ITRI

INFORMATIONAL TEXT
READING INVENTORY

Grade 3

Teacher Guide

Developed by the Center for Innovation in Assessment in conjunction with the Indiana Department of Education

What's In This Booklet

The Grade 3 Informational Text Reading Inventory (ITRI) was developed to address the specific reading challenges that grade 3 students encounter as they move from reading largely narrative textbooks in grade 2 to being expected to read and comprehend more dense and content-driven text in grade 3.

This booklet contains all of the information teachers need to use the Grade 3 ITRI materials, including assessments, lessons and graphic organizers, answer keys, student scoring sheets, and a survey of the scientifically-based reading research that is foundational to ITRI.

Because all Grade 3 ITRI content comes from *Indiana's Academic Standards* for grade 3, the ITRI materials will enhance the subject matter teachers already teach. Students will always learn the reading skills within the context of their content area curriculum.

For a detailed list of all items, please go to the Table of Contents on page iii.

Table of Contents

About the Grade 3 Informational Text Reading Inventory (ITRI)

For a quick overview of how to get started, please turn to page 2.

How Grade 3 ITRI Works

Grade 3 ITRI is designed to help students learn how to read their content area textbooks better. ITRI's research-based materials will:

- help teachers identify class and student strengths/weaknesses in reading informational text.
- encourage students to use graphic organizers to classify and understand information.
- help students understand how to find information in a textbook.
- increase student ability, confidence, and performance in the content areas.
- reinforce the critical content identified in *Indiana's Academic Standards* for social studies, science, health, and mathematics.

Grade 3 ITRI lessons were written and designed to model Indiana's adopted textbooks. Because the lessons model the textbook syntactically, conceptually, and graphically, and because textbooks are not perfect, Grade 3 ITRI lessons also include:

- occasional grammatically incorrect phrases (And then…).
- graphics that do not always illustrate the topic at hand.
- vocabulary words that are sometimes used before they are defined.

For an outline of the titles, subject matter, or the standards indicators addressed in each lesson, please see Appendix C.

Four Components of Grade 3 ITRI

ITRI allows teachers to gather data to continually monitor student progress. Grade 3 ITRI has four distinct components:

1. Diagnostic Assessment: Grade 3 ITRI begins with an initial assessment, which inventories student reading behaviors and identifies student reading ability in five critical skill areas.
2. Introductory Text Features Lessons: Grade 3 ITRI offers an initial set of lessons that aid students in understanding the layout and features of content area textbooks.
3. Lessons and Graphic Organizers: Grade 3 ITRI lessons model how proficient readers read. The lessons emphasize four reading skill areas, and promote the use of graphic organizers. Each set of Grade 3 ITRI lessons has its own unique graphic organizer to aid students in internalizing the skills necessary to increase comprehension.
4. Follow-Up Assessment: Grade 3 ITRI ends with a final assessment, which allows the teacher to quantify reading improvement and to identify students who are continuing to have difficulty.

Overview of Grade 3 ITRI Assessments

There are two Grade 3 ITRI assessments. The Diagnostic Assessment is used to obtain baseline data about how well students read their textbooks before they complete the Grade 3 ITRI lessons. The Follow-Up Assessment is used after the completion of the Grade 3 ITRI lessons to monitor student achievement. Each assessment tests students' knowledge of the following reading skill areas:

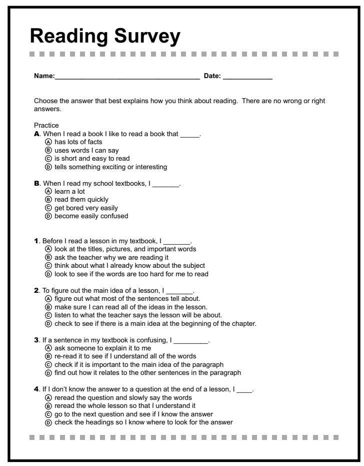
1. **Text Features**
2. **Main Idea**
3. **Problems and Solutions**
4. **Predicting**
5. **Key Words**

Before beginning the Diagnostic Assessment, students complete a Metacognitive Reading Strategies Survey which allows teachers to gather information about how students think about reading their textbooks.

1 Students Complete a Metacognitive Reading Strategies Survey

Students answer 10 questions about how they read their content area textbooks. There are no right or wrong answers.

Specific instructions for administering the reading survey can be found on page 12.



Reading Survey

Name:________________ Date: ________

Choose the answer that best explains how you think about reading. There are no wrong or right answers.

Practice

A. When I read a book I like to read a book that _____.
- Ⓐ has lots of facts
- Ⓑ uses words I can say
- Ⓒ is short and easy to read
- Ⓓ tells something exciting or interesting

B. When I read my school textbooks, I _______.
- Ⓐ learn a lot
- Ⓑ read them quickly
- Ⓒ get bored very easily
- Ⓓ become easily confused

1. Before I read a lesson in my textbook, I _______.
- Ⓐ look at the titles, pictures, and important words
- Ⓑ ask the teacher why we are reading it
- Ⓒ think about what I already know about the subject
- Ⓓ look to see if the words are too hard for me to read

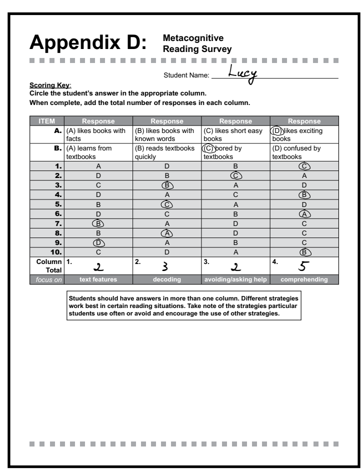
2. To figure out the main idea of a lesson, I _______.
- Ⓐ figure out what most of the sentences tell about.
- Ⓑ make sure I can read all of the ideas in the lesson.
- Ⓒ listen to what the teacher says the lesson will be about.
- Ⓓ check to see if there is a main idea at the beginning of the chapter.

3. If a sentence in my textbook is confusing, I _________.
- Ⓐ ask someone to explain it to me
- Ⓑ re-read it to see if I understand all of the words
- Ⓒ check if it is important to the main idea of the paragraph
- Ⓓ find out how it relates to the other sentences in the paragraph

4. If I don't know the answer to a question at the end of a lesson, I ____.
- Ⓐ reread the question and slowly say the words
- Ⓑ reread the whole lesson so that I understand it
- Ⓒ go to the next question and see if I know the answer
- Ⓓ check the headings so I know where to look for the answer

2 Teachers Review Survey Results

Teachers use the Metacognitive Reading Survey scoring sheet to collect data about student reading habits. A copy of the scoring sheet shown here is included as Appendix D.



Appendix D: Metacognitive Reading Survey

Student Name: Lucy

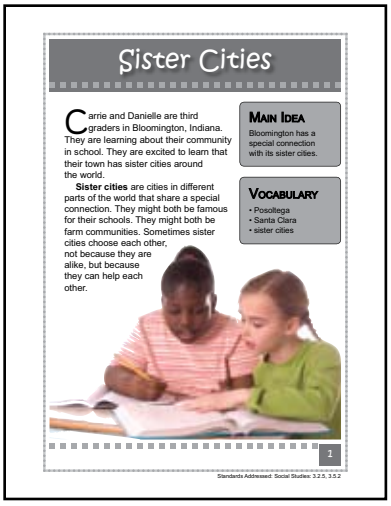
Scoring Key:
Circle the student's answer in the appropriate column.
When complete, add the total number of responses in each column.

ITEM	Response	Response	Response	Response
A.	(A) likes books with facts	(B) likes books with known words	(C) likes short easy books	(D) likes exciting books
B.	(A) learns from textbooks	(B) reads textbooks quickly	(C) bored by textbooks	(D) confused by textbooks
1.	A	D	B	C
2.	D	B	C	A
3.	C	B	A	D
4.	D	A	C	B
5.	B	C	A	D
6.	D	C	B	A
7.	B	A	D	C
8.	B	A	D	C
9.	D	A	B	C
10.	C	D	A	B
Column Total	1. 2	2. 3	3. 2	4. 5
focus on	text features	decoding	avoiding/asking help	comprehending

Students should have answers in more than one column. Different strategies work best in certain reading situations. Take note of the strategies particular students use often or avoid and encourage the use of other strategies.

3 Students Complete the Diagnostic or Follow-Up Assessment

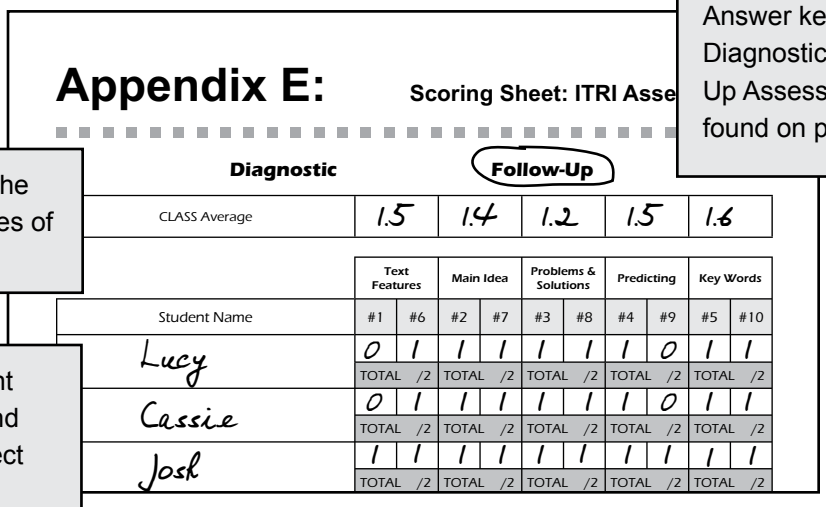
The lesson tools use the structure of textbook passages to evaluate student comprehension. Students read three pages of material and answer 10 multiple-choice questions about what they have read.



Specific instructions for administering the Diagnostic and Follow-Up Assessments can be found on page 13.

4 Teachers Score Assessments and Collect Data

There are 10 questions total in each assessment. Each of the five reading skill areas is assessed by two questions. In order to simplify scoring, reading skill areas are always assessed in the same order (so questions 1 and 2 will always assess Text Features, questions 3 and 4 will always assess Main Idea, etc.). A copy of the assessment scoring sheet shown here is included as Appendix E.



Appendix E: Scoring Sheet: ITRI Asse

Diagnostic | Follow-Up

CLASS Average	1.5		1.4		1.2		1.5		1.6	
	Text Features		Main Idea		Problems & Solutions		Predicting		Key Words	
Student Name	#1	#6	#2	#7	#3	#8	#4	#9	#5	#10
Lucy	0	1	1	1	1	1	1	0	1	1
TOTAL /2	TOTAL	/2	TOTAL	/2	TOTAL	/2	TOTAL	/2	TOTAL	/2
Cassie	0	1	1	1	1	1	1	0	1	1
TOTAL /2	TOTAL	/2	TOTAL	/2	TOTAL	/2	TOTAL	/2	TOTAL	/2
Josh	1	1	1	1	1	1	1	1	1	1
TOTAL /2	TOTAL	/2	TOTAL	/2	TOTAL	/2	TOTAL	/2	TOTAL	/2

Class Averages identify the strengths and weaknesses of the class as a whole.

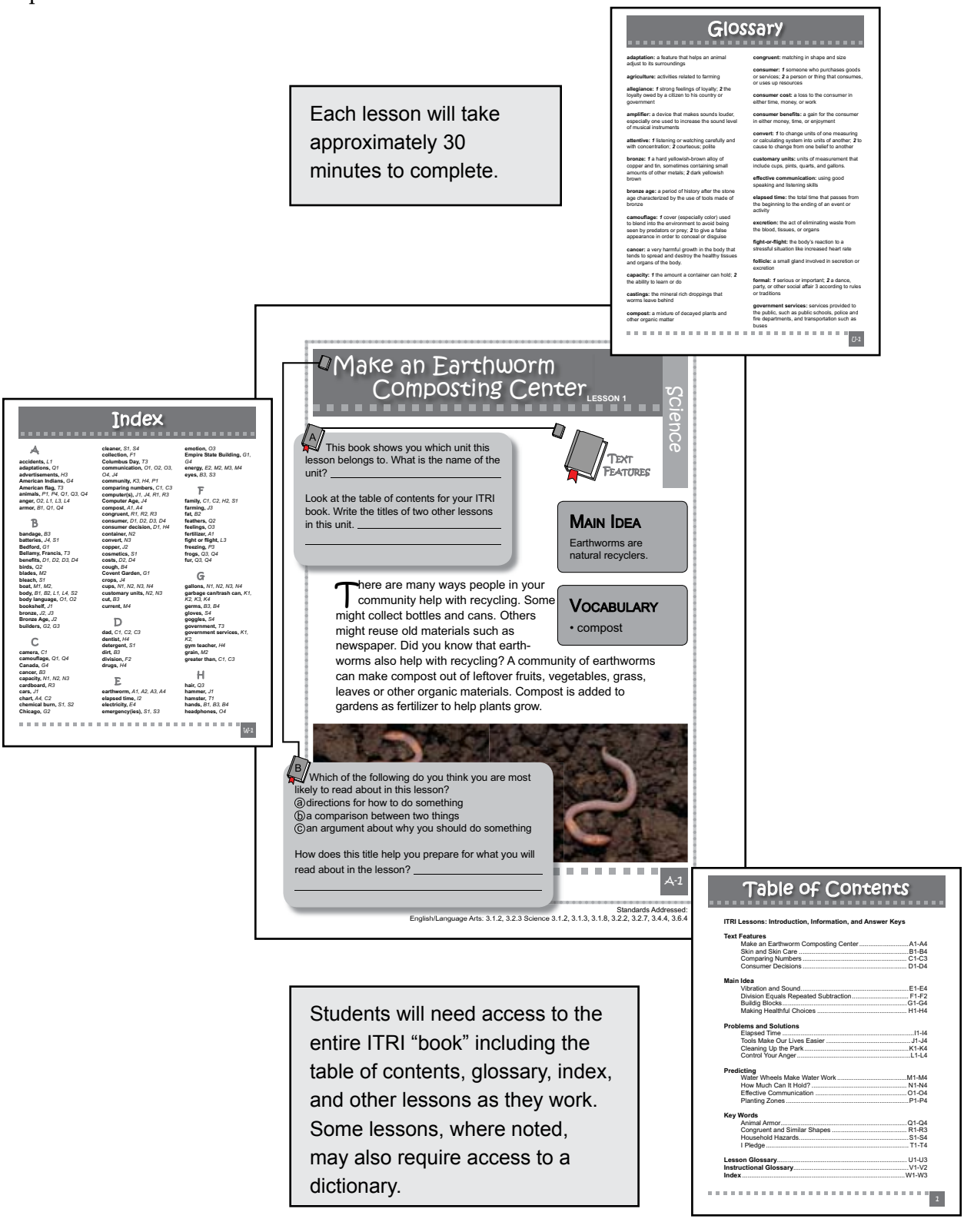
Teachers award one point for a correct response and zero points for an incorrect response.

Answer keys for the Diagnostic and Follow-Up Assessments can be found on pages 14–15.

NOTE: ***Students who are unable to read the diagnostic passages or who struggle to complete the questions may need assistance to complete ITRI lessons. Teachers may want to arrange for these students to work in small groups with the assistance of a teacher or classroom assistant***.

Overview of Grade 3 ITRI Text Features Lessons

Grade 3 ITRI begins with a set of introductory text features lessons which are designed to help students develop an understanding of how to use their content area textbooks. There are four lessons included in this section (one each for social studies, science, health, and mathematics). Additionally, these activities will require students to make use of a glossary, index, and other important features of textbooks.



Each lesson will take approximately 30 minutes to complete.

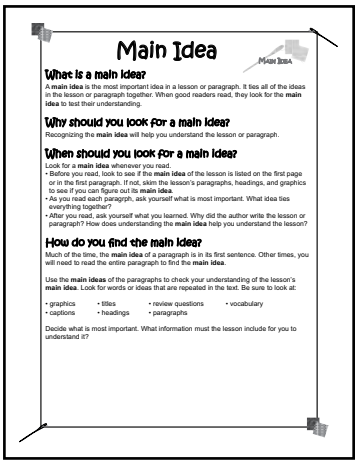
Students will need access to the entire ITRI "book" including the table of contents, glossary, index, and other lessons as they work. Some lessons, where noted, may also require access to a dictionary.

Overview of Grade 3 ITRI Lessons

There are four sets of Grade 3 ITRI lessons. Each set contains a Reading Skill Introduction, a graphic organizer, and three lessons (with content for social studies, science, health, or mathematics). Each of the sets focuses on one of the reading skill areas noted on page 2.

1 Students Read the Reading Skill Introduction

The Reading Skill Introduction prepares students for what they are to learn and helps them complete the lessons. Teachers may want to model certain strategies, make overheads of the Reading Skill Introductions, and pace student learning as appropriate to student ability.



Main Idea

What is a main idea?

A **main idea** is the most important idea in a lesson or paragraph. It ties all of the ideas in the lesson or paragraph together. When good readers read, they look for the **main idea** to test their understanding.

Why should you look for a main idea?

Recognizing the **main idea** will help you understand the lesson or paragraph.

When should you look for a main idea?

Look for a **main idea** whenever you read.

- Before you read, look to see if the **main idea** of the lesson is listed on the first page or in the first paragraph. If not, skim the lesson's paragraphs, headings, and graphics to see if you can figure out its **main idea**.
- As you read each paragraph, ask yourself what is most important. What idea ties everything together?
- After you read, ask yourself what you learned. Why did the author write the lesson or paragraph? How does understanding the **main idea** help you understand the lesson?

How do you find the main idea?

Much of the time, the **main idea** of a paragraph is in its first sentence. Other times, you will need to read the entire paragraph to find the **main idea**.

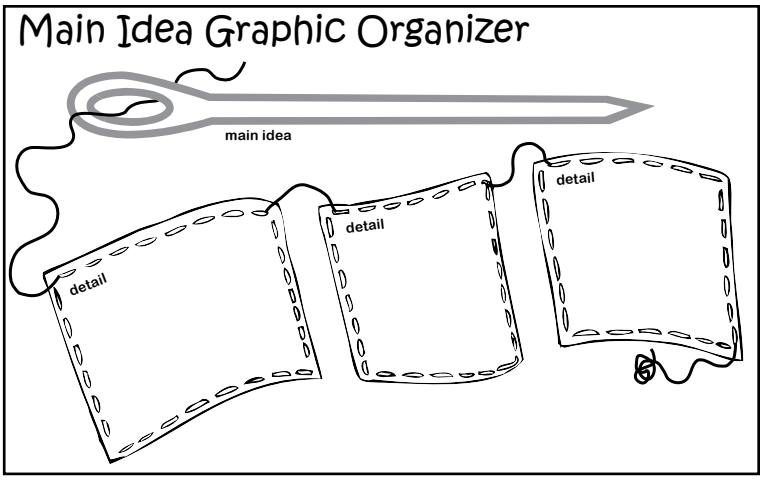
Use the **main ideas** of the paragraphs to check your understanding of the lesson's **main idea**. Look for words or ideas that are repeated in the text. Be sure to look at:

- graphics
- captions
- titles
- headings
- review questions
- paragraphs
- vocabulary

Decide what is most important. What information must the lesson include for you to understand it?

2 Teachers Introduce the Graphic Organizer

Each set of lessons includes one unique graphic organizer. Before students begin to work through the lessons, teachers should introduce the graphic organizer and model its use. A single lesson, "Hop to It," is provided for use with each of these graphic organizers.



Hop to It!

Science

Learning About Frogs

Have you ever watched a frog hop or heard its call? Frogs of all kinds can be found across the United States. They live in and near lakes, in swamps and muddy bogs, by clear streams, in woodlands with water, and even underground. What kinds of frogs live near you?

Main Idea
Frogs are amphibians.

Vocabulary
- amphibians
- habitat

What kind of animal is a frog?

All frogs are part of a group of animals known as amphibians. **Amphibians** (am FIH bee yuns) are cold-blooded and have moist skin without fur. The word amphibian comes from Greek words that mean *double life*. Amphibians begin their young lives looking one way and then look very different as adults. Frogs begin their lives as swimming tadpoles without any legs.

Are all frogs the same?

Frogs can be identified by their size, color, and call. The largest frog that lives in the United States is the Bullfrog. Bullfrogs are from 3½ to 8 inches long and are usually

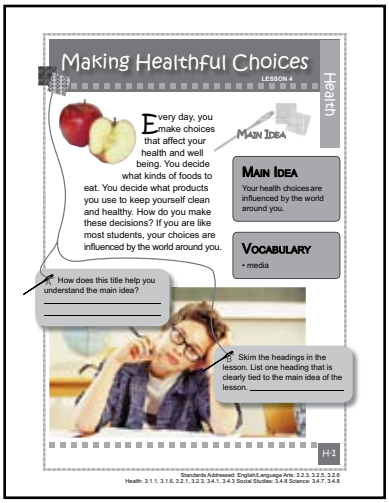
1

Health Standard: 3.5.1 , 3.5.3,3.5.4, 3.5.5

Instructions for using the graphic organizers with the "Hop to It" lesson can be found in Appendix G.

3 Students Complete a Lesson

Each lesson contains Guided Reading Boxes that ask students to answer questions as they read. All questions relate to the particular reading skill area. In the first lesson of each set, Guided Reading Boxes guide students through the use of the graphic organizer.

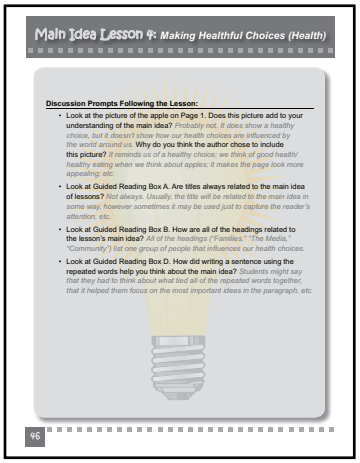


Each lesson will take approximately 30 minutes to complete.

Each set of lessons is arranged in order of ascending complexity. Although this is the recommended order of Grade 3 ITRI materials, teachers should feel free to rearrange these lessons as they see fit.

