

Ask®

Surprising Snacks

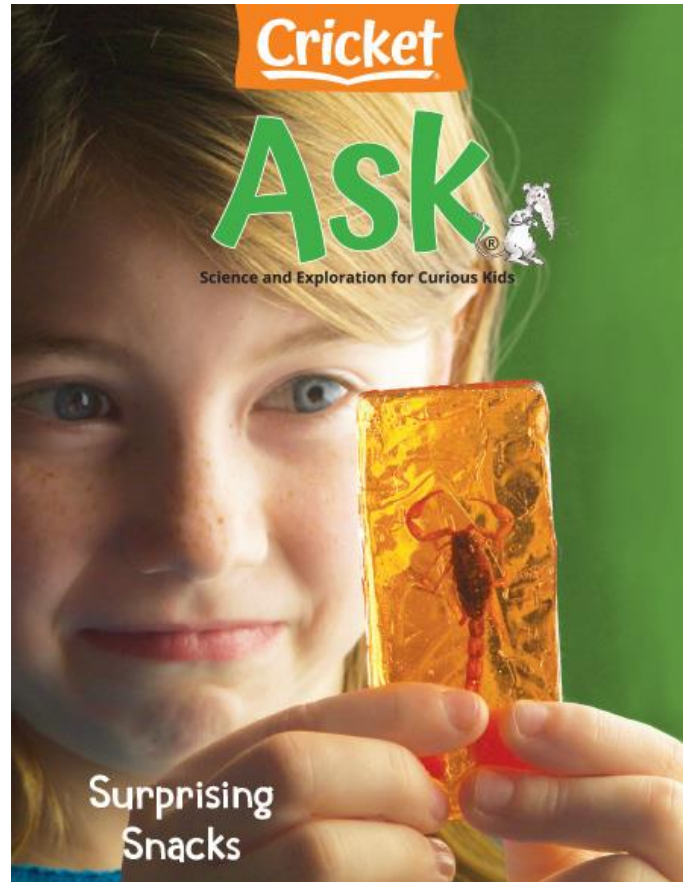
Sweet, savory, or sour—snacks come in all flavors and textures. This month's issue of ASK magazine examines the treats we like to eat and how they are made or grown. *Warning: Snack Attack Incoming!*

CONVERSATION QUESTION

How are our favorite snacks made?

TEACHING OBJECTIVES

- Students will learn how specific ingredients combine to make a tasty treat.
- Students will learn how color gives us information about our food.
- Students will learn how cheese is made.
- Students will examine a process.
- Students will obtain information from an expository article.
- Students will sequence and explain a studied process.
- Students will convert standard measurements.
- Students will learn a technique to self-regulate their breathing.
- Students will contribute to a class book that details accidental discoveries.



In addition to supplemental materials focused on core STEAM skills, this flexible teaching tool offers vocabulary-building activities, questions for discussion, and cross-curricular activities.

SELECTIONS

- **The Secret Life of Cookies**
Expository Nonfiction, ~770L
- **A Rainbow of Food**
Expository Nonfiction, ~730L
- **Cheese Please!**
Expository Nonfiction, ~890L

Ask® Teacher Guide: September 2024

The Secret Life of Cookies

pp. 6–11, Expository Nonfiction

One of America's most loved cookies is the chocolate chip. Readers will learn how the correct combination of simple ingredients and proper baking temperature creates this delicious treat of crispy cookie with melted chocolate chunks.



ENGAGE

Conversation Question: How are our favorite snacks made?

Present the title of the article and give students one minute to list cookie ingredients. Have students share responses and generate a master list on the board. Next, examine the ingredients one by one, and ask students the purpose of each ingredient. Students may know that sugar adds sweetness but may not know the purpose of baking powder. Beside each ingredient listed, have the class give the reason it is included. Encourage them to respond even if they aren't 100% sure. Revisit the list after the reading of the article and add correct answers.

INTRODUCE VOCABULARY

Post and discuss the key vocabulary words and definitions on the board. Ask students to divide the words into two different groups and discuss how they were grouped (“science words” and “cooking words,” for example). Discuss how science and cooking can overlap. Have volunteers predict how the four vocabulary words (ingredients, preheated, molecule, atoms) will appear together in an article titled, “The Secret Life of Cookies.”

READ & DISCUSS

Reinforce comprehension of the concepts presented in the article by using the following questions to direct discussion.

1. What is flour?
2. How does butter affect the other ingredients?
3. What happens to the mixture when it is placed in the oven?
4. Which cookie ingredient is “full of proteins”?
5. How does changing the recipe change the outcome?

SKILL FOCUS: Examine a Process

INSTRUCT: Discuss with the class how recipes appear in a particular format. Distribute the *Smart Cookie* organizer and have students unscramble the components of a typical recipe. They can consult the article or peruse recipes online or in books, if assistance is needed. Allow students to work in pairs to complete Part I of the worksheet.

