



**Foods of the Month**  
**Fun, Experiential Activities**

# **BERRIES**

## **GRADES 3-5**



National Recreation  
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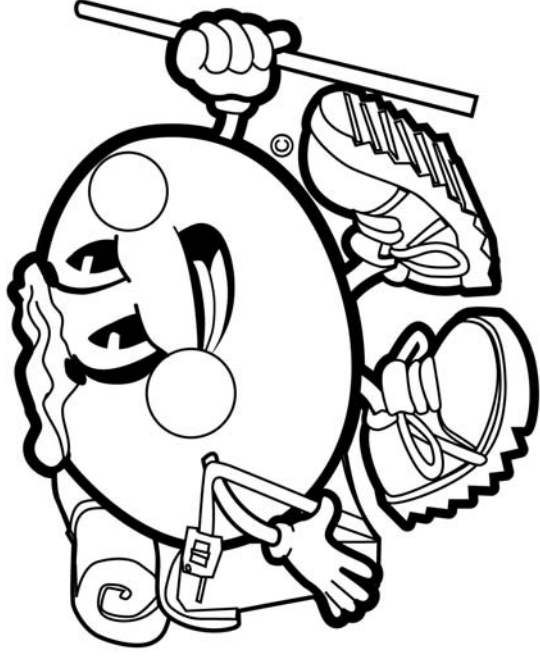
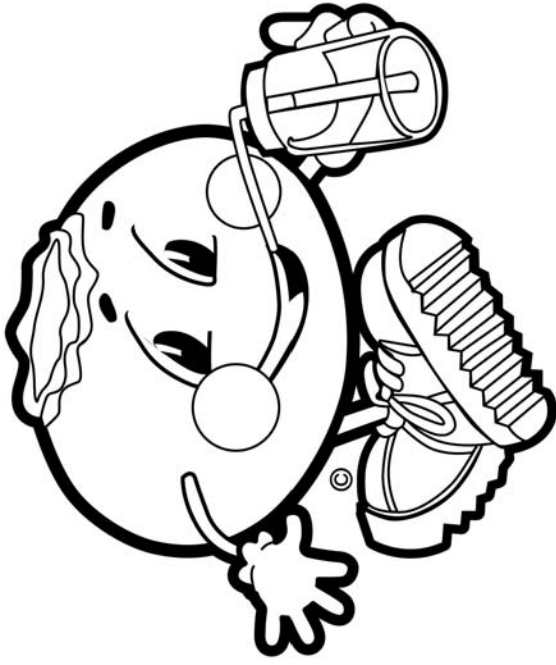
#CommitToHealth

# Fun Facts About Blueberries

## Hi! We're Brandon and Bronwyn Blueberry.

*Did you know that...?*

- Blueberries are one of three fruits native to North America. The other native fruits are Concord grapes and cranberries.
- Blueberries are one of the most popular berries in America, second only to strawberries.
- Blueberries belong to the Ericaceae family of plants, which includes cranberry, azalea, rhododendron, and heather plants.
- Blueberries grow in clusters on bushes.
- Wild blueberries grow on bushes that grow close to the ground, and cultivated blueberries grow on taller bushes.
- The scientific name for blueberries is *Vaccinium myrtillus*.
- Some of the states that grow the most blueberries include Michigan, Oregon, New Jersey, North Carolina, Maine, and Washington.
- Although they're called "blue" berries, blueberries grow in a variety of shades from light blue to dark purple.
- Did you know that blueberries were once called "star berries?" That's because of the star-shaped formation on their skin left from the flower that formed the fruit.
- At least 50 different species of blueberries have been identified.
- Wild blueberries tend to be smaller than cultivated blueberries.
- Blueberry season lasts from mid-April to late September, beginning in the southern states and moving north as the season progresses.
- Although the blueberry season is relatively short, blueberries can be enjoyed all year long, thanks to frozen and canned blueberries!
- One-half cup of blueberries counts as one serving of your 5 A Day and contains just 40 calories.
- Blueberries get their intense blue color from anthocyanins, substances that may reduce risk of heart disease in humans.
- Blueberries are a good source of vitamin C and vitamin K.
- The Spanish word for blueberry is *arandano*.
- The French word for blueberry is *myrtille*.
- The Italian word for blueberry is *il mirtillo*.
- The German word for blueberry is *Heidelbeere*.



