

Ask®

Nothing but Noodles

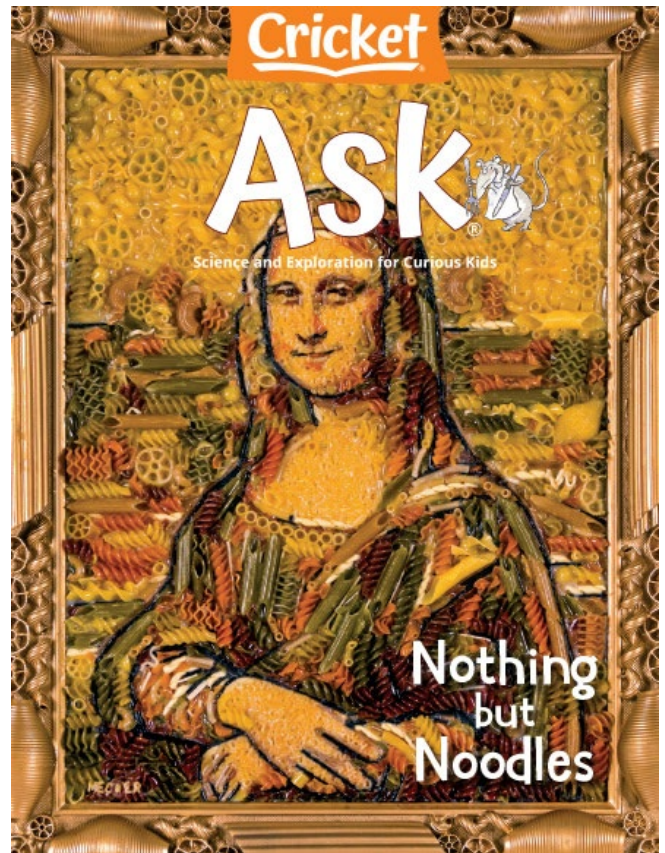
Long, flat, round, or skinny, noodles are popular around the world. This month's issue of ASK magazine traces the history of this worldwide staple and provides the reader with fun facts and a tour of a standard pasta factory.

CONVERSATION QUESTION

Why are noodles popular around the world?

TEACHING OBJECTIVES

- Students will learn about the history and cultural significance of pasta.
- Students will learn about the process of making pasta noodles.
- Students will learn about the invention of instant ramen noodles.
- Students will obtain information from a nonfiction text.
- Students will sequence a process.
- Students will analyze problems and solution relationships.
- Students will use a map of the world to plot and label locations.
- Students will participate in an engineering design challenge.
- Students will use a mathematical process to solve word problems.



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.

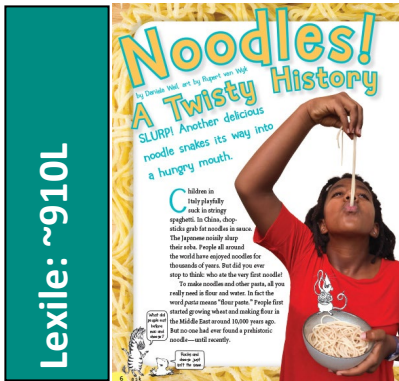
SELECTIONS

- **Noodles! A Twisty History**
Expository Nonfiction, ~910L
- **At the Pasta Factory**
Expository Nonfiction, ~570L
- **Magic Noodles**
Expository Nonfiction, ~840L

Noodles! A Twisty History

pp. 6–11, Expository Nonfiction

From China to Italy, pasta-lovers can be found all around the world. This article teaches students how pasta is made and how it originally traveled from region to region.



RESOURCES

Obtain Information: Oodles of Noodles

OBJECTIVES

- Students will learn about the history and cultural significance of noodles.
- Students will obtain information from a nonfiction text.
- Students will use a map of the world to plot and label locations.

KEY VOCABULARY

- **millet (p. 7)** a plant that grows in dry and poor soil, producing seeds that can be used to make flour
- **durum (p. 10)** a variety of wheat often used to make pasta
- **semolina (p. 10)** hard grains that remain after milling flour

ENGAGE

Conversation Question: Why are noodles popular around the world?

Give students one minute to list as many pasta varieties as they can, such as penne, fusilli, farfalle, etc. Ask for volunteers to share their lists and generate a list on the board. Next give small groups of students a bowl of mixed dried noodle shapes to sort and tally. (Later these noodles can be used for an art project.) Distribute the article and have students preview the subheadings and pictures, emphasizing the pasta names and shapes on top of page 10.

INTRODUCE VOCABULARY

List the three key terms (**millet**, **durum**, and **semolina**) 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 the article and procure 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 the article.

READ & DISCUSS

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

1. What made pasta a practical food in ancient times?
2. How did the Chinese master the art of using wheat dough?
3. How did pasta-making move from region to region?
4. What is the pasta myth involving Marco Polo?
5. Why did Naples, Italy, become a noodle-making center?
6. Why did the use of tomato sauce with pasta take some time to catch on?