4 Teachers Lead a Class Discussion and Grading Session

Teachers facilitate the transfer of learning by engaging students in a discussion of their answers. Students score their own lessons. Each lesson has 10 possible points. Discussion Prompts Following the Lesson are provided to extend the discussion. These prompts may be related to lesson content and/or the reading skill.



Each class discussion will take approximately 20-30 minutes to complete.

5 Teachers Record Scores and Review Student Answers

The way in which students answered questions informs teachers of each student's skill level and reading ability.

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Teachers use data to identify those students who may benefit from Additional Practice or Extension Activities which are provided in the answer keys for each lesson (See pages 10 -11).

Students who consistently score 90% or above would likely benefit from Extension Activities.

Students who consistently score below 60% would likely benefit from Additional Practice Activities.

Appendix F: **Scoring Sheet: Grade 3 ITRI Lessons**

Skill Area: *Circle one* — *Text Features* | *Main Idea* | *Problems & Solutions* | *Predicting* | *Key Words*

Student Name	Social Studies	Science	Health	Mathematics
Cassie		8	8	9
Martin		6	6	8
John		6	6	7
Dominique		7	7	7
Tamika		9	8	9
Claire		8	8	6
Antonio		10	8	9
Connor		5	5	6
Lucy		7	7	8
Abigail		9	10	9

Key to Lesson Layout

The following pages have been reproduced from the Grade 3 ITRI lessons. See page 9 of this document for a description of each lettered item below.

Animal Armor (A)

LESSON 1

Science (B)

Animals have different skin coverings. These coverings, or adaptations, serve many different purposes. An **adaptation** is any feature that helps an animal adjust to its surroundings.

Key Words (C)

Discover (D)

Animals have different skin coverings. These coverings serve many purposes

Vocabulary (E)

- adaptation
- camouflage

A This paragraph includes one vocabulary word. You will use your **graphic organizer** to study it carefully. First, find the bolded word and write it on the fish. This is the word you want to "hook" or understand. go! (F)

Now look at the paragraph. Choose the strategy below that makes the most sense and write it in the "hook."

ⓐ **Look in the dictonary/glossary.**
ⓑ **Use clues or information from the paragraph.**
ⓒ **Break the word into parts that you already know.** go! (H)

Now write what you learned or figured out on the fishing line. You want to be able to remember what this word means, so **connect yourself**. Write a sentence about your own life using the word *adaptation*. go!

N-1

Standards Addressed: English/Language Arts: 3.1.4, 3.1.6, 3.1.7, 3.2.3, 3.4.4
Science: 3.4.1, 3.4.3 (G)

Key to Lesson Layout

The following list of elements in the Grade 3 ITRI lesson layout corresponds to the lesson page reproduced on the previous page.

A **Lesson Title:** The title of each lesson is listed in oversized print on the student page.

B **Subject Indicator:** This "tab" indicates whether the lesson's content is drawn primarily from social studies, science, health, or mathematics.

C **Reading Skill Area Icon** (Text Features, Main Idea, Problems and Solutions, Predicting, or Key Words)**:** This icon allows readers to quickly identify which reading skill area the lesson emphasizes.

D **Main Idea Box:** This box lists the lesson's main idea. It is labeled 'Main Idea' in social studies, 'Discover' in science, 'Focus' in health, and 'Find Out' in mathematics.

E **Vocabulary Box:** Found under the Main Idea Box, this box lists all vocabulary words that students are expected to learn as they complete the lesson. These words appear in bold print where they are defined. This box is labeled "Vocabulary" in social studies, science, and health, and "Math Words" in mathematics.

F **Guided Reading Box:** These boxes appear outside or on top of the lesson's text and model the strategies that proficient readers use. The boxes contain reading skill questions. Questions will often refer back to the Reading Skill Introduction. In the first lesson of each reading skill set, these questions will guide students in using the graphic organizer. Later lessons will focus on comprehension and mastery of the reading skill. Icons are used to direct the students to the relevant text.

G **Standards Footer:** The footer appears on the first page of every lesson. It identifies the standards in social studies, science, health, and mathematics that are addressed by the lesson.

H **Graphic Organizer Icon (**  **):** This icon appears wherever a student needs to write information on his or her graphic organizer.

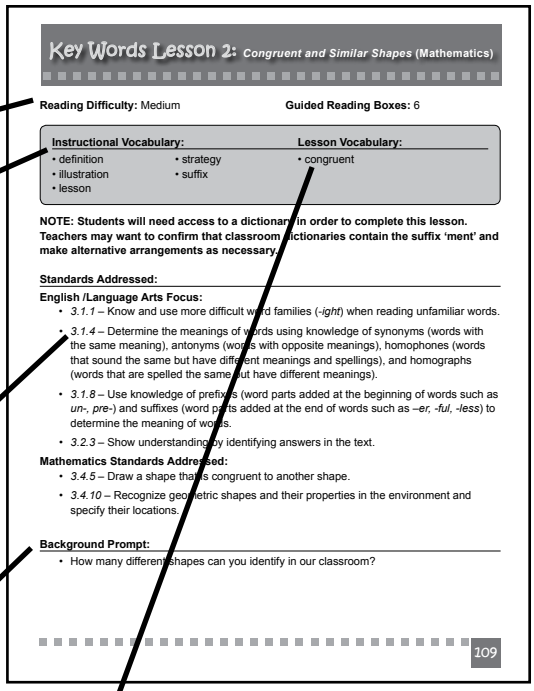
Key to the Teacher Manual Layout

Reading Difficulty / Guided Reading Boxes: This section rates the lesson's reading difficulty as either low, medium, or high, and indicates the number of Guided Reading Boxes.

Instructional Vocabulary: This section lists all of the text feature vocabulary that students will need to know in order to complete the lesson. All of these terms also appear in the text feature glossary.

Standards Addressed: This section lists the Indiana Academic Standards Indicators addressed in the lesson.

Background Prompt: This section provides a prompt to help teachers activate student thinking about the topic of the lesson.



Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)

Reading Difficulty: Medium **Guided Reading Boxes:** 6

Instructional Vocabulary:
- definition
- illustration
- lesson
- strategy
- suffix

Lesson Vocabulary:
- congruent

NOTE: Students will need access to a dictionary in order to complete this lesson. Teachers may want to confirm that classroom dictionaries contain the suffix 'ment' and make alternative arrangements as necessary.

Standards Addressed:

English /Language Arts Focus:
- *3.1.1* – Know and use more difficult word families (*-ight*) when reading unfamiliar words.
- *3.1.4* – Determine the meanings of words using knowledge of synonyms (words with the same meaning), antonyms (words with opposite meanings), homophones (words that sound the same but have different meanings and spellings), and homographs (words that are spelled the same but have different meanings).
- *3.1.8* – Use knowledge of prefixes (word parts added at the beginning of words such as *un-, pre-*) and suffixes (word parts added at the end of words such as *–er, -ful, -less*) to determine the meaning of words.
- *3.2.3* – Show understanding by identifying answers in the text.

Mathematics Standards Addressed:
- *3.4.5* – Draw a shape that is congruent to another shape.
- *3.4.10* – Recognize geometric shapes and their properties in the environment and specify their locations.

Background Prompt:
- How many different shapes can you identify in our classroom?

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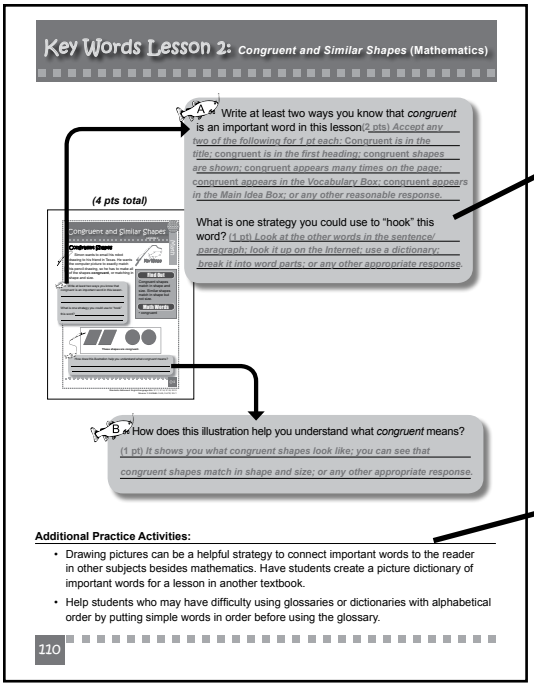
Lesson Vocabulary: This section lists all lesson vocabulary. All of these terms also appear in the student glossary.



Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)

A Write at least two ways you know that *congruent* is an important word in this lesson (2 pts) *Accept any two of the following for 1 pt each: Congruent is in the title; congruent is in the first heading; congruent shapes are shown; congruent appears many times on the page; congruent appears in the Vocabulary Box; congruent appears in the Main Idea Box; or any other reasonable response.*

What is one strategy you could use to "hook" this word? (1 pt) *Look at the other words in the sentence/paragraph; look it up on the Internet; use a dictionary; break it into word parts; or any other appropriate response.*

(4 pts total)

B How does this illustration help you understand what *congruent* means? (1 pt) *It shows you what congruent shapes look like; you can see that congruent shapes match in shape and size; or any other appropriate response.*

Additional Practice Activities:
- Drawing pictures can be a helpful strategy to connect important words to the reader in other subjects besides mathematics. Have students create a picture dictionary of important words for a lesson in another textbook.
- Help students who may have difficulty using glossaries or dictionaries with alphabetical order by putting simple words in order before using the glossary.

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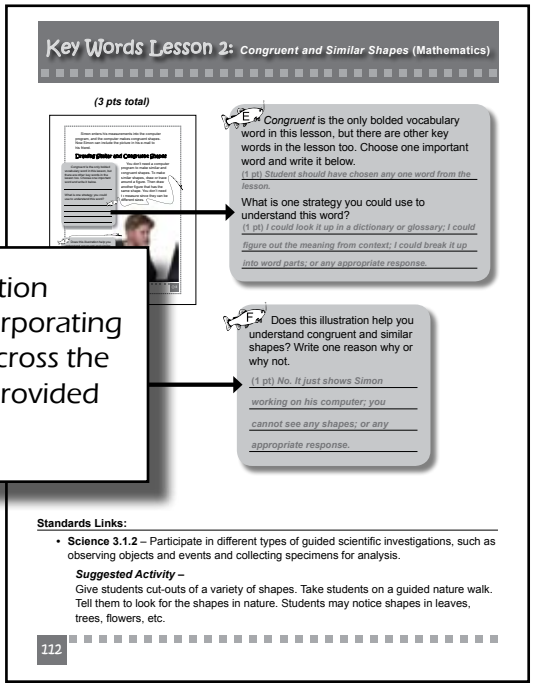
Answer Key: This section lists correct responses for each Guided Reading Box. Use these during the all-class scoring session.

Additional Practice Activities: This section suggests optional activities for students who continue to struggle with the reading skill after completing the lesson.

Key to the Teacher Manual Layout



Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)

(3 pts total)

E *Congruent* is the only bolded vocabulary word in this lesson, but there are other key words in the lesson too. Choose one important word and write it below.

(1 pt) *Student should have chosen any one word from the lesson.*

What is one strategy you could use to understand this word?

(1 pt) *I could look it up in a dictionary or glossary; I could figure out the meaning from context; I could break it up into word parts; or any appropriate response.*

F Does this illustration help you understand congruent and similar shapes? Write one reason why or why not.

(1 pt) *No. It just shows Simon working on his computer; you cannot see any shapes; or any appropriate response.*

Standards Links:

- **Science 3.1.2** – Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.

Suggested Activity –
Give students cut-outs of a variety of shapes. Take students on a guided nature walk. Tell them to look for the shapes in nature. Students may notice shapes in leaves, trees, flowers, etc.

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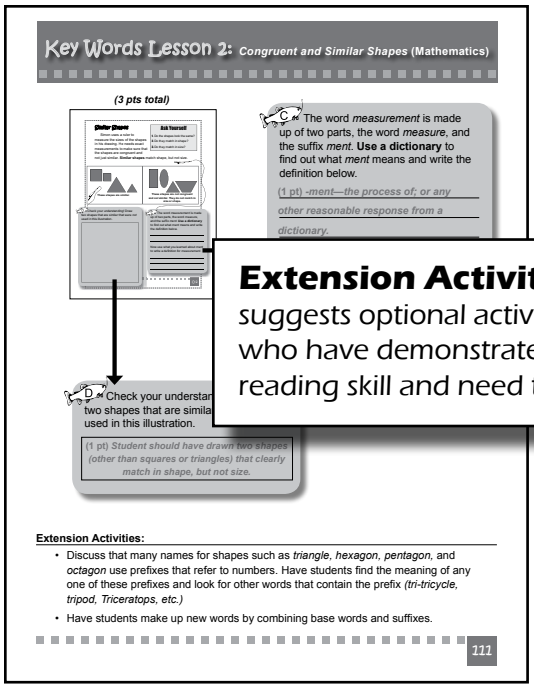
Standards Links: This section includes optional activities incorporating additional Indiana Standards across the curriculum. Internet links are provided for some activities as indicated.



Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)

(3 pts total)

C The word *measurement* is made up of two parts, the word *measure*, and the suffix *ment*. **Use a dictionary** to find out what *ment* means and write the definition below.

(1 pt) *-ment—the process of; or any other reasonable response from a dictionary.*

D Check your understan... two shapes that are simila... used in this illustration.

(1 pt) *Student should have drawn two shapes (other than squares or triangles) that clearly match in shape, but not size.*

Extension Activities:

- Discuss that many names for shapes such as *triangle, hexagon, pentagon,* and *octagon* use prefixes that refer to numbers. Have students find the meaning of any one of these prefixes and look for other words that contain the prefix *(tri-tricycle, tripod, Triceratops, etc.)*
- Have students make up new words by combining base words and suffixes.

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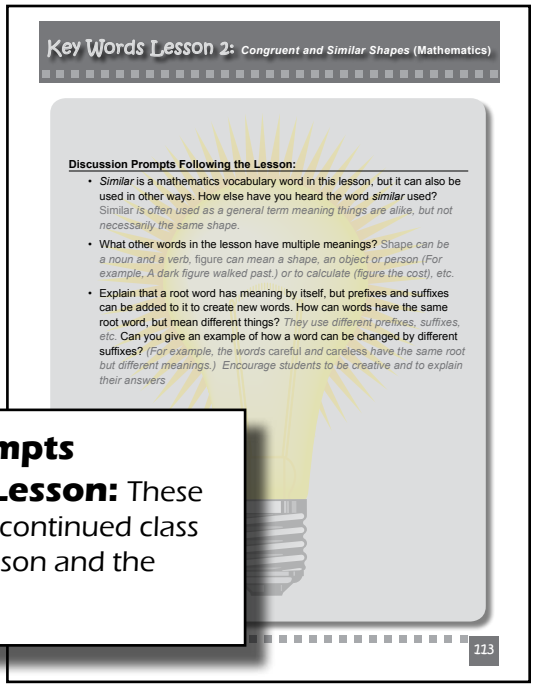
Extension Activities: This section suggests optional activities for students who have demonstrated mastery of the reading skill and need to be challenged.



Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)

Discussion Prompts Following the Lesson:

- *Similar* is a mathematics vocabulary word in this lesson, but it can also be used in other ways. How else have you heard the word *similar* used? Similar *is often used as a general term meaning things are alike, but not necessarily the same shape.*
- What other words in the lesson have multiple meanings? Shape *can be a noun and a verb,* figure *can mean a shape, an object or person (For example, A dark figure walked past.) or to calculate (figure the cost), etc.*
- Explain that a root word has meaning by itself, but prefixes and suffixes can be added to it to create new words. How can words have the same root word, but mean different things? *They use different prefixes, suffixes, etc.* Can you give an example of how a word can be changed by different suffixes? *(For example, the words careful and careless have the same root but different meanings.) Encourage students to be creative and to explain their answers*

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Discussion Prompts Following the Lesson: These prompts encourage continued class discussion on the lesson and the reading skill.

Instructions for Administering the Metacognitive Reading Strategies Survey

NOTE: This survey is only given with the Diagnostic Assessment. Teachers may wish to give the survey again during the Follow Up Assessment to gather information about if and how students' reading strategies have changed. It is not, however, intended to measure improvement.

Distribute the survey to the students. Alternately, teachers may want to read the survey aloud to students and either record their answers on the form or have them mark their own answers.

Say: This is a set of questions that will help me learn about how you think about reading. There are no right or wrong answers. When I tell you to begin, you will have as much time as you need to answer the questions. Take your time and choose the answers that best describe how you think when you read.

Write your name at the top of the survey. You may now begin.

Give students as much time as they need to complete the survey.

Instructions for Administering the Diagnostic and Follow-Up Assessments

NOTE: The intent of these tools is to gather accurate baseline and follow-up data. Teachers should not help students read or offer suggestions about how to figure out answers. Teachers should only encourage students to do their best.

Use these directions for both passages.

- **Diagnostic Assessment: "Sister Cities"**
- **Follow-Up Assessment: "Clarksville"**

Distribute the passage to the students.

Say: This is a tool that will help me know how well you can read your textbooks. When I tell you to begin, you will have as long as you need to read the lesson and answer the questions. Remember to take your time and read carefully. Pay close attention to everything on the page. When you are done reading the passage, answer the questions on the next page. There are 10 questions total. Do your best to answer the questions correctly. You may look back at the lesson as you work. If you do not know an answer, choose the one that seems the most correct.

Write your name at the top of the lesson. You may now begin.

Give the students as much time as they need to read the lesson and complete the questions.

Diagnostic: Sister Cities

Name: _____

1. Which of these is a heading in the lesson?
O Sister Cities
● Santa Clara
O Social Studies
O Standards Addressed

2. Which of these is *least* important to understanding the lesson?
O the Main Idea Box
O the Vocabulary Box
O the sister cities map
● the photo of the girls

3. What is the lesson's main idea?
O Carrie and Danielle are learning about sister cities.
O Carrie and Danielle are third graders in Bloomington, Indiana.
● Bloomington has a special connection with its sister cities.
O Bloomington and Posoltega have been sister cities since 1988.

4. What is the main idea of the section "Posoltega?"
O Nicaragua is a small country.
O Posoltega is smaller than Bloomington.
● Being sister cities has helped Posoltega and Bloomington.
O Hurricane Mitch destroyed much of Posoltega in 1998.

5. Why did the people of Bloomington *first* send food to Posoltega?
● Many people in Posoltega are poor.
O Much of Posoltega was destroyed by Hurricane Mitch.
O The population of Posoltega is too small to grow enough food.
O The farmers in Bloomington needed a place to send their extra crops.

6. What is one problem faced by the people of Santa Clara and Bloomington?
O They have dirty parks and universities.
O They don't have enough medicine.
● Their governments do not agree.
O Their towns are too small.

7. Which of these do you think is *most* likely to happen in the future?
O Carrie's family will move to Santa Clara.
O Posoltega will adopt Santa Clara as a sister city.
● People in Bloomington will learn more about life in Cuba.
O Posoltega will send medicine and supplies to Bloomington.

8. Based on what you know, which of the following would you be *most* likely to find in Posoltega?
O crowds of people
O beautiful parks
O tall buildings
● small homes

9. Which of these helps you understand the definition of *Posoltega*?
O *Posoltega* is pronounced POS-ul-TAY-gah.
O Looking up Posoltega in the table of contents.
O Noticing that *Posoltega* has ten letters.
● Reading "Posoltega is in Nicaragua."

10. How would you break the word *government* into word parts to understand it better?
O go-ver-ment
● govern-ment
O gover-nme-nt
O gov-ern-ment

4

Follow-Up: Clarksville

Name: _____

1. Which of these is a heading in the lesson?
O Clarksville: A Special Hoosier Community
O Clarksville played a role in Indiana History
● A Growing Community
O Standards Addressed

2. Which of these is *least* important to understanding the lesson?
O the Main Idea Box
O the Vocabulary Box
O the Clarksville map
● the photo of Soo Jin

3. What is the lesson's main idea?
O Soo Jin is proud of her community.
O The people of Clarksville are proud of their town.
● Clarksville has played an important role in Indiana history.
O During the Devonian Period there was a coral reef in what is now Clarksville.

4. What is the main idea of the section titled "A Coral Reef in Indiana?"
O The Falls of the Ohio is a special place to the people of Indiana.
● Clarksville was home to a coral reef 400 million years ago.
O People have found fossils at the Falls of the Ohio.
O A coral reef is a ridge of coral found in water.

5. Why did companies come to Clarksville after its slow years?
O Steamboats made travel easier.
● A new highway was built.
O The town had big neighbors.
O Clarksville was busy again.

6. What was one problem that the town of Clarksville faced?
O There were too many railroads coming through the town.
O The homes and businesses in the town were under water.
● There were not enough people living in the town.
O The town did not have enough neighbors.

7. Which of these people do you think would be *most* likely to visit the Falls of the Ohio for work?
● a fossil collector
O a police officer
O a fisherman
O a car maker

8. Based on what you know, which of the following would be *most* likely to bring new businesses to a city?
● airports
O coral reefs
O large fossil beds
O American Indians

9. Which of these helps you understand the definition of *Devonian*?
O *Devonian* is pronounced de-VO-nee-an
O Looking up Devonian in the table of contents.
O Noticing that *Devonian* has eight letters.
● Reading "400 million years ago, during the Devonian Period…"

10. How would you break the word settlement into word parts to understand it better?
O sett-leme-nt
O se-ttlement
● settle-ment
O set-tle-ment

4

Text Features Lesson 1: *Make an Earthworm Composting Center* (Science)

Reading Difficulty: Medium **Guided Reading Boxes:** 6

Instructional Vocabulary:		Lesson Vocabulary:
• definition	• lesson	• compost
• glossary	• list	
• heading	• section	
• index	• table of contents	
	• title	

Note: Students will need access to the ITRI Table of Contents, Glossary, and Index in order to complete this lesson.

Standards Addressed:

English/Language Arts Focus

- *3.2.1* – Use titles, tables of contents, chapter headings, a glossary, or an index to locate information in text.
- *3.2.3* – Show understanding by identifying answers in the text.

