

HighWire
MAGAZINE

YOU ARE WHAT YOU EAT

A Question of Digestion

Food's amazing
journey

From Hand to Mouth

A prehistoric menu

Food Myths

Does chocolate really
give you pimples?



Volume 7, Issue 6 Teacher Guide

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High Wire Magazine – You Are What You Eat Teacher Guide

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You Are What You Eat

Teacher Guide

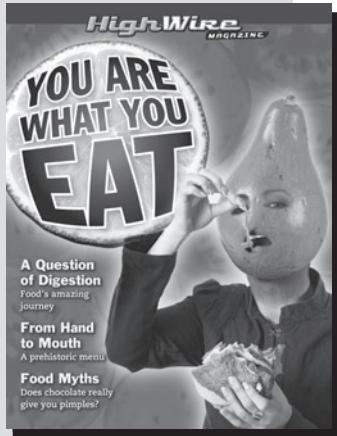
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The lesson plans in this Teacher Guide are supported by the *High Wire Magazine* Program and Assessment Guide. The Program and Assessment Guide contains:

- an overview of the components and features of *High Wire Magazine*
- a scope and sequence chart that outlines the key reading strategies that are highlighted in each issue of *High Wire Magazine*
- supporting information about the needs of adolescent readers
- descriptions of the instructional strategies, approaches, and activities used in the lesson plans
- assessment masters for the key reading strategies.

Brief explanations of instructional strategies are provided in the sidebar of the lesson plans alongside the first use of each strategy.



You Are What You Eat

Key Reading Strategy: *Evaluating Information*

The lesson plans in this issue of *High Wire Magazine* highlight the reading strategy Evaluating Information. Opportunities to practice this strategy are indicated by the symbol ★. For more information on this strategy, see page 7. **Assessment Master 6** in the Program and Assessment Guide can be used with this strategy.

Curriculum Links: science, mathematics, health

Introducing the Magazine

Setting the Scene

Tell the students that this issue of *High Wire Magazine* is about food. It includes selections about food myths, the process of digestion, the history of people's eating habits, and the nutritional values of various foods.

Making Connections

Explain to the students that the magazine looks at how food affects our well-being, our thinking, and also how we feel.

Prompt a discussion by asking questions such as the following:

- What does "You are what you eat" mean to you? Have you heard this expression before? Is it true?
- What foods do you think are nutritious?
- Why is it important to eat these foods?
- What happens to food once you have eaten it?
- What do you think happens to people when they don't eat nutritious foods?
- Can you tell when a person has been eating a balanced diet? How?

Lesson Focus

Making connections
Asking questions
Evaluating information

About This Selection

Food is vital to how a person feels and functions. This article describes each stage in the process of digestion and includes features on such issues as food allergies and school cafeterias.

Word Talk

Glossary words: *digest, gland, saliva, enzymes, corrosive, mucus, carbohydrate*

Other vocabulary: *hypothalamus, signal, stimulates, serotonin, chemical, absorb, esophagus, heartburn, intestine, villi, liver, glycogen, bile*

Probable Passage

The teacher lists key words from the selection and the students discuss the words. They may be asked to arrange the words into categories. The students then use the words to fill in the blanks of a Probable Passage (one that might occur in the text) or to write their own Probable Passage.

Say Something

Students work in pairs, taking turns to read the sections of the text aloud. The reader pauses occasionally to say something about the text, for example, a prediction, question, comment, or connection.

A Question of Digestion

page 2

Before Reading

Making Connections

Ask questions such as the following:

- What does “digestion” mean?
- How do you think the body digests food? Share your ideas with a partner.

Asking Questions

Have the students work in pairs to brainstorm questions that they would like to ask and investigate. Share, discuss, and record these questions on chart paper or a transparency.

Probable Passage

Explain that it is useful to find the definitions for the vocabulary in Word Talk before reading the text. Divide the students into small groups and assign each group several words from Word Talk. Allow the groups five minutes to find as many definitions as they can. Share and discuss these, including any definitions not found. (Have dictionaries and thesauruses available.) Hand out copies of **BLM 1, Probable Passage**. Ask the students to complete the passage using the list of words.

