



## **ACTIVITY GUIDE**

HAMILTON  
**TASTEBUDS**  
STUDENT NUTRITION COLLABORATIVE

[TASTEBUDSHAMILTON.CA/GREATBIGCRUNCH](https://TASTEBUDSHAMILTON.CA/GREATBIGCRUNCH)

[GREATBIGCRUNCH.EVENTBRITE.COM](https://GREATBIGCRUNCH.EVENTBRITE.COM)

## **SPROUTING HEALTHY RELATIONSHIPS WITH FOOD**

Tastebuds, Hamilton's Student Nutrition Collaborative facilitates student nutrition programs across the city. We believe that all students in Hamilton have universal access to healthy foods in schools and community environments to improve student success, support healthy growth, development, and lifelong eating habits.

Tastebuds is supported by the Social Planning and Research Council of Hamilton, and is funded in part by the Ministry of Children and Youth Services (MCYS), administered regionally through Haldimand-Norfolk R.E.A.C.H.



## GETTING STARTED

Source: FoodShare Toronto

### HOW TO GET CRUNCHING

Introduce your students to The Great Big Crunch by telling them that they are a part of a cross-Canada, record-setting event promoting the healthy crunch of apples! Your students will be joining thousands of students from coast to coast. Distribute apples to each of your students ...but don't crunch yet!

### BEFORE THE CRUNCH, ENCOURAGE YOUR STUDENTS TO:

Think about how the apple was grown. Picture it first as an apple blossom flower on the tree in Spring, being pollinated by bees and then transforming into a fruit, ripening in the sunny weather. Imagine what the orchard looked like, the growers who work there, and the workers who harvest and wash the apples. Think about the journey the apple took from the orchard to the grocery store. Were your local apples transported to you on a bike, in a car, truck, train, plane or ship?

**Have a Great Big Crunch Countdown**, making sure to emphasize the fun in crunching all at once! For an even bigger crunch invite students to crunch into the P.A system, a microphone or in an echoey hallway, gymnasium or auditorium. Don't stop at the first crunch – keep crunching until the apples are finished!

Take a look at this guide for some ideas on food education activities for the classroom. Many of these activities have been adapted from FoodShare Toronto's Great Big Crunch Guide.



Peter Bosman, Lincoln Line Orchards

Photo credit: Amanda Watkins



## APPLE FACTS

- The top five apple varieties in Ontario (based on acreage planted) are McIntosh, Empire, Northern Spy, Red Delicious and Gala.
- Hamilton produced over 2 million lbs of apples in 2012!
- In Ontario, close to 20 different varieties of apples are grown on 16,000 acres. The province's major apple-producing areas are along the shores of Lake Ontario, Lake Erie, Lake Huron and Georgian Bay.
- Apples are the most varied food on Earth. 7500 varieties of apples are grown throughout the world!
- Apples have grown in the wild since prehistoric times. They were first cultivated by ancient Greeks, Etruscans, Romans and Egyptians over 3000 years ago!
- On average, Canadians eat 86 apples per year.
- The science of apple growing is called "pomology"
- The largest apple ever picked weighed three pounds
- Archeologists have found evidence that humans have been eating apples since 6500 B.C.
- Apples are a member of the rose family
- It takes energy from 50 leaves to produce one apple
- Fresh apples float because 25% of their volume is air
- The only apple native to North America is the crabapple
- It takes four to five years for an apple tree to produce it's first apple
- China is the largest producer of apples, followed by US, Turkey, Poland and Italy.



## Ontario Apple Varieties



**Ambrosia**

Chance seedling discovered in B.C. in the 1980's. It is a large red apple that is crisp and juicy with a distinct aroma and a sweet low acid flavour. Excellent for eating fresh.

Available October to March.



**Cortland**

Descended from the McIntosh, the Cortland is a cross between a Ben Davis and McIntosh. It is a mild, sweet tasting apple with crisp texture. Excellent for pies, salads

and fruit plates; resists browning after being cut. Available mid-Sept. to April.



**Crispin**

Cross between the Golden Delicious and the Japanese Indo. Larger than average apple with sweet taste and firm texture. Ideal for snack and delicious in pies and chunky sauces. Available from

October to May.



**Empire**

Cross between the McIntosh and Red Delicious varieties. A slightly tart; juicy, firm and crisp apple that is ideal for snacks and makes great applesauce. Available October to July.



**Fuji**

Cross between a Delicious and Ralls Janet. Medium to large size; firm and greenish pink in colour with white flesh. Great for eating fresh. Available October to February.



