

Cranberries

GRADE
2-3

Month: November

Time Required: 30 minutes

Alternative Tastings: Grapes

Lesson Goals

- Students will increase their knowledge of fruits and vegetables.
- Students will learn to try new fruits and vegetables and increase their preference for them.
- Students will learn that their peers like to eat fruits and vegetables.
- Students will learn how to ask their parents/caregivers for the fruits and vegetables tasted in class.

Learning Objectives

- Students will be able to identify questions as part of the scientific method.
- Students will be able to explain why fresh cranberries float.

Academic Standards Connection

Coming soon.

Essential Components Checklist

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| <input type="checkbox"/> Physical Activity | <input type="checkbox"/> Newsletters, BINGO Cards, Stickers, and Incentives |
| <input type="checkbox"/> "Asking" Discussion | <input type="checkbox"/> Tasting |
| <input type="checkbox"/> Voting | |

Materials

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|--|--|
| <input type="checkbox"/> Bog Experiment <ul style="list-style-type: none">• Clear container full of water• Assortment of items that sink or float (dry sponge - floats, plastic spoon, metal key, pencil, marbles, index card)• Small bag/container of several fresh cranberries (for demonstration, not eating) | <input type="checkbox"/> Napkins or paper plates |
| | <input type="checkbox"/> Plastic knives (optional) |
| | <input type="checkbox"/> Fresh cranberries |
| | <input type="checkbox"/> Dried cranberries |

Preparation

- Collect and assortment of items that will sink or float (these can be reused from class to class)

Engage

1. Introduction: 2 minutes

The “Introduction” section is a time to introduce yourself, recap previous lessons, establish norms, or introduce the day’s lesson.

Place all materials for the cranberry bog experiment in the center of the carpet. Write question words on the board: Who, What, Where, When, Why, How

2. Engage Activity: 10 minutes

The “Engage Activity” section has two purposes: 1) to activate students’ prior knowledge and 2) to engage every student.

Choral Response:

As we start today, what do you want to be when you grow up? What dream job do you want when you get older? Think quietly in your head and when I say the magic word “water,” you’re going to tell me what you want to be. Pause for students to think, then say “water”. Listen for a few examples from the group, acknowledge some of their responses.

Think-Pair-Share

Gather students in a seated, large circle around the bog experiment materials. *Today, we’re going to practice being scientists. Does anyone know what scientists do? Use pick-a-stick or select a child at random to share. Scientists conduct experiments and ask questions “Who, What, Where, When, Why, and How” questions. Reference the words written on the board.*

1. *Look at these items on the carpet, and in your head, think of one question you have about these things. Your question might include one of these words. When I say “go,” you’ll turn to a partner and take turns asking your questions. Move around the circle, listening to students’ questions.*
2. *Those were great questions! I heard question words like [share student examples]. This is a curious classroom. Now, think in your head, why is it important to ask questions? Again, when I say “go,” you’ll turn to your partner and share with each other. Move around the circle, listening to students’ discussions. Ask a couple of partners to share their answers.*

We ask questions to learn. Scientists make guesses of what they think is going on, called a hypothesis. Write the word on the board, define it, and have the class repeat it out loud. Scientists make a hypothesis and then they create an experiment to find an answer. One question we are going to explore with these materials is: Will they sink or will they float when we put them in water?

Will it sink or float?

1. Stand in a circle around the materials. You are going to test if each object will float or sink.
 - a. If students think the object will sink, they should crouch to the ground.
 - b. If students think the object will float, they should stretch toward the sky.
 - c. Students will make a guess for each object before you place them in the water (save the cranberries for last).
2. As you test each object, make two piles: things that float and things that sink.
3. What do the things that float have in common? What do the things that sink have in common?
4. Lastly, have students make a hypothesis about the cranberries. Will they sink or float?

The cranberries will float. Leave them in the water and transition students to desks.

Explore

3. Experiential Learning: 8 minutes

This is a time for students to familiarize themselves with what you'll be tasting. The best way to do this is through a hands-on or exploratory activity.

Have students sit where they will eat (opportunity for 3 deep breaths).

With a student or teacher helper, pass out a couple of fresh cranberries and a napkin to each student. *Today, we're going to taste this fruit, called a cranberry, but first, we're going to look inside to see if we can figure out why cranberries float.* Using their fingers or a plastic knife, instruct students to break one cranberry into two pieces (alternately, demonstrate this using the doc-cam). *What do you see inside?* Confirm that there are seeds inside and four air pockets. *The air pockets on the inside make the cranberry float.*

Play and narrate a short portion of a video showing footage of a cranberry harvest (options linked below). Explain, *when cranberries are ready to be harvested in the fall, the field where they are growing is flooded with water, and they float to the top. The cranberry farmer collects the floating cranberries.*

Wisconsin Cranberries: Growing Strong (1:33-2:09 recommended):

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

“Secrets of the Cranberry Harvest,” from Ocean Spray (no words): <https://www.oceanspray.com/en/Our-Story/About-the-Harvest>

Cranberry Harvest, drone footage (no words):

https://www.youtube.com/watch?v=KTUbRyqo_os&feature=emb_rel_pause

We're going to taste two types of cranberries today: a fresh cranberry and a dry cranberry. As I pass out samples, talk with your table. Do you think the cranberries will taste the same or different?

