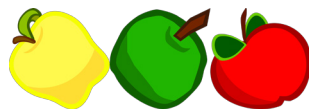


Activity Guide





The Ontario Student Nutrition Program, Southwest Region (OSNP-SW) invites school and workplaces across southwestern Ontario to take a great big crunch into locally grown apples all at the same time!



What is the Great Big Crunch?

OSNP-SW's Great Big Crunch is a special day, class, assembly, lunch hour or 5 minutes dedicated to locally grown apples and ending with a synchronized "crunch" to celebrate! This fun initiative gets kids, educators, parents and politicians to think about the impact food has on our kids while making a whole lot of noise!

When does it happen?

The Great Big Crunch is an annual event on the 3rd Thursday in October at the time most convenient for your school. Don't forget to register with us at www.osnp.ca/great_big_crunch and share details about your event. We want to count your crunches towards the grand total no matter when you do it, how you do it, or what you crunch (yep, carrots count too!)

Who and Where?

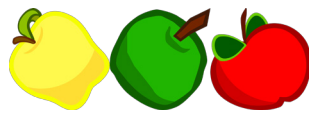
Anyone can participate, from students, teachers and individuals in classrooms, gymnasiums, recreational facilities, to homes, work places and communities across Ontario... and beyond!

Why participate?




When you crunch, you'll be teaching your students about the nutritious and delicious benefits of apples and local food, while taking part with other students from across Southwestern Ontario. Whether your class or school participates in a day's worth of activities, an afternoon or just one big crunch, we hope your students get excited about local food and healthy eating.

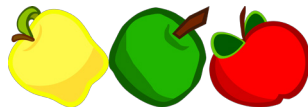
Your participation will:

- Promote, celebrate and enjoy healthy snacking.
- Highlight the availability of local produce.
- Use apples as the centerpiece for classroom activities on nutrition (see below!).



How to take the Great Big Crunch

- 1** **Register your school on-line** at www.osnp.ca/great_big_crunch. Registration is important! We want to count your crunches towards the grand total no matter when you do it, or what you crunch.
- 2** **Get your locally grown apples.** Schools can either order apples for delivery through OSNP Southwest Region at a subsidized cost (during on-line registration above) OR schools can purchase their own apples or other crunchy vegetables or fruits from your local green grocer, farmer's market or supermarket. *Please note that OSNP-SW apple orders due by the last Friday in September at 12 o'clock NOON.* OSNP Southwest Region will follow-up to confirm availability and delivery details.
- 3** **Plan.** Check out the activities in this booklet and gather the required materials for your Great Big Crunch festivities.
- 4** **Like us on Facebook** and follow us on **Twitter** and **Instagram** @OSNPswsouthwest and use #GreatBigCrunch to let us know you are crunching.   
- 5** **Share!** Share your crunch pictures and stories by tweeting @OSNPswsouthwest and hashtagging #GreatBigCrunch.



Apple Activities by Subject

Science

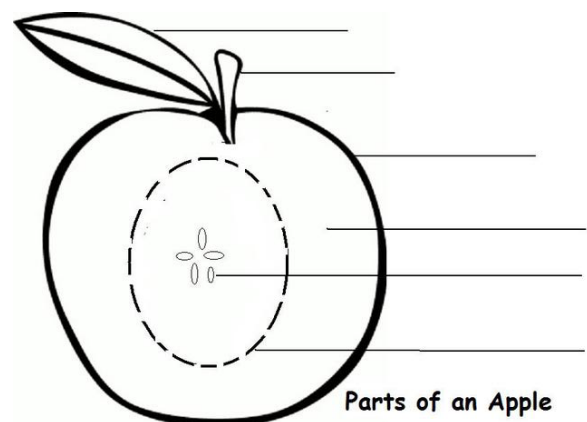
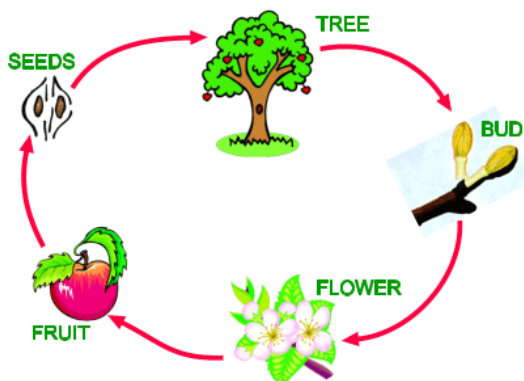
1. Apple Variety Taste Test (Grade 1 - 3)