Science

- *3.1.2* – Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- *3.1.3* – Keep and report records of investigations and observations using tools, such as journals, charts, graphs, and computers.
- *3.2.2* – Measure and mix dry and liquid materials in prescribed amounts, following reasonable safety precautions.
- *3.2.7* – Ask "How do you know" in appropriate situations and attempt reasonable answers when others ask the same question.
- *3.4.4* – Describe that almost all kinds of animals' food can be traced back to plants.
- *3.6.4* – Take, record, and display counts and simple measurements of things over time, such as plant or student growth.

Background Prompt:

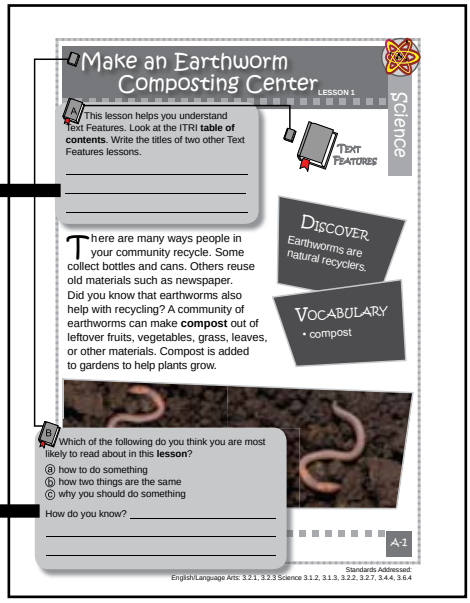
- Where can you find worms? What do you know about worms? What would you like to know about worms?

Text Features Lesson 1: *Make an Earthworm Composting Center* (Science)

A This lesson helps you understand Text Features. Look at the ITRI **table of contents**. Write the titles of two other Text Features lessons.

(2 pts) *Accept any two of the following for 1 pt each: "Skin and Skin Care," Comparing Numbers," "Consumer Decisions."*

(4 pts total)



B Which of the following do you think you are most likely to read about in this **lesson**? (1 pt)

● how to do something
ⓑ how two things are the same
ⓒ why you should do something

How do you know?

(1 pt) *The title says 'make,' so you know you will be reading directions for how to make something, or any other appropriate response.*

Additional Practice Activities:

- If students continue to have trouble identifying and using text features, send them on a scavenger hunt for specific features such as titles or glossaries using their content area textbooks.
- Have students go back through the lesson and make a list of all of the text features they encounter. Have them write down what each adds to the lesson.
- Have students design a graphic for this lesson that uses worms and the recycling symbol. Ask them to explain how this graphic would help a reader learn information about composting. Ask where in the lesson the graphic should appear to be most helpful.

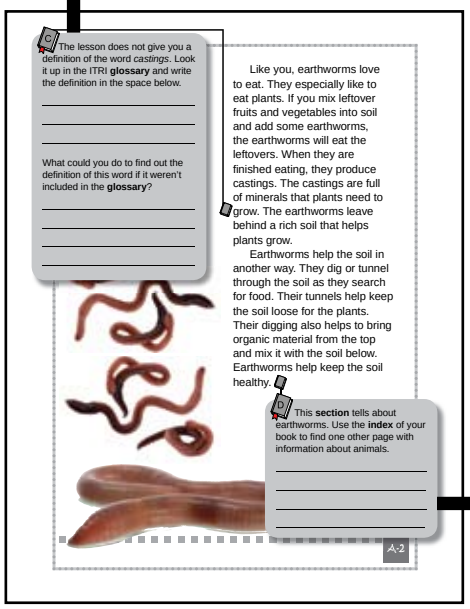
C The lesson does not give you a definition of the word *castings*. Look it up in the ITRI **glossary** and write the definition in the space below.

(1 pt) ***the mineral rich droppings that worms leave behind***

What could you do to find out the definition of this word if it weren't included in the **glossary**? _____

(1 pt) ***You could look in a dictionary, an encyclopedia, on the Internet; you could ask a friend or teacher; you could try to figure it out from context; or any other appropriate response.***

(3 pts total)



D This **section** tells about earthworms. Use the **index** of your book to find one other place with information about animals. _____

(1 pt) ***Accept any of the following: M4 ("Planting Zones"), N1 – N4 ("Animal Armor")***

Extension Activities:

- Have students choose a simple activity they enjoy or understand. Have them write thorough instructions in a simple multiple-step list. Then have them write a paragraph to explain the same information. Have them exchange lists and paragraphs and discuss which is easier to follow and why.
- Have students design a scavenger hunt of informational text features for their classmates or for another class in your building.

Text Features Lesson 1: *Make an Earthworm Composting Center* (Science)

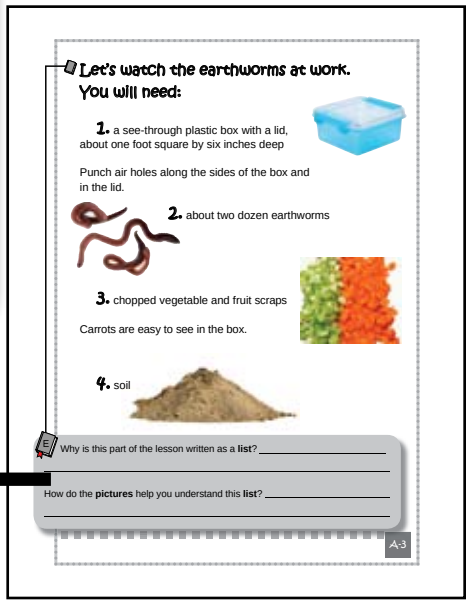
E Why is this part of the lesson written as a list?

(1 pt) *It is easy to see; you can get the information quickly; or any other appropriate response.*

How do the **pictures** help you understand this list?

(1 pt) *They show you what you will need; they illustrate each item on the list; or any other appropriate response.*

(2 pts total)



Standards Links:

- **English/Language Arts 3.4.3** – Create single paragraphs with topic sentences and simple supporting facts and details.
- **English/Language Arts 3.5.8** – Write or deliver a research report that has been developed using a systematic research process.
- **Social Studies 3.2.1** – Explain that people are citizens of their community, state, and nation, and explain the importance of good citizenship.
- **Science 3.18 –** Describe how discarded products contribute to the problem of waste disposal and that recycling can help solve this problem.

Suggested activity –
Recycling is a great way to show good citizenship. Have students research what recycling programs exist in your community. Have them each write a brief paragraph about their research and present it to the class. Ask them to think about what text features they would need to add if their paragraphs were going to be included in a textbook.

F

What word in this **heading** helps you know these are ordered steps, not just a list of items?

(1 pt) *how*

(1 pt total)

Discussion Prompts Following the Lesson:

- Look at the photograph on the bottom of Page A-1. What does this graphic add to the lesson? *It makes the lesson more interesting; it shows what an earthworm looks like; it shows that an earthworm lives in soil, etc.* Do you need to look at this graphic in order to understand the lesson? *No. It was included to make the lesson look more inviting. It does not add new information to the lesson.*
- Look at the first paragraph on Page A-2. What would be a good heading for this paragraph? *What do Earthworms Eat? Hungry Earthworms, etc.* How did you come up with your heading? *I thought about what was in the paragraph; I asked what question the paragraph answers, etc.*
- Look at Guided Reading Box D. The question asks you to look at the book's index. What is another text feature that can help you find out where you could read information about animals and their characteristics? *The table of contents could help you locate this information.*
- Look at Guided Reading Box E. Do you think a numbered list is easier to understand than a paragraph about the same thing? Why or why not? *Answers will vary. Ask students to explain and defend their answers.*
- How can you use time order words (*first*, *next*, *then*) to re-write the numbered list on page A-3? *First, get a see-through plastic box. Second, get about two dozen earthworms. Third/Next, get some chopped vegetable and fruit scraps. Last/fourth/finally, get some soil.*

Text Features Lesson 2: *Skin and Skin Care* (Health)

Reading Difficulty: Medium **Guided Reading Boxes:** 5

Instructional Vocabulary:

- chart
- definition
- glossary
- heading
- lesson
- paragraph
- vocabulary word

Lesson Vocabulary:

- oil glands
- pores

Standards Addressed:

English/Language Arts Focus

- *3.2.1* – Use titles, tables of contents, chapter headings, a glossary, or an index to locate information in text.
- *3.2.3* – Show understanding by identifying answers in the text.

Science:

- *3.4.9* – Explain that some diseases are caused by germs and some are not. Note that diseases caused by germs may spread to other people. Also understand that washing hands with soap and water reduces the number of germs that can get into the body or that can be passed on to other people.

Health

- *3.1.1* – Identify responsible health behaviors.
- *3.1.8* – Explain how childhood injuries and illnesses can be prevented or treated.
- *3.3.5* – Demonstrate the ability to use strategies to improve or maintain personal health and hygiene.
- *3.6.3* – Predict outcomes of positive health decisions.

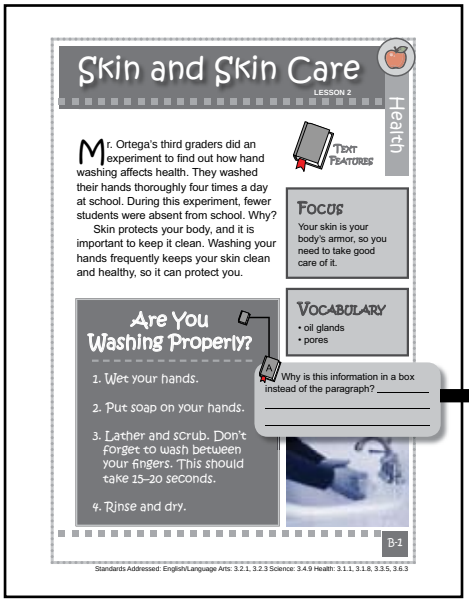
Background Prompt:

- Why do we have skin? How does it help us?

Text Features Lesson 2: *Skin and Skin Care* (Health)

A Why is this information in a box instead of the paragraph? (1 pt) *It makes it easier to see the information; it makes it possible to get the information quickly; it makes the page look more interesting; it sets off the information so you know it is important; it makes you pay attention to the information; or any other appropriate response.*

(1 pt total)

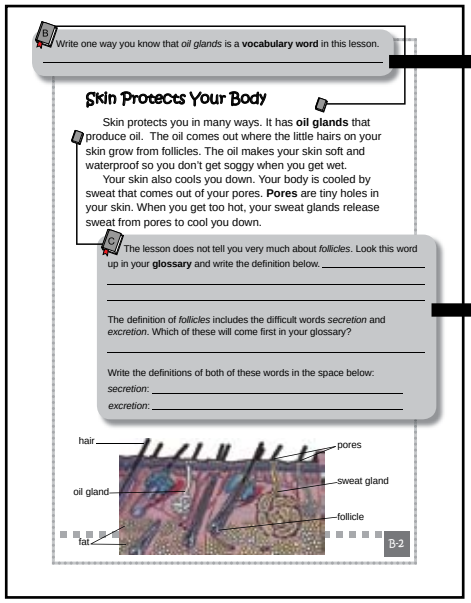


Additional Practice Activities:

- Have students examine a similar lesson from a health or science textbook. Have them compare the text features in that lesson to those in the ITRI lesson. Have them discuss what each feature adds to the lesson and why the authors likely chose each of them.

Text Features Lesson 2: *Skin and Skin Care* (Health)

(5 pts total)


B Write one way you know that *oil glands* is a **vocabulary word** in this lesson.

Skin Protects Your Body

Skin protects you in many ways. It has **oil glands** that produce oil. The oil comes out where the little hairs on your skin grow from follicles. The oil makes your skin soft and waterproof so you don't get soggy when you get wet.

Your skin also cools you down. Your body is cooled by sweat that comes out of your pores. **Pores** are tiny holes in your skin. When you get too hot, your sweat glands release sweat from pores to cool you down.

C The lesson does not tell you very much about *follicles*. Look this word up in your **glossary** and write the definition below.

The definition of *follicles* includes the difficult words *secretion* and *excretion*. Which of these will come first in your glossary?

Write the definitions of both of these words in the space below:

secretion:

excretion:

B-2

B Write one way you know that *oil glands* is a **vocabulary word** in this lesson.

(1 pt) ***It is in bold print; it is in the vocabulary box on the first page of the lesson; or any other appropriate response.***

C The lesson does not tell you very much about *follicles*. Look this word up in your **glossary** and write the **definition** below.

(1 pt) ***a small gland involved in secretion or excretion***

The **definition** of *follicles* includes the difficult words *secretion* and *excretion*. Which of these will come first in your **glossary**?

(1 pt) ***excretion***

Write the definitions of both of these words in the space below:

secretion: **(1 pt)** ***the process of releasing a substance from the blood or cells of the body***

excretion: **(1 pt)** ***the act of eliminating waste from the blood, body tissues, or organs***

Extension Activities:

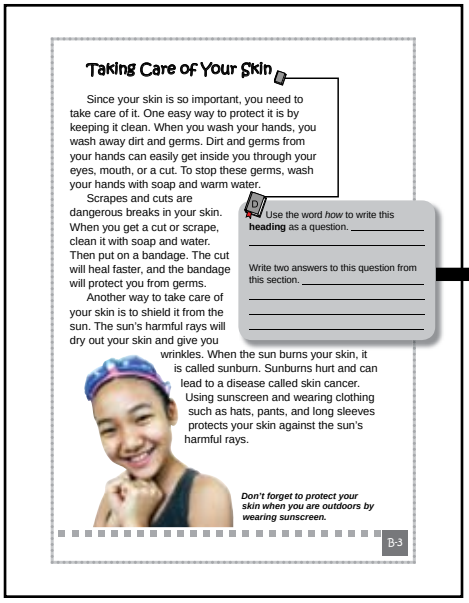
- Have students choose a lesson from a content area textbook and design new text features to go with it. Have them explain their choices to a partner or to the class.

D

Use the word *how* to write this **heading** as a question. (1 pt) *How can you take care of your skin?*

Write two answers to this question from this section. (2 pts) *Accept any 2 of the following for 1 pt each: keep it clean, wash your hands, clean scrapes with soap and water, cover scrapes with bandages, protect your skin from the sun, use sunscreen, wear clothing that protects skin from the sun.*

(3 pts total)



Taking Care of Your Skin

Since your skin is so important, you need to take care of it. One easy way to protect it is by keeping it clean. When you wash your hands, you wash away dirt and germs. Dirt and germs from your hands can easily get inside you through your eyes, mouth, or a cut. To stop these germs, wash your hands with soap and warm water.

Scrapes and cuts are dangerous breaks in your skin. When you get a cut or scrape, clean it with soap and water. Then put on a bandage. The cut will heal faster, and the bandage will protect you from germs.

Another way to take care of your skin is to shield it from the sun. The sun's harmful rays will dry out your skin and give you wrinkles. When the sun burns your skin, it is called sunburn. Sunburns hurt and can lead to a disease called skin cancer. Using sunscreen and wearing clothing such as hats, pants, and long sleeves protects your skin against the sun's harmful rays.

D

Use the word *how* to write this **heading** as a question. _____

Write two answers to this question from this section. _____

Don't forget to protect your skin when you are outdoors by wearing sunscreen.

B-3

Standards Links:

- **English/Language Arts 3.4.3** – Create single paragraphs with topic sentences and simple supporting facts and details.
- **Health 3.1.5** – Describe the basic structure and functions of the human body systems.

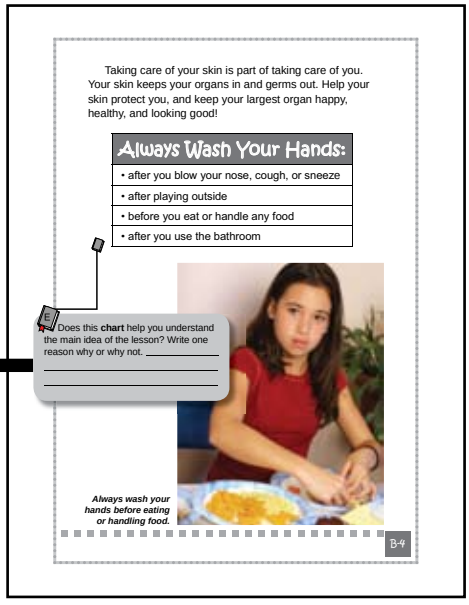
Suggested Activity –

Have students read about another body system. Have each student write a paragraph and create a graphic similar to the one on Page B-2 to explain it. Have students exchange paragraphs and graphics and discuss which is easiest to understand and why.

E

Does this **chart** help you understand the main idea of the lesson? Write one reason why or why not. **(1 pt)** ***Yes. It explains one way to take good care of your skin, or any other appropriate response.***

(1 pt total)



Taking care of your skin is part of taking care of you. Your skin keeps your organs in and germs out. Help your skin protect you, and keep your largest organ happy, healthy, and looking good!

Always Wash Your Hands:

- after you blow your nose, cough, or sneeze
- after playing outside
- before you eat or handle any food
- after you use the bathroom

E

Does this **chart** help you understand the main idea of the lesson? Write one reason why or why not. _____

Always wash your hands before eating or handling food.

B-4

Discussion Prompts Following the Lesson:

- Look at Guided Reading Box A. Do you think this information would be easier to understand if it was included in the paragraph? *Answers will vary. Have students explain and defend their answers.* Why is it important to look at this graphic? *It includes information that is not in the paragraph; it adds new information to the lesson; it gives important health information/ tips, etc.*
- Look at the heading at the top of Page B-2. How could you turn this heading into a question? *How does skin act as your body's armor?* What is the answer to this question? *It keeps you from getting soggy when you get wet; it protects you from getting too hot or too cold, etc.* How does turning the heading into a question help you read more carefully? *It tells you what information you need to look for as you read the paragraph; it tells you what will be most important in the paragraph, etc.*
- Look at Page B-3. What text features do you see on this page? *It has a heading and a graphic/photograph/caption.* Which do you think is more important? Why? *The heading is more important because it is directly related to the main idea of the lesson. The graphic is more for decoration. It does not add new information to the lesson. It does not help you understand what is most important in the lesson.*
- Look at the chart on Page B-4. How is it similar to the chart on Page B-1? *Both charts add new information to the lesson; both charts offer useful health tips; etc.* How is it different? *The chart on this page is not in a numbered list; it includes separate tips, not steps; the order of information on this chart does not matter; etc.*

Text Features Lesson 3: *Comparing Numbers* (Mathematics)

Reading Difficulty: Medium

Guided Reading Boxes: 6

Instructional Vocabulary:

- bold print
- chart
- glossary
- index
- lesson
- paragraph
- table of contents
- title

Lesson Vocabulary:

- greater than (>)
- less than (<)

Note: Students will need access to the ITRI Table of Contents, Glossary, and Index in order to complete this lesson.

Standards Addressed:

English/Language Arts

- *3.2.1* – Use titles, tables of contents, chapter headings, a glossary, or an index to locate information in text.
- *3.2.3* – Show understanding by identifying answers in the text.

Mathematics

- *3.1.5* – Compare whole numbers up to 1,000 and arrange them in numerical order.

Background Prompt:

- Is it possible to read things that aren't words? Discuss the use of symbols and images to express meaning such as a peace symbol, an equal sign, and a no smoking sign.

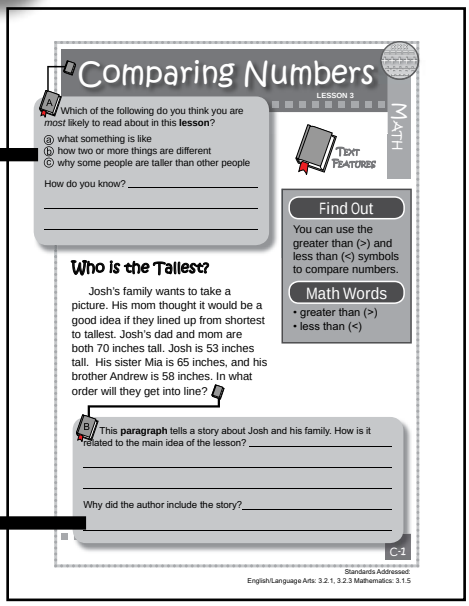
Text Features Lesson 3: *Comparing Numbers* (Mathematics)

A Which of the following do you think you are *most* likely to read about in this lesson? **(1 pt)**

ⓐ what something is like
● how two or more things are the same and different
ⓒ why some people are taller than other people

How do you know? **(1 pt)** ***The word* comparing *tells you what you will be reading about, or any other appropriate response.***

(4 pts total)



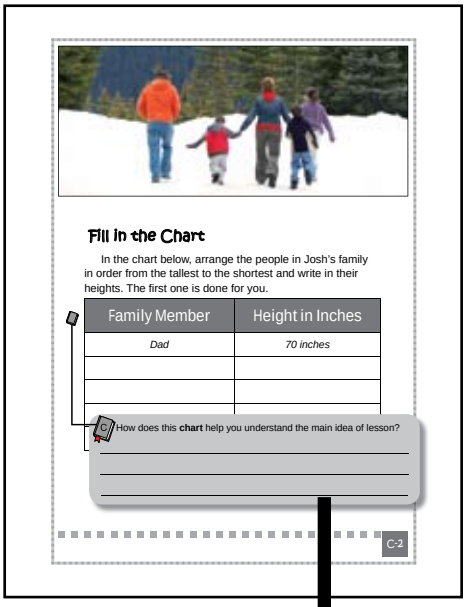
B This **paragraph** tells a story about Josh and his family. How is it related to the main idea of the lesson? **(1 pt)** ***Josh needs to find out which heights of members of his family are greater than the heights of other members of the family; Josh needs to compare numbers; it helps set up the problem that the main idea explains; or any other appropriate response.***

Why did the author include the story? **(1 pt)** ***It makes the lesson more interesting to read; it gets the reader's attention; it is a situation the reader can relate to; or any other appropriate response.***

Additional Practice Activities:

- Have students locate a lesson in their mathematics textbook that uses the symbols >, and <. Have them note the similarities and differences between their mathematics lesson and the ITRI lesson.