SKILL FOCUS: Obtain Information

INSTRUCT: Guide students to obtain information from the text, captions and graphics in the article. Remind them that the article was written to provide readers with interesting facts regarding the making of pasta, as well as to explain its popularity all around the world. Introduce the *Oodles of Noodles* worksheet and instruct students to unscramble the terms in the word box and then correctly complete the sentences.

ASSESS: Review the worksheet with the class. Challenge students to scramble five additional words from the article for a partner to solve.

EXTEND

Geography: Instruct students to revisit the article and highlight all of the geographical locations mentioned in the text. Provide pairs of students with a map of the world and have them plot and label each location. They will use information from the article as well as online resources to indicate where different types of pasta were created. Instruct them to make a key using pasta shapes that can be used to explain the points plotted on the map.

Oodles of Noodles

Obtain Information Reread the article and gather information to complete the worksheet.

PART I: *Unscramble the words in the boxes below.*

boas _____	cire _____	anagal _____	imacnora _____	lletmi _____
yairti _____	anmi _____	aseminlo _____	fastkaebr _____	thawe _____

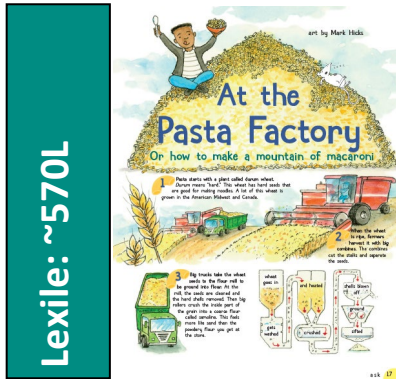
PART II: *Use the unscrambled words to correctly complete the sentences below.*

1. An old book on Jewish law includes rules for eating _____, or dried noodles.
2. People first started growing _____ and making flour around 10,000 years ago.
3. Noodles in China were made from ground-up _____, mung beans, or yams.
4. Marco Polo wrote in his journal that noodles in China reminded him of _____.
5. In Asia, it is not unusual to eat noodles for _____.
6. The Japanese have been slurping their _____ for thousands of years.
7. Millers in Italy ground the grain into a coarse flour called _____.
8. At a dig site in China, scientists found a preserved noodle in a bowl made from _____.
9. In the 1700s, the word, _____, meant any kind of noodle.
10. The Chinese stretched wheat dough into long noodles called _____.

At the Pasta Factory

pp. 17–19, Expository Nonfiction

This article details each step of the pasta-making process. Students will learn how modern machinery makes this ancient process more efficient.



RESOURCES

Sequence a Process: Pasta Perfection

OBJECTIVES

- Students will learn about the process of making pasta.
- Students will sequence a process.
- Students will participate in an engineering design challenge.

KEY VOCABULARY

- **combines** (p. 17) machines that cut crops and separate the seeds of the plant from the rest of the plant
- **flour tanker** (p. 18) a truck trailer specially designed to transport flour or other powdered food ingredients
- **vacuum mixer** (p. 19) a machine that kneads dough in a sealed container with the air removed

ENGAGE

Conversation Question: Why are noodles popular around the world?

First, review with the class the ingredients and tools that are necessary for making a grilled cheese sandwich. Guide students to acknowledge the importance of having the proper ingredients and tools on hand. Then introduce the title, “At the Pasta Factory,” and tell them that they will be reading about the process of making pasta. Explain that the main ingredients in pasta are flour, water, and sometimes eggs. The dough is stretched out and cut into shapes and dried. Finally, activate prior knowledge by asking students what they know about the pasta-making process.

INTRODUCE VOCABULARY

Post and read aloud the three vocabulary terms and their definitions. Revisit the introductory activity above and have students incorporate these words (**combine**, **flour tanker**, **vacuum mixer**) into their explanation of how they presume pasta is made in a factory. Discuss how each machine has a purpose that helps the pasta to be made more quickly and more efficiently.

READ & DISCUSS

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

1. Where is most wheat grown?
2. What determines the shape of the pasta?
3. Why do machines shake the soft, new noodles?
4. Why must noodles be dried “just right”?
5. What ingredients are added before the vacuum mixer kneads the dough?

SKILL FOCUS: Sequence a Process

INSTRUCT: Review sentences from the article describing how pasta is made. Remind the class that the article was written to teach readers about each step of the process. Introduce the worksheet, *Pasta Perfection*, and tell students that they will be using information from the article to correctly put the process in order.

ASSESS: Review the worksheet and have a class discussion. Which steps were the hardest to get in the correct order and which were easiest? Why? Why is it important that the steps are followed sequentially when following a recipe?

EXTEND

STEM: Have students look at step five in the pasta factory on page 19. Ask students what the man standing at the top of the machine is doing (adding water). Ask if this looks like an efficient way to this job. Then have students draw a machine that could add the water for a safe and more efficient way to complete this step.

