

# What's Growing On In Virginia?

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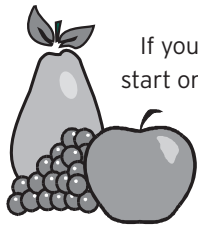
AGRICULTURE IN THE CLASSROOM

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## HEALTHY EATING:

# Start with Virginia Agriculture



If you want to learn the ABCs of healthy eating, start on the farm.

Virginia farmers grow everything from apples to zucchinis; they raise animals for beef, chicken and pork; and the state's dairy farmers provide calcium-rich milk. Their products meet all the requirements of the nutritional pyramid.

For example, the U.S. Department of Agriculture recommends that most Americans\* eat 1½ to 2 cups of fruits, 2 to 3 cups of vegetables, at least 6 ounces of whole grains, 5½ to 6½ ounces of lean meat and beans and 3 cups of dairy products daily.

Apples from the Shenandoah Valley, tomatoes from Hanover County, snap beans from the Eastern Shore or cucumbers from Halifax County will help you meet those nutritional goals.

For the daily fruit recommendation from USDA's healthy eating pyramid one cup of fruit or fruit juice, or ½ cup of dried fruit is considered a cup from that group. Canned, dried, fresh or frozen fruits all count.

Virginia farmers grow a wide variety of fruits such as apples, grapes, peaches and watermelon. In fact, apples are the 16th-ranked agricultural commodity in the state.

For vegetables, a 1-cup serving is considered 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw, leafy greens. Vegetables can be raw or cooked, fresh, frozen, canned or dried.

To find fresh Virginia vegetables, you don't have to look any farther than your local farmers' market or grocery store. Farmers here grow tomatoes, potatoes, snap beans, sweet corn and a wide variety of squash and leafy greens. Virginia tomatoes are the 14th-ranked agricultural commodity in the state.



Whole grains include any food made from wheat, rice, oats, cornmeal or barley. Bread, pasta, oatmeal, breakfast cereals, tortillas and grits are examples of grain products, but you need to make sure they are whole grains, which have not been processed.

Virginia farmers grow barley, corn and wheat. Sometimes farmers' markets offer whole-grain products made with ingredients from Virginia farms. But you also can find brown rice, whole-grain bread and even whole-wheat pasta in your local grocery store.

USDA recommends substituting whole-grain products for refined products. For example, instead of white bread eat whole-wheat, or rather than white rice eat brown rice.

And don't forget about lean cuts of meat. The average person should eat 5 to 6 ounces of lean meat each day. This includes lean cuts of beef, chicken, pork, lamb and veal,

as well as fish and beans. In general, 1 ounce of meat, poultry or fish, ½ cup dry beans, 1 egg, 1 tablespoon of peanut butter or a half-ounce of nuts or seeds are considered 1 ounce from the meat and beans group.

Virginia farmers raise beef, chicken, pigs, lambs and turkeys. There are even aquaculture producers who raise fish such as tilapia and trout. Chickens are Virginia's No. 1 agricultural commodity, and beef cows are the second most important economically.

Lean meats, fish, beans and nuts in this group contain protein, B vitamins, vitamin E, iron, zinc and magnesium, all of which are necessary for health.

Other foods important to your health are dairy products with their high calcium concentration. If you're following the nutritional pyramid, it recommends three daily servings of dairy products.

Virginia has about 700 Grade A dairies whose



cows produce milk for drinking, butter and cheese. To meet the USDA requirements, choose 1 cup of fat-free or low-fat milk or yogurt, 1½ ounces of low-fat natural cheese or 2 ounces of processed American cheese.

A serving of dairy also includes one cup of pudding made with milk, a 1-cup serving of frozen yogurt or 1½ cups of ice cream.

### **A healthy lifestyle includes exercise**

Eating Virginia farm products goes a long way toward improving health, but exercise is another key component.

The importance of physical activity and a diet full of fruits, vegetables and whole grains cannot be overstated, according to Virginia Cooperative Extension. Following sound nutrition and exercise recommendations improves overall health and well-being and also prevents cardiovascular disease, diabetes and other chronic health problems.