Apples are the most varied food on Earth. Did you know there are 7500 varieties of apples 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.



2. Parts of the Apple/ How an Apple Grows (Grade 1 - 3)

Use a knife to carefully cut away the different parts of an apple. Find the flesh, leaves, skin, seeds, stem and core. Talk about the life-cycle of an apple, and how apples grow from seed, to seedling, to tree, bud, blossom/flower and fruit.





3. Apple Browning Experiment (Grade 4 - 6)

This experiment allows students to learn how different liquids affect apples.

When an apple is cut open, an enzyme called polyphenol oxidase is released from the cells of the apple and reacts with the oxygen in the air. This reaction causes the fruit to turn brown, similar to rust forming on metal. The most effective liquid to prevent browning is lemon juice (or other similar acidic liquids). Lemon juice contains ascorbic acid and has a low pH. This works to prevent browning because oxygen will react with ascorbic acid before it will react with the compounds in the apple. Lemon juice's low pH level also helps prevent browning. Polyphenol oxidase works best when the pH level is between 5.0 and 7.0. However, below a pH level of 3.0, the enzyme becomes inactivated. The pH of lemon juice is in the 2.0 range, making it very effective against browning.

Materials:

- Small containers
- Apples
- Lemon juice
- Vinegar
- Water
- Soda
- Recording Sheet (see [Appendix A](#))

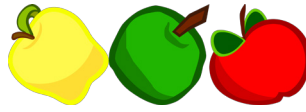


Steps:

1. Set out five containers with a few apple pieces in each one.
2. Label the containers with the name of the each liquid. Be sure to include a control container with no liquid to use as comparison.
3. Have students record initial observations about the colour and appearance of the apple pieces.
4. Ask students what they think will happen to the apples after they have been sitting out. What might adding a liquid do differently?
5. Pour the appropriate liquids into each cup.
6. Leave the apples for a few hours and then check on them to record your observations.

Learning Opportunities:

- Counting – counting the apple pieces that go into each bowl
- Writing – children can help label each container and record their observations
- Scientific process – ask a question, experiment, observe and record
- Vocabulary – use different words to describe observations



Math

4. Taste Test Graphing (Grade 1 - 2)

Taste testing apples is a great way to let students use their senses to explore apples, while also incorporating math lessons.

Have students try green apples (granny smith), red apples (red delicious) and yellow apples (golden delicious). Encourage them to try at least one bite of each. Help students describe the apples and their taste using their senses. Once everyone has finished trying all colours of apples, take a quick poll to see which one is the class favourite.

Art Extension:

Have children use their favourite apple to paint apple prints. Cut a red, green and yellow apple in half. Those who like green apples paint the green half with green paint, then stamp it onto a piece of paper. Have the other children do the same with the red and yellow apple halves. Once the apple prints are dry, cut them out. Make sure each child has an apple print representative of their favourite colour of apple.

Graphing:

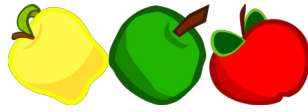
Write colour words on construction paper, then place the words on the top of a pocket chart a large piece of paper. Have each child come up and add his or her apple in the appropriate place. During this activity, ask questions like “how many red apples do we have so far”. Once the graph has been fully assembled, get the students involved in analyzing it.