**Gala**

Cross between a Kidd's Orange and Golden Delicious, this apple yellow orange in colour with a red blush. Ideal for eating fresh out-of-hand. Available Early September to February.



**Golden  
Delicious**

Originated in West Virginia as a chance seedling, it was introduced in 1916. Firm and juicy this apple keeps its shape when baked in pies. Great for applesauce too. Available October to May.



**Honeycrisp**

Cross between a Macoun and Honeygold. Large sized fruit with a distinctive crisp texture, aromatic, juicy and a sweet taste. Flesh is cream coloured. Best eaten fresh. Available late September to March.



**Idared**

Cross between a Jonathan and a Wagenaar. Medium to large apple with a round to flat round shape. Tart; keeps its flavour when oven baked and is ideal for eating fresh

or baking. Available from December to July.



**Jonagold**

Cross between a Golden Delicious and Jonathan, this is a large, round shaped apple with orange-red blush over faint striping and green-yellow ground colour. Jonagold apples are

firm with a slightly coarse texture and are great for eating fresh or cooking. Available from late September to February.



**McIntosh**

Originated around 1800 as a chance seedling by John McIntosh of Dundela, Ontario. Medium size; irregular round shape; green ap-

ple with red splash; white, juicy flesh; mildly tart, sweetens as it ripens. Excellent for eating fresh, baking pies and sauces. Available from mid September to May.



**Northern Spy**

Distinguished by bright red stripes and elongated shape, the Northern Spy is a large apple that is crisp and firm. This variety is excellent for pies and

baking. Available from October to May.



**Red Delicious**

A juicy large size fruit with firm and sweet taste, this apple is characterized by the bumps on the bottom of the apple. This apple is ideal for fresh eating and salads and not recom-

mended for cooking. Available from October to July.



**Spartan**

Cross between the McIntosh and Newtown, this apple variety originated in British Columbia. It is a medium sized apple with red skin. Excellent for eating fresh

and makes great pie filling. Available from October to April.



## FUN ACTIVITIES

### APPLE TRUE OR FALSE ACTIVITY

This is an easy activity to set up and perfect if you are looking for something simple to build up the student's appetites before the Great Big Crunch, at the same time testing their knowledge of apple trivia.

#### You will need:

- A safe space for running back and forth
- Two markers, flags or signs – one representing the word "True" the other "False"

Set up the True and False markers or signs on opposite sides of the gymnasium, classroom or outdoor space you are using. Have students stand directly in between the True and False signs. Call out an apple fact (either from page 3 or a false one you've fabricated for the sake of the game) and have the students run to one of the signs – True if they think the statement is correct or False if they do not believe the statement. Once students have chosen their answer reveal the truth and start again.

*Source: FoodShare Toronto*

### APPLE VARIETY TASTE TEST

Apples are the most varied food on Earth. 7500 varieties of apples are grown throughout the world! The top five apple varieties in Ontario (based on acreage planted) are McIntosh, Empire, Northern Spy, Red Delicious and Gala.

Bring in a variety of local apples and even some apple products (unsweetened applesauce, dehydrated apple chips) to share with your class. Have your students document the different names, sizes, shapes and colours. Take a look at the apples both inside and out.

Cut up some different types of apples and have students taste test and describe the flavours of each variety.

### APPLE STAMPS

#### You will need:

- Apples
- A knife
- Paper
- Paint

#### Directions:

1. Cut a few apples horizontally and a few vertically.
2. Dip in paint and scrape any excess
3. Press painted side of apple on to paper and stamp away!
4. Collect some of the seeds before composting the apples. Students can glue the seeds in the space that shows the middle of the apple once the paint has dried.



## SPROUTING & PLANTING AN APPLE TREE EXPERIMENT

Growing apple trees is a challenging endeavor... But it is worth the experiment! It is best to start this experiment 4 months before transplanting it outdoors. Remember it takes six years for an apple tree grown from seed to produce fruit.

### You Will Need:

- Apples or seeds from apples
- Paring knife
- Small, covered container
- Paper towels
- Small flower pot or recycled egg carton
- Potting soil
- Plastic tray or saucers



Young apple trees at Lincoln Line Orchards

### Instructions:

1. Cut apples in half, using the paring knife.
2. Carefully remove the seeds and eat the apple.
3. Place the seeds on a plate to dry for several days until the moisture has disappeared.
4. Place the seeds in a small container. Cover the container and place it in the fridge. The seeds must be kept in the fridge for six weeks. Record the date on the calendar. This process tricks the seeds to think they have gone through winter.
5. After the six weeks have passed, place the seeds between two sheets of damp paper towel.
6. Keep the paper towel moist for several weeks until the seeds sprout.
7. Once the seeds have sprouted place them into a pot or egg carton filled with potting soil. The seeds should be planted 2 cm deep. Place the container next to a bright window and keep the soil moist daily.
8. Transplant the seedlings into larger containers once they have outgrown their pot. Fertilize the seedling occasionally. Most importantly give the seedlings lots of love!