During Reading

★Say Something

Explain the Say Something activity to the students. Model this strategy by reading aloud page 2. Have the students focus on their prior knowledge about digestion and decide whether the new information changes or confirms their beliefs. For example, after reading page 2, you might say, “I knew that food was fuel for the body, but I didn’t know that it affects my fingernails.” Have the students use a Double Entry Journal to record their comments.

Share the students’ thinking and journals together. Ask questions such as the following:

- Was there anything that you thought was untrue?
- Why did you think it was untrue?
- What changed your thinking in this article? What did you learn from this article?

Double/Triple Entry Journal

Two- or three-column charts are used for students to record parts of the text and their inferential or critical thinking about each part.



Assessment Tip

Look for the students who are able to assess whether the information that they read is reasonable, accurate, and consistent with what they already know or believe about the topic.

After Reading

Asking Questions

Have the students reflect on the questions that they asked before reading, and cross off the questions that were answered. Encourage them to investigate unanswered questions by using a library or the Internet.

Graphic Organizer

Explain to the students that they are going to create a chain of events to show the journey that food takes through the digestive system. Have them write the name of each stage of digestion inside a box. They can then sketch a picture of the body to show what is happening. Tell them to clearly label important parts of the body, such as the liver and stomach.

Creative/Aesthetic Response

The students could turn the digestive journey into a play or a dance. The characters are the parts of the body. Explain that the students will need to use body and facial expressions to show what each character does at the different stages of digestion. For example, Stomach Acid would be a vicious and ferocious character, and Large Intestine would be sluggish and slow.

Strategy Focus

page 10

Key Reading Strategy: Evaluating Information

Evaluating information means carefully examining the messages in a text and looking for evidence of the author’s beliefs, values, and points of view. When readers receive new information, they draw conclusions about the validity of that information by comparing it with what they already know and then deciding whether it makes sense. Evaluating information enables readers to become more critical of what they read.

Reading and Discussing the Page

Have the students read page 10. Ask questions such as the following:

- What information can you trust? Why?
- How can you find out whether the person providing the information is an expert?
- How can you check whether information is true or false?

Have the students work in pairs to share and discuss their responses.

Ask the students to read through the first two questions of Try It Out. In pairs, they can share and discuss their ideas. Read aloud the second part, ensuring that the students understand what they have to do when they go on to read “Food Myths.” Ask them to complete **BLM 2, Evaluating Information**.

When they have finished reading, have the students share their opinions. Explain that they must justify their answers using their prior knowledge and the information from the text. Prompt a discussion by asking questions such as the following:

- What myths changed your thinking? How?
- How do you know that this information is reliable?
- Are there any food myths that you still believe to be true? Why do you think that the information is true?
- How might you check that this information is correct?

Lesson Focus

Making connections
Evaluating information
Asking questions

About This Selection

Some information about food can be misleading. This article provides the facts to either debunk or validate several popular food myths.

Word Talk

Glossary word: *fatigue*
Vocabulary: *antioxidants, tryptophan, digestive system, superhuman strength, oxalic acid, nutritious, gelatin*



Assessment Tip

Look for the students who are able to assess whether the information that they read is reasonable, accurate, and consistent with what they already know or believe.

Food Myths

page 12

Before Reading

Making Connections

To activate the students' prior knowledge and experiences about food myths, ask questions such as the following:

- What is a food myth?
- What food myths do you know about? Share and write these onto chart paper or an overhead transparency.
- What food myths do you believe? (Circle the myths that a majority of students think are true in one color and the myths they are unsure about in another color.)
- How can you find out whether these myths are true or false?

During Reading

★Think Aloud

Focus the students on the key reading strategy Evaluating Information by asking them to compare what they already know with the information in the text. Explain that this will help them to make a decision about the validity of the food myths. As you read aloud the first paragraph on page 12, model Think Aloud to help make the text more meaningful. For example, you might say, "I know that it's true that a watermelon won't grow in your stomach if you swallow a watermelon seed. I have swallowed watermelon seeds before, and nothing has ever happened to me!"