What counts as exercise? It includes cardiovascular conditioning as well as stretching and strengthening for muscular strength. According to the USDA's dietary guidelines, American adults should get at least 30 minutes of moderate-intensity physical activity most days of the week. Children should get at least 60 minutes of physical activity on most, if not all, days of the week.

\* Based on the average woman or man ages 19-50. To personalize your own nutritional plan, visit [mypyramid.gov](http://mypyramid.gov).



Encourage students to create their own "Wanted" posters for the other food groups.

## Nutrition myths abound; it's time to debunk them

There are lots of nutrition myths out there, and many of them need to be debunked.

"Don't eat after 7 p.m. if you're trying to lose weight" is one of these myths. According to several sources, it's not when you eat; it's how much you eat that will cause you to gain or lose weight.

How about the belief that organic foods are healthier than conventional foods? According to the USDA, there is no consensus that organic food is healthier.

Another widespread myth is that skipping meals is a good way to lose weight, but that's false. Research shows that people who skip breakfast and eat fewer times during the day tend to consume more calories and be heavier than people who don't skip meals. Eating small meals throughout the day helps you control your appetite and prevents overeating.

Another myth is that you should drink at least eight glasses of water a day. Studies over the past few years have shown that most healthy adults who don't live in severely hot climates or who don't engage in overly rigorous activities can simply drink water when they're thirsty and not worry about how many glasses they're downing.

Recently, some schools have begun shunning chocolate milk because they believe it has too much sugar in it. This, too, is something of a myth. Flavored milks do have added sugar, but they have less than juice, punch or soda. Additionally, a 2002 study found that children who were offered flavored milk were much more likely to meet their calcium requirements than kids who didn't drink milk.

Many people eat instant oatmeal for breakfast and have heard that it's not as nutritious or healthy as the slow-cooked variety. It's true that the steel-cut oats that have to cook on the stove for a half-hour have a lot of fiber, but the instant packets still use whole-grain oats; they're just mashed more. They still contain a lot of soluble fiber that can help reduce cholesterol.

Last, but not least, be wary of claims that foods labeled as "reduced fat," "low-fat" and "nonfat" have fewer calories than the regular versions of those foods. This is not true, because the lower-fat versions often have added sugar, flour or starch thickeners, all of which add calories. And people often eat more, because they think the low- or no-fat version has fewer calories.

## LESSON PLAN &gt;&gt; ELEMENTARY SCHOOL

# Shopping for a balanced meal

**SOL:**

Health: 1.2, 2.2

**Objective:**

to categorize foods by food group and identify the components of a healthy meal.

**Materials:**

- grocery store circulars/ ads from multiple stores/ weeks - enough for each student or group of students to have one
- paper plates
- scissors
- glue sticks
- markers

**Background Knowledge**

A well-balanced diet is essential to good health. By learning to make good food choices early, students can form habits that will prevent health problems such as obesity, diabetes and heart disease later in life. When students choose nutrient-rich foods from each of the five food groups they can fuel their bodies for healthy and active lifestyles. A significant addition to the revised food pyramid is physical activity. A person's age, gender and level of physical activity determine how much of each food group he or she should eat.

Virginia farmers grow or raise food that belongs in each section of the pyramid. "Meat and Beans" includes chicken, eggs, beef and pork, as well as soybeans and peanuts. Additionally, Virginia farmers produce many dairy items for the "Milk" section. In fact, there are more than 100,000 head of dairy cattle in Virginia, and milk is the state's third largest commodity (behind chickens and beef, respectively). For the "Fruit" group, Virginia farmers grow an average of 8 to 10 million bushels of apples each year, and they also grow strawberries, grapes, peaches, cantaloupes and watermelons. In the "Vegetables" section, Virginia is the nation's third largest producer of fresh tomatoes. Our state's farmers also plant potatoes, green peppers and snap beans, as well as many other fresh vegetables. For the "Grains" group, Virginia farmers produce corn, wheat and barley.

