolate chips, or nuts.
3. Top with another apple slice to make a sandwich.



Grilled Apple and Cheese Process:

1. Core and slice an organic apple.
2. Warm up a grill or iron skillet on the stove. Add a small amount of oil or butter to the pan if using a stove. Our younger learners should use the skillet and our older learners can practice using a grill.
3. Place a few apple slices on the grill/pan. Add a piece of your favorite cheese to each slice.
4. Let the apples cook until they brown a little and the cheese begins to melt.
5. Add an apple slice on top of the cheese and flip. (Pepper jack tastes great if you like a little spice!)
6. Cook the other side until it reaches the desired color.
7. Allow your grilled sandwich to cool and enjoy!

Vitamin V for Vitality!

Like other animals, we need food to sustain life—and there are so many to choose from! When possible, we want to choose foods that will not only allow us to survive but to thrive. That's where Vitamin V for Vitality comes in. Seasonal and local raw fruits, vegetables, and herbs give our bodies a Vitamin V boost. You can taste the vitality too. Seasonal foods are so much more flavorful and nutrient-rich than those eaten out of season, yet apples are an important food that is available all year round.

Cultural and Historical Context



Ages 4-7

Humans have been eating apples for a really long time. Can anyone guess how long people have been enjoying apples for? Tens of thousands of years! Apples originally come from a country called Kazakhstan. Let's look on a map to see where Kazakhstan is. (Show students Kazakhstan on a world map and where we live in comparison.) People brought apples to nearby countries. (Show students Europe and Asia on the map and where the apples spread to.)



English settlers brought apple seeds with them to plant in North America. Vermont is located in North America. After the apple seeds were brought to North America, a man named Johnny Appleseed planted apple seeds across what is now the United States of America. Perhaps he was our first Hunger Hero! Read the story aloud or have new readers practice reading “popcorn” style.

Johnny Appleseed by Patricia Demuth

Who was Johnny Appleseed? Was he just in stories? No. Johnny was a real person. His name was John Chapman. He planted apple trees—lots of them. So people called him Johnny Appleseed.

Johnny was young when our country was young. Back then, many people were moving west. There were no towns, no schools, not even many houses. And there were no apple trees. None at all.

Johnny was going west too. He wanted to plant apple trees. He wanted to make the West a nice place to live. So Johnny got a big, big, big bag. He filled it with apple seeds. Then he set out. Johnny walked for days and weeks.

On and on. Soon his clothes were rags. His feet were bare. And what kind of hat did he wear? A cooking pot! That way he didn't have to carry it.

Snow came. Did Johnny stop? No. He made snowshoes. Then he walked some more.

Spring came. Johnny was out west now. He stopped at a river. He dug a hole. Inside he put an apple seed. Then he covered it with dirt. Some day an apple tree would stand here.

Johnny set out again. He had lots more seeds to plant. Johnny walked by himself, but he was not alone.

The animals were his friends. Most people were afraid of wild animals. But not Johnny. One day a big, black bear saw Johnny go by. Maybe the bear knew Johnny was a friend.

The Native Americans were Johnny's friends too. They showed him how to find good food—berries and plants and roots.

Where did Johnny sleep? Under the stars. Johnny liked to lie on his back and look up. The wind blew softly. Owls hooted. The stars winked down at him.

Many years passed. Johnny planted apple trees everywhere. People started to call him Johnny Appleseed.

One day he came back to where he planted the first seed. It was a big tree now. A girl was swinging in it. That night Johnny stayed with the girl's family. He told stories. Everybody liked Johnny. "Stay with us," they said. "Make a home here" But Johnny did not stay. "I have work to do," he said. "I am happy. The whole world is my home."

More and more people came out west. Johnny planted more and more trees.

In the spring, the trees bloomed with white flowers.

In the fall, there were apples—red, round, ripe apples.

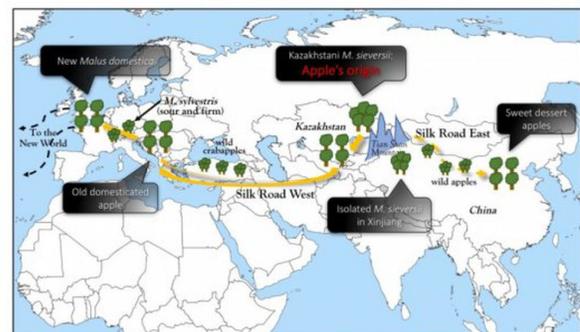
People made apple pies. And apple butter for their bread. And apple cider to drink. And children had apple trees to climb.

It was all thanks to Johnny Appleseed.



Ages 8-12

Can you guess how old the oldest apple tree in the world is? If you guessed 1,000 years old you guessed right. Today in Wales stands the rarest, and still healthy, oldest apple tree. Its fruits are pink and medium sized and taste like lemons. How incredible is that? Humans have been eating apples for tens of thousands of years. The apples we are familiar with today come from wild apple trees that originated in the Tien Shan mountains of Kazakhstan millions of years ago. Where is Kazakhstan? Let's look for Kazakhstan on the map. How did these apples get to orchards in the United States today? The story starts with a network of trading routes called the Silk Road that connected parts of the continents of Asia and Europe between 130 BC and 1453 AD. Traders on these routes ate apples and spread their seeds. What are some ways traders could have spread seeds? Traders planted seeds on purpose and threw their apple cores on the ground.