(1 pt total)



Fill in the Chart

In the chart below, arrange the people in Josh's family in order from the tallest to the shortest and write in their heights. The first one is done for you.

Family Member	Height in Inches
Dad	*70 inches*

How does this **chart** help you understand the main idea of lesson?

C-2

C How does this **chart** help you understand the main idea of the lesson?

(1 pt) ***It helps you compare numbers so that you can easily see whether they are greater or less than each other, or any other appropriate response.***

Extension Activities:

- Teach students how to use the table of contents to calculate the number of pages in a lesson. If Chapter 2 starts on page 10 and ends on page 18, how many pages are in the chapter? *There are nine pages.* Have students create a Chapter Lengths chart using the <> symbols and information they learned about the lengths of various chapters.

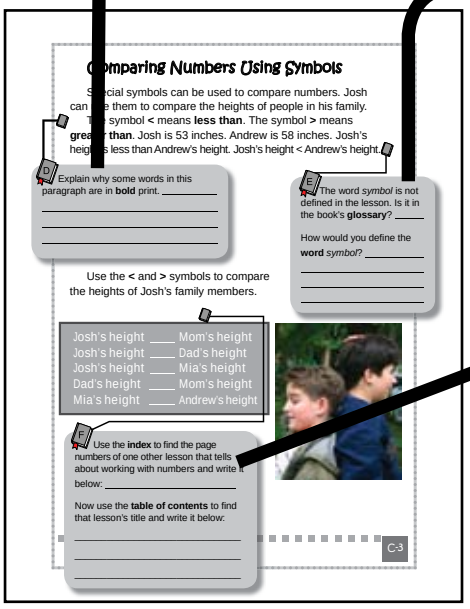
Text Features Lesson 3: *Comparing Numbers* (Mathematics)

D Explain why some words in this paragraph are in **bold** print. (1 pt) *They are in bold print because they are vocabulary words, or any other appropriate response.*

E The word *symbol* is not defined in the lesson. Is it in the book's **glossary**? (1 pt) *No.*

How would you define the word *symbol*? (1 pt) *something that stands for something else, or any other appropriate response*

(5 pts total)


Comparing Numbers Using Symbols

Special symbols can be used to compare numbers. Josh can use them to compare the heights of people in his family. The symbol **<** means **less than**. The symbol **>** means **greater than**. Josh is 53 inches. Andrew is 58 inches. Josh's height is less than Andrew's height. Josh's height < Andrew's height.

D Explain why some words in this paragraph are in **bold** print. _____

E The word *symbol* is not defined in the lesson. Is it in the book's **glossary**? _____

How would you define the **word** *symbol*? _____

Use the **<** and **>** symbols to compare the heights of Josh's family members.

Josh's height ___ Mom's height
Josh's height ___ Dad's height
Josh's height ___ Mia's height
Dad's height ___ Mom's height
Mia's height ___ Andrew's height

F Use the **index** to find the page numbers of one other lesson that tells about working with numbers and write it below: _____

Now use the **table of contents** to find that lesson's title and write it below:

C-3

F Use the **index** to find the page numbers of one other lesson that tells about working with numbers and write it below. (1 pt) *H1 - H4, L1 - L4, O1 - O3*

Now use the **table of contents** to find that lesson's title and write it below. (1 pt) *Accept any of the following: "Elapsed Time," "How Much Can It Hold?," or "Congruent and Similar Shapes."*

Standards Links:

- **Social Studies 3.2.3** – Discuss the reasons why governments are needed and identify specific services that governments provide.
- **Science 3.5.3** – Construct tables and graphs to show how values of one quantity are related to values of another.

Suggested Activity –

Find out the population of your community as well as those of three neighboring communities. Compare the populations and have the class put them in order from largest to smallest on a chart. Discuss how size affects the need for government services (Larger communities need more roads, street crews, stoplights, more schools, etc.).

Standards Links (continued):

- **Science 3.5.1** – Select and use appropriate measuring units, such as centimeters (cm) and meters (m), grams (g) and kilograms (kg), and degrees Celsius (°C).

  Suggested Activity –
  Have students record the kilogram weights of different books in the classroom and put them in order based on their weights. Discuss what makes books heavier and lighter (materials used, pages, etc.).

- **Science 3.1.3** – Keep and report records of investigations and observations using tools, such as journals, charts, graphs, and computers.
- **Science 3.1.4** – Discuss the results of investigations and consider the explanations of others.
- **Science 3.5.2** – Observe that and describe how some measurements are likely to be slightly different, even if what is being measured stays the same.
- **Science 3.6.4** – Take, record, and display counts and simple measurements of things over time, such as plant or student growth.
- **Science 3.6.5** – Observe that and describe how some changes are very slow and some are very fast and that some of these changes may be hard to see and/or record.

  Suggested Activity –
  Ask students how they know they are growing if they can't see it happening? (clothes are too small, friends say they are taller, they measure at the doctor, etc). Discuss ways they could prove that they are growing (try on last year's clothes, look at pictures, compare numerical measurements, etc.) as well as the best methods to use to show growth. Have students record their heights daily for three months to show differences between daily, weekly, and monthly measuring. After three months, compare the data and discuss results. Did accuracy affect daily measurements or monthly measurements more in showing growth? Discuss why there may be changes in height daily that don't mean growth occurred.

Discussion Prompts Following the Lesson:

- Look at Page C-1. Would the title "People in Josh's Family" be a good title for this lesson? *Yes and no. It would tell something about the lesson, but it would not tell what is important.* When you read the title "Comparing Numbers," did it help you know what the lesson would be about? *Yes, because the lesson is about comparing numbers that show how tall people are.* What are some other good ideas for a title for this lesson? *Answers will vary. Discuss the pros and cons of the suggested titles.*
- What would happen if the lesson had no title? *It would be hard to tell what the lesson was about unless you read it. You might need to look at the headings to predict.*
- Sometimes books have incomplete graphics. What page has an incomplete graphic in this lesson? *Page C-2.* In order for this graphic to be helpful, what needs to be done? *The chart needs to be filled in correctly.* What does filling in the chart help you do? *It helps you organize facts and information; it helps you write the information clearly and see it quickly; it helps you check your understanding of the math skills you have learned.*
- Which do you find more helpful, a chart with the heights or an illustration that shows each person with his/her height? *Answers will vary. Ask students to explain their answers. Point out that both kinds of graphics give good information and that different people learn differently.*

Text Features Lesson 4: *I Pledge...* (Social Studies)

Reading Difficulty: High

Guided Reading Boxes: 8

Instructional Vocabulary:		**Lesson Vocabulary:**
• heading	• map	• Pledge of Allegiance
• lesson	• paragraph	

Standards Addressed:

English/Language Arts Focus

- *3.2.1* – Use titles, tables of contents, chapter headings, a glossary, or an index to locate information in text.
- *3.2.3* – Show understanding by identifying answers in the text.

Social Studies Standards Addressed:

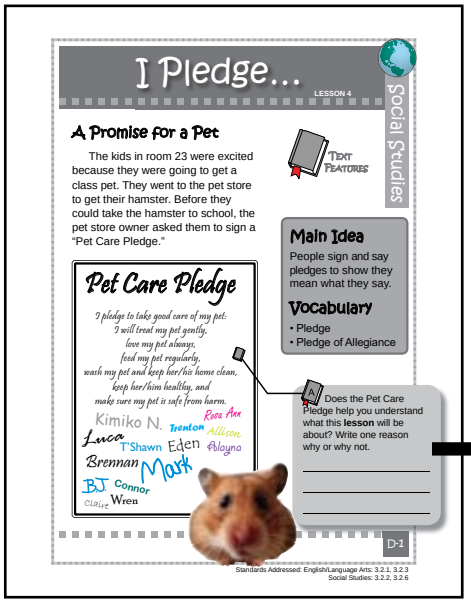
- *3.2.2* – Identify fundamental democratic principles and ideals in the American songs, stories, and symbols.
- *3.2.6* – Discuss and explain the meaning of the Pledge of Allegiance. Explain other ways citizens can affirm their citizenship.

Background Prompt:

- What does it mean to “promise” something?

Text Features Lesson 4: *I Pledge…* (Social Studies)

(1 pt total)



A Does the Pet Care Pledge help you understand what this **lesson** will be about? Write one reason why or why not.

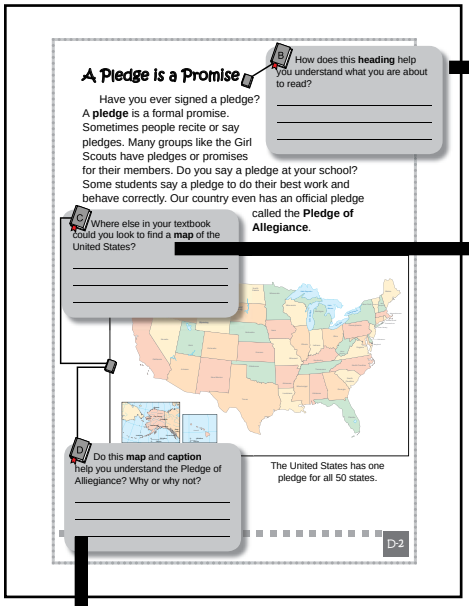
(1 pt) Yes. The Pet Care Pledge is an example of a pledge; it helps you understand what a pledge is and why someone might sign one. No. The lesson is not about pets or pet care.

Additional Practice Activities:

- Provide students with articles/passages from several different sources. Prior to giving students the articles, cover or block out the supporting graphics (maps, photos, charts, etc.). Read the articles with students and ask them to problem solve what kind of text feature would be helpful where things were blocked out. Ask questions like "What type of graphic would make sense here?" or "Would a map or chart be useful here?"
- Have students skim several short articles and compare/contrast how each author tries to alert the reader to important ideas with the use of text features like **bold letters**, *italics*, large headings, or illustrations and graphics.
- Supply students with a pad of sticky notes and ask them to "tag" specific text features in one of their textbooks. You can turn this into a speed activity (see who can tag something the fastest) or present it as something like bingo (in which each student has a time limit in which he or she must find the named text feature until they've found each one).

Text Features Lesson 4: *I Pledge…* (Social Studies)

(3 pts total)



B How does this **heading** help you understand what you are about to read?

(1 pt) *You know that you will read a definition of* pledge*; you will read about how a pledge is a promise; or any other approprite response.*

C Where else in your textbook could you look to find a **map** of the United States?

(1 pt) *This will depend on the textbook. Some may have an atlas, others may have maps in the front or back of the book. Accept any resonable response.*

D Do this **map** and **caption** help you understand the Pledge of Alliegiance? Why or why not?

(1 pt) *Yes. The caption explains that the Pledge of Allegiance is the same for all fifty states; or any other approprite response.*

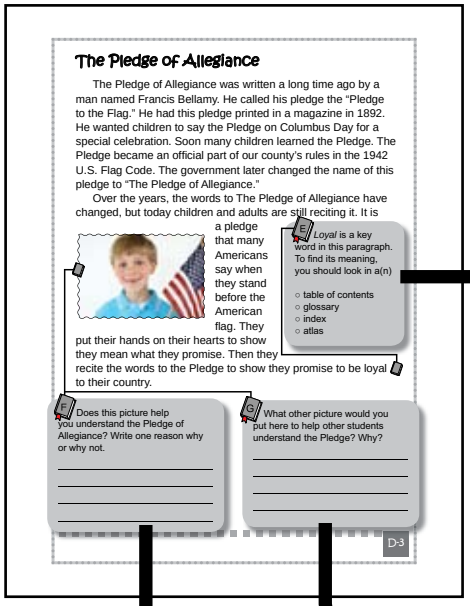
No. It only shows where the states are, it does not tell anything about the Pledge of Allegiance; or any other appropriate response.

Extension Activities:

- Help students locate several examples of abstract or unusual print advertisements from newspapers or magazines. Ask students to study the ads to identify the product or service that is being promoted. Ask them to identify what parts of the ad are helpful in terms of communicating to the reader and what parts distract from the ads message. Point out that text features in a textbook are meant to help the reader, but sometimes pictures or graphics are used that don't necessarily support the text. Offer clear examples by displaying them on an overhead or hanging them on a bulletin board.

Text Features Lesson 4: *I Pledge...* (Social Studies)

(4 pts total)



E *Loyal* is a key word in this paragraph. To find its meaning, you should look in a(n)

○ table of contents
● glossary
○ index
○ atlas

(1 pt)

F Does this picture help you understand the Pledge of Allegiance? Write one reason why or why not.

(1 pt) ***No. It is just a picture of a boy with a flag; it does not give any information about the Pledge; or any other approprite response.***

G What other **picture** would you put here to help other students understand the Pledge? Why?

(1 pt) ***Student should have listed one idea for a graphic and*** **(1 pt)** ***given a reasonable explanation of why (For example, I would put a photograph of Francis Bellamy so readers would know what he looked like).***

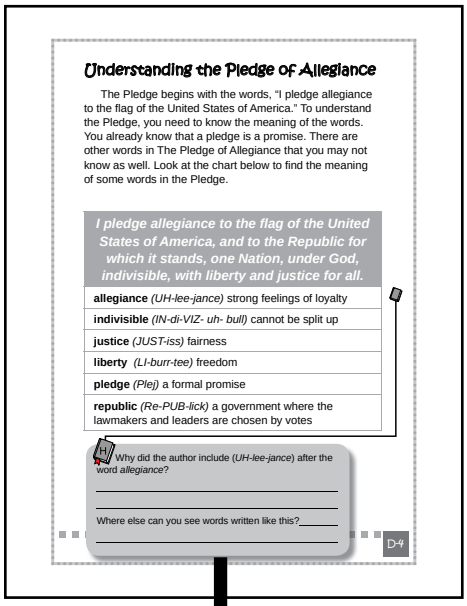
Standards Links:

- **Health 3.1.6** – Describe ways in which a healthful school and community environment influences personal health.

  Suggested Activity –
  Discuss the importance of learning in a healthful environment. Create a class pledge in which students promise to engage in healthy behaviors – not smoking, eating healthy foods, etc.

Text Features Lesson 4: *I Pledge…* (Social Studies)

(2 pts total)



Understanding the Pledge of Allegiance

The Pledge begins with the words, "I pledge allegiance to the flag of the United States of America." To understand the Pledge, you need to know the meaning of the words. You already know that a pledge is a promise. There are other words in The Pledge of Allegiance that you may not know as well. Look at the chart below to find the meaning of some words in the Pledge.

I pledge allegiance to the flag of the United States of America, and to the Republic for which it stands, one Nation, under God, indivisible, with liberty and justice for all.
allegiance *(UH-lee-jance)* strong feelings of loyalty
indivisible *(IN-di-VIZ- uh- bull)* cannot be split up
justice *(JUST-iss)* fairness
liberty *(LI-burr-tee)* freedom
pledge *(Plej)* a formal promise
republic *(Re-PUB-lick)* a government where the lawmakers and leaders are chosen by votes

H Why did the author include (*UH-lee-jance*) after the word *allegiance*?

Where else can you see words written like this?

D-4

H Why did the author include (*UH-lee-jance*) after the word *allegiance*?

(1 pt) ***It tells how the word is pronounced.***

Where else can you see words written like this?

(1 pt) ***in a dictionary/glossary***

Standards Links (cont):

- **Social Studies 3.1.7** – Use a variety of community resources – such as libraries, museums, and county historians – to gather information about the local community.

  Suggested Activity –
  Research the local community's motto, symbols, and traditions and how they relate to good citizenship.

Discussion Prompts Following the Lesson:

- Look at Guided Reading Box A: How is the Pet Care Pledge similar to the Pledge of Allegiance? *Both are promises; both promise to be loyal/care for something(a pet/the country); both have been written down; etc.* How are these two pledges different? *The Pet Care Pledge is signed while the Pledge of Allegiance is recited; the Pet Care Pledge is only used by one pet store, but the Pledge of Allegiance is used all over the country; the Pledge of Allegiance is was written long ago by Francis Bellamy, etc.*
- Look at Guided Reading Box B. Why is it important to pay attention to headings when you read? *Headings help you predict what you are going to learn; they help you test your understanding of what you read, etc.* Why do textbooks use headings? *They help divide up the material; they organize information, etc.*
- Look at Guided Reading Box E. What kind of type is the word “loyal” in? *Italics.* Why is this word in italics? *It is in italics to draw attention to the word.*

Main Idea Lesson 1: *Vibration and Sound* (Science)

Reading Difficulty: Low **Guided Reading Boxes:** 6

Instructional Vocabulary:		**Lesson Vocabulary:**
• graphic organizer	• paragraph	• vibrate
• lesson	• sentence	

Students will need two copies of the Main Idea graphic organizer in order to complete this lesson. (Completed graphic organizers for this lesson can be found on page 46 and 47.)

Standards Addressed:

English /Language Arts Focus:

- *3.2.2* – Ask questions and support answers by connecting prior knowledge with literal information from the text.
- *3.2.3* – Show understanding by identifying answers in the text.
- *3.2.5* – Distinguish the main idea and supporting details in expository (informational) text.

Social Studies:

- *3.5.3* – Examine the contributions of individual artists (painters, sculptors, writers, musicians, and traditional artists) in enriching the culture of the community.

Science:

- *3.1.6* – Give examples of how tools, such as automobiles, computers, and electric motors, have affected the way we live.
- *3.3.9* – Demonstrate that things that make sound do so by vibrating, such as vocal cords and musical instruments.

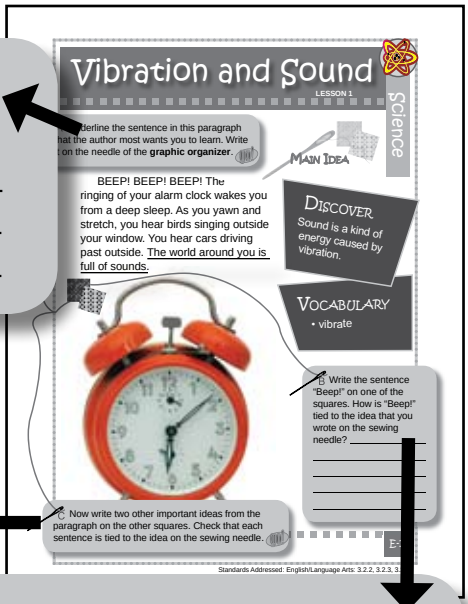
Background Prompt:

Have you ever tried to talk under water? What did it sound like? Why?

Main Idea Lesson 1: *Vibration and Sound* (Science)

(4 pts total)

A Underline the sentence in this paragraph that the author most wants you to learn. Write it on the needle of the **graphic organizer**. ***(1 pt) Student should have underlined: "The world around you is full of sounds." and written it on or under the needle of the graphic organizer.***



C Now write two other important ideas from the paragraph on the other squares. Check that each sentence is tied to the idea on the sewing needle. ***(2 pts) Student should have placed any two of the following sentences on the organizer: The ringing of your alarm clock wakes you from a deep sleep; As you yawn and stretch, you hear birds singing outside your window; You hear cars driving past outside.***

B Write the sentence "Beep!" on one of the squares. How is "Beep!" tied to the idea that you wrote on the sewing needle? ***(1 pt) Student should have written "Beep!" on a square. "Beep!" is a sound or noise that is around us, or any other appropriate response.***

(See graphic organizer example on page 46.)

Additional Practice Activities:

- If students are struggling with main idea and with using the graphic organizer, have them practice using the graphic organizer with simpler texts. Choose paragraphs that have main ideas written explicitly in the first sentence. As students become more comfortable using the graphic organizer and identifying the main idea, have them practice with increasingly challenging texts.
- Obtain old magazines and newspapers for students to clip articles they find interesting. Have students identify the main idea of these articles.

Main Idea Lesson 1: *Vibration and Sound* (Science)

D This paragraph begins with an important sentence, but it is only part of the main idea of the paragraph. Read the paragraph and then choose the main idea below. **(1 pt)**

● Sound is energy caused by vibration.
ⓑ We feel sound vibrations in our throat.
ⓒ We feel vibrations from sound in our ears.
ⓓ Sound vibrations move back and forth quickly.

Underline the sentence or sentences where you find this main idea. **(1 pt)** ***Student should have underlined "sound is a kind of energy. Sound begins when something vibrates."***

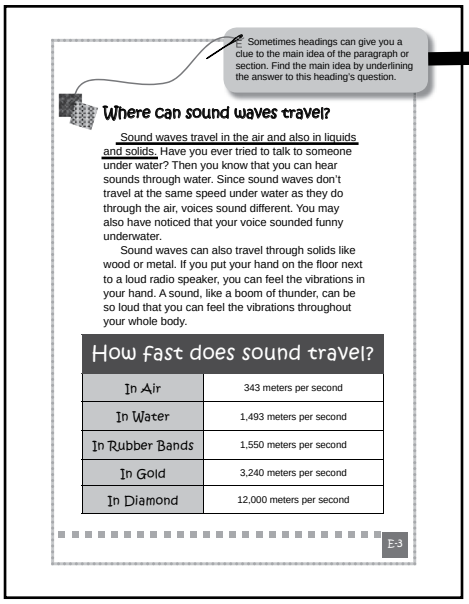
(2 pts total)

Extension Activities:

- If students are comfortable using the graphic organizer and have a clear grasp on identifying main ideas, ask them to create their own unique graphic organizers to reflect their thought processes. Have them share these graphic organizers with the class. You may want to have students vote on the one that is most helpful and use it when reading a textbook lesson.
- Challenge students to create short reports to present to the class or partners. Students who share their reports should explain how they determined the main idea and show how details support it.

Main Idea Lesson 1: *Vibration and Sound* (Science)

(1 pt total)



E Sometimes headings can give you a clue to the main idea of the paragraph or section. Find the main idea by underlining the answer to this heading's question.

Where can sound waves travel?

Sound waves travel in the air and also in liquids and solids. Have you ever tried to talk to someone under water? Then you know that you can hear sounds through water. Since sound waves don't travel at the same speed under water as they do through the air, voices sound different. You may also have noticed that your voice sounded funny underwater.

Sound waves can also travel through solids like wood or metal. If you put your hand on the floor next to a loud radio speaker, you can feel the vibrations in your hand. A sound, like a boom of thunder, can be so loud that you can feel the vibrations throughout your whole body.