Some thoughtful questions include:

- How many apples are under red/green/yellow? What does that mean?
- Which kind of apples are the most liked? Which are liked the least?
- How many more apples are under red? Is there more or less people who like green apples then yellow apples?
- **Alternative:** Instead of using painted apples, you can use coloured stickers to represent colours of apples on the graph.

Learning Opportunities:

- Exploration of apples through the five senses
- Descriptive vocabulary (more, less, equal, same, most, least)
- Counting
- Comparing more and less
- Reading graphs and making observations



5. Hands on Fractions with Apples (Grade 3 - 5)

Start with 3 red paper plates, mark one as whole, divide the second into halves, and the third into quarters.

Take a good look at the whole apple before cutting it into two halves. To further emphasize the concept of two halves making a whole, place the two halves of chopped apple onto the corresponding paper plate.

Repeat the exercise by cutting the apple halves into four quarters and placing these onto the correct paper plate.

From: www.craftykidsathome.com/2015/08/how-to-use-an-apple-to-explain-basic-fractions.html

6. Price Unit Comparison (Grade 7 - 8)

Find 3-5 flyers advertising apples. Try and include different size packages (i.e. 5kg bag, apples by the kg, 3kg bag). Use the flyers already located in [Appendix B](#) for help.

Helps students to find the unit price (price per kg or lb) for each product to find the product that is least expensive by unit.

Art

7. Apple Stamps (Grade JK - 2)

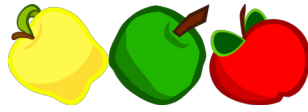
Materials:

- Apples
- Knife
- Paper
- Paint

Steps:

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.





8. Apple Mosaics (Grade 2 - 5)

Mosaics have been found in Roman ruins throughout Europe and around the Mediterranean. Traditional mosaics were made from tiny squares of natural-coloured rock called “tesserae”. These intricate designs featured scenes from everyday life, such as people, plants and animals.

Materials:

- Scissors
- Glue
- Black construction paper
- Pencil
- 1-2 cm strips of card stock in a variety of colours

Steps:

1. Draw a simple apple outline with pencil on black paper.
2. Use a paper trimmer to cut ½ inch strips of the colours you’ll need, and then use scissors to cut the strips into squares.
3. Place your squares into your design and glue to secure. Try not to overlap squares, but trim them as necessary to fit where they need to.



From: <http://www.teachkidsart.net/mosaics/>

Other

9. Apple Songs (Grade JK - 2)

(a) Sung to the tune of “I’m a Little Teapot”:

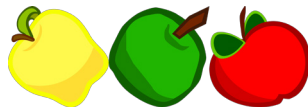
I’m a little apple, short and round,
I make a munchy, crunchy sound,
If you bite into me you will see –
I’m delicious as can be!

(b) “Apples and Bananas” by Raffi.

Link: <https://www.youtube.com/watch?v=oacQL7UQtlk>

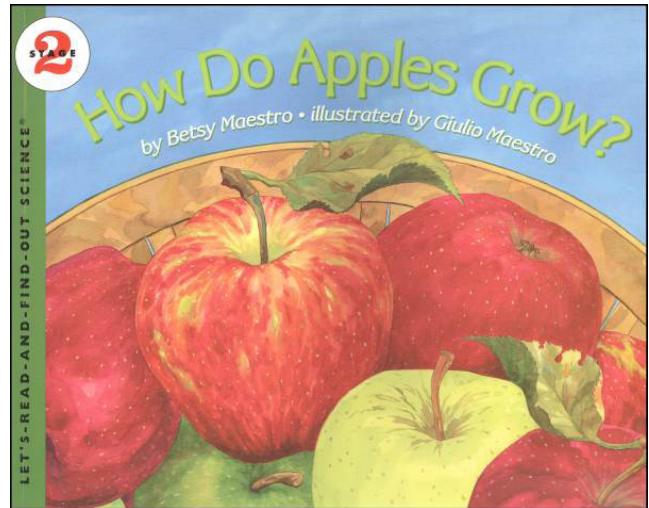
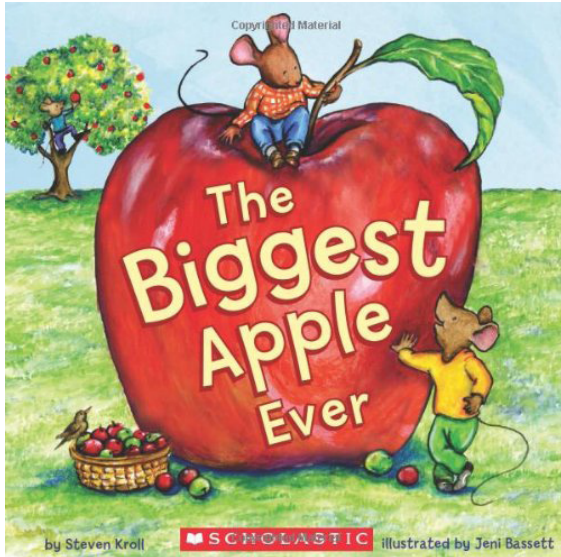
(c) “Eating Crunchy Fruits and Vegetables You Can’t Go Wrong” by Sesame Street