Explain to the students that as they read the article, they will use an I Read, I Think, Therefore chart to organize their thoughts. This will enable them to see the comparisons between the new information and their own thinking. Read aloud each myth so that the students can complete the first two columns of the chart without seeing the answers in the text. Tell them to complete the final column as they read. They should write whether the myth is true or false and use evidence from the text.

Discuss the students' findings and ask:

- Were there any answers that surprised you?

Have the students look closely at the layout of the myths on the pages. Ask:

- What features has the designer used to make this article easy to read?

Share and discuss the students' responses. You could point out the following design features:

- different-colored subheadings;
- the words "fact or fiction?" in a yellow box next to each explanation;
- a separate box for each explanation;
- brightly colored images next to each myth and explanation.

After Reading

Asking Questions

Prompt the students to ask further questions about myths using the five Ws (who, what, where, when, why) as well as how. Write the questions onto chart paper or a transparency. Activate the students' thinking by asking questions such as the following:

- Which myths would you like to know more about?
- Do you think some of these myths need further research before deciding whether they are true or false?

In small groups, the students can search for the answers and record them next to each of the questions. Discuss their findings and any unanswered questions.

Creative/Aesthetic Response

The students could invent a quiz show that tests people's knowledge about common myths. Explain that the show must include plenty of questions about food myths. (Some can be made up.) The students will need to allocate a host, contestants (possibly teachers or other students), and an audience.

Lesson Focus

Making connections
Making inferences
Making predictions

About This Selection

In this email exchange, a student asks a school principal why fries and other foods have disappeared from the school cafeteria. The principal explains why the new menu is a change for the better.

Word Talk

Vocabulary: *pun*,
nutritionist, *processed*

Anticipation Guide

An Anticipation Guide contains several statements that relate to the text topic or theme. Students use the guide to prompt their thinking before they read the text.



Teaching Tip

Encourage the students to make inferences by prompting them to use their own knowledge as well as the words and pictures in the text.

Ask an Expert: Food Types

page 16

Before Reading

Anticipation Guide

Hand out copies of **BLM 3**, Anticipation Guide, and explain that it contains statements relating to food in a school cafeteria. Before reading, the students' task is to indicate whether they strongly agree, agree, disagree, or strongly disagree with each statement. After reading, have the students complete the final column. Encourage them to share and justify their final decisions, including their reasons why some responses have changed.

Making Connections

To support the students in making connections, ask questions such as the following:

- What do you like to eat when you go to a cafeteria?
- What kinds of food are available in your usual cafeteria?
- Have you noticed any changes to the food in that cafeteria? If so, what has changed?
- What healthy foods are available?
- In your view, what foods at the cafeteria are unhealthy?

During Reading

Making Inferences

Ask the students to read pages 16 and 17 independently. Point out the pun “we’re fed up” in the first email. Ask questions such as the following:

- What do you think Megan, Raj, Ellie, Marcus, and Jake normally like to eat at the school cafeteria?
- Why do you think that the change in menu was such a shock?

Making Predictions

Have the students reread page 17. Ask questions such as the following:

- How will the students respond to Principal Leroy’s email?
- Do you think the changes to the menu will affect the students’ health or their ability to concentrate? What evidence supports your view?

After Reading

Survey

Have the students survey others in the school about the healthy food options they would like to see on a school cafeteria menu. The students can then discuss the results and write a proposal to the principal.

They can collect the data on a chart with the heading “Food Options” in the left column and the heading “Tally” in the right column. They will need to add the tallies to find the total.

Creative/Aesthetic Response

Using the survey results above, the students could draw up a healthy menu for a school cafeteria. Their menu should entice others to try the healthier options on offer.

Extra Help

Have available a variety of magazines or recipe books containing healthy food options to give the students inspiration and encourage new ideas.

Lesson Focus

Text features
Evaluating information
Making judgments
Making connections

About This Selection

The discovery of preserved prehistoric bodies, or “bog bodies,” has helped scientists to piece together an understanding of the prehistoric diet. This article describes early eating habits and health.

Word Talk

Glossary words:
nomads, hand-to-mouth, Neanderthal, Syria
Other vocabulary: *bog, chamomile, fossils, debris, archeologists, preserved, decaying, parasitic, gruel, arthritis, malnutrition*

Marking the Text

Students can use sticky notes or plain paper bookmarks to mark their thoughts, questions, predictions, or comments.