ASSESS: Have students complete Part II of the worksheet independently, and then discuss with their partner. Circulate and guide as they discuss.

EXTEND

Mathematics: Have students recognize that cooking, like science, depends on accurate measurements. Discuss how it may be necessary to double or halve a recipe and that making conversions is often a part of cooking. Have students practice properly converting the measurements below. Post the following equivalent if needed:

1 cup = 8 ounces

3 cups = _____ ounces

16 ounces = _____ cups

3/4 cup = _____ ounces

1 tablespoon = 3 teaspoons

4 tablespoons = _____ teaspoons

9 teaspoons = _____ tablespoons

2/3 tablespoon = _____ teaspoons

RESOURCES

Examine a Process: *Smart Cookie*

OBJECTIVES

- Students will learn how specific ingredients combine to make a tasty treat.
- Students will examine a process.
- Students will convert standard measurements.

KEY VOCABULARY

- **ingredients (p. 7)** parts of a mixture to make a certain food
- **preheated (p. 7)** heated (an oven) to a certain temperature before using for cooking
- **molecule (p. 10)** two or more atoms stuck together
- **atoms (p. 10)** the smallest part of an element

Smart Cookie

Examine a Process: Unscramble the parts of a recipe. Then in Part II, list the ingredients of your favorite dishes.

PART I: Unscramble the parts of a recipe.

Recipe Words

1. tsnidgenrei _____
2. diyel _____
3. necdsiroit _____
4. elitt _____
5. tterumpeera _____

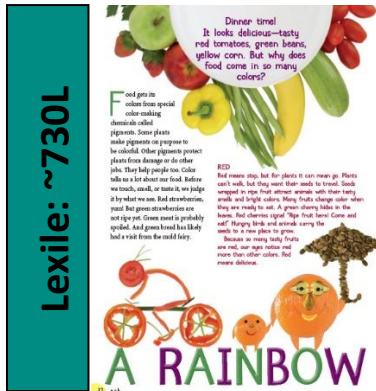
PART II: Use the space below to list two of your favorite foods and the ingredients that you think they are made with. After the chart is completed, share your list with your partner and discuss your favorite dishes.

Favorite Food	Ingredient List
1.	
2.	

A Rainbow of Food

pp. 12–15, Expository Nonfiction

Nutritious fruits and vegetables come in a variety of colors. Readers will learn why a rainbow belongs not only in the sky—but on your plate as well!



RESOURCES

Obtain Information: *Fruit Salad*

OBJECTIVES

- Students will learn how color gives us information about our food.
- Students will obtain information from an expository article.
- Students will learn a technique to self-regulate their breathing.

KEY VOCABULARY

- **pigments** (p. 12) substances that give color to other materials
- **climate** (p. 13) the weather conditions that are expected in a region at a particular time of the year
- **descended** (p. 15) having a specified ancestry or ethnic origin

ENGAGE

Conversation Question: How are our favorite snacks made?

Nutritionists often advise people to “eat the rainbow.” Post this phrase on the board and explain to the class that this means to incorporate a wide variety of colorful fruits and vegetables into their daily meals. Have students discuss the benefits of eating a diet rich with diverse color. Be sure students acknowledge the difference between natural and artificial colors.

INTRODUCE VOCABULARY

Post and discuss the three key vocabulary terms. Have students make connections by asking them to use each word in a sentence. Next, have the students engage in “rainbow writing.” Instruct them to fold a white piece of paper horizontally into thirds and use pencil to largely write one word in each space (**pigments, climate, descended**). Then they will use the colors of the rainbow in order, to trace over the words. (ROYGBIV)

READ & DISCUSS

Post and discuss questions prior to reading. Have students read the article independently and answer the questions in full sentences.

1. Where do fruits and vegetables get their colors?
2. What can color tell us about our food?
3. Why do squirrels and mice often eat dull brown foods?
4. What problem did the ice-pop makers have? How did they solve it?
5. Why is the orange carrot the most popular?

SKILL FOCUS: Obtain Information

INSTRUCT: This article presents the reader with detailed information about how the pigment of foods reflects their nutritional value. Students will need to refer to the article to complete the graphic organizer, *Fruit Salad*. They will record the pigment's benefit, provide examples, and list fun facts.

ASSESS: Review the chart with the class. Ask: *How can you incorporate what you have learned to eat a healthier lunch?*

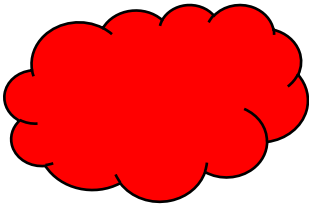

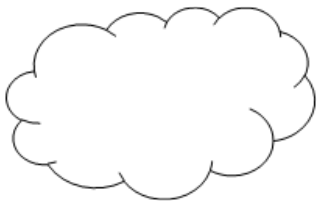
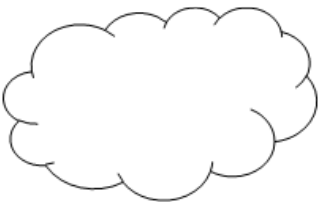
EXTEND

Social Emotional Health: Remind students that sometimes we feel bad inside when we are angry, confused, anxious, or overexcited. Teach students to self regulate their breathing when they feel “big” feelings. Give each student a template of a rainbow on drawing paper to color in. Show them how to use the rainbow to relax by tracing a finger along a color as they inhale, and exhaling when they reach the cloud on the other side of the rainbow. By the time they have completed the rainbow breathing exercise, have students notice how they feel. Allow them to keep the rainbows in their desk to use as a coping strategy. (Laminate, if possible.)



Fruit Salad

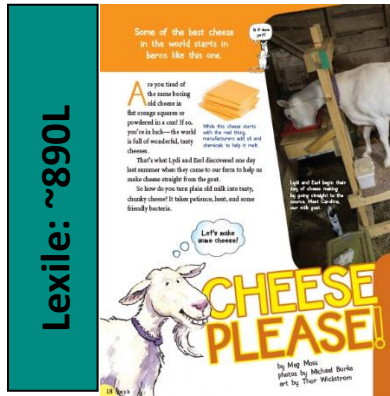
Obtain Information: Color the cloud in the first column. Then use information from the article and your own thinking to complete the chart.

Color	Fruit & Vegetable Example	Fun Facts
<p>RED</p> 	<p>Fruit:</p> <p>Vegetable:</p>	<p>1.</p> <p>2.</p>
<p>ORANGE</p> 	<p>Fruit:</p> <p>Vegetable:</p>	<p>1.</p> <p>2.</p>
<p>GREEN</p> 	<p>Fruit:</p> <p>Vegetable:</p>	<p>1.</p> <p>2.</p>
<p>PURPLE</p> 	<p>Fruit:</p> <p>Vegetable:</p>	<p>1.</p> <p>2.</p>

Cheese Please!

pp. 18–21, Expository Nonfiction

With over 1,800 cheeses in the world, everybody is sure to have a favorite. Students will join Lydi and Earl at the farm as they learn how cheese is made.



RESOURCES

Sequencing a Process: *The Big Cheese*

OBJECTIVES

- Students will learn how cheese is made.
- Students will sequence and explain a studied process.
- Students will contribute to a class book that details accidental discoveries.

KEY VOCABULARY

- **pasteurized** (p. 19) heated at a controlled temperature for a specific period of time in order to kill bacteria
- **curds** (p. 20) the thickened or solid part of sour or partly digested milk
- **brine** (p. 21) water containing large amounts of salt

ENGAGE

Conversation Question: How are our favorite snacks made?

Introduce the article, "Cheese Please!" Motivate students to learn about this topic by discussing their favorite types of cheese. Select the four most popular cheeses and have students vote for their favorite. Give students ten minutes to convert this information into a simple bar graph. Remind them that bar graphs must include: a title, accurately labeled x and y axes, a scale, and bars to represent the findings. Graphs should be easily readable and may include color. Ask the class questions based on the gathered information.

INTRODUCE VOCABULARY

List the three key terms on the board and have pairs of students define each word. Then post the definitions provided so that students may check their work. Have the pairs choose at least seven additional words from this vocabulary-rich article and produce definitions. Instruct them to create a mini crossword puzzle using all ten words. Share puzzles with another class for use as a pre-reading activity for this "cheesy" article.

READ & DISCUSS

As a post-reading activity, lead a discussion based on the following questions.

1. What are the three things needed to turn plain milk into tasty, chunky cheese?
2. What animals can provide milk to be made into cheese?
3. Why do some cheese makers prefer using raw milk straight from the animal?
4. List two attributes of halloumi cheese.
5. What is the function of the cheese press?

SKILL FOCUS: Sequence a Process

INSTRUCT: Review the article and guide students to notice that there is a specific process involved in making cheese from milk. Distribute *The Big Cheese* graphic organizer and instruct students to condense the process into four important steps that detail the cheese-making process from milk to final product.

ASSESS: Circulate as students are working and have them retell the process in their own words. Collect and evaluate charts for accuracy.

EXTEND

Science: Many of the world's most important discoveries have involved a combination of wisdom and accident. Remind students that according to the article, a traveler, a primitive canteen, and a bouncy ride likely resulted in the first cheese. Have students research and write a mini-report on an accidental discovery. They will create a page for a class book, "Happy Accidents" that includes the following: a graphic representation, what was being studied or what occurred, place, date and name of the creator, and details about the resulting discovery.

The Big Cheese

Sequencing a Process: Reread the article and highlight sentences that detail how cheese is made. Condense the process into four steps and explain each step in the correct order. Include details.