English settlers brought apple seeds and cuttings with them to the New World, and in 1607 they started harvesting apples in Jamestown. Where is Jamestown? Jamestown is in Virginia and was the first permanent English settlement. Does anyone know which 19th-century pioneer helped to spread apples across the United States? (Hint: he has a fun apple-themed nickname!) Johnny Appleseed! He traveled on the pioneer routes planting apple trees on the way. He got this fun nickname because he helped struggling pioneers by giving away apple seedlings for them to grow near their homes. Perhaps Johnny Appleseed was our first Hunger Hero!



Teens/Adults

Humans have been eating apples for tens of thousands of years. The apples we are familiar with today are descendants of wild apple trees that originated in the Tien Shan mountains of Kazakhstan millions of years ago. How did these million-year-old wild apple trees become a staple fruit in the United States? The story starts with a network of trading routes called the Silk Road that connected parts of Asia and Europe 130 BCE and 1453 CE. Traders moving along the Silk Road routes ate apples and spread their seeds by planting the seeds and throwing their apple cores on the ground. This allowed the apple trees to cross-breed with other species, eventually creating a larger, sweeter, and softer apple. Apples became very popular in the 11th century in England for their use in cider. Due to water sanitation issues at the time, the English typically served fermented cider with meals instead of water.

Apple harvesting in North America began in 1607 with Jamestown settlers. Settlers brought seeds and cuttings from European apple trees to the New World. In the 19th century, John Chapman, a.k.a. Johnny Appleseed, spread apple orchards through the American midwest. Chapman, a horticulturist and businessman, traveled along pioneer's routes planting apple trees along the way. Since cider was a staple at the American dinner table, Chapman traded his seedlings to settlers so they could grow apples near their homes. Chapman was known as a kind man who would sometimes give his seedlings to struggling pioneers for free. His benevolent nature earned him his friendly nickname, Johnny Appleseed.

Apple Traditions

In the United States, apples are the stars of many sweet treats. In Vermont especially there are many traditions surrounding the fall apple harvest. Apple pie is a staple dessert at many Thanksgiving tables in the United States. What traditions do other people have when it comes to enjoying this sweet fruit? Jewish people celebrate Rosh Hashanah in the fall. Rosh Hashanah is a celebration of a sweet Jewish new year and apple slices are dipped in honey. How does your family enjoy apples? Do you have any special traditions or family recipes?

Language Arts



Ages 4-7

Can you write a magical story about how stars got inside apples? This can be a great follow-up to the Wellness Star activity found in the Ages 4-7 Health and Wellness section of this lesson. Students might enjoy hearing the following story after writing their own while observing the tiny star found inside apples.

The Story of How the Stars Got Apples Within

There was once a tiny seed sleeping in its blanket of Earth all winter long until one early spring morning when the rain watered the resting Earth and sun began to shine. The little seed awoke when feeling the splashing water drops and began to stretch and yawn and stretch until its legs pushed deeper into the earth and its arms finally stretched up above the earth. Then, with one last stretch, the little seed poked its head up and looked around at the wide, wide world.

After all those long winter months in its brown earth bed, the little sprout thought it had never seen anything so beautiful as grass and flowers, and it gazed in wide-eyed wonder at the world. All day the little sprout listened to the music of the birds and the breezes and was full of wonder. It watched the clouds sail by in the blue sky and then saw the sky turn golden as the sun sank into bed. And then, as everything grew dark again, the little sprout saw a wonderful sight: up in the sky diamond-stars were twinkling! It wished so much to touch one that it stretched and stretched to reach the sky. But it couldn't touch the sparkling stars. And finally, it began to cry.

Suddenly, there appeared a fairy, wearing a crown just like those sparkling stars. "Why do you weep?" asked the fairy. "Because I so want such a star for my very own," answered the little sprout. "Ah, someday your wish shall be granted," said the fairy. "But first you have much work to do. You must grow strong and tall and full of love." And then the fairy vanished.

The little sprout worked hard to grow tall and strong and after some time it became a young sapling. A storm came with its winds and rains and beat the little sprout down almost to the earth. But each time it struggled to stand tall again and grew stronger and stronger. And after some time it was no longer afraid of the storm, for it knew he helped it to grow.

After many visits from the storm, one morning the little tree awoke to find its branches covered with pink blossoms. "Oh, how lovely!" it cried, and it took great care of them, day after day, until one day tiny apple babies appeared. Now the little tree was becoming a parent, and it was so busy caring for its tiny apple children that it forgot all about its wish to the fairy. Summer

came, and its children grew golden and green, and the little fairies came and kissed each little apple until it blushed bright red.

The little apple tree was so proud of its children—it felt it could not be happier. Then suddenly the fairy with the crown of stars appeared beside it. “I have come to grant your wish,” the fairy said, “to bring you a star from heaven for your very own.” “Oh,” said the little apple tree, “I no longer need a star. I am quite happy with my apple children.” “Well then,” said the fairy, “I shall give my basket of stars to your apple children. But I will hide them deep inside where only the earth children can find them.”