## June: Berries

### The Cranberry Bounce Test

**Problem:** Will cranberries bounce if dropped from a fixed position?

**Hypothesis:** Fresh, undamaged cranberries will bounce; the others will not.

**Experiment:**

**Materials:** 20 whole cranberries selected randomly for each team, ruler, flat surface such as a desk or table top, 6" cardboard square, pencils, 2 small open containers and labels.

1. Before selecting your cranberries, how many do you think will bounce in this experiment? Enter a prediction (an educated guess) before moving to step 2.
2. Working in teams of two, randomly select 20 cranberries.
3. While one partner holds a piece of cardboard at a level of 1 foot above a desk, the other will push one berry at a time off the edge of the cardboard.
4. Berries should be separated into two containers. Label them "Bounced" and "Didn't Bounce."
5. Count and record the berries that are found in each container. Examine the berries and describe their appearance on the data box below.
6. Repeat the trial at least 5 times at two-day intervals and record the results.
7. Answer the questions and make conclusions.

**Observations:**

Trial	Day 1	Day 3	Day 5	Day 7	Day 9
Your own prediction for how many you think will bounce					
Number that actually bounced					
Appearance					
Number that did <i>not</i> bounce					
Appearance					

**Conclusions:**

How might this information be useful to a cranberry grower?

Describe your results. Did more berries bounce in the earlier trials or later trials? Why do you think this happened?

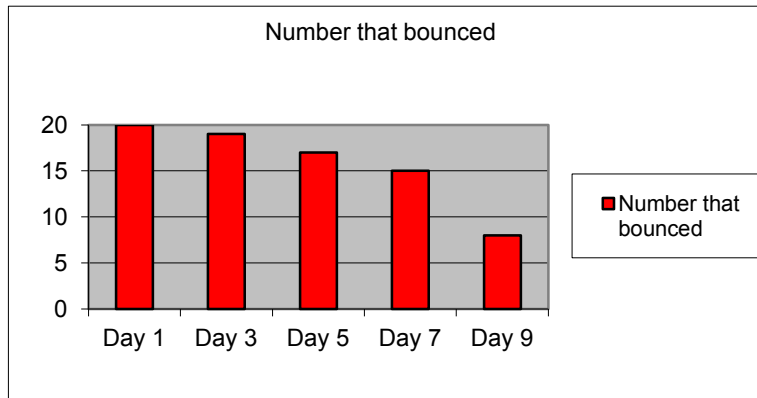
What fraction of the berries bounced for each trial? What fraction didn't bounce?

	Day 1	Day 3	Day 5	Day 7	Day 9
Fraction that bounced					
Fraction that did <i>not</i> bounce					

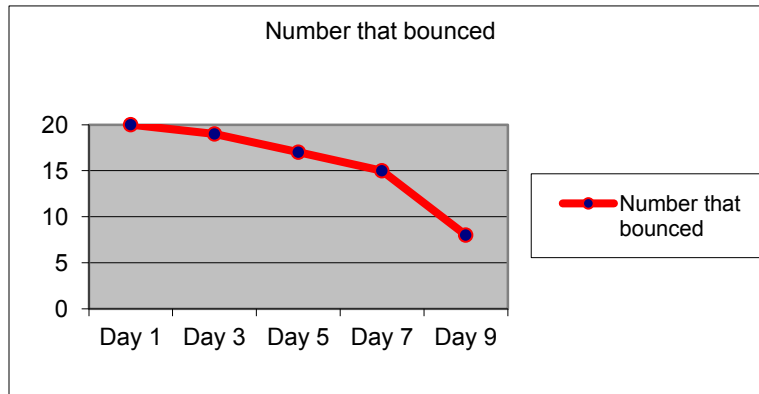
Can you think of a way to keep berries fresher for a longer period of time?

**(Optional)** Graph your findings in either a bar graph or a line graph. See examples below.

Sample bar graph



Sample line graph



## **June: Berries**

### **Cranberry Trivia**

- ◆ The cranberry is one of three fruits native to North America. The other two are the Concord grape and the blueberry.
- ◆ Wild cranberries were probably served at the first Thanksgiving meal.
- ◆ Massachusetts, Wisconsin, and New Jersey are the top three cranberry growers in America. About 10% of the country's cranberries come from New Jersey.
- ◆ If you lined up all the cranberries produced in North America in 2000, they would stretch from Boston to Los Angeles more than 565 times.
- ◆ The first cranberry crop was harvested in 1816 in Massachusetts.
- ◆ Cranberries grow wild in northern states from Maine to Wisconsin and down the Appalachian Mountains to North Carolina.
- ◆ There are 4,400 cranberries in one gallon of cranberry juice.
- ◆ In 1996, the worldwide cranberry harvest produced 40 cranberries for every person on the planet.