Link: <https://www.youtube.com/watch?v=ZZ539RtqPb8>



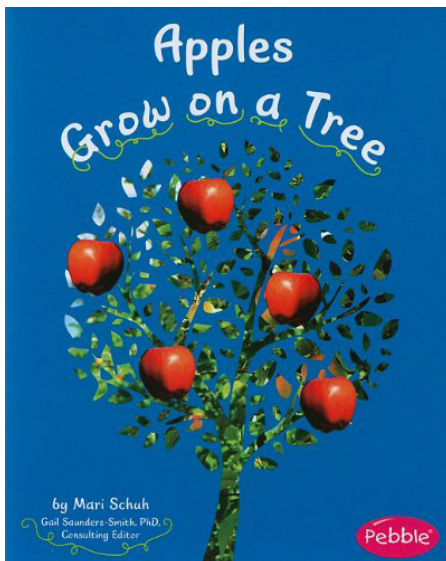
10. Books About Apples (Grade 2 - 5)

The Biggest Apple Ever by Steven Kroll

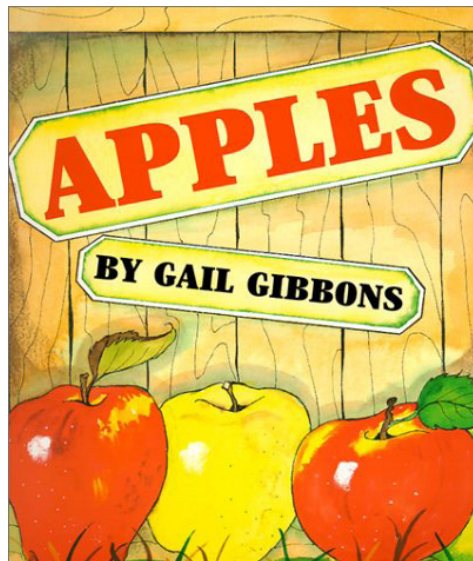


How do Apples Grow by Betsy Maestro

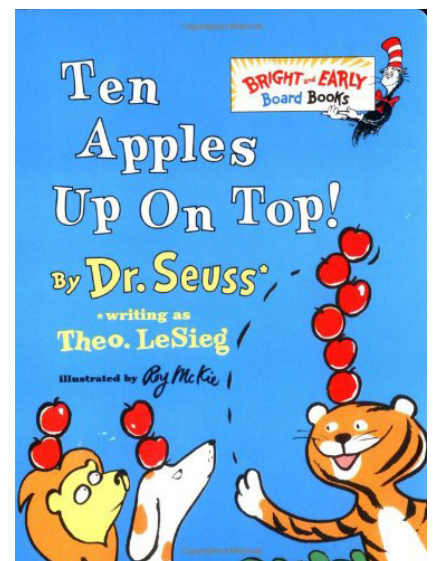
Apples Grow on a Tree
by Mary Schuh



Apples by Gail Gibbons


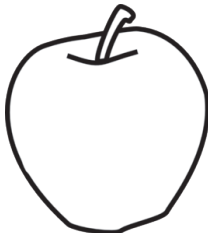
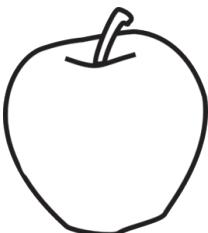

