

# WHY DO CRANBERRIES BOUNCE & FLOAT

Grades 3-5 • 45 minutes



## CRANBERRIES

### OBJECTIVES

Students will practice making a hypothesis, developing a theory, and recording observations. Students will understand that air pockets cause cranberries to bounce and float.

### ESSENTIAL QUESTIONS

- Why do cranberries bounce?
- Why do cranberries float in water?
- Does every cranberry bounce or float?

### MA STATE FRAMEWORK(S)

- 2-PS1-1
- 2-PS1-2

### MATERIALS

- Fresh Cranberries
- Water
- Small Dish
- Containers
- Worksheets (attached)

## PROCEDURE

### Warm Up

Ask the class to come up with all the things they can think of that bounce and float. Make a list on the board.

### Activity

- Divide students into working groups.
- Give each group 15-20 cranberries.
- Give each group the Bounce & Float worksheets.

#### *Part One: The Bounce Test*

Instruct students to push the cranberries, one by one, off of a table or drop each one to the floor from the same exact height. Students should put each cranberry that bounces in one container, and the ones that don't bounce in another container. Students should collect data and fill out the worksheet.

#### *Part Two: The Float Test*

Each group will need a container full of water. Students can use the same cranberries they used for the bounce test, or they can get new ones. Instruct students to drop the cranberries in the water to test if they will float. Students should collect data and fill out the second half of the worksheet.

# WHY DO CRANBERRIES BOUNCE & FLOAT

Page 2



## PROCEDURE, CONT.

### *Discussion*

Come back together as a whole group to discuss their findings:

- Did they notice differences between the cranberries that bounced or did not bounce?
- That floated or did not float?
- What do they think caused the berries to bounce and float?
- Was there a correlation to the list they made during the warm up?

Ask the class how what they find on the inside of a cranberry would impact whether it bounces and floats? If they cut a cranberry in half, what do they think they would find inside and why?

Cut a cranberry in half and show the group to air pockets.

### *Conclusion*

Why do air pockets create bounce or float? Students can write this as a reflection or share in a discussion.

## EXTENSIONS and VARIATIONS

Show the class the video, "[How Does It Grow: Cranberries](https://youtu.be/XZPXQ7nw_gY)." [https://youtu.be/XZPXQ7nw\_gY]. While you watch, ask students to record or think about something they didn't know before watching the video that they will share out.

- What did they learn about cranberries?
- How are cranberries harvested?
- What in the video surprised them?

On a map of the United States, locate where cranberries are grown. (Massachusetts, Wisconsin, Oregon, Washington, and British Columbia.)

Taste test: Check for food allergies before this taste test. Ask students if they have ever eaten a fresh cranberry. Give every student a cranberry to taste. Ask them to come up with one word they would use to describe the taste.

# WHY DO CRANBERRIES BOUNCE & FLOAT

## WORKSHEET



### CRANBERRY BOUNCE TEST

Write down your hypothesis.

*If we drop a cranberry from a height it will...*

A large rectangular area with a dotted border, intended for writing a hypothesis.

Record your observations and results.

*What happened when you dropped the cranberries? How many cranberries bounced?  
How many cranberries did not bounce? What else did you notice?*

A large rectangular area with a dotted border, intended for recording observations and results.

Explain.

*Look carefully at the cranberries. Why do you think you got the results you did?*

A large rectangular area with a dotted border, intended for explaining the results.

# WHY DO CRANBERRIES BOUNCE & FLOAT

## WORKSHEET



### CRANBERRY FLOAT TEST

Write down your hypothesis.

*If we place a cranberry in a container of water it will...*

A large rectangular area with a dotted border, intended for writing a hypothesis.

Record your observations and results.

*What happened when you put the cranberries in water? How many cranberries floated?  
How many cranberries did not float? What else did you notice?*

A large rectangular area with a dotted border, intended for recording observations and results.

Explain.

*Look carefully at the cranberries. Why do you think you got the results you did?*

A large rectangular area with a dotted border, intended for explaining the results.