## June: Berries

### **Make Your Very Own Berry Ink!**

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Supplies:

- ½ cup of ripe berries (edible varieties only)
- ½ teaspoon vinegar
- ½ teaspoon salt
- measuring cups and spoons
- large mixing bowl
- strainer
- wooden spoon
- baby food jar or prep bowl with cover

1. Place your berries in the strainer, set the strainer on top of the mixing bowl.
2. Using the wooden spoon crush the berries so the juice flows into the bowl.
3. Add the salt and vinegar to your berry juice.
4. Add water if it is too thick, add more berry juice if it is too thin.
5. Pour into your container. Keep it covered when not in use.
6. Use this for stamping, or writing with quill pens!

<http://www.creative-activities-for-kids.com/berry-ink.html>

Source: [http://www.state.nj.us/hangout\\_nj/200211\\_cranberry\\_p3.html](http://www.state.nj.us/hangout_nj/200211_cranberry_p3.html)

The badge is a white rectangular card with a red border decorated with yellow dots. It is set against a background of a strawberry field with green leaves, white flowers, and red strawberries. A silver bucket filled with strawberries is visible in the lower right. The text 'Official Strawberry Picker' is written in a large, red, cursive font. Below the title is a horizontal line for a name, with the word 'NAME' printed in red above it.

# Official Strawberry Picker

NAME \_\_\_\_\_

To learn more about strawberries or obtain  
more copies of this booklet, visit  
[www.ncstrawberry.com](http://www.ncstrawberry.com)

© 2001 North Carolina Strawberry Association



## June: Berries

### Painting with Real Berries!

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#### What You Need for Berry Painting:

- Paper: card stock, watercolor paper, or plain white paper
- Berries, frozen or fresh: Blueberries, raspberries, blackberries, etc.
- (Optional): A plastic tablecloth or newspaper to cover your work surface
- (Optional): Smock or old t-shirt

Note: This is a semi-messy activity, and children will probably get berry-stained hands, face, and clothes (Wear an old t-shirt or a dark t-shirt, or a smock!)

1. Protect work surface with newspaper or a plastic tablecloth.
2. Give child a piece of paper. Card stock in white or light colors are a good choice, or textured watercolor paper makes a great surface. You can also use plain white copy paper.
3. Bring on the berries: Put a pile of berries (fresh or frozen) directly on the paper.
4. Older children can hold a berry (especially a sturdy berry like a frozen blueberry) like a crayon and “draw”/”paint” with it.
5. Once the painting is complete, allow the juice to dry. Then put your new abstract art into a frame!

<http://www.kixcereal.com/kix-cereal-play-with-your-food-berry-paintings/>

## June: Berries

### Playing with the Acidity (pH) Levels in Blueberries

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Blueberries get their blue pigment from a phytochemical called anthocyanin, which some think is rich in antioxidants. The color of anthocyanins is affected by the level of acidity, or pH level, in a particular substance or food. Anthocyanins are red at low pH (indicating greater acidity) and are blue to purple at higher pH (more basic).

#### Materials:

- 1 pint of fresh or frozen blueberries
- ½ cup water
- ½ cup lemon juice
- ½ cup vinegar
- 1 small box of baking soda
- 3 glass jars

#### Activity:

1. Simmer blueberries in water over medium heat until water is deep blue.
2. Strain blueberry skins with a tea strainer.
3. Let solution cool. Pour into three jars.
4. Add lemon juice to first jar. Record color.
5. Add vinegar to second jar. Record color.
6. Add baking soda to third jar. Record color.
7. Discuss results. Based on what you know about anthocyanins, which substances added to the jars were acids? Which were bases?