**Procedure**

1. Display a poster of the food pyramid (You can find this at [mypyramid.gov](http://mypyramid.gov)).
2. Discuss the food groups and examples within each category. Ask students to share what they had for lunch. Write the foods included in the meal on the board, and then have students sort them into the appropriate categories.
3. Discuss the importance of choosing foods from each of the food groups, as well as healthy choices within each group. Point out that each of the food groups has foods that you should eat more often than others—these are represented by the wider base at the bottom of the pyramid (for example, low-fat yogurt versus ice cream). Also point out that some of the stripes are larger than others. This means that you should choose more foods from these groups.
4. Pass out grocery store circulars and markers to students. Remind them that the different food groups are represented by different colors on the pyramid. Have students use the appropriate colored markers to circle various items in the ads. For example, students will circle the chicken, steak and eggs in purple, and they will circle the bread and cereal in orange.
5. Have students share a few of the items that they circled. Discuss the items that have ingredients from multiple food groups.
6. Next, pass out one paper plate to each student. Have them cut foods out of the circulars and paste them onto their plates to create a meal. They must include at least one item from each food group.
7. Students may share their meals and display the plates around the classroom.

**Extension**

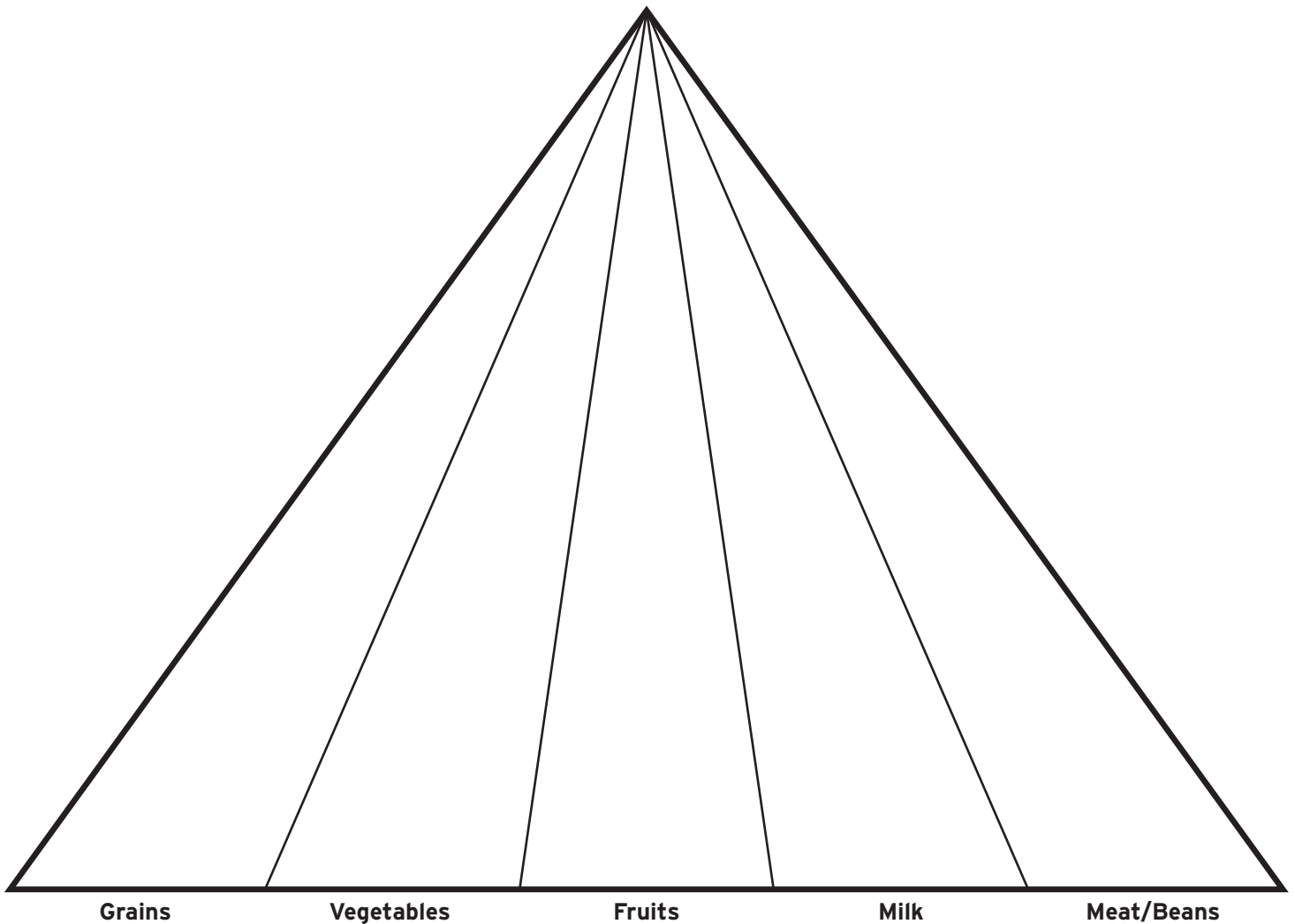
Bring in examples of healthy snacks for students to taste and enjoy! For example, fruit with yogurt dip and whole-grain pasta salad tossed with chopped veggies and grilled chicken cubes.