How fast does sound travel?

In Air	343 meters per second
In Water	1,493 meters per second
In Rubber Bands	1,550 meters per second
In Gold	3,240 meters per second
In Diamond	12,000 meters per second

E-3

E Sometimes headings can give you a clue to the main idea of the paragraph or section. Find the main idea by underlining the answer to this heading's question.

(1 pt) ***Student should have underlined "Sound waves travel in the air and also in liquids and solids."***

Standards Links:

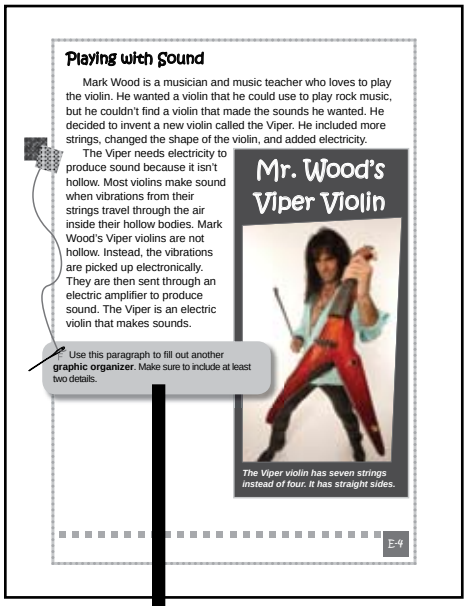
- **Science 3.1.2** – Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- **Science 3.1.3** – Keep and report records of investigations and observations using tools, such as journals, charts, graphs, and computers.
- **Science 3.1.4** – Discuss the results of investigations and consider the explanations of others.
- **Science 3.2.5** – Construct something used for performing a task out of paper, cardboard, wood, plastic, metal, or existing objects.

Suggested Activity –

Have students work with partners to test the ability of vibrations to travel through different materials/barriers. Students should develop a list of several materials to test (wood, brick, steel, etc.). Have them keep notes of their experiments in a science journal and create a chart or graph to show the results. Have each group report its findings to the class. Discuss the results. Were there any surprises?

Main Idea Lesson 1: *Vibration and Sound* (Science)

(3 pts total)



Playing with Sound

Mark Wood is a musician and music teacher who loves to play the violin. He wanted a violin that he could use to play rock music, but he couldn't find a violin that made the sounds he wanted. He decided to invent a new violin called the Viper. He included more strings, changed the shape of the violin, and added electricity.

The Viper needs electricity to produce sound because it isn't hollow. Most violins make sound when vibrations from their strings travel through the air inside their hollow bodies. Mark Wood's Viper violins are not hollow. Instead, the vibrations are picked up electronically. They are then sent through an electric amplifier to produce sound. The Viper is an electric violin that makes sounds.

Mr. Wood's Viper Violin

The Viper violin has seven strings instead of four. It has straight sides.

Use this paragraph to fill out another **graphic organizer**. Make sure to include at least two details.

E-4

F Use this paragraph to fill out another **graphic organizer**. Make sure to include at least two details.

(1 pt) Main Idea: ***The Viper is an electric guitar that makes sound.***

Details: Accept any 2 of the following for 1 point each: ***Most violins make sound when vibrations from their strings travel through the air inside their hollow bodies; Mark Wood's Viper violins are not hollow; Viper violins pick up vibrations electronically; Vibrations in a Viper violin are sent through an electric amplifier to make sound; the Viper is an electric violin that makes sounds.***

(See graphic organizer example on page 47.)

Standards Links (continued):

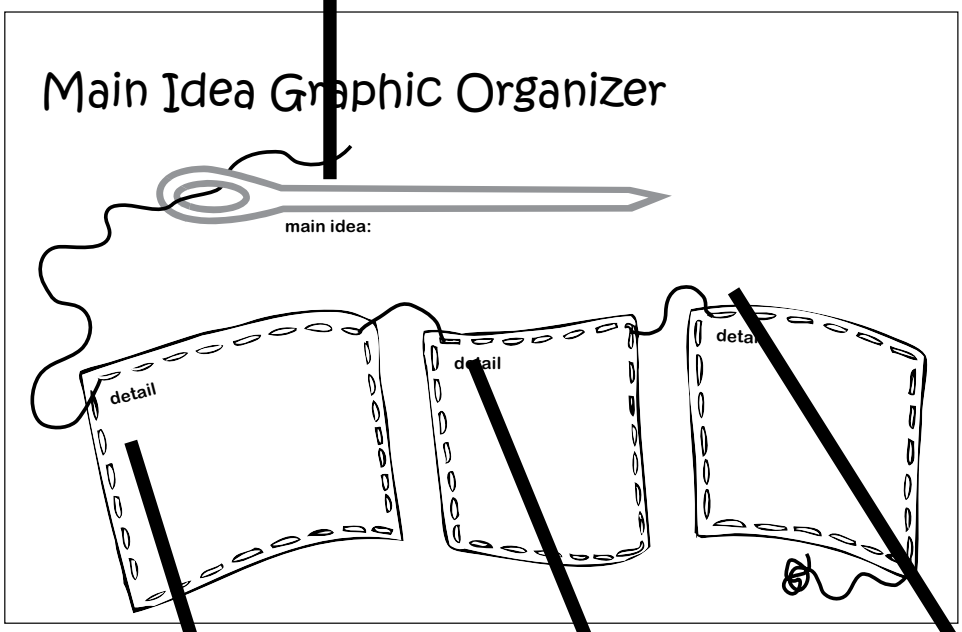
- **English/Language Arts 3.5.2** – Write descriptive pieces about people, places, things, or experiences that…
- **Music 3.6.4 –** Identify various instruments by sight or sound.

  Suggested Activity –
  Have students look at photographs and listen to recordings of various stringed instruments. Have them discuss the various sounds. Use information from the lesson to figure out how the sizes/shapes of the instruments are related to their sounds. Have each student choose one of these instruments and write a brief descriptive paragraph. Have students share these descriptions with a partner or the class.

Main Idea Lesson 1: *Vibration and Sound* (Science)

main idea:

The world around you is full of sounds.



detail:

Beep!

detail:

Birds make different sounds.

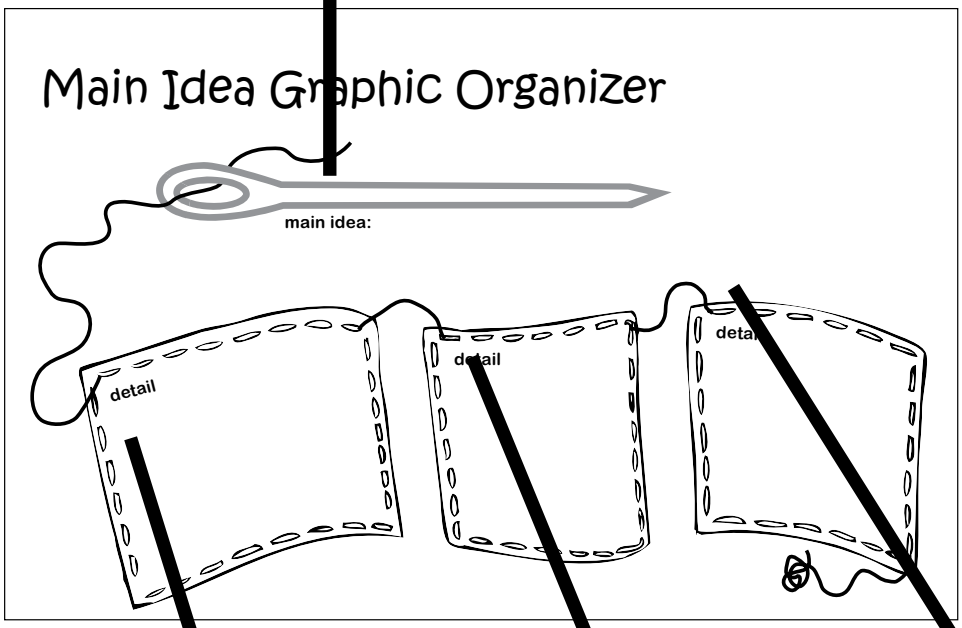
detail:

Cars make sounds like honking and tires moving over the road.

Main Idea Lesson 1: *Vibration and Sound* (Science)

main idea:

The Viper is an electric violin that makes sounds.



detail:

- Most violins are hollow.
- Most violins make sound when vibrations from their strings travel through the air inside their hollow bodies.

detail:

- Viper violins pick up vibrations electronically
- Viper violins send vibrations through an electric amplifier to produce sounds.

detail:

- The Viper needs electricity to produce sound because it isn't hollow.
- Mark Wood's violins are not hollow.

Discussion Prompts Following the Lesson:

- Look at Guided Reading Box A. How did you answer this question? *Students might say that they knew that "Beep!" could not be the main idea of the lesson because it does not contain any real information. The other ideas in the paragraph are not clearly tied to the idea "Beep." They might also say that they looked at the main idea of the lesson and knew that "Beep" did not support it.*
- Look at the photograph at the bottom of Page E-2. Is it clearly tied to the main idea of the section on this page? *Answers will vary. Have students defend their answers. Yes: it shows a violin making sound with its vibrating strings. No: It is just a picture of a girl playing a violin. You cannot hear the sound or feel the vibrations.*
- Look at Guided Reading Box E. How do you know that the first sentence is not the complete main idea? *The sentences are not all tied to that idea; the paragraph is about more than the fact that sound is a kind of energy, etc.*
- Look at the chart at the bottom of Page E-3. Through which material does sound travel the fastest? *Diamonds.* How is this chart tied to the main idea of the section on this page? *It tells how fast sound travels through different solids.*
- Look at Page E-4. Why did the author include the information about Mark Wood? *It is interesting; it connects energy and sound to real life; etc.* How is it tied to the main idea of the lesson? *It is an example of how sound is used; it shows how vibrations affect sound, etc.*

Main Idea Lesson 2: *Building Blocks: from the Stone Belt to the Empire State Building (Social Studies)*

Reading Difficulty: High **Guided Reading Boxes:** 5

Instructional Vocabulary:		**Lesson Vocabulary:**
• heading	• phrase	• Skywalkers
• lesson	• section	• Stone Belt
• paragraph		

Standards Addressed:

English /Language Arts Focus:

- *3.2.3* – Show understanding by identifying answers in the text.
- *3.2.5* – Distinguish the main idea and supporting details in expository (informational) text.
- *3.2.6* – Locate appropriate and significant information from the text, including problems and solutions.

Social Studies:

- *3.1.3* – Describe the role of specific communities in the development of the region.
- *3.1.4* – Give examples of people, events, and developments that brought important changes to the local community or region.
- *3.3.3* – Explain that regions are areas that have similar physical and cultural characteristics and locate the local community in a specified region.
- *3.5.2* – Identify connections that the local community has with other communities, including cultural exchanges of several types, and ways that technology links communities in other places.
- *3.5.4* – Identify factors that make the local community unique, including how the community is enriched through foods, crafts, customs, languages, music, visual arts, architecture, dance, and drama representing various cultures.

Science:

- *3.1.6* – Give examples of how tools, such as automobiles, computers, and electric motors, have affected the way we live.

Background Prompt:

What material do you think our school is built out of? Where did this material come from?

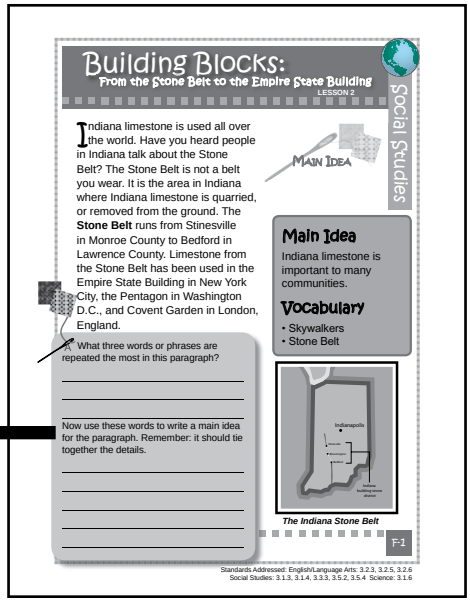
A What three words or phrases are repeated the most in this paragraph?

(3 pts) ***Indiana*, *limestone,* and *Stone Belt***

Now use these words to write a main idea for the paragraph. Remember: it should tie together the details.

(1 pt) ***Limestone from the Indiana Stone Belt is used all over the world, or any other appropriate response that includes the words* Indiana, limestone *and* Stone Belt.**

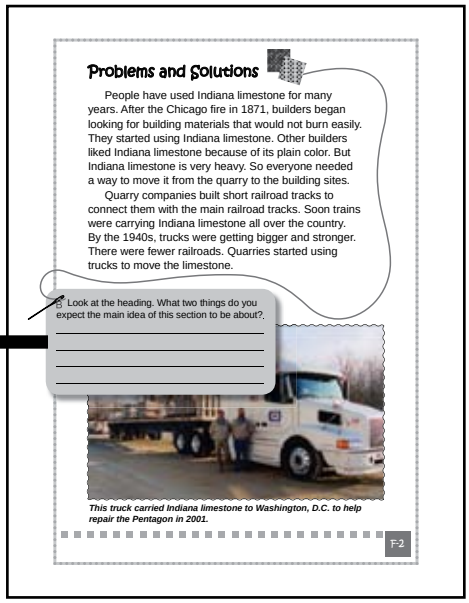
(4 pts total)



Additional Practice Activities:

- Read aloud short stories to the entire class. When reading select paragraphs, pause after each sentence and ask students to identify main idea or detail. Review the paragraph aloud and clarify the main idea for those who were unsure.

(1 pt total)



Problems and Solutions

People have used Indiana limestone for many years. After the Chicago fire in 1871, builders began looking for building materials that would not burn easily. They started using Indiana limestone. Other builders liked Indiana limestone because of its plain color. But Indiana limestone is very heavy. So everyone needed a way to move it from the quarry to the building sites.

Quarry companies built short railroad tracks to connect them with the main railroad tracks. Soon trains were carrying Indiana limestone all over the country. By the 1940s, trucks were getting bigger and stronger. There were fewer railroads. Quarries started using trucks to move the limestone.

B Look at the heading. What two things do you expect the main idea of this section to be about?

This truck carried Indiana limestone to Washington, D.C. to help repair the Pentagon in 2001.

F-2

B Look at the heading. What two things do you expect the main idea of this section to be about? **(1 pt)** ***problems and solutions***

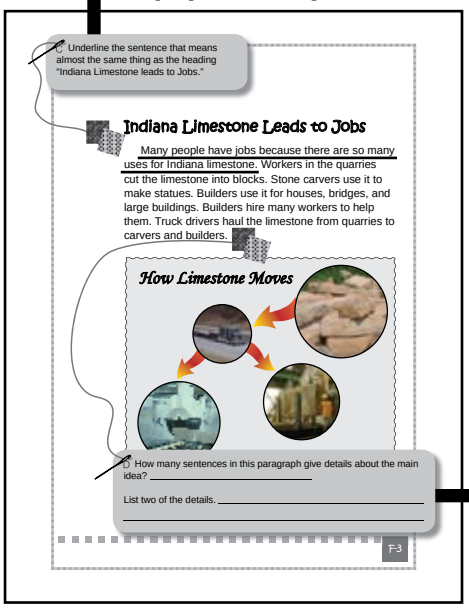
Extension Activities:

- Have students select short stories they would like to read aloud to the class or to a partner. The listeners should write down their guesses for the main idea. When the story is over, ask the listeners to share what they wrote.

C Underline the sentence that means almost the same thing as the heading "Indiana Limestone leads to Jobs."

(1 pt) ***Student should have underlined "Many people have jobs because there are so many uses for Indiana limestone."***

(4 pts total)


C Underline the sentence that means almost the same thing as the heading "Indiana Limestone leads to Jobs."

Indiana Limestone Leads to Jobs

Many people have jobs because there are so many uses for Indiana limestone. Workers in the quarries cut the limestone into blocks. Stone carvers use it to make statues. Builders use it for houses, bridges, and large buildings. Builders hire many workers to help them. Truck drivers haul the limestone from quarries to carvers and builders.

How Limestone Moves

D How many sentences in this paragraph give details about the main idea? _____

List two of the details. _____

F-3

D How many sentences in this paragraph give details about the main idea?

(1 pt) ***five***

List two of the details.

(2 pts) ***Accept any of the following for 1 pt each: workers cut limestone into blocks; stone carvers use it for statues; builders use it for houses, bridges, and large buildings; builders hire many workers to help them; or truck drivers haul the limestone.***

Standards Links:

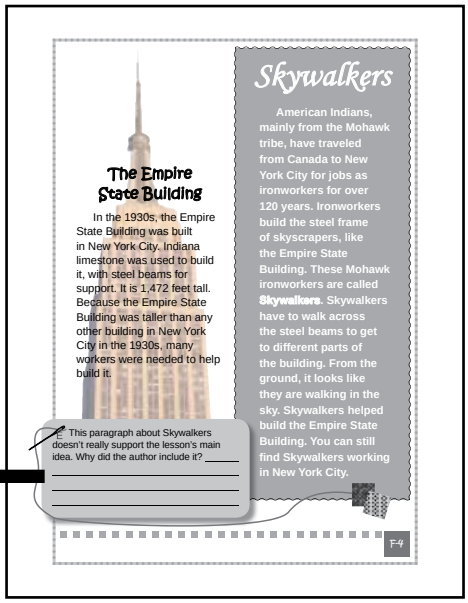
- **English/Language Arts 3.5.2** – Write descriptive pieces about people, places, and things, or experiences that…
- **Social Studies 3.5.3** – Examine the contributions of individual artists (painters, sculptors, writers, musicians, and traditional artists) in enriching the culture of the community.

Suggested Activity –

Have students explore Indiana artists who work with limestone. (Dale Enochs, Amy Grier, etc.) Have them create brief descriptive paragraphs about the artists they have chosen.

E This paragraph about Skywalkers doesn't really support the lesson's main idea. Why did the author include it?

(1 pt) ***It is an interesting story; it has to do with the Empire State building; it is something that students will enjoy reading about; or any other appropriate response.***



(1 pt total)

Standards Links (contined):

- **Social Studies 3.1.1** – Describe American Indian groups who lived in the region when European settlers arrived.

  Suggested Activity –
  The Mohawk tribe was displaced by European settlers. So too, were many American Indian groups native to the area that is now Indiana. Explain to students that the name of our state means "The Land of the Indians." Have them research what happened to the tribes who once called Indiana home (Miami, Wea, and Piankashaw, etc.).

Discussion Prompts Following the Lesson:

- Look at Guided Reading Box A. Looking for repeated words is one way to find the main idea. But are repeated words always part of the main idea? *No. Sometimes they might not be part of the main idea. They might be words that add interest to the paragraph, etc.*
- Look at the map on the bottom of page F-1. What information does this map add to the main idea of the lesson? *It shows the communities that make up the Stone Belt. These are some of the communities to which limestone is important.*
- Look at the picture on the bottom of page F-2. How is it related to the main idea of the section on this page? *The section is about problems and solutions. One problem was that it was difficult to move heavy limestone. The picture shows a truck used to move limestone. The caption also tells that the truck was used to help solve another problem—needed repairs to the Pentagon. [Teachers could discuss this further in relation to September 11th as they are comfortable.]*
- Look at the chart on page F-3. How does it help you understand the main idea of the paragraph on this page? *It shows some of the jobs that result from limestone production. It shows how some jobs lead to others.*
- Look at the section about the Skywalkers on page F-4. What is the main idea of this paragraph? *Mohawk Indians known a Skywalkers work(ed) to build skyscrapers.*

Main Idea Lesson 3: *Making Healthful Choices (Health)*

Reading Difficulty: Medium **Guided Reading Boxes:** 5

Instructional Vocabulary:		**Lesson Vocabulary:**
• heading	• sentence	• media
• paragraph	• title	
• section	• vocabulary word	

Standards Addressed:

English /Language Arts Focus:

- *3.2.3* – Show understanding by identifying answers in the text.
- *3.2.5* – Distinguish the main idea and supporting details in expository (informational) text.
- *3.2.6* – Locate appropriate and significant information from the text, including problems and solutions.

Social Studies:

- *3.4.8* – Illustrate how people compare benefits and costs when making choices and decisions as consumers and producers.

Science:

- *3.4.7* – Explain that eating a variety of healthful foods and getting enough exercise and rest help people stay healthy.
- *3.4.8* – Explain that some things people take into their bodies from the environment can hurt them and give examples of such things.

Health:

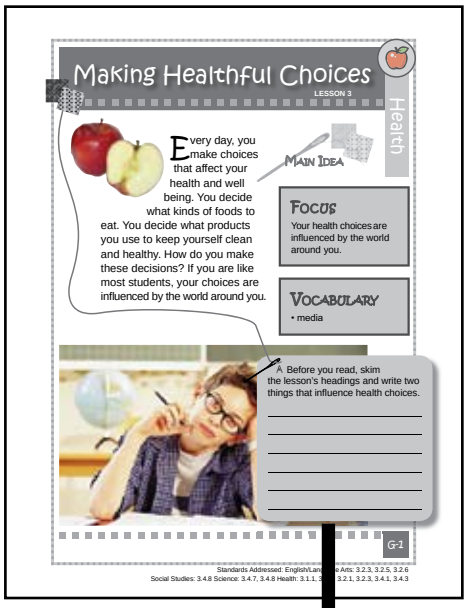
- *3.1.1* – Identify responsible health behaviors.
- *3.1.6* – Describe ways in which a healthful school and community environment influences personal health.
- *3.2.1* – Identify characteristics of valid health information and health-promoting products and services.
- *3.2.3* – Explain how media influences the selection of health information, products, and services.
- *3.4.1* – Describe how the family and school influence personal health behaviors.
- *3.4.3* – Explain how media influences thoughts, feelings, perceptions, and health behaviors.

Background Prompt:

How do you decide what to eat? How about what kind of toothpaste to use, or how to dress?

Main Idea Lesson 3: *Making Healthful Choices (Health)*

(2 pts total)



A Before you read, skim the lesson's headings and write two things that influence health choices.