Adapted from: [www.umaine.edu/nsfgk-12/images/PDFs/natdye.pdf](http://www.umaine.edu/nsfgk-12/images/PDFs/natdye.pdf)



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# **PEPPERS**

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## Foods of the Month Fun, Experiential Activities

### June: Peppers

#### Fun Pepper Stamping Activity

Time: 15 minutes

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#### Materials:

- Green peppers (look for one that looks like it could be a 3 leaf clover, and one that looks like a 4 leaf clover (see picture below; You can tell by the bottom of the peppers if they are going to be a 3 leaf clover or a 4 leaf shamrock. )
- Knife for cutting
- Paint
- Paintbrush (or you can use your fingers)
- Paper (maybe make a sheet of wrapping paper with a large piece!)

Cut the peppers across (not top to bottom), about  $\frac{3}{4}$  inch thick for little fingers to be able to hold onto. You may be able to get 3-5 “stamper” from one pepper. Make sure you cut the peppers straight across, or one side of the “shamrock” will be darker than the other. Paint the bottom of the pepper and stamp it on paper.

## June: Peppers

### Fun, Interesting “Trivia” Facts about Red, Green, Yellow, Orange Bell Peppers!

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Below are 16 incredible fun and interesting facts about bell peppers. These facts are for everyone, especially kids!

1. The first bell pepper fact is that it is **the only member of Capsicum genus that does not produce capsaicin**, a lipophilic chemical that can cause a strong burning sensation (or simply a hot taste) when it comes in contact with mucous membranes. The absence of capsaicin in bell peppers is related to a recessive form of a gene that gets rid of capsaicin. It is actually why they are called sweet pepper at times.
2. Peppers **are actually fruits. Why?** Simply because they are produced from a flowering plant and contain seeds, though, most people think of them as vegetables.
3. Peppers were **named by Christopher Columbus and Spanish explorers** who were searching for peppercorn plants to produce black pepper.
4. **The peppers have different names.** In many Commonwealth of Nations countries, such as India, Canada, and Malaysia, as well as in the United States, they are called bell peppers. Australian and New Zealanders call the fruit Capsicum. The British simply call them peppers, while the Japanese call them ‘パプリカ’ (papurika)
5. In terms of nutrition, it is a fact that bell peppers are **rich sources of antioxidants and vitamins**. This is due to the great color in the fruits, try to eat all colors of peppers!
6. Compared to green peppers, **red peppers are known to have more vitamins and nutrients and contain the antioxidant lycopene**. The level of carotene, like lycopene, is nine times higher in red peppers. [Red peppers](#) have twice the vitamin C content of green peppers.
7. The **pulpy white inner cavity** of the bell pepper (usually cut off and discarded) is a **rich source of flavonoids and can be eaten!** This an interesting bell pepper fact not known by many.
8. Bell peppers **can be eaten at any stage of development**. This is real fun! However, recent research has shown that the vitamin C and carotenoid content of bell peppers tends to increase while the pepper is reaching its optimal ripeness. Bell peppers are also typically more flavorful when really, really ripe.
9. **Freshness is key when cooking and eating bell peppers**. You can store peppers up to a week in the refrigerator. However, the green belly pepper is known to last a little longer.
10. **Bell peppers are not seasonal fruits**, meaning that their availability all around the year is possible! You should have fun with these fruits all through the year.



## Foods of the Month Fun, Experiential Activities

11. The **taste of ripe peppers varies with growing conditions and post-harvest storage treatment**; the sweetest are fruit allowed to ripen fully on the plant in full sunshine, while fruit harvested green and after-ripened in storage are less sweet.
12. Bell pepper is an excellent source of **vitamin C at 117 milligrams per cup**. (That's more than twice the amount of vitamin C found in a typical orange!) Simple math: one green bell pepper is equal to two oranges.
13. Traditional Chinese Medicine **used bell peppers as a natural treatment for certain medical conditions** relating to digestive issues and blood circulation such as indigestion, loss of appetite, swelling, and frostbite!
14. The **green peppers you purchase in the food market may actually be immature, non-ripe versions of the other color varieties**. Interesting fact, however, neither all bell peppers start off green nor do green bell peppers always mature into other colors.
15. **Red bell peppers are sweeter** than green ones because bell peppers sweeten as they ripen. Green peppers are less sweet and slightly bitterer than all the other color varieties.
16. Last bell pepper fact: Contrary to what is commonly known bell peppers are **used worldwide as vegetables and provide a lot of "spice" to recipes, and of course are great eaten raw!**

Adapted from : <http://durablehealth.net/food-nutrition/16-incredible-bell-pepper-facts/>



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