Source: *Get Growing* by Lois Walker



## DISSECT AN APPLE

### You Will Need:

- 1 Bag of apples
- Spoons
- Dull knives or plastic knives
- Magnifying glasses
- Watch or timer



Carluk Orchards

Photo credit: Rebekah Roy

### Instructions:

1. Give each student an apple, spoon, knife or divide the students to work in pairs to reduce the number of materials.
2. Have the students observe the exterior of the apple. Have students record their observations
3. Items to describe could be the texture, physical appearance, and smell.
4. Have the students remove a part of the skin using a dull knife. Have them describe their observations once again. Is it possible to measure the thickness of the apple's skin?
5. Have students cut the apple in half. Have students place one half a side and begin to record the time it will take for the flesh to oxidize (turn brown).
6. Meanwhile have students taste a small piece of the other half to record further observations. Have them record the interior appearance including the seeds.
7. Have students estimate the number of seeds in their apple. Once the full time is recorded for the other half of the apple, have the students remove the seeds from both halves. Were they correct with their estimations?
8. Have students draw a diagram of the apple and its different layers. Have students share their results with the class.

Source: FoodShare Toronto



## SUBJECT-LINKED APPLE ACTIVITY SUGGESTIONS

### Math

- Introduce fractions using an apple: 1 whole,  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{2}{3}$ ...
- Graph favourite apple foods or different apple varieties
- Introduce or practice measurements while preparing an apple recipe such as apple crumble, spiced apple sauce, or spiced apple cider
- Sort apples according to different colours, varieties, and sizes

### Science

- Investigate the different parts of an apple tree, its blossoms, and the apple
- Investigate the different stages/lifecycle of an apple tree according to the four seasons
- Investigate the different nutrients of an apple
- Investigate the habitat of an apple tree and the role of pollination

### Social Studies

- Introduce cardinal directions by using a map of an apple orchard
- Discuss the traditional uses of the apple tree during pioneer days such as tree bark used for dying clothing, apple dolls, Johnny Appleseed, different myths such as the meaning of bobbing for apples
- Time line of Johnny Appleseed's life
- Introduce climate change and the stages of the imported apple. Compare the imported apple to the local apple. Use mapping for this activity.

*Source: FoodShare Toronto*



### APPLES THROUGH THE FOOD SYSTEM

This lesson takes students through the course of a food item's life, including the people who process and distribute the item.

#### Questions to stimulate discussion

- How many hands did this apple touch before it got here?  
Ask students to guess.
- Where does food come from?

Tell the story of apples going from farm/orchard to plate. To make this interactive, ask students to guess what the next step will be. 5 main steps:

1. Farm
2. Processing/washing
3. Delivery
4. Store market
5. Eater/consumer

(You can find pictures of each step by searching these terms online: apple orchard, apple processing, produce delivery truck, apples grocery store)

Bring students into this story. Talk about how apples don't have legs – they can't take themselves from the farm to the processing facility to the grocery store. To illustrate the different jobs involved in the food supply chain, have five students come to the front of the class. Each should get a nametag saying what his/her job is:

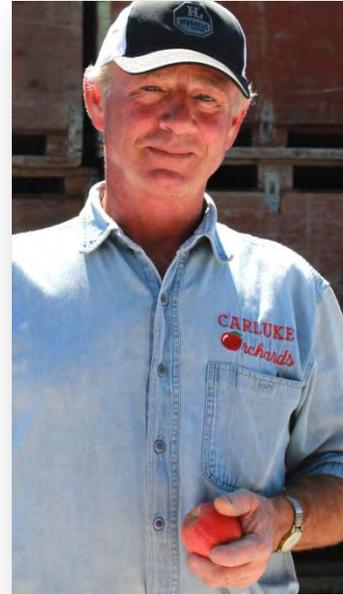
- Farmer/rancher/fisherman
- Processor (apple sauce maker? Apple juice maker?)
- Delivery person
- Retailers, grocery store workers
- Eater

Have the students in front of the class act out their job as you walk them through the process again. If they end up in the wrong order at the front of the class, have the students sitting down help to put them in the correct order.