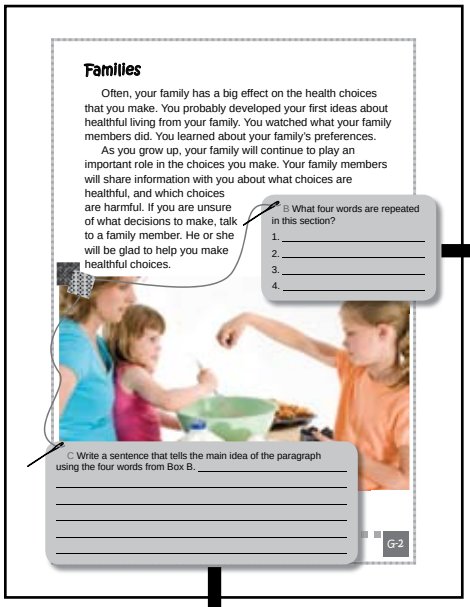
(2 pts) ***Accept any two of the following for 1 pt each: Families, The Media, Community***

Additional Practice Activities:

- Ask students to develop a list of all the negative effects they can think of for something like smoking cigarettes. When they are finished, ask them to review their list and write one sentence that communicates the point of listing all the negative effects. You might give students a lead-in phrase like "All of these bad things mean that smoking can _____" (a student might respond with "All of these bad things mean that smoking can hurt you and other people," etc.
- Provide students with additional short articles that have main idea sentences in different locations. Students can use two different color highlighters to differentiate between main ideas and additional information.

Main Idea Lesson 3: *Making Healthful Choices (Health)*

(5 pts total)



B What four words are repeated in this section? **(4 pts)**

1. *You(r)*
2. *healthful/health*
3. *choices*
4. *family*

C Write a sentence that tells the main idea of the paragraph using the four words from Box B .

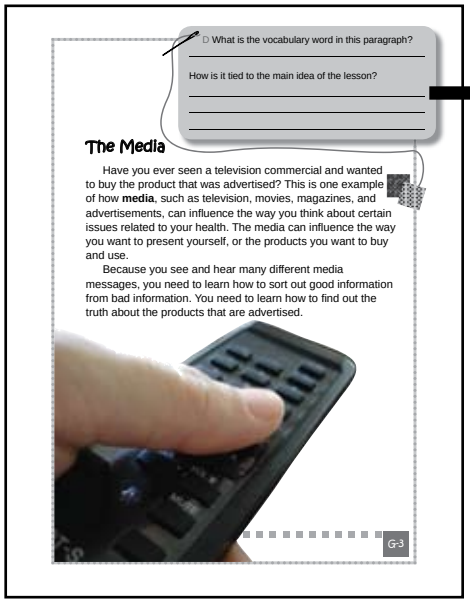
(1 pt) ***Your family influences your health choices; your family can help you make healthful choices; or any other appropriate response that uses all four words.***

Extension Activities:

- Provide students with a recording of a variety of age-appropriate television commercials. Tell the students to pay close attention to how a main idea can be a tactic used to sell the product. You may even want to provide them with questions ahead of time (How many times was the product name given in the commercial? Was a famous person used to promote the product? Did the product do anything in the commercial that it probably doesn't really do?).
- Record several radio advertisements that you can play for students out loud or individually through headphones. Try to choose advertisements that have a moderate amount of information. Ask students to listen carefully to an advertisement. After listening, tell students to identify the overall message or main idea of the advertisement. You may want to model this activity and ask guiding questions before having students work independently.

Main Idea Lesson 3: *Making Healthful Choices (Health)*

(2 pts total)



D What is the vocabulary word in this paragraph? **(1 pt)** ***media***

How is it tied to the main idea of the lesson? **(1 pt)** ***The media affects the healthful choices you make or don't make; the media is one part of the world around you that influences your health choices; or any other appropriate response.***

Standards Links:

- **Science 3.3.6** – Describe ways human beings protect themselves from adverse weather conditions.

  Suggested Activity –
  Look at the different methods people use to protect themselves from the sun and extreme heat. After discussing some of the different methods (sunscreen, sunglasses, tinted windows, air conditioning, etc.), point out that no matter what the method, the main purpose or idea is to protect yourself.

(1 pt total)

E Use the heading and the first sentence to write the main idea of this paragraph in fewer than 10 words. _____

Community

The people around you in your school, your neighborhood, and your town can affect the choices you make. Your gym teacher encourages you to keep fit. Your dentist encourages you to brush your teeth. The school nurse helps you choose healthy foods. But you might still be tempted by unhealthful choices.

At some time in your life, you might feel pressured to make an unhealthful choice, like using tobacco, or trying illegal drugs. You will be more likely to make the right choice if you live in a community that emphasizes healthy choices.

Whether you are choosing a new shampoo or deciding how to answer when someone offers you tobacco, you are making a choice that affects your health. You may be influenced by the people around you and the media. But you need to stand up for what you know is the right health choice for you. You will be happier and healthier.

Communities can encourage healthful behaviors by banning smoking in public places.

G-4

E Use the heading and the first sentence to write the main idea of this paragraph in fewer than 10 words. ***(1 pt) Your community can affect the choices you make, or any other appropriate response.***

Standards Links (continued):

- **English/Language Arts 3.4.4** – Use various reference materials (such as a dictionary, thesaurus, atlas, encyclopedia, and online resources).
- **English/Language Arts 3.5.6** – Write persuasive pieces that ask for an action or response.

Suggested Activity –
Have students investigate whether there is a smoking ban in their community. After they report their findings to their classmates, have them write letters to local government officials explaining why such a ban is beneficial to the community. If a ban is already in place, have students write letters thanking officials for their role in helping keep the community healthy by promoting healthy choices.

Discussion Prompts Following the Lesson:

- Look at the picture of the apple on Page G-1. Does this picture add to your understanding of the main idea? *Probably not. It does show a healthy food choice, but it doesn't show how our health choices are influenced by the world around us.* Why do you think the author chose to include this picture? *It reminds us of a healthy choice; we think of good health/ healthy eating when we think about apples; it makes the page look more appealing; etc.*
- Look at the title of the lesson. Are titles always related to the main idea of lessons? *Not always. Usually, the title will be related to the main idea in some way, however sometimes it may be used just to capture the reader's attention, etc.*
- Look at Guided Reading Box A. How are all of the headings related to the lesson's main idea? *All of the headings ("Families," "The Media," "Community") list one group of people that influences our health choices.*
- Look at Guided Reading Box C. How did writing a sentence using the repeated words help you think about the main idea? *Students might say that they had to think about what tied all of the repeated words together, that it helped them focus on the most important ideas in the paragraph, etc.*

Problems and Solutions Lesson 1: *Elapsed Time* (Mathematics)

Reading Difficulty: Low **Guided Reading Boxes:** 5

Instructional Vocabulary:	**Lesson Vocabulary:**
• graphic organizer • lesson • paragraph • signal words/phrases	• elapsed time

Students will need a copy of the Problems and Solutions graphic organizer in order to complete this lesson. (A completed graphic organizer for this lesson can be found on page 66.)

Standards Addressed:

English /Language Arts Focus:

- *3.2.6* – Locate appropriate and significant information in the text, including problems and solutions.

Mathematics Standards Addressed:

- *3.5.9* – Tell time to the nearest minute and find how much time has elapsed.

Science Standards Addressed:

- *3.2.1* – Add and subtract whole numbers mentally, on paper, and with a calculator.

Background Prompt:

- How do you know when to get up in the morning? How long does it take you to get ready for school? How long does it take you to travel to school? How do you know?

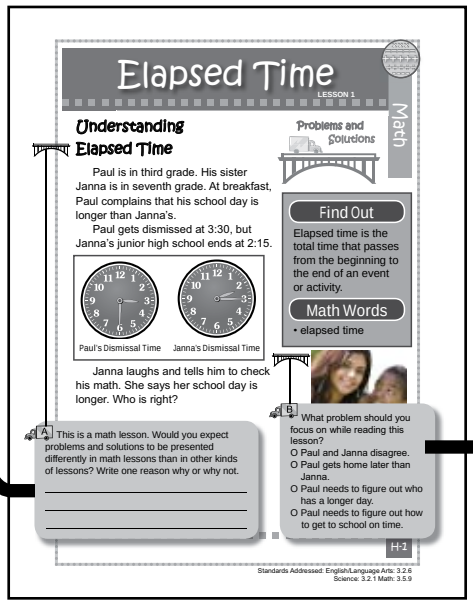
Problems and Solutions Lesson 1: *Elapsed Time* (Mathematics)

A This is a math lesson. Would you expect problems and solutions to be presented differently in math lessons than in other kinds of lessons? Write one reason why or why not. **(1 pt)** ***Accept either yes or no, as long as the choice is reasonably supported.***

Yes: ***Math lessons include math problems and math solutions as well as other kinds of problems, or any other appropriate response.***

No: ***Math lessons may use the same problem and solution signal words as other kinds of lessons, or any other appropriate response.***

(2 pts total)



B What problem should you focus on while reading this lesson? **(1 pt)**

O Paul and Janna disagree.

O Paul gets home later than Janna.

● Paul needs to figure out who has a longer day.

O Paul needs to figure out how to get to school on time.

Additional Practice Activities:

- If students struggle with using the graphic organizer, have them work together in small groups to use the graphic organizer to organize information about a simple problem that is familiar to them (missing the bus, forgetting homework, etc.). As students gain confidence in using the graphic organizer, have them practice using it on other content area lessons.
- Give students several simple problem scenarios. Problems could be posed as "what if" questions: "What if you spilled all your breakfast on the floor?" "What if one of your bike tires went flat when you were far from home?" Have students write paragraphs describing their problems and giving their solutions. Have them circle signal words that identify the problems and solutions.

Problems and Solutions Lesson 1: *Elapsed Time* (Mathematics)

(4 pts total)

C

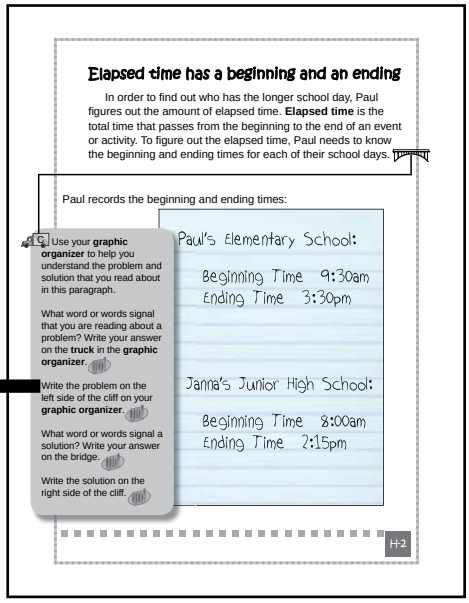
Use your **graphic organizer** to help you understand the problem and solution that you read about in this paragraph.

What word or words signal that you are reading about a problem? Write your answer on the **truck** in the **graphic organizer**. **(1 pt)** ***Student should have written "in order to (find out)" on the truck.***

Write the problem on the left side of the cliff on your **graphic organizer**. **(1 pt)** ***Student should have written "Paul needs to know who has the longer school day" on the left side of the cliff.***

What word or words signal a solution? Write your answer on the bridge. **(1 pt)** ***Student should have written "figure out" on the bridge.***

Write the solution on the right side of the cliff. **(1 pt)** ***Student should have written "figure out the amount of elapsed time" on the right side of the cliff.***



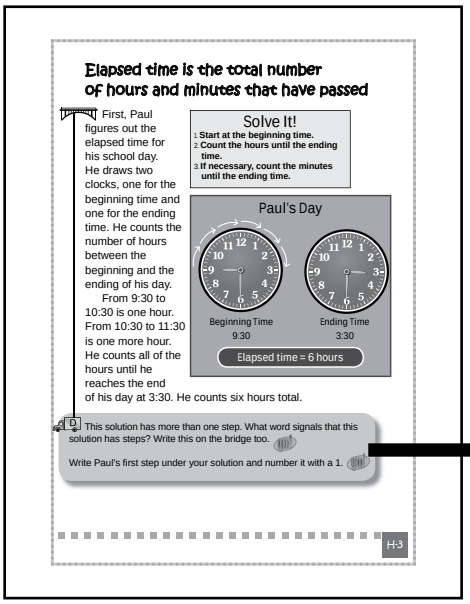
(See graphic organizer example on page 66.)

Extension Activities:

- If students have a good understanding of problems and solutions, have them create graphic organizers for problems and solutions that reflect their own thought processes. Have them share these with the class. You can reproduce these and make them available for class use as you see fit.
- Working in reverse: Ask students to make up several problem/solution scenarios. Next, have them work with partners or small groups to challenge each others' critical thinking. Direct students to share only the solution to a problem. Their partners or groups must each develop a problem that could be solved by that solution. For example, a student might have written "…so, Joe filled up a jug of water." There could be several possible problems that Joe is trying to solve – it's up to the students to use their creativity to create a problem that Joe's jug of water could be the solution for.

Problems and Solutions Lesson 1: *Elapsed Time* (Mathematics)

(2 pts total)



D This solution has more than one step. What word signals that this solution has steps? Write your answer on the bridge too. **(1 pt)** ***Student should have written "first" on the bridge.***

Write Paul's first step under your solution and number it with a 1. **(1 pt)** ***Student should have written "1). Paul figures out elapsed time for his school day" in the appropriate place on the graphic organizer.***

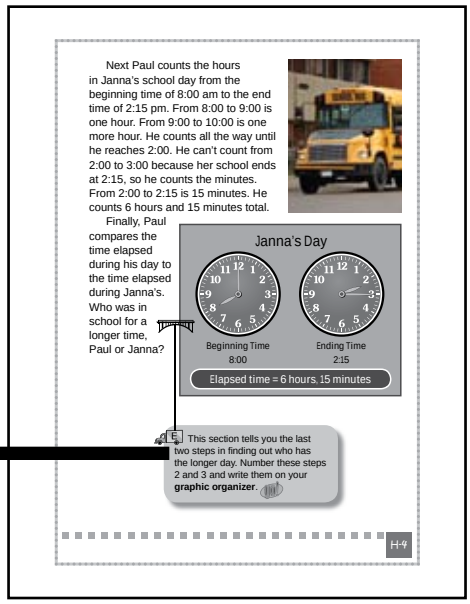
(See graphic organizer example on page 66.)

Standards Links:

- **Mathematics 3.6.9** – Note the method of finding the solution and show a conceptual understanding of the method by solving similar problems.

  Suggested Activity –
  Create a scenario similar to the one in the lesson in which students must convert distances from kilometers to miles and vice versa in order to solve a problem.

(3 pts total)



E This section tells you the last two steps in finding out who has the longer day. Number these steps 2 and 3 and write them on your **graphic organizer**.

(2 pts) ***Student should have written "2). Paul figures out elapsed time for Janna's day" or "figure out how much time elapses between 8:00 and 2:15" and "3). Paul compares the amount of time elapsed during his day to the amount of time elapsed during Janna's day."***

(See graphic organizer example on page 66.)

Standards Links (continued):

- **Mathematics 3.5.9** – Tell time to the nearest minute and find how much time has elapsed.

  Suggested Activity –
  Have students use what they learned from the lesson to determine how much time elapses during their school day.

in order to (find out)

figure out, first

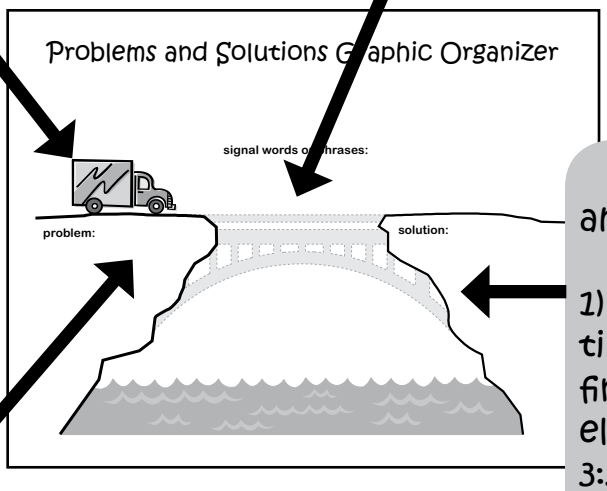


Figure out the amount of elapsed time.

1) paul's figures out elapsed time for his school day (or find out how much time elapses between 8:30 and 3:30).

2) Paul figures out elapsed time for Janna's school day (or find out how much time elapses between 8:00 and 2:15).

3) Paul compares the time elapsed during his day to the time elapsed during Janna's day.

Paul needs to know who has a longer school day.

Discussion Prompts Following the Lesson:

- Look at Guided Reading Box A. How are problems and solutions different in a mathematics lesson than a social studies or science lesson? *A mathematics lesson will usually have only one solution; social studies and science lessons will sometimes have more than one solution; problems in a mathematics lesson are more likely to be solved with numbers; etc.*
- Look at Guided Reading Box D. How did you figure out the answer? *I knew that if something had to be done "first" that there would be additional steps, etc.*
- How do the clocks in this lesson help you understand the solution to Paul's problem? *The clocks help you count the hours from morning to afternoon; they make it easier to see the answer; etc.*
- Figuring out elapsed time involves multiple steps. Explain that there can be steps embedded in steps. For example, getting ready for school: 1) brush teeth a) wet brush b) put paste on brush c)brush 2) Make bed... *Ask students to think of other examples.*
- Look at Guided Reading Box B. What signal words helped you identify the last two steps? Next *and* Finally
- Who had the longer day? *Janna (by 15 minutes).*

Problems and Solutions Lesson 2: *Cleaning Up the Park* (Social Studies)

Reading Difficulty: Medium

Guided Reading Boxes: 6

Instructional Vocabulary:		**Lesson Vocabulary:**
• paragraph	• title	• government services
• phrase		• recreation

Standards Addressed:

English /Language Arts Focus:

- *3.2.6* – Locate appropriate and significant information in the text, including problems and solutions.

Social Studies Standards Addressed:

- *3.2.3* – Discuss the reasons why governments are needed and identify specific services that governments provide.

Background Prompt:

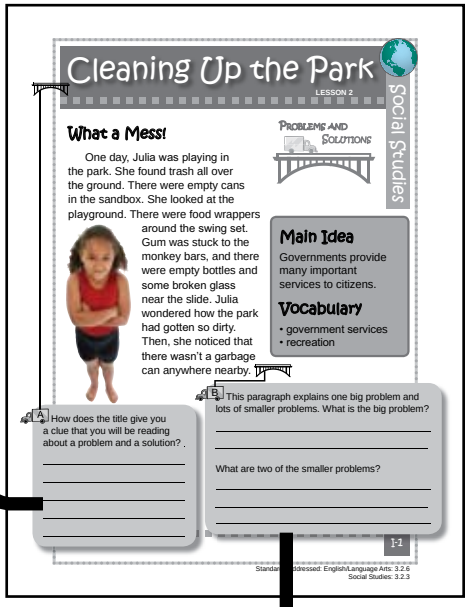
- What happens when you don't take care of something that is important to you?

Problems and Solutions Lesson 2: *Cleaning Up the Park* (Social Studies)

A How does the title give you a clue that you will be reading about a problem and a solution?

(1 pt) ***If the park has to be cleaned, then something must be dirty, which sounds like a problem; cleaning the park sounds like a solution; or any other appropriate response.***

(4 pts total)



B This paragraph explains one big problem and lots of smaller problems. What is the big problem? **(1 pt)** ***The park is really dirty.***

What are two of the smaller problems?

(2 pts) ***Accept any two of the following for 1 pt each: There is trash on the ground; there are empty cans in the sand box; there are food wrappers around the swing set; there is gum on the monkey bars; there are empty bottles and broken glass; there is no garbage can.***

Additional Practice Activities:

- Have students highlight in yellow the sentences that describe the problem in the lesson. Have them highlight the solution sentences in green. Discuss how the sentences are organized. Are the problem sentences listed first, last, or grouped together?

C Write at least one word or phrase in this paragraph that gives you a clue that you are reading about a solution.

(1 pt) figured out, plan, step, accomplish

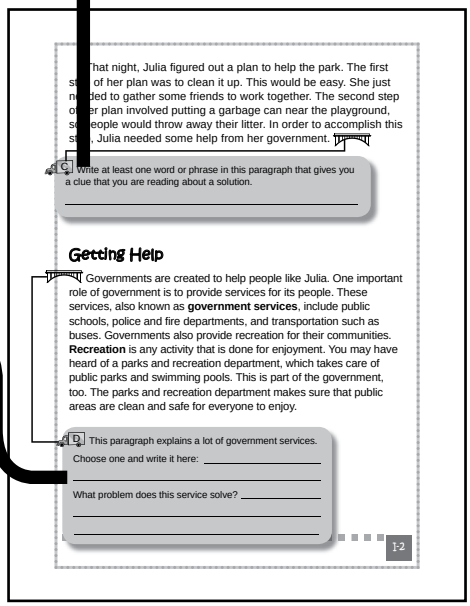
D This paragraph explains a lot of government services. Choose one and write it here.

(1 pt) ***Student should have chosen one of the following: public schools, fire departments, police departments, transportation, buses, recreation, or any other appropriate response***

What problem does this service solve?

(1 pt) ***Accept any reasonable response. For example: students need education; fires would cause more damage if there was no one to put them out; someone needs to keep communities safe; people need a way to get from one place to another; people need places to exercise and play; etc.***

(4 pts total)


That night, Julia figured out a plan to help the park. The first st… of her plan was to clean it up. This would be easy. She just n…ded to gather some friends to work together. The second step o…er plan involved putting a garbage can near the playground, s… people would throw away their litter. In order to accomplish this st…, Julia needed some help from her government.

C Write at least one word or phrase in this paragraph that gives you a clue that you are reading about a solution.

Getting Help

Governments are created to help people like Julia. One important role of government is to provide services for its people. These services, also known as **government services**, include public schools, police and fire departments, and transportation such as buses. Governments also provide recreation for their communities. **Recreation** is any activity that is done for enjoyment. You may have heard of a parks and recreation department, which takes care of public parks and swimming pools. This is part of the government, too. The parks and recreation department makes sure that public areas are clean and safe for everyone to enjoy.

