

Cranberry Graphing

A lesson from the New Jersey Agricultural Society Learning Through Gardening program

OVERVIEW: New Jersey is the United State's third largest producer of cranberries. In this lesson, students learn how cranberries are grown and harvested, sample three different cranberry juices, and predict and graph the ones they like best and least.

OBJECTIVES: The student will be able to:

Write a paragraph detailing some facts about cranberries and how they are grown and harvested.

Create a graph detailing the class's likes and dislikes of three different cranberry juices, and express the results in fractions, decimals, and percentages depending on grade level ability. Younger students can write equations to determine the differences between the three cranberry juices.

GRADES: 2-5, *can be modified as a whole group activity for younger grades*

MATERIALS:

Three different cranberry drink flavors, such as cranberry juice, cranberry apple juice, and cranberry raspberry juice.

Small paper cups

Large paper to place cups on to create a graphing

Permanent markers to mark cups



BACKGROUND:

Share these facts about cranberries with your students:

Cranberries are one of only three native American fruits. The other two are Concord grapes and blueberries.

It's still debated whether or not cranberries were actually on the first Thanksgiving menu. The Native Americans who lived on Cape Cod, where cranberries grew wild, were know to eat pemmican, a dried concoction made with cranberries, dried deer meat, and fat. They introduced pemmican to the early settlers.

Cranberries were originally called crane berries because the pink flower of the plant looks like a crane.

New Jersey is the third top producer of cranberries in the United States. The first two are Wisconsin and Massachusetts. Cranberries are also grown in Washington, Oregon, and Canada. They are cultivated in so few places because they need a rare combination of sandy, boggy soil, sunshine in June, heavy spring rains, and a cold winter.

Contrary to popular belief, cranberries are not grown in water. In mid-summer while the berries are growing, the bogs are dry. In winter, the bogs are flooded to prevent wind damage, and at harvest time, most growers flood the bogs to make harvesting easier.

Although the early Cape Cod settlers ate wild cranberries, it wasn't until the late 1800s that cranberries were grown on farms.

Sailors ate cranberries because their high vitamin C content helped prevent a disease called scurvy.

Before 1963 when a sweetened cranberry juice began to be marketed in the United States, 95 percent of the world's entire cranberry crop was sold in this country between Thanksgiving and Christmas.

PROCEDURE:

Show the YouTube video: *How Does It Grow: Cranberries*, www.youtube.com/watch?v=XZPXQ7nw_9Y or go to howgrow.org and click on videos.

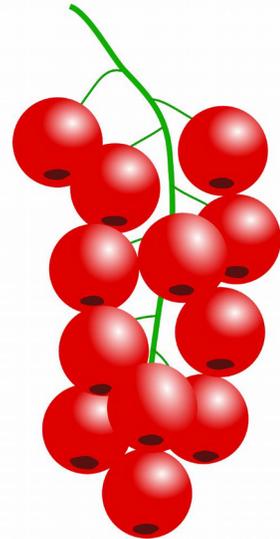
Discuss the video with the class. What did they learn about cranberries? How are cranberries harvested? What in the video surprised them?

Show students the three different cranberry juices and tell them they will be sampling each one. Have the students predict in secret on a piece of paper which juice they think will be the class favorite, and which juice the class will like the least.

Give each student a cup and have them write his/her name on it with permanent marker. The students then sample the three different juices and then place their empty cup on the graph paper over the name of their favorite flavor.

The whole class observes and discusses the results of the finished graph. Make a second graph of the students predictions and compare the two graphs.

Ask the students to show the results of both the taste test and the predictions in fractions or decimals according to their grade level ability.



EVALUATION:

Student recreates the graph of cups in a bar graph on graph paper, and expresses the results in fractions, decimal, and percentages depending on grade level.

Student writes a paragraph or paragraphs about what they learned about cranberries and how they are harvested.

EXTENSION:

Read the book *Cranberries Fruit of the Bogs* by Diane Burns

New Jersey Learning Standards

Math: 2.MD.D 3.NF 3.MD.B 4.MD, 4.NF.C 5.MD.B

Science: 2:LS2.A 3:LS1.B 4:LS1.A 5:LS2.A

Social Studies: 2: 6.1.2.Geo.GI.1; 6.1.2.EconEM.1,2; 6.1.2.EconNE.1
3-5: 6.1.5.GeoHE.2; 6.1.5.EconEM.1, 2

English Language Arts: 2:W.2.2,4,8 3:W.3.2.A-D, W.3.4,8 4:W.4.2.A-E, W.4.4,8
5: W.5.2.A-E; W.5.4,8