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**Directions: Draw the daily recommended servings based on a 2000-calorie diet**

- You should have six 1-ounce servings of grain a day. Draw six examples of a Virginia grain in the correct column.
- You should have five-and-a-half 1-ounce servings of meat and beans a day. Draw five-and-a-half examples of Virginia meats and beans in the correct column.
- You should have 2 cups of fruit a day. Draw two Virginia fruits in the correct column.
- You should have two-and-a-half cups of vegetables a day. Draw two-and-a-half Virginia vegetables in the correct column.
- You should have 3 cups of milk (or milk products) a day. Draw three Virginia milk products in the correct column.

**FOOD BANK:** Items may be used multiple times.



## LESSON PLAN &gt;&gt; MIDDLE SCHOOL

# What's Really in the Bowl?

**SOL:**

Science: 6.1  
Health: 6.2, 7.2

**Objective:**

to identify critical information on food labels and analyze serving sizes and nutritional information.

**Materials:**

- 6 cereal boxes (one box with cereal still in it)
- cereal bowls
- dry-measure measuring cups
- metric scale

**Background Knowledge**

Breakfast is essential to a balanced diet. What we eat, as well as how much, can start the day with energy or give a burst of instant energy that can lead to a crash later.

Eating a regular, healthy breakfast does make a difference. In fact, studies show it improves your overall health and well-being. School children who skip breakfast have greater hyperactivity, irritability and anxiety; more disruptive classroom behavior; more tardiness; and a decreased ability to concentrate and solve problems. Children who eat breakfast even perform better on standardized achievement tests and have fewer behavior problems in school.

Eating breakfast reduces fatigue and sleepiness in the mid-morning hours; helps banish the blues; improves concentration; increases alertness; and helps one function more efficiently.

Cereal is a popular breakfast choice in many households. But what is in that breakfast bowl? Does it fill you with whole grains, vitamins, minerals and maybe even a little protein? Or does it just give you a sugary start to the day?

**Procedure**

1. Provide a sampling of cereal boxes for the class to examine.
2. Have a student pour a bowl of cereal. The bowl should represent the amount the student would serve himself or herself for breakfast.
3. Read the serving size listed on the box. Measure how much the student has poured, and write the number of servings on the board. Most likely, the student will have poured significantly more than one serving.
4. Determine and record the amount of calories, fat, carbohydrates, fiber and sugars that would be consumed if one were to eat the amount of servings written on the board.
5. Record all data on the "What's Really in the Bowl?" worksheet.
6. Read the cereal label to determine the grams of sugar per serving. Multiply this number by the amount of servings in the bowl. Measure this amount of refined white sugar into a different bowl using the metric scale. Compare the total amount of cereal to the amount of sugar.
7. Read the label to determine the calories, fat, carbohydrates, fiber and sugars in a recommended serving.
8. Record all data on the "What's Really in the Bowl?" worksheet.
9. Divide the class into groups, and provide a sample box for each group.
10. Give students time to analyze each box and record the findings. Rotate the boxes until students have recorded information for each sample box.
11. Finally, have each group put the cereals in order from most healthy (1) to least healthy (5). Record in the health ranking column, and discuss the results.