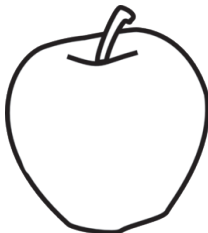
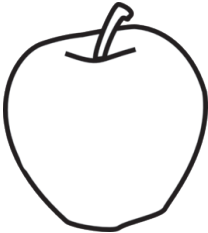
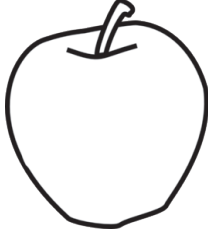

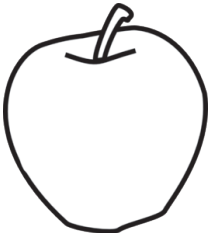
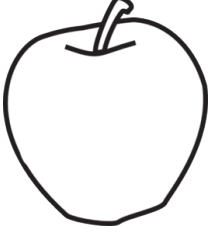

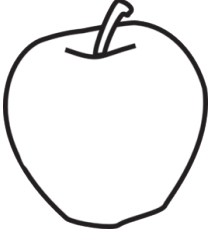


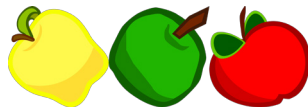
Ten Apples Up On Top by
Dr. Seuss





Appendix A: Apple Science Experiment Recording Sheet

| Scientific Method | |
|----------------------------------|---|
| Observe | What do the apple slices look like right after being cut? |
| Ask a Question | What will happen if you leave an apple slice sitting out? What might adding a liquid do differently? |
| Make a Prediction | <div>  no liquid  water  milk </div> <div>  lemon juice  soda  vinegar </div> |
| Make a Plan and Follow It | Observe what happens to an apple after it has been sliced (control). Observe what happens when apple slices are placed in different liquids. Do they all turn brown? Which one turns brown first? Which turns brown last? |
| Record the Results | <div>  no liquid  water  milk </div> <div>  lemon juice  soda  vinegar </div> |
| Draw a Conclusion | |



Appendix B: Apple Flyers

ROYAL GALA APPLES
PRODUCT OF U.S.A. EXTRA FANCY GRADE
1.70/KG

77¢
/LB

Fuji Apples or
Asian Brown or
Yellow Pears
Product of China
Fancy Grade
2.82/kg

128
/lb

First of the Season
Paulared or
Gold Delicious Apples
Product of Ontario, Canada
Extra Fancy, 3 lb. Bag or
Large Seedless Oranges
Product of South Africa, 3 lb. Bag
SAVE UP TO 4.98 ON 2

3 lb. Bag
2/5

Royal Gala or
Red Delicious Apples
Product of USA
Extra Fancy Grade
2.76/kg

125
/lb

THIS WEEK
249
/lb

ORGANIC Gala Apples
product of USA extra fancy
5.49/kg

GO ONLINE
Find our Grilled
Cheddar, Bacon & Apple
Sandwich online at
Sobeys.com

SAVE 50¢
169
/lb

Granny Smith Apples product
of USA no 1 grade 3.73/kg

Foodland
ONTARIO

FARMER'S MARKET
DELIQUES DU MARCHE
PAULARED
Apples - Pommes

4 lb BAG
Farmer's Market
Paula red apples
product of Ontario,
Canada fancy grade
20255215001

398
EA

Fuji Apples
Product of China.
Fancy Grade.
#30200234.

167
lb.
3.68/kg