#### Discussion points:

- Food that is grown for transport instead of taste
- Food borne illness – so many hands and machines
- We need food every day; the food supply chain ensures that we have it even when foods we enjoy are not local or not in season (pineapple, oranges, tomatoes), especially in densely populated cities where there is less farmland
- How does the food supply chain look different when you grow your own food?

*Adapted from Abigail Phillips, The Edible Schoolyard*



Al Inksetter, Carluke Orchards



## EDIBLE EDUCATION VIDEOS

Show these short videos to your students to start a discussion about seeds, local good and the seasonality of food.

### **Jamie Oliver, “Apple Seed” – 1:10**

One apple can feed one person, but an apple tree can be shared for generations. Chef Jamie Oliver describes the magic of seeds.

<http://www.nourishlife.org/2011/03/apple-seed/>

---

### **Michael Pollan, “Why Eat Local?” – 1:59**

Food journalist Michael Pollan encourages buying local food to conserve energy, support farmers, and preserve the natural landscape.

<http://www.nourishlife.org/2011/03/why-eat-local/>

---

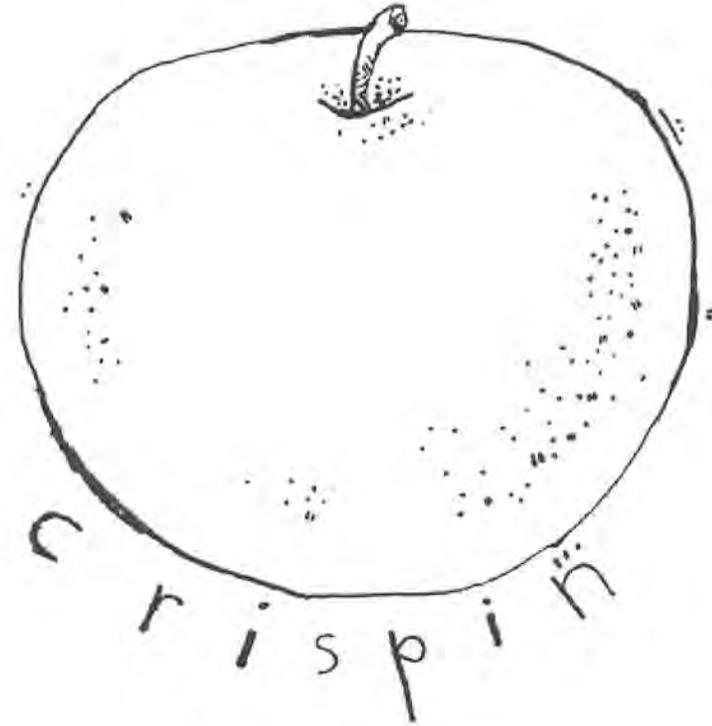
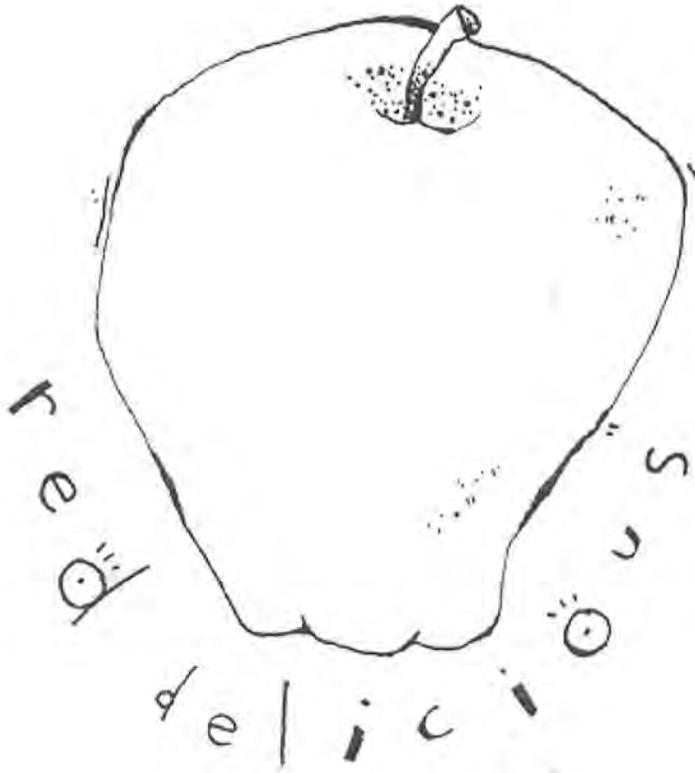
### **“In season” – 2:06**

Have you ever eaten a freshly picked strawberry in the height of its season? Farmer Nigel Walker, Dr. Nadine Burke, and others share why eating seasonally is good for your body and the planet—and it tastes better, too!