D This paragraph explains a lot of government services. Choose one and write it here: _____

What problem does this service solve? _____

1-2

Extension Activities:

- **Problem/Solution Toss:** Students can play a variation of "hot potato" in which they sit in a circle and toss a soft object to each other. Pick one student to make up a problem and share it with the class. Then, he or she must toss the object to another student. The student who catches the object must offer a reasonable solution to the problem before he or she can toss the object to someone else.

E Is this paragraph more about problems or solutions? **(1 pt)** ***solutions***

How do you know? **(1 pt)** ***The paragraph describes how Julia gets help; it discusses putting a trash can in the park to fix the problem; or any other appropriate response.***

(2 pts total)

Standards Links:

- **Science 3.1.8** – Describe how discarded products contribute to the problem of waste disposal and that recycling can help solve this problem.
- **Mathematics 3.2.2** – Represent the concept of multiplication as repeated addition.

Suggested Activity –
Research what the school and/or local community is doing to recycle waste. Discuss various mathematical scenarios or "what if's" about how many pounds of plastic or paper, etc. would be wasted if it weren't recycled. For example, one household throws away two milk jugs per week—how many is that in a month? A year? What if 50 households threw away two milk jugs per week? Have students represent these "what ifs" as repeated addition problems.

F What word or phrase in this paragraph signals that a problem has been solved?

(1 pt) success

(1 pt total)

Standards Links (continued):

- **Health 3.1.6** – Describe ways in which a healthful school and community environment influences personal health.

  Suggested Activity –
  Discuss how having a clean park can influence the health of community members. For example, if children have a place to play outside, they'll get needed exercise, etc.

Discussion Prompts Following the Lesson:

- Look at the photograph of Julia on Page I-1. Does this photograph help you identify a problem or solution? *No. It just shows Julia.* Why do you think the author chose to include this photograph? *It decorates the lesson; it makes you feel like you know Julia; it makes the page more interesting; etc.*
- Look at Guided Reading Box E. Lots of problems involve more than one person. How does the government help with these kinds of problems? *The government offers public services to help solve these problems.*
- Look at the heading at the top of Page I-4. How does "Clean Again" signal that the problem has been solved? *The problem was that the park was dirty. If the park is clean again, then the problem has been solved, etc.*
- Look at the photograph on the bottom of Page I-4. Does this photograph illustrate a problem or a solution? *Neither. It does show the clean park, which is the result of Julia's solution, and the trash can which is part of the solution.*

Problems and Solutions Lesson 3: *Control Your Anger* (Health)

Reading Difficulty: High

Guided Reading Boxes: 6

Instructional Vocabulary:

- chart
- lesson
- paragraph
- title

Lesson Vocabulary:

- stress
- therapy writing

Standards Addressed:

English /Language Arts Focus:

- *3.2.6* – Locate appropriate and significant information from the text, including problems and solutions.

Health Standards Addressed:

- *3.1.4* – Describe the relationship between physical health and emotional health.
- *3.5.7* – Differentiate between negative and positive behaviors used in conflict situations.

Background Prompt:

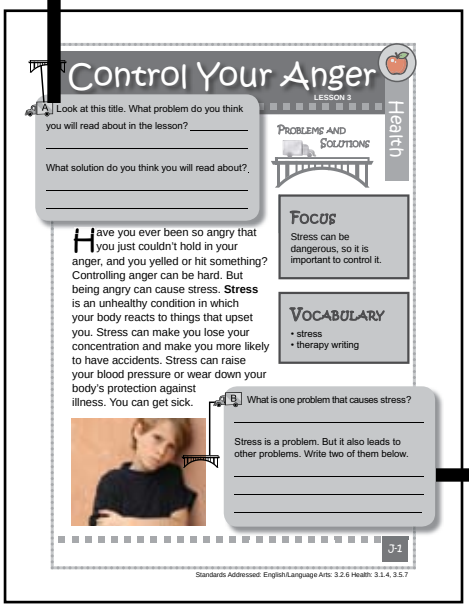
- Allow students time to journal about an event that made them angry and how they handled it. If time allows, read part (or all) of *Taking the GRRR out of Anger* by Elizabeth Verdick & Marjorie Lisovskis (2003) that discusses the various aspects of angry feelings and what to do. If students feel comfortable, have them share and discuss these experiences before beginning the lesson.

Problems and Solutions Lesson 3: *Control Your Anger* (Health)

A Look at this title. What problem do you think you will read about in the lesson? **(1 pt)** ***anger, angry people, getting mad, or any other appropriate response***

What solution do you think you will read about? **(1 pt)** ***Accept any reasonable response for solution to anger (e.g., talking, cooling down).***

(5 pts total)


Control Your Anger
LESSON 3
Health
A Look at this title. What problem do you think you will read about in the lesson? _____
What solution do you think you will read about? _____
Problems and Solutions
Focus
Stress can be dangerous, so it is important to control it.
Vocabulary
• stress
• therapy writing
Have you ever been so angry that you just couldn't hold in your anger, and you yelled or hit something? Controlling anger can be hard. But being angry can cause stress. **Stress** is an unhealthy condition in which your body reacts to things that upset you. Stress can make you lose your concentration and make you more likely to have accidents. Stress can raise your blood pressure or wear down your body's protection against illness. You can get sick.
B What is one problem that causes stress? _____
Stress is a problem. But it also leads to other problems. Write two of them below. _____
J-1
Standards Addressed: English/Language Arts: 3.2.6 Health: 3.1.4, 3.5.7

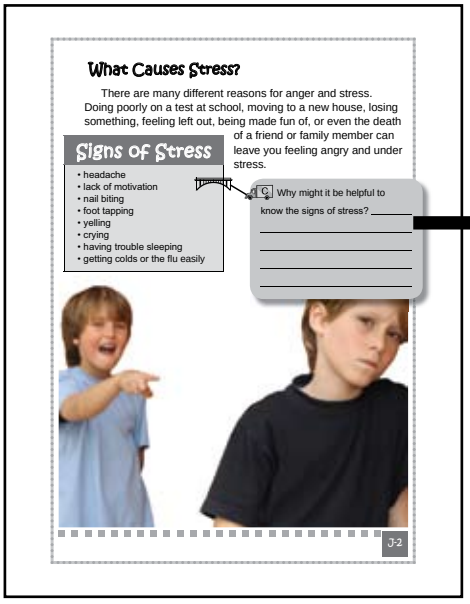
B What is one problem that causes stress? **(1 pt)** ***anger, things that make you upset, or any other appropriate response***

Stress is a problem. But it also leads to other problems. Write two of them below. **(2 pts)** ***Accept any two of the following for 1 pt. each: lost concentration, increased blood pressure, illness, or decreased protection from illness.***

Additional Practice Activities:

- Give students several simple problem scenarios to read. Have them work to identify the central problem(s). Have students brainstorm to come up with several possible solutions to these problems. What are the pros and cons of each decision/solution?
- Give students short passages to read. Have them highlight any problem and solution signal words or phrases that they encounter. If these words or phrases are missing, have them write them in. Discuss how signal words and phrases help to make the process of identifying problems and solutions easier.

(1 pt total)



C Why might it be helpful to know the signs of stress? (1 pt)

You will be able to notice them in yourself and others and help relieve the stress that is causing them; it helps you think about how you personally react to stress; or any other appropriate response.

Extension Activities:

- Have students work independently or with partners to create short stories that offer more than one possible solution to a problem. Encourage students to use clear problem and solution signal words/phrases. Have students exchange these stories. Have the students reading the stories choose which solution they think is best. Alternately, have students volunteer to read their stories aloud and ask the class to vote on which solution they prefer.

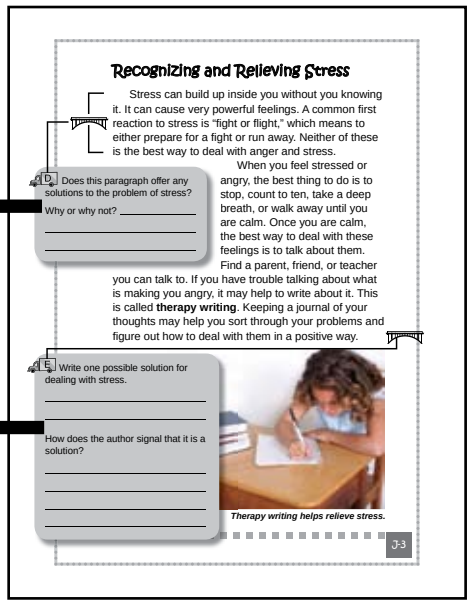
Problems and Solutions Lesson 3: *Control Your Anger* (Health)

(3 pts total)

D Does this paragraph offer any solutions to the problem of stress? Why or why not? **(1 pt)** ***No. It tells how stress makes you feel. It doesn't say what to do.***

E Write one possible solution for dealing with stress. **(1 pt)** ***Count to ten; walk away; talk to someone; write about it; journal.***

How does the author signal that it is a solution? **(1 pt)** ***S/he uses the words best way, best thing, it may help when describing solutions, or any other appropriate response.***



Recognizing and Relieving Stress

Stress can build up inside you without you knowing it. It can cause very powerful feelings. A common first reaction to stress is "fight or flight," which means to either prepare for a fight or run away. Neither of these is the best way to deal with anger and stress.

When you feel stressed or angry, the best thing to do is to stop, count to ten, take a deep breath, or walk away until you are calm. Once you are calm, the best way to deal with these feelings is to talk about them. Find a parent, friend, or teacher you can talk to. If you have trouble talking about what is making you angry, it may help to write about it. This is called **therapy writing**. Keeping a journal of your thoughts may help you sort through your problems and figure out how to deal with them in a positive way.

D Does this paragraph offer any solutions to the problem of stress?

Why or why not? _____

E Write one possible solution for dealing with stress.

How does the author signal that it is a solution?

Therapy writing helps relieve stress.

J-3

(1 pt total)

F How is knowing your body's reaction to stress an important solution to the problems stress causes?

(1 pt) ***When you know your body's reaction, you can do something about it and relieve stress, or any other appropriate response.***

Standards Links:

- **English/Language Arts 3.7.5** – Organize ideas chronologically (in the order they happened) or around major points of information.
- **English/Language Arts 3.7.6** – Provide a beginning, a middle, and an end to oral presentations, including details that develop a central idea.
- **Health 3.3.1** – Demonstrate how to apply skills to manage stress.
- **Health 3.3.2** – Demonstrate how to apply coping strategies when feeling anxious, upset, angry, or out of control.
- **Health 3.3.3** – Demonstrate ways to avoid, reduce, and report threatening situations.
- **Health 3.5.3** – Demonstrate healthy ways to express needs, wants, and feelings including "I" messages and assertive communication strategies.
- **Health 3.5.8** – Demonstrate nonviolent strategies to resolve conflicts.

Suggested Activity –

Divide the class into small groups. Present each group with a different "stressful" scenario card. Ask each group to decide on the healthiest course of action. Have each group share their scenario card and solution(s) with the rest of the class through a brief oral presentation.

Discussion Prompts Following the Lesson:

- Look at the photograph at the bottom of Page J-1. How can you tell that this boy is experiencing stress? *He looks unhappy; he isn't standing straight; he looks sad; etc.* Why do you think the author included this photograph? *It illustrates that kids can feel stress too; kids can relate to it; it makes the lesson more interesting; etc.* Do you think the photo illustrates a problem or a solution? *It shows there is a problem.*
- Look at Guided Reading Box B. How did you answer the second part of the question? *I looked to see what other problems are described in the paragraph (losing concentration, having accidents, raising blood pressure, wearing down the body's defense system, getting sick, etc.) and saw that the paragraph said they could be caused by stress, etc.*
- Look at the photograph on Page J-2. What seems to be causing this boy's stress? *He is being bullied.* Have you ever been in a situation like this one? What did you do? *Allow students to discuss their experiences.* What might you do differently next time to relieve your stress? *Remember what you read, try therapy writing, resist the "fight-or-flight" impulse, talk about your feelings, etc.*
- Look at Guided Reading Box D. How did you know that you were not reading about solutions in this paragraph? *The paragraph says "neither is the best way to deal with anger and stress;" "fighting and running away are not good solutions to any problem;" etc.* Would you expect this section to tell you solutions to stress and why or why not? *Yes, because the heading says "Recognizing and Relieving Stress."* If the first paragraph in the section doesn't tell you a solution, what should you do? *You should continue reading to find a solution; predict what the solution might be; etc.*
- Look at Guided Reading Box E. Can you think of any other healthful ways of dealing with your stress that were not discussed in the lesson? *Some solutions might be exercise, relaxing through a hobby or other activity that you enjoy; talking to a school counselor/doctor, etc.*

Predicting Lesson 1: *Water Wheels Make Water Work* (Science)

Reading Difficulty: Low **Guided Reading Boxes:** 6

Instructional Vocabulary:	**Lesson Vocabulary:**
• graphic organizer	• horizontal water wheel
• lesson	• vertical water wheel
• paragraph	• water wheel
• section	
• heading	

Students will need a copy of the Predicting graphic organizer in order to complete this lesson. (A completed graphic organizer for this lesson can be found on page 86.)

Standards Addressed:

English/Language Arts Focus:

- *3.1.6* – Use sentence and word context to find the meaning of unknown words.
- *3.2.2* – Ask questions and support answers by connecting prior knowledge with literal information from the text.
- *3.2.3* – Show understanding by identifying answers in the text.
- *3.2.4* – Recall major points in the text and make and revise predictions about what is read.
- *3.2.6* – Locate appropriate significant information from the text, including problems and solutions.

Social Studies Standards Addressed:

- *3.3.7* - Use a variety of information resources to identify local environmental issues and examine the ways that people have tried to solve these problems.

Science Standards Addressed:

- *3.3.8* – Investigate and describe how moving air and water can be used to run machines like windmills and waterwheels.

Background Prompt:

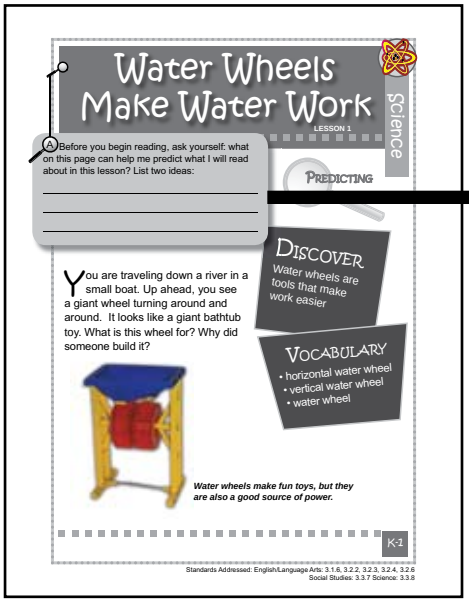
- What kinds of wheels can you think of? Where do you see wheels? What do these wheels do?

Predicting Lesson 1: *Water Wheels Make Water Work* (Science)

A Before you begin reading, ask yourself: what on this page can help me predict what I will read about in this lesson? List two ideas: _____

(2 pts) ***Accept any two of the following for 1pt each: graphics, titles, vocabulary words, captions, headings, main ideas, the photo of the water wheel, or any other appropriate responses.***

(2 pts total)



Additional Practice Activities:

- If students continue to struggle to make predictions, have them use the Detective Graphic Organizer to work with picture books or other simpler texts. As they become more comfortable using the graphic organizer to predict, have them practice making predictions with a lesson.

Predicting Lesson 1: *Water Wheels Make Water Work* (Science)

(3 pts total)

What is a Water Wheel?

A **water wheel** is a tool that uses water to do work. As water pushes against the blades or spokes of a water wheel, the wheel turns. The energy from the moving wheel can then be used to do work.

Scientists believe humans have been using water wheels for nearly 2,000 years. Early people used water to turn stones in order to grind grain. The water made it easier to grind the grain, so people did not have to work as hard. Five hundred years ago, water wheels provided much of the energy used for grinding grain, mining minerals, powering boats, and even chopping wood. People learned to build different kinds of water wheels over time. These kinds of wheels are based on the same scientific idea, but they work in different ways.

This photo shows an undershot water wheel used to grind grain.

B This heading asks you a question. Before you read the paragraph, ask yourself: "What do I already know about water wheels?" Write what you know about water wheels in the "What I Know" space of your **graphic organizer**.

C Now that you have read the paragraph, write down some of your observations in the "What I Read or Learned" space of your **graphic organizer**.

Using what you know and have read, predict what you will learn about in the rest of the lesson. Write this in the "My Predictions" space of your **graphic organizer**.

K-2

B This heading asks you a question. Before you read the paragraph, ask yourself: "What do I already know about water wheels?" Write what you know about water wheels in the "What I Know" space of your **graphic organizer**.

(1 pt) ***Students should have written any one water wheel fact in the proper space of the graphic organizer. This could be information from the first page of the lesson (Water wheels are tools that make work easier; water wheels make water work; water wheels make fun toys; water wheels are a good source of power; etc.) or notes about students' own experiences seeing or playing with a water wheel (You can play with them in the bathtub; I have one in my water table; sometimes you see them on rivers; etc.).***

(See graphic organizer example on page 86.)

(1 pt) ***Student should have written information from the paragraph in the "Read or Learned" space of the graphic organizer.*** (1 pt) ***Student should have written a reasonable prediction about what will be learned on the graphic organizer based on his or her background knowledge and the information from the text (different kinds of water wheels, how different kinds of water wheels work, etc.).***

Extension Activities:

- Have students use what they know about predicting to develop their own graphic organizers. Have them trade these graphic organizers and test them out using textbook lessons.

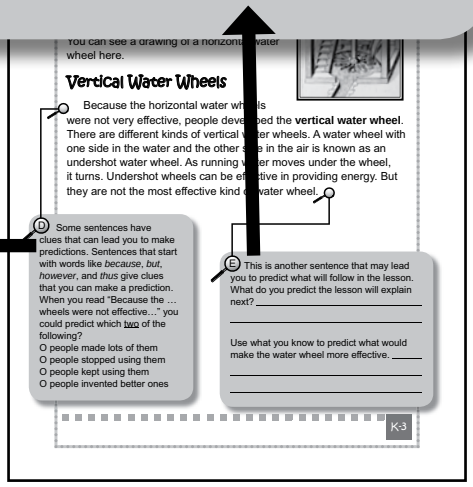
Predicting Lesson 1: *Water Wheels Make Water Work* (Science)

E This is another sentence that may lead you to predict what will follow in the lesson. What do you predict the lesson will explain next? **(1 pt)** ***It will explain what kind of water wheel is more effective, or any other appropriate response.***

Use what you know to predict what would make the water wheel more effective. **(1 pt)** ***It would need a steady stream of water, or any other appropriate response.***

D Some sentences have clues that can lead you to make predictions. Sentences that start with words like *because*, *but*, *however*, and *thus* give clues that you can make a prediction. When you read "Because the …wheels were not effective…" you could predict which two of the following? **(2 pts)**

O people made lots of them
● people stopped using them
O people kept using them
● people invented better ones


You can see a drawing of a horizontal water wheel here.

Vertical Water Wheels

Because the horizontal water wheels were not very effective, people developed the **vertical water wheel**. There are different kinds of vertical water wheels. A water wheel with one side in the water and the other side in the air is known as an undershot water wheel. As running water moves under the wheel, it turns. Undershot wheels can be effective in providing energy. But they are not the most effective kind of water wheel.

D Some sentences have clues that can lead you to make predictions. Sentences that start with words like *because*, *but*, *however*, and *thus* give clues that you can make a prediction. When you read "Because the … wheels were not effective…" you could predict which two of the following?
O people made lots of them
O people stopped using them
O people kept using them
O people invented better ones

E This is another sentence that may lead you to predict what will follow in the lesson. What do you predict the lesson will explain next? _____

Use what you know to predict what would make the water wheel more effective. _____

K-3

(4 pts total)

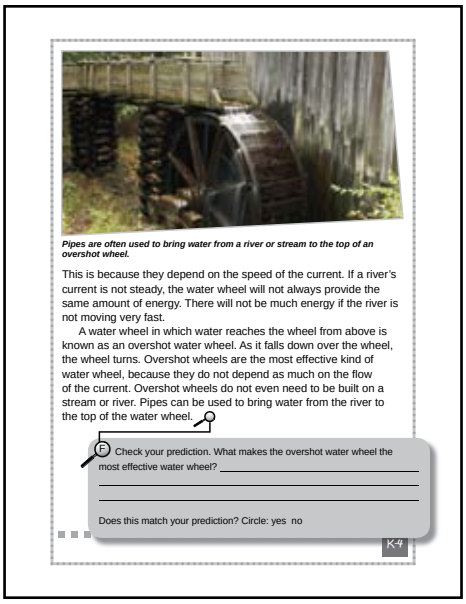
Standards Links:

- **Science 3.2.5** – Construct something used for performing a task out of paper, cardboard, wood, plastic, metal, or existing objects.
- **Science 3.6.1** – Investigate how and describe that when parts are put together, they can do things that they could not do by themselves.
- **Mathematics 3.4.8** – Identify and draw lines of symmetry in geometric shapes (by hand or using technology).

Suggested Activity –

To learn more about harnessing natural energy, have students build an anemometer with straws, Styrofoam cups, and pencils. For an example, see: *http://tristate.apogee.net/kids/lawe_ifrm.aspx.*

Have students identify the lines of symmetry in their anemometers as they work. Discuss how the simple parts they used came together to form a working instrument.



Pipes are often used to bring water from a river or stream to the top of an overshot wheel.

This is because they depend on the speed of the current. If a river's current is not steady, the water wheel will not always provide the same amount of energy. There will not be much energy if the river is not moving very fast.

A water wheel in which water reaches the wheel from above is known as an overshot water wheel. As it falls down over the wheel, the wheel turns. Overshot wheels are the most effective kind of water wheel, because they do not depend as much on the flow of the current. Overshot wheels do not even need to be built on a stream or river. Pipes can be used to bring water from the river to the top of the water wheel.