4. Tasting Activity: 3 minutes

The “Tasting Activity” section is when students get to try the fruit or vegetable. Don't forget to review your food tasting norms (for example, “don't yuck my yum”).

Be sure to review your brave tasting rules (for example, don't yuck my yum, we all try together, etc.). Ask students to use their senses while they wait until the entire class is ready to taste the cranberries together.

Reflect

5. Voting Activity: 2 minutes

This is a time for students to give their opinion on what they tried!

As students taste the cranberries, have them vote with their thumbs. Observe their voting and offer positive reinforcement regarding the Brave Taster Rules. If a student dislikes the tasting, perhaps ask what they would change about it.

6. Reflection: 5 minutes

Reflection is one of the most important processes for students to process and retain new information or experiences. Give students an opportunity to reflect on what they've learned or tried in your lesson. This is an excellent place for students to practice the “Asking Discussion”.

Due to time, it might be wise to ask the teacher or a classroom aid to ask some of the below questions to the class while you clean up your sink/float experiment supplies.

Reflection Questions:

- Choral Response:
 - *What did we pretend to be today?* Scientists
 - *What fruit did we try?* Cranberries
 - *Did cranberries sink or float?* Float
 - *What is inside the cranberry that makes it float?* Air or air pockets

- *Raise your hand if you're excited to go home and tell your family about tasting cranberries.*
 - Ask a student with a raised hand: *if you wanted to try this at home, how might you ask your grown-ups?*
 - You might also ask additional questions like, *where could you buy cranberries?*

Leave newsletters, incentives, stickers, and BINGO sheets with the teachers to pass out.

Lesson Supplement

Recommended Book

“Time for Cranberries” by Lisl H Detlefsen

Physical Activity

“Supermarket Shopping” from “Get Movin’ Activity Breaks”

Read the story and perform each underlined word for 5-10 seconds or until the next underlined word.

More ideas for physical activity are available at <https://idph.iowa.gov/inn/play-your-way/brain-breaks>.

What You Need to Know About Cranberries

- The cranberry is a Native American wetland fruit which grows on trailing vines like a strawberry.
- The American Cranberry is a low-growing, vining woody perennial (grows back each year). During harvest, water is used to float the fruit for easier collection. These cranberries are usually used for juice and sauce. The dry harvested fruit are combed from the vines and are used as the fresh fruit.
- Most production occurs in Wisconsin, Massachusetts, New Jersey, Oregon, Washington, Canada and Chile.
- Fresh cranberries should be firm, plump and dark red.
- The plant flowers in May-June, and the fruit is ripe in late September to early October.
- Cranberries freeze well. Rinse before using, not before freezing. They will last about one year in the freezer or three to four weeks in the refrigerator.

Facts About Cranberries

- Cranberry juice is the most popular way cranberries are consumed, but during the holidays, cranberries are used in stuffing, dressing, relish and cranberry sauce.
- Grapes are also a fruit that grows on vines; dried grapes are called raisins. In French, raisin means “grape”.
- Raisins vary based on the type of grape used and are found in different sizes and colors including green, black, blue, purple and yellow.

Health Connection

- Vitamin C - to help heal cuts and keep the gums and skin healthy (reinforce with crossing arms for a defense shield)
- Fiber - to keep us full longer and to help with digestion (reinforce by rubbing stomach)
- Potassium - to keep normal blood pressure (reinforce by squeezing hands to show heart beating). The heart is a muscle that needs a workout. To make it stronger, be active in a way that gets you huffing and puffing.
- Sugar is added to many fruits such as cranberries, blueberries, cherries, strawberries and mango before drying. Dried fruits, such as cranberries and raisins, can be bad on teeth because sugar clings to the teeth, causing acids to build up. Make sure to brush and floss on a daily basis to remove plaque and any acids that build up on your teeth.

References and Resources

<http://www.choosemyplate.gov/fruit> (See: What counts as a cup of fruit? Children ages 6-8 years need 1 to 1 ½ cup of fruit per day.)

<https://www.cranberryinstitute.org/>

<https://snaped.fns.usda.gov/seasonal-produce-guide/cranberries>