Teaching Tip

Encourage the students to read difficult sections of text and stop afterward to analyze the strategies that they used to gain meaning from the text.



Assessment Tip

Look for the students who are able to assess whether the information that they read is reasonable, accurate, and consistent with what they already know or believe about the topic.

From Hand to Mouth

page 18

Before Reading

Text Features

Using the images on pages 18 to 21, have the students predict what this article will be about. Discuss the images that led them to make these predictions.

K-W-L Chart

To encourage questioning, have the students draw a K-W-L chart. Discuss what they already know about eating in the prehistoric age and what they want to know about it. Refer them to the five Ws (who, what, when, where, why) as well as how to help them compose their questions. During reading, have the students complete the final column by recording new information they have learned.

During Reading

★Marking the Text

Revisit the strategy Evaluating Information by reminding the students to check the validity of new information by comparing it with what they already know. Have the students use sticky notes to mark any uncertainties as they read. Ask them to share any information that they are unsure about or find difficult to believe. Encourage them to investigate their uncertainties using resources such as a library, the Internet, or experts in the community.

Graphic Organizer

A Plus-Minus-Interesting (PMI) chart is an effective tool for evaluating information and making judgments. Have the students work in pairs to carry out a Think Aloud activity as they read through the text. Ask them to complete **BLM 4, Plus-Minus-Interesting Chart**.

In the first column, they are to record the positive aspects of eating in the prehistoric age; in the second column, the negative aspects; and in the third column, the interesting aspects. Ask the students to use their PMI chart to discuss topics such as the following:

- eating a prehistoric diet;
- cooking in prehistoric times;
- hunting and gathering for food in prehistoric times.



Reflection and Metacognition

Ask the students to reflect on how marking the text and using a graphic organizer helped them to evaluate information in order to make a decision.

After Reading

Making Connections

Ask the students if they know about the eating habits of other civilizations. To encourage discussion, ask questions such as the following:

- Are the eating habits of some civilizations similar to the eating habits of the people in this article?
- Is a prehistoric diet similar to your diet? How?
- Why are people fascinated by the eating habits of other civilizations?
- What do the contents of people's stomachs tell us about their lives?

Role-play

Have the students carry out a role-play. Explain that one person will play the character of an interviewer and the other will play the Tollund Man. The interviewer should ask the Tollund Man to share his thoughts about food and survival three thousand years ago.

Graphic Organizer

page 22

Featured Graphic Organizer: Pie Chart

A pie chart is a helpful tool for understanding and viewing information clearly. The pieces of the pie represent the different categories of information. The size of each piece denotes the percentage, amount, or value of that category.

Reading and Discussing the Page

Discuss pie charts, asking questions such as the following:

- How is a pie chart useful?
- How is the information organized?
- How do you read the information?

Record the students' responses on chart paper or a transparency, then read aloud the explanation on page 22.

Refer the students to the pie chart on page 23. Ask questions such as the following:

- How do you know what this pie chart is about? (Remind them to take note of the title.)
- What do the colors tell you? How do you know? (Direct the students to the legend.)
- How do you know the amount, percentage, or value of each piece of the pie? How can you figure this out?

Have the students look back at the information they gathered in the survey after reading “Ask an Expert” and tell them that they will use it to create a pie chart, using **BLM 5, Pie Chart**. Explain the process of converting the data into percentages.

The students can then transfer this information onto the pie chart. (As an alternative, the students could use Excel or a similar software program to convert the raw data to a pie chart.)

Have the students share three important findings, such as the most and least popular foods.

Lesson Focus

Making inferences
Visualizing
Monitoring for meaning

About This Selection

Kris has to go on a wheat-free diet to find out if a food allergy is to blame for his eczema. When he goes on school camp with a classmate who has a peanut allergy, he realizes that his situation could be worse.

Word Talk

Vocabulary: *eczema, unconvincingly, sensitive, allergy, sympathetically, self-consciously, unenthusiastically, allergic reaction, adrenaline*

Scales

A Likert scale asks students to rate their level of agreement with a statement on a range from “strongly disagree” to “strongly agree.”