Pasta Perfection

Sequencing a Process Look at the pictures and read the words in the article. Then, label the steps in order from 1 to 9, showing the process of pasta-making at the factory.

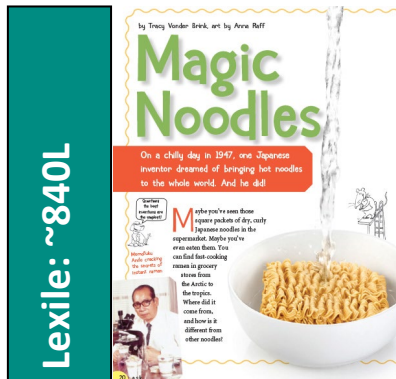
Step Number	Pasta-Making Process
	To make the noodle shapes, a big screw pushes the dough through a metal plate with holes in it. This determines what shape the pasta will be.
	Big trucks take the wheat seeds to the flour mill to be ground into flour.
	Finally the dried noodles are packed into boxes and bags.
	Flour and water are measured into a big mixing machine, along with salt.
	Noodles go into a quick dryer to set and then into a slow dryer to harden.
	Pasta starts with a plant called durum wheat.
	A big hose sucks the flour out of the flour tanker trucks into the factory.
	The dough is kneaded by the vacuum mixer in a sealed container with the air bubbles removed.
	Big combines are used by the famers to harvest the ripe wheat.

Use the back of the paper to illustrate one of the steps. Can a partner guess which step you've drawn?

Magic Noodles

pp. 20–23, Expository Nonfiction

Students will learn how Momofuku Ando was inspired to invent instant ramen noodles. From an observed necessity in the world, meet the man who worked tirelessly to solve a problem.



RESOURCES

Problems and Solutions: Springy Success

OBJECTIVES

- Students will learn about the invention of instant ramen noodles.
- Students will analyze problem and solution relationships.
- Students will use a mathematical process to solve word problems.

KEY VOCABULARY

- **scarce** (p. 21) insufficient for the demand; not abundant
- **texture** (p. 21) the feel, appearance, or consistency of a surface or substance
- **seasoned** (p. 22) flavored with spices or herbs

ENGAGE

Conversation Question: Why are noodles popular around the world?

Show students a package of ramen noodles and ask them if anyone has eaten them at home. Invite students to explain how they are prepared for eating. Present the title of the article, “Magic Noodles,” and tell the class that they will be reading about the man who invented instant ramen noodles and why they are so special. If possible, prepare some ramen noodles for the class to enjoy during lunchtime.

INTRODUCE VOCABULARY

Post the key words and discuss the meanings of the terms. Then display the following prompts and have students discuss responses with a partner.

- How would **scarce** food sources affect a region?
- What might the **texture** of a wedding dress be?
- How do you like your food **seasoned**?

READ & DISCUSS

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

1. What was the political climate in 1947 Japan?
2. What was the criteria for Momofuku Ando’s new type of ramen?
3. How was Ando inspired by his wife’s cooking of tempura?
4. Why was Ando’s new ramen nicknamed, “magic ramen”?
5. How did Ando recreate his ingredients to make Space Ram?

SKILL FOCUS: Problems and Solutions

INSTRUCT: Inform students that they will be rereading the article with a partner and highlighting passages that depict how Momofuku Ando solved many problems in order to be successful with his invention. Distribute the *Springy Success* graphic organizer. Tell students that they will be responsible for recording and explaining the solutions to the problems listed.

ASSESS: Collect the graphic organizers to evaluate the students’ ability to clearly identify and explain solutions. Discuss the personality traits of inventors.

EXTEND

Mathematics: Several facts in the article use dates to make the reader aware of a specific place in time. Have students circle all of the dates in the article and then use the R-D-W (read-draw-write) process to solve questions A–C.

- A. What year did Ando create the version of ramen that came in a cup?
- B. How long after Ando created “magic ramen” did he visit America?
- C. How old was Momofuku Ando when he passed away?

(Answers: A. 1971 B. 8 years C. 97 years old)

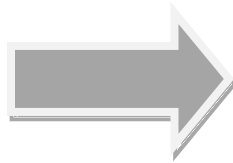
Challenge students to create another word problem using information from the article.

Springy Success

Problems and Solutions Use information from the article to explain solutions to the problems listed.

Problem:

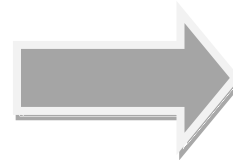
In 1947, Japan was recovering from war and Ando witnessed a long line of people waiting for food.



Solution:

Problem:

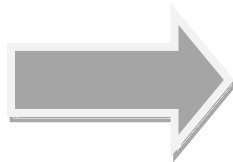
When ramen is air-dried, then boiled, the texture is rubbery.



Solution:

Problem:

The standard recipe and packaging was not suitable for trips to space.



Solution: