

Apples of the World!



Ages 10 - 14

Lesson Overview:

Students will explore the variety of apples that are available in a grocery stores through sampling and evaluating their sensory properties. Students will document the sampling process by following along with the 'Apples of the World!' worksheet, which outlines basic apple sensory properties.

Learning Outcomes:

Students will:

- be able to recognize that apples can be grown and distributed both globally and locally.
- be able to differentiate sensory profiles of various apples.

Materials:

- Printed copies of the 'Apple of the World!' worksheet (1 per student or 1 per group)
- Pencil crayons or markers
- Projector and Computer
- A variety of apples, 3-4 of each
- A paring knife (or 1 per group)
- A cutting board (or 1 per group)
- An apple slicer/corer (optional)

LESSON

Activating Discussion:

- What do you need to do before eating a raw apple?
 - Rinse and remove the sticker.
- Why do apples (and other fruit) have stickers on them? What do the stickers tell us about the fruit?
 - Apple stickers have a product look up [PLU] number (4 or 5 digits) that let cashiers know what the product is and how much it costs. They also commonly have the country of origin on the sticker.
- Does anyone have an apple tree? What time of year do you pick the apples?
 - Late summer or early autumn.
- How is it possible that apples are in the grocery stores year-round if they are only picked in the late summer/early fall? Won't they spoil?
 - cold temperatures and low oxygen storage; global production of apples allows for consistent supply.

- Why do apples brown? How can this be prevented?
 - The apple 'oxidizes' by exposure to the air and becomes reddish brown, like rust; exposure to acid, such as lemon juice, will prevent oxidization.

Learning Plan:

1. Show the following video titled 'The Ontario apple industry at a glance' (3:14):
<https://www.youtube.com/watch?v=k6ExPLMpoXs>
2. Show the following video titled 'The quest for the perfect apple' (3:14):
<https://www.youtube.com/watch?v=JXRxdgivnic>
3. Knife safety review - highlight key components of knife safety and/or apple corer safety

Activity Options:

Option 1: Complete with instructor's guidance

Instructor goes through each apple, leading the discussion on each apples' sensory properties. Students fill in their worksheet to document the sampling process and making comparisons to other apples.

Option 2: Student-led approach

Instructor goes through one example of how to assess the sensory properties of an apple. After, students complete the remaining apples in groups. At the end, a review of the worksheet and apple sensory products will compare responses and sensory experiences. Students can complete the 'Apples of the World!' worksheet as a group or independently.

Follow-up Discussion Questions

- Which apple was your favorite/least favorite?
- Which apple do you think costs the most/least?
- Which apple(s) travelled the farthest distance to us/are locally produced?
- Which apple(s) are better for our environment/produced the most carbon emissions? Why?
- Which apple(s) are better for our economy? Why?
- Some apples are good for baking and cooking with while others are not. Why do you think this is?

Additional Resource: Apple Chips Recipe

Create apple chips with your students in an oven or dehydrator.

Appendices:

- Appendix 1 – Apples of the World! Worksheet
- Appendix 2 – Apple Chips Recipe