**Extension**

Analyze other breakfast items using their labels. How does cereal compare with other options such as toast (be sure to subtract the fiber), orange juice, biscuits, soft drinks or any other breakfast items that students in the class mention?

**References**

[elook.org/nutrition/cereals](http://elook.org/nutrition/cereals)



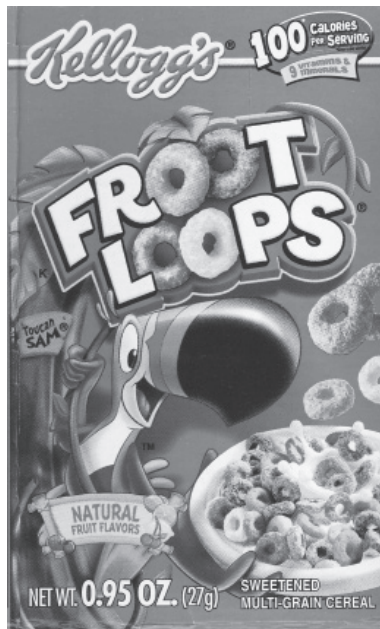
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## What's Really in the Bowl?

Breakfast Cereal (cups)	Serving Size	Calories	Total Fat (g)	Saturated Fat (g)	Carbs (g)	Fiber (g)	Sugar (g)	Carbs - Sugars=	Health Ranking
<b>EXAMPLE: Froot Loops</b>	<b>.95 oz</b>	<b>100</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>3</b>	<b>12</b>	<b>11</b>	



## LITERARY CORNER

## Reading through the pyramid

## MEAT AND BEANS

*Down on the Farm: Chickens*, Hannah Roy, Crabtree Publishing, ISBN 100778740501

*The Life and Times of the Peanut*, Charles Micucci, Houghton Mifflin Co., ISBN 0618033149

## MILK

*Milk: From Cow to Carton*, Aliki, Harper Collins Publishers, ISBN 0064451119

*What's for Lunch? Milk*, Claire Llewellyn, Grolier Publishing, ISBN 0516262211

## VEGETABLES

*Too Many Tomatoes*, Marcie Abott, Picture Window Books, ISBN 9781404842083

*The Vegetable Alphabet Book*, Jerry Pallotta and Bob Thomson, Charlesbridge, ISBN 100881064688

## FRUITS

*The Grapes Grow Sweet*, Lynne Tuft, Studio Eight/River Press, ISBN 0965609294

*Apples*, Gail Gibbons, Holiday House, ISBN 0823416690

## GRAINS

*The Tortilla Factory*, Gary Paulson, Voyager Books, ISBN 0152016988

*Bread Comes to Life*, George Levenson, Tricycle Press, ISBN 101582461147

## AITC Program Highlights

### AITC Web site has new look, lessons and resources

Have you visited [AgInTheClass.org](http://AgInTheClass.org) lately?

AITC has re-launched its Web site to include even more great features and resources, including new lesson plans and video demonstrations. You also can keep up-to-date with AITC by following us on Twitter. Just search for [AgintheClassVA](https://twitter.com/AgintheClassVA).