<http://www.nourishlife.org/2011/03/in-season/>

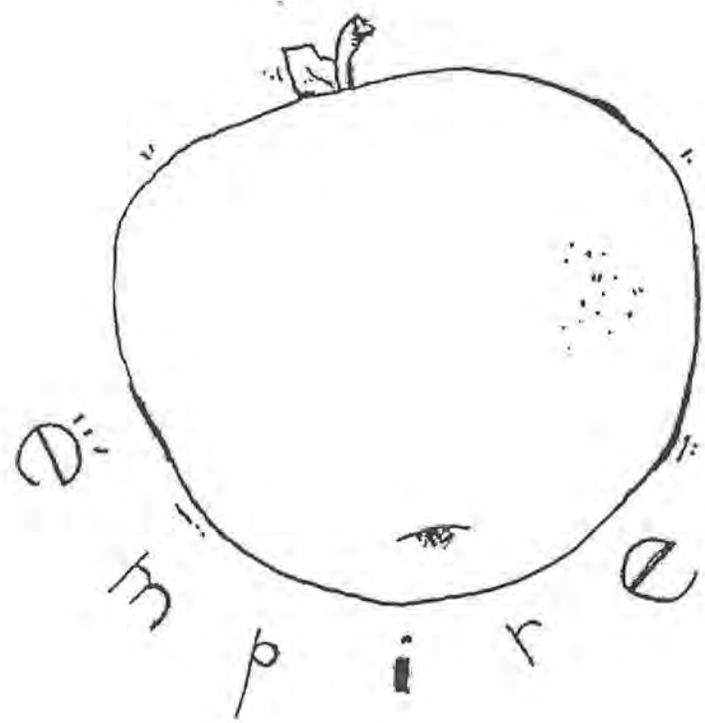
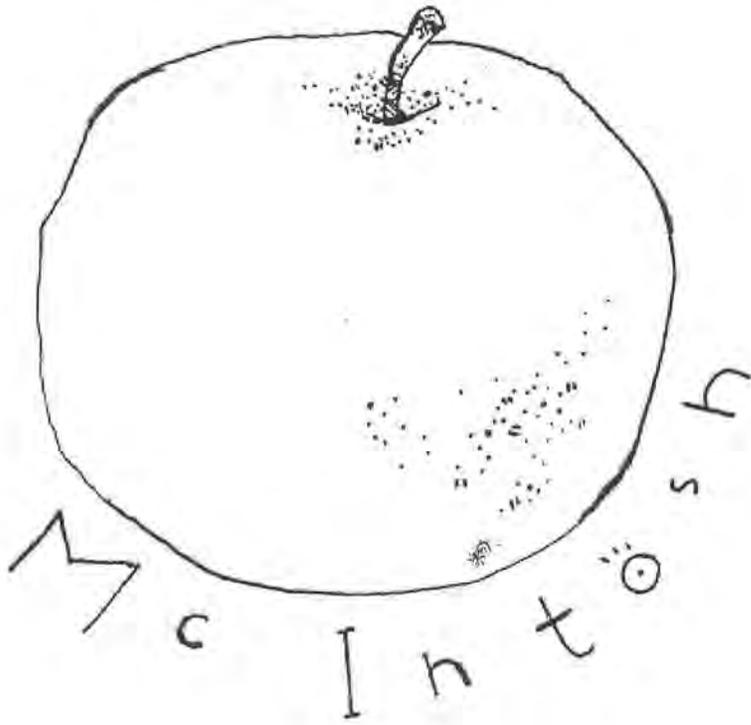
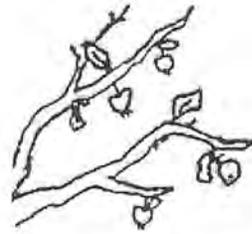
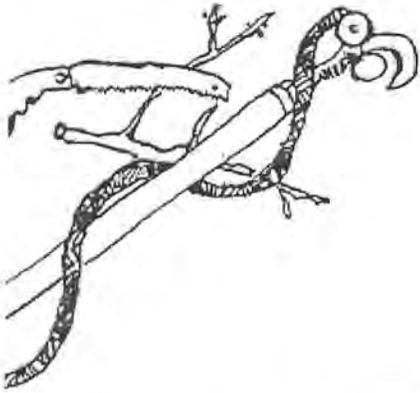


Carl Luke Orchards



What colour would you use for the Red Delicious?

This Crispin is greenish yellow.



Colour this McIntosh apple green with red on one side.

The Empire apple sports a red colour with green striping.