Teaching Tip

Have the students work in small groups with the questions written on chart paper. This will support those who are reluctant to share their thoughts or responses.

Rash Measures

page 24

Before Reading

Scale

Begin by clarifying the students’ understanding of skin rashes and eczema. Encourage them to share their knowledge and experience. Ask them to respond to the statements below on a range from “strongly agree” to “strongly disagree.”

- A skin rash is always caused by food.
- Eczema would be the worst thing to have in the world.
- Going on a special diet can cure a skin rash or eczema.
- You would have to give up eating all your favorite foods, such as ice cream, cakes, cookies, and bread, to fix a skin problem.

Visualizing

Explain that the students are going to read a story about a person who has eczema. That person has been told to stop eating certain foods in order to cure the problem. To grab the reader’s attention, the author has used language features such as similes and metaphors. Discuss similes and metaphors with the students. Read aloud the following examples from the text:

- “Our bathroom was like a drugstore ...”
- “The doctor was driving me crazy ...”
- “I felt my cheeks fire up.”
- “Cascade Falls looked like a cool place.”
- “The falls were a thick, white smudge ...”

Discuss with the students what they visualize when they hear this descriptive language. Have them draw a T-chart with the headings “Descriptive Language” and “What I Visualize.” Explain that as they read the story, they are to record similes and metaphors and draw a quick sketch of the mental image each example conjures up. Reflect on the effects of descriptive language by sharing their work after reading.

During Reading

Guided Reading

Have the students read pages 24 and 25 independently. Ask questions such as the following:

- Why was Kris feeling guilty about the food in his backpack?
- What was Mom doing when she “declared war on wheat”?
- Why do you think Kris didn’t want the school to know about his special diet?
- What do you predict will happen when Kris goes to camp?

Have the students turn to page 26 and read independently to the end of page 27. Ask questions such as the following:

- Why do you think Kris said that the bun was moldy? Do you think it was?
- What do you think Ms. Giles was holding in the air?

Have the students continue reading to the end of the story. Ask questions such as the following:

- What did Kimberly mean when she said, “You’re lucky you only get a rash”?
- What do you think Kimberly was about to say when she said, “If I eat anything that even comes close to a peanut, I ...”? Finish the sentence for her.
- Why do you think Mr. Mendez was feeling self-conscious?
- What was happening to Kimberly on page 30? Do you believe a cookie was really to blame? Explain.
- Why didn’t Kris’s eczema seem so bad after all?
- If Kris goes on another camp, do you think he will feel differently about the restrictions of his diet? Why/why not?

After Reading

Scale

Return to the questions from the Scale activity. Have the students discuss with a partner whether their initial responses have changed. Ask them to share the information that changed their prior beliefs.

Somebody Wanted But So

Have the students carry out a Somebody Wanted But So activity to summarize the different points of view of one of the following characters: Kris, Mom, Mr. Mendez, or Kimberly.

Somebody Wanted But So

Students choose a character from the text and create a sentence saying what the character wanted, what stands in the character’s way, and how the conflict was resolved.

Project

page 32

Featured Project: Survey-Research-Evaluate

Read aloud the introduction and project instructions on page 32. Ensure that the students understand what they need to do. Clarify any questions that they have.

Organize the students into pairs and have them brainstorm questions that they could ask about their classmates' eating habits. As they think of questions, remind the students to consider:

- the kinds of foods their classmates eat on special occasions;
- whether they eat three meals or graze throughout the day;
- what their favorite foods are;
- how often they eat junk food.

Record the questions on chart paper or a transparency. Have the students select a limited number of questions to use in their survey. Have the students carry out their survey in pairs.

Discuss how they can display the results of the survey. Share techniques and decide on the most efficient and effective way to do this.

Have plenty of books available for the students to use, as well as access to a library and the Internet. At the "Evaluate" stage, have the students use a T-chart to compare the survey results with the information they have gathered. Ask for volunteers to share their findings with the class.