And so the fairy did. And that’s where you will find a star waiting for you: inside each apple, guarding the little seed babies for you to plant in the earth again.

Digging Deeper

In this lesson, we learned about Johnny Appleseed, a well-known Hunger Hero, and how he spread not only apples but generosity to the early pioneers. How can we express gratitude to our modern-day Hunger Heroes, like orchardists, and maybe even become Hunger Heroes ourselves?



Ages 4-7

In this lesson, we discussed the role of hardworking orchardists and farm workers throughout the year in producing a bountiful apple harvest in the fall. Making a connection with a local orchardist is a great way to grow a child’s appreciation for their hard work and the apple itself. Before taking a field trip to the orchard, let’s make something for the orchardist in return for the apples provided for us. How about making some cards or drawing pictures for the orchardist? This apple wreath craft is another great way to express your gratitude!

No-Waste Apple Wreath Craft

This craft is a great way to repurpose the apples used for our Wellness Star Activity found in the Health and Wellness section of this lesson. Collect recycled paper to use for this craft and remind students of the many creative ways to reuse our “waste”!

Materials:

- Apple
- Knife
- Plate



- Red and green paint
- Paper
- Scissors
- Glue
- Paper plate

Process:

1. Have an adult cut a few apples lengthwise. (Use apples from Wellness Star observation if possible.)
2. Pour some red paint on a plate.
3. Dip the apple half into the red paint and press the apple on a piece of paper to leave a print.
4. Pour some green paint on the plate.
5. Dip your thumb into the green paint and press above the apple print to create a leaf.
6. Allow the apple prints to dry.
7. After drying, cut out each apple.
8. Cut a hole in the center of a paper plate, making a ring.
9. Glue the apples to the paper plate ring and allow to dry. When the glue is dry, you will have a beautiful apple wreath to give to your new orchardist friend!



Ages 8-12

In this lesson, we discussed the role of hardworking orchardists and farm workers throughout the year in producing a bountiful apple harvest in the fall. Students ages 8-12 might enjoy connecting with a local orchardist to learn more about the apple-growing process. If an orchardist is kind enough to invite your class to the orchard, make sure you really take the opportunity to get to know them. Before the field trip to the orchard, try to come up with some questions as a class that you want to ask the orchardist. Here are some questions you might want to ask the orchardist:

- What kind of creatures do you see the most in the orchard?
- How tall are the apple trees?
- How did you become interested in being an orchardist?
- What is your favorite way to enjoy apples?
- Which season of apple trees is the most challenging?
- What are some common obstacles you face as an orchardist?
- What is your favorite season in the apple orchard?
- Who else helps out on the orchard?
- How much of the harvest is done by hand? How much by machine?

- How many pounds of apples do you harvest each year? What's the record for the largest harvest from this orchard?

What is a Food Forest?

Johnny Appleseed might have been one of this country's first Hunger Heroes, but who are some of the Hunger Heroes in our society today? People today are planting Food Forests much like how Johnny Appleseed planted apple trees. What is a Food Forest? A Food Forest is a diverse way of planting food that mimics nature. Food Forests are planted in several layers to utilize space efficiently. One of the best things about Food Forests is that they generally only need to be planted once and are very resilient.

Food Forests support local food systems and provide food for all. They also serve as carbon sinks and wildlife habitat. For more information about Food Forests and how you can get involved, visit the Project Food Forest website. How will you be a Hunger Hero in your community?



Teens/Adults

Gleaning

Each year, 100 billion pounds of food are wasted in the United States. A 2009 estimate from the US Department of Agriculture (USDA) indicated that 20% of the United States' food supply goes to waste! At the same time, millions of Americans are food insecure. On top of that, food waste is a huge source of greenhouse gas emissions. What can we do to reduce food waste while simultaneously feeding millions of hungry Americans? As a class, let's brainstorm some ways to redirect food to those in need.

Gleaning is the process of collecting excess fresh foods from farms, gardens, farmers markets, grocers, restaurants, and other sources in order to provide to those in need. Gleaning can help to bring fresh and local produce to low-income people who might not be able to afford it otherwise. Additionally, since gleaning is usually done with volunteer groups, it provides an opportunity to build a sense of community.

Teens and adults might enjoy coordinating a gleaning volunteer group. Reaching out to local farmers, farmers markets, and restaurants is a great way for students to practice communication skills via email and phone. Reference the USDA Gleaning Tool Kit cited in this lesson for more information on putting together a gleaning volunteer group.

You might also want to look into Salvation Farms. Salvation Farms is a Vermont-based organization that aims to manage food surplus in Vermont. An important pillar of their mission is to reinforce local food systems. Through their gleaning efforts, they reduce food waste while locally redistributing food grown by local farmers.

Gleaning Tip! Remember to be respectful of the farmers. Contact them during non-harvest months. Encourage volunteers to be respectful and mindful of the farmer's hard work. Express your gratitude to the farmer!

Food Forests

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