### National Agriculture Day is coming soon

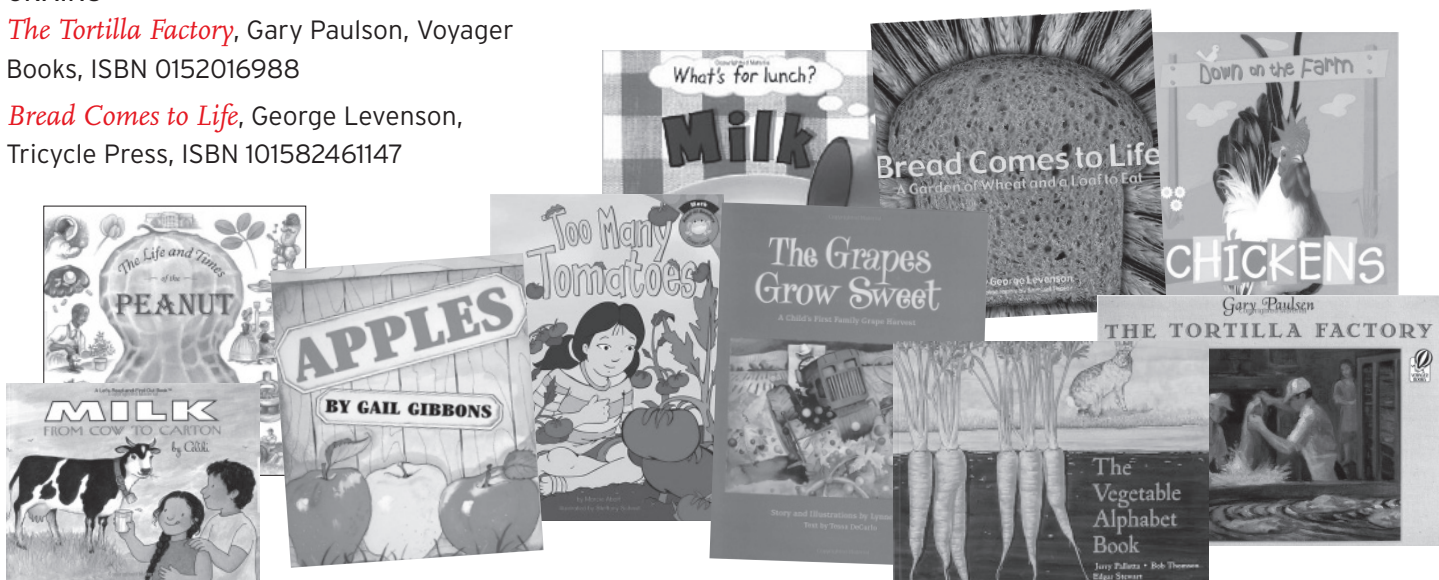
Coming soon to a classroom near you—Ag Day 2010! National Ag Day is March 20, and the theme is “American Agriculture: Abundant. Affordable. Amazing.” Celebrate with your students by sharing Virginia’s finest foods, and have a tasting party.

### Look for Virginia AITC at national conference in Baltimore

The National Agriculture in the Classroom Conference will be June 24-26 in Baltimore.

You won't want to miss this dynamic conference, which includes hands-on workshops, field trips and a resource fair. Virginia AITC will be presenting several sessions and premiering the new Garden Chef resource during one of them.

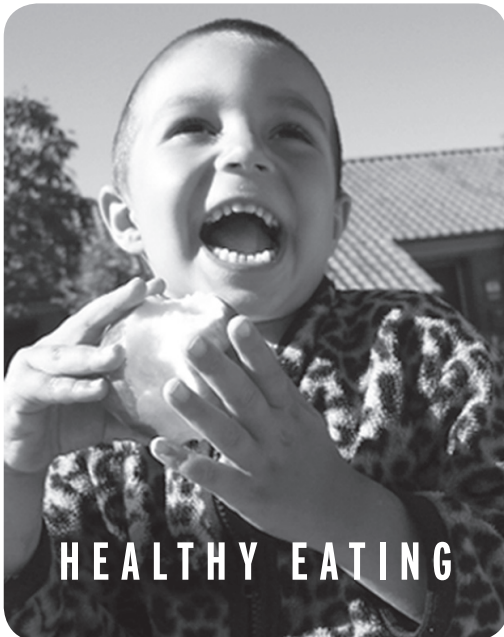
For more information and to register, visit [agclassroom.org](http://agclassroom.org). We'll see you there!





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#### **About the Newsletter**

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