Probable Passage

Name: _____ Date: _____

What to do:

- Read and discuss the following words from “A Question of Digestion” (*You Are What You Eat*, pages 2–9).
- Write the words from the list into the passage below. Check that the passage makes sense with the words you’ve added.

digest	bacteria	saliva
corrosive	mucus	hypothalamus
glycogen	esophagus	heartburn
intestine	bile	villi
serotonin	23-foot	bloodstream

The food that you _____ is very important to how you feel and function. It all starts when the _____ sends a signal to say that you are hungry. If you smell something tasty, parts of your mouth produce _____. When you begin to eat, a chemical called _____ is released to make you feel relaxed and happy. Once you’ve swallowed the food, it travels down a pipe called the _____. Sometimes, acid can rush back up, which causes a feeling called _____. This acid is very _____. The stomach is protected from the acid by a lining of _____. Inside the stomach, the acid breaks down food and kills _____. The liquid mixture then travels into the small _____, which is a _____ long tube. The food is broken down here. Thousands of tiny structures called _____ absorb nutrients from the food and pass them into your _____. The liver stores nutrients from the blood. It also stores a carbohydrate called _____, which you need for energy, and _____, which helps to digest fats.

Evaluating Information

Name: _____ Date: _____

What to do:

- Read the myths in the article “Food Myths” (*You Are What You Eat*, pages 12–15).
- Complete the grid below by writing down the myth, ticking the true or false box, and justifying your response with a reason.

Food Myth	True	False	Reason

Anticipation Guide

Name: _____ Date: _____

What to do:

- Before reading “Food Types” (*You Are What You Eat*, pages 16–17), read the statements in the table below. In the first column, write your response: agree, strongly agree, disagree, or strongly disagree.
- Read the article, and look back at the statements. Have you changed your ideas? Write your new response, or your original response, in the final column.

Response before Reading	Statements	Response after Reading
	Fries should be available at school cafeterias every day.	
	Pizza should always have plenty of vegetables on top of it.	
	Burger patties taste better when they are made from beans.	
	Students should be able to choose what is included on a school cafeteria menu.	

Plus-Minus-Interesting Chart

Name: _____ Date: _____

What to do:

- Read “From Hand to Mouth” (*You Are What You Eat*, pages 18–21) with a partner.
- Record on the chart below the positive aspects (Plus), the negative aspects (Minus), and the interesting aspects (Interesting) of eating in the prehistoric age.

Plus	Minus	Interesting

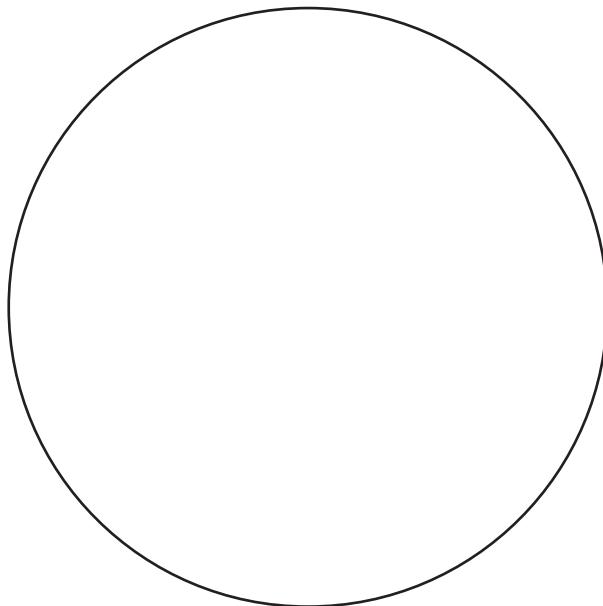
Pie Chart

Name: _____ Date: _____

What to do:

- Revisit the information gathered in the food survey. Figure out the percentage for each food option for your pie chart. To do this: divide the tally for each food option by the total number of tallies. Then multiply that number by 100 to get the percentage. (You will need to round the results to the nearest whole number).
- Record the food options and the percentages in the legend below. Use the percentages to complete your pie chart. Add a title and colors to show what each piece of pie represents.
- What does your pie chart tell you? Use the back of this page to write three findings.

Title: _____



Legend

Color	Food Options	Percentage