F Check your prediction. What makes the overshot water wheel the most effective water wheel? _____

_____

Does this match your prediction? Circle: yes no

K-4

(1 pt total)

F Check your prediction. What makes the overshot water wheel the most effective water wheel? **(1 pt)** ***It does not need a current, and it can go anywhere, or any other appropriate response.***

Does this match your prediction? Circle: yes no **(no points)**

Standards Links (continued):

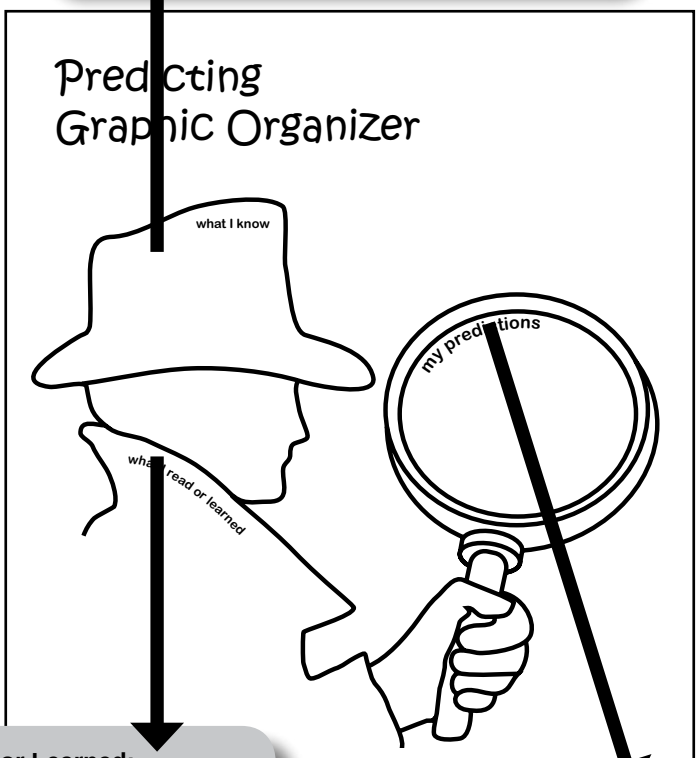
- **English/Language Arts 3.5.6** – Write persuasive pieces that ask for an action or response.

  Suggested Activity –
  Have students research the ways in which a switch to water power could help the environment. Have them write persuasive essays about the need to develop and switch to water power.

Predicting Lesson 1: *Water Wheels Make Water Work* (Science)

What I Know:

Water wheels move when water goes over them.



What I Read or Learned:

Water wheels are used to do work. There are different kinds of water wheels.

My Predictions:

I'll read about how water wheels work and what kinds there are.

Discussion Prompts Following the Lesson:

- Look at the title of this lesson. What does the author mean by making water "work"? Is the water broken? *No. The author means that water can be used to help people do work.*
- Look at the photograph on the bottom of Page K-1. If you had to predict what the lesson was about from this photograph, what would you say? *Answers will vary. Students might say that the lesson will be about water play, toys etc.* Would this answer be right? *Probably not.* Why do you think the author chose this photograph if it is not a good clue about what the lesson will be about? *It is fun; it interests the reader in reading more; it helps the reader connect the lesson to his or her background knowledge from playing with a water wheel; etc.*
- Look at Guided Reading Box C. What in the paragraph did you already know about water wheels? *Answers will vary. Some students may have had prior experience playing with water wheels. Other students' knowledge will likely have been limited to what they read in the preceding paragraphs.* Was there anything that you already knew about water wheels, but forgot to write in your graphic organizer? *Answers will vary. Ask students to think about why they might have left this information out.*
- Look at Guided Reading Box D. How did you choose your answers? *Answers will vary. Have students explain their thought processes. Answers might include: "I asked myself whether each choice was logical;" "I predicted what I would do if something was not very effective;" etc.*
- Look at Guided Reading Box F. Why is it important to check to see if your prediction was correct? *You can check your understanding; you may be able to make better predictions next time; you will think about what you learned; etc.* Is it important that your predictions are always right? *No.* Why not? *What is most important is that you think about what you have learned/read.*

Predicting Lesson 2: *How Much Can It Hold?* (Math)

Reading Difficulty: Medium **Guided Reading Boxes:** 7

Instructional Vocabulary:	**Lesson Vocabulary:**		
• graphics	• capacity	• gallon	• quart
• lesson	• cup	• pint	
• sentence			
• title			

Standards Addressed:

English/Language Arts Focus:

- *3.1.6* – Use sentence and word context to find the meaning of unknown words.
- 3.2.2 – Ask questions and support answers by connecting prior knowledge with literal information from the text.
- *3.2.3* – Show understanding by identifying answers in the text.
- *3.2.4* – Recall major points in the text and make and revise predictions about what is read.

Science Standards Addressed:

- *3.1.4* – Discuss the results of investigations and consider the explanations of others.
- *3.2.3* – Keep a notebook that describes observations and is understandable weeks or months later.
- *3.5.1* – Select and use appropriate measuring units, such as centimeters (cm) and meters (m), grams (g) and kilograms (kg), and degrees Celsius (°C).
- *3.5.3* – Construct tables and graphs to show how values of one quantity are related to the values of another.

Mathematics Standards Addressed:

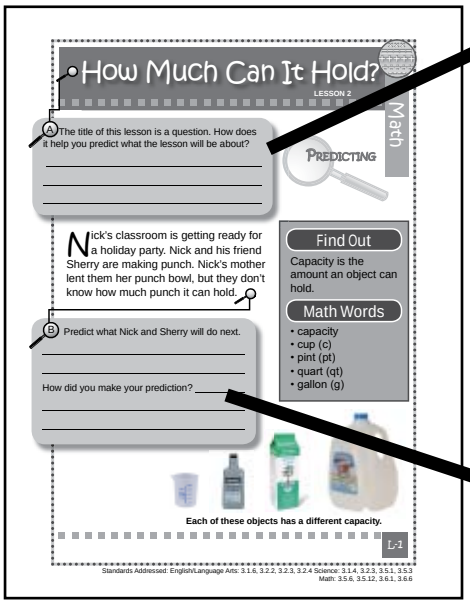
- *3.5.6* – Estimate and measure capacity using quarts, gallons, and liters.
- *3.5.12* – Carry out simple unit conversions within a measurement system (e.g., centimeters to meters, hours to minutes).
- *3.6.1* – Analyze problems by identifying relationships, telling relevant from irrelevant information, sequencing and prioritizing information, and observing patterns.
- 3.6.6 – Know and use strategies for estimating results of whole-number addition and subtraction.

Background Prompt:

- Which one holds more liquid: a water bottle, a fish tank, or a swimming pool? What are some units of measurement for liquids? How do you find out how much liquid you can put in something like a swimming pool?

Predicting Lesson 2: *How Much Can It Hold?* (Math)

(3 pts total)



A The title of this lesson is a question. How does it help you predict what the lesson will be about? **(1 pt)** ***You know that the lesson will be about how much an object can hold; you know that you will be reading about some form of measurement; or any other appropriate response.***

B Predict what Nick and Sherry will do next. **(1 pt)** ***They might test the bowl; Nick and Sherry will fill the bowl with something; they will measure the bowl; or any other appropriate response.***

How did you make your prediction? **(1 pt)** ***I thought about what I would do in the situation; I combined what I know with what I read; or any other appropriate response.***

Additional Practice Activities:

- If students are continuing to struggle with predicting, have them work with partners to predict. It may be useful to pair students who are struggling with students who have a better mastery of the skill. Give each pair a simpler text, such as a picture book with illustrations that lend themselves well to predicting. Have them work together to make predictions using the simpler book first, then move on to generate predictions about informational text.
- Mathematics textbooks can often be confusing for students who are learning to make predictions. Books often frame their lessons with stories and graphics that are not directly related to the skill at hand. Although these stories and graphics can lead to useful predictions, students should not overlook the mathematics content. Have students practice looking at lessons using both the stories and the mathematics content to make predictions. Have them evaluate the graphics carefully, thinking about whether they are reliable aids for predicting.

Predicting Lesson 2: *How Much Can It Hold?* (Math)

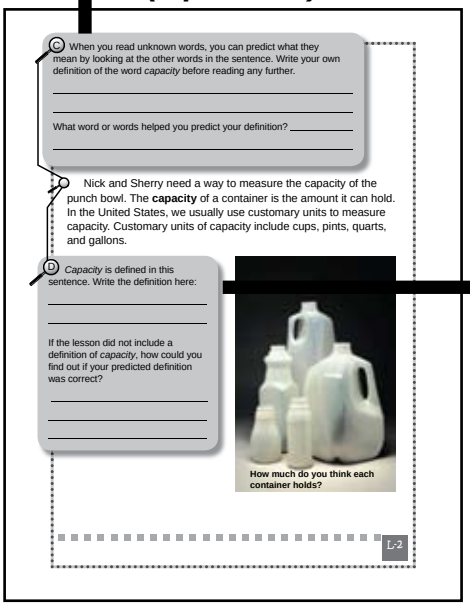
C When you read unknown words, you can predict what they mean by looking at the other words in the sentence. Write your own definition of the word *capacity* before reading any further.

(1 pt) ***Capacity has to do with measuring; capacity has to do with holding something; or any other appropriate response.***

What word or words helped you predict your definition?

(1 pt) measure, hold, *etc.*

(4 pts total)


C When you read unknown words, you can predict what they mean by looking at the other words in the sentence. Write your own definition of the word *capacity* before reading any further.

What word or words helped you predict your definition?

Nick and Sherry need a way to measure the capacity of the punch bowl. The **capacity** of a container is the amount it can hold. In the United States, we usually use customary units to measure capacity. Customary units of capacity include cups, pints, quarts, and gallons.

D *Capacity* is defined in this sentence. Write the definition here:

If the lesson did not include a definition of *capacity*, how could you find out if your predicted definition was correct?

How much do you think each container holds?

L-2

D *Capacity* is defined in this sentence. Write the definition here:

(1 pt) Capacity *is the amount a container can hold.*

If the lesson did not include a definition of *capacity*, how could you find out if your predicted definition was correct?

(1 pt) ***You could look in a dictionary/ glossary, ask a friend or teacher, look it up on the Internet, or any other appropriate response.***

Extension Activities:

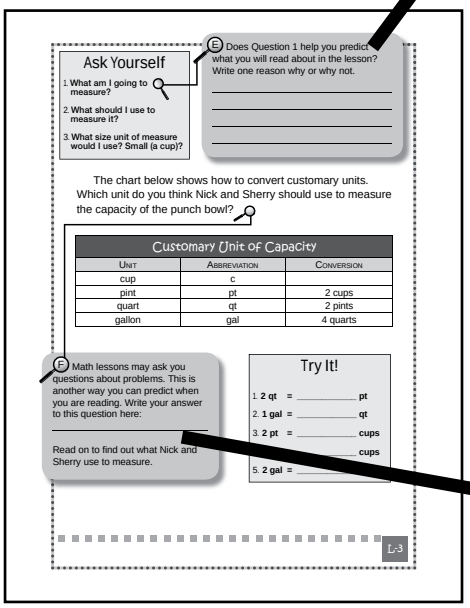
- If students are comfortable making predictions and need a challenge, have them write stories using prediction clues. Have them share these stories with the class and have the class make predictions about what will happen next.

Predicting Lesson 2: *How Much Can It Hold?* (Math)

E Does question 1 help you predict what you will read about in the lesson? Write one reason why or why not.

(1 pt) ***Accept either Yes or No as long as the student has justified his or her answer (see below). Yes: I know the lesson will be about measuring, or any other appropriate response. No: it is asking me to predict what I'm going to measure, not what I am going to read, or any other appropriate response.***

(2 pts total)



F Math lessons may ask you questions about problems. This is another way you can predict when you are reading. Write your answer to this question here:

(1 pt) ***cups, pints, quarts (although if students are not familiar with these units of measure, you may wish to accept gallons as well)***

Read on to find out what Nick and Sherry use to measure.

Standards Links:

- **Science 3.1.5** – Demonstrate the ability to work cooperatively while respecting the ideas of others and communicating one's own conclusions about findings.
- **Mathematics 3.5.6** – Estimate and measure capacity using quarts, gallons, and liters.

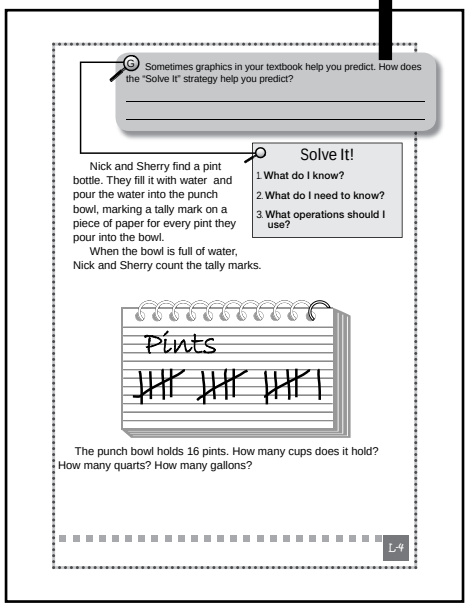
Suggested Activity –

Collect pictures of juice, milk, cream, water, yogurt, paint, syrup, vegetable oil, flour, sugar, and honey containers from the Internet and have students guess what each container's unit of measurement is. Separate the students into three groups: 1) the cup group, 2) the quart group, and 3) the gallon group. Have each group come up with a list of five to ten things that are best measured using their unit of measurement.

Predicting Lesson 2: *How Much Can It Hold?* (Math)

G Sometimes graphics in your textbook help you predict. How does the "Solve It" strategy help you predict?

(1 pt) ***It gives you an idea about the kinds of questions you should ask yourself; it helps you connect what you know to what you need to know; or any other appropriate response.***



(1 pt total)

Standards Links (continued):

- **English/Language Arts 3.5.3** – Write personal, persuasive, and formal letters, thank-you notes, and invitations that…
- **English/Language Arts 3.5.1** – Write narratives that…
- **English/Language Arts 3.5.5** – Write for different purposes and to a specific audience or person.

Suggested Activity –

Have students plan an imaginary party for your classroom. Have them design and write invitations. Then have them write make believe stories about the party to share with the class.

Discussion Prompts Following the Lesson:

- Look at the photograph at the bottom of Page L-1. Does it help you predict what the lesson is going to be about? *Yes. It shows different objects that have different capacities. The caption tells you that the objects have different capacities. You know the lesson will be about capacity/how much an object can hold.*
- Look at Guided Reading Box B. Why is it important to explain how you made your prediction? *Answers will vary. Have students explain their ideas. Possible answers include: It helps you check your understanding; it helps you think about thinking; etc.*
- Look at Guided Reading Box D. Why is it important to check your predictions to see if they were correct? *You will find out if you are predicting correctly; it will help you think about how you are predicting; it will help you change how you are predicting if need be; it will help you become better at predicting; etc.*
- Look at the chart of Customary Units of Capacity on Page L-3. Predict why someone would prefer to use the abbreviation instead of the full unit title. *It is faster and easier to write; it takes up less space; etc.* Why is it important to recognize the abbreviations? *People are more likely to use the abbreviations than the complete titles. If you don't know the abbreviations, you will not know what you are reading about.*
- Look at page L-4. Why do you think Nick and Sherry use water instead of punch? *They do not want to waste the punch; they do not want to make a mess; they need to save the punch for the party; it is easier to use water; etc.*
- Do you think that 16 cups is too much, too little, or just the right amount for a punch bowl for a party? *It is probably about right.* How did you make your prediction? *Answers will vary. Have students explain their thought processes. Answers might include: a punch bowl is probably designed to hold a good amount for a party; if the punch bowl holds 16 cups, that must be enough for a party; the author would not have chosen a number of cups that did not make sense, etc.*

Predicting Lesson 3: *Planting Zones* (Social Studies)

Reading Difficulty: High **Guided Reading Boxes:** 7

Instructional Vocabulary:		**Lesson Vocabulary:**
• chart	• paragraph	• region
• graphics		
• lesson		

Standards Addressed:

English/Language Arts Focus:

- *3.2.2* – Ask questions and support answers by connecting prior knowledge with literal information from the text.
- *3.2.3* – Show understanding by identifying answers in the text.
- *3.2.4* – Recall major points in the text and make and revise predictions about what is read.

Social Studies Standards Addressed:

- *3.3.1* – Distinguish between physical and political features on maps and globes and label a map of North America identifying countries, oceans, major rivers, the Great Lakes, and mountain ranges. Locate the United States, Indiana, and the local community.
- *3.3.3* – Explain that regions are areas that have similar physical and cultural characteristics and locate the local community in a specific region.
- *3.3.4* – Explain basic Earth/sun relationships, including how they influence climate, and identify major climate regions of the United States.
- *3.3.5* – Explain how climate affects the vegetation and animal life of a region and describe the physical characteristics that relate to form an ecosystem.

Science Standards Addressed:

- *3.4.4* – Describe that almost all kinds of animals' food can be traced back to plants.

Background Prompt:

- (Teachers may want to do some preliminary research about different tree species that exist in the United States prior to asking the question.) How many different types of trees can you name? Why do you only see certain trees, like palm trees, in some states and not others?

Predicting Lesson 3: *Planting Zones* (Social Studies)

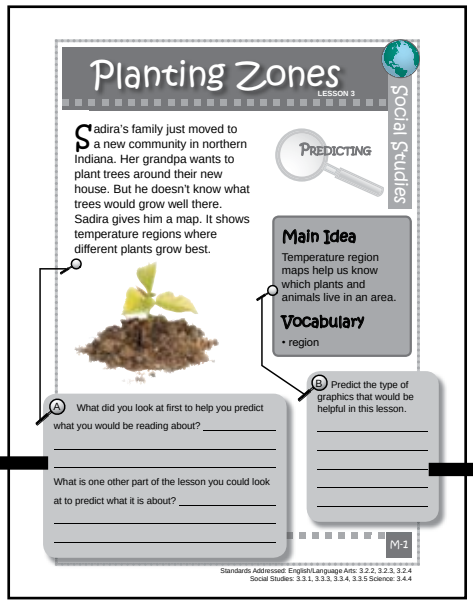
A What did you look at first to help you predict what you would be reading about?

(1 pt) *the title, the plant zone map, headings, growth chart, or any other appropriate response*

What is one other part of the lesson you could look at to predict what it is about?

(1 pt) *the title, the plant zone map, headings, growth chart, or any other appropriate response not listed above*

(3 pt total)



B Predict the type of graphics that would be helpful in this lesson.

(1 pt) *temperture region/ zone, maps, illustrations that show where plants and animals live, , or any other appropriate response*

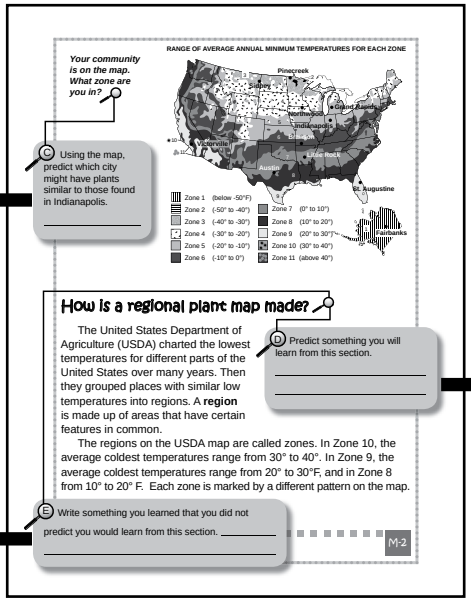
Additional Practice Activities:

- Using Cloze reading passages where words have been left out can help students with their predicting skills. Using removable sticky notes, cover up every tenth word in the story "The Giving Tree" by Shel Silverstein. Read the story aloud and have students supply the missing words. Next, copy a paragraph from a grade level appropriate story. White out some of the words in the paragraph and then make copies for the students to write in the missing words. Discuss with students which words were easiest to fill in. Which blanks had many words that could be substituted? Follow-up the activity by having students fill in missing words in a textbook passage.

Predicting Lesson 3: *Planting Zones* (Social Studies)

D Predict something you will learn from this section. **(1 pt)** ***how a map is made, how to make regional plant maps, or any other appropriate response.***

(3 pts total)



C Using the map, predict which city might have plants similar to those found in Indianapolis.
(1 pt) ***Grand Rapids, Michigan***

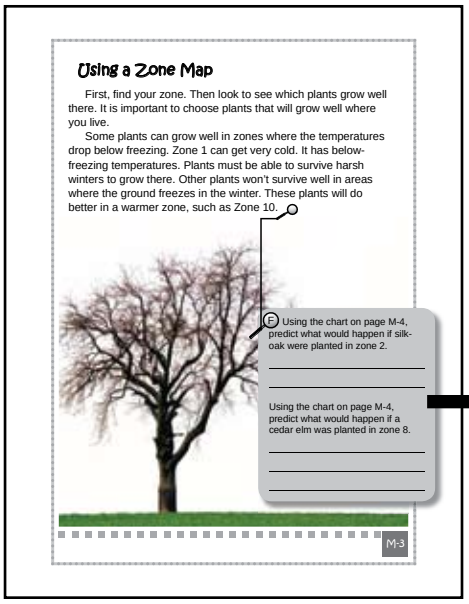
E Write something you learned that you did not predict you would learn from this section.
(1 pt) ***Accept any reasonable response that is drawn from the paragraph.***

Extension Activities:

- Have students predict other trees that might grow well in their hardiness zone as well as trees that would not grow well. Using the Internet and nursery sites, students can check to see if their predictions were correct.

Predicting Lesson 3: *Planting Zones* (Social Studies)

(2 pts total)



F Using the chart on page M-4, predict what would happen if silk-oak were planted in zone 2. _

(1 pt) ***The silk-oak might die; it might not grow as well; or any other appropriate response.***

Using the chart on page M-4, predict what would happen if a cedar elm was planted in zone 8.

(1 pt) ***It should grow; it will grow well in that zone; or any other appropriate response.***

Standards Links:

- **Math 3.2.1** – Add and subtract whole numbers up to 1,000 with or without regrouping, using relevant properties of the number system.
- **Math 3.2.8** – Use mental arithmetic to add or subtract with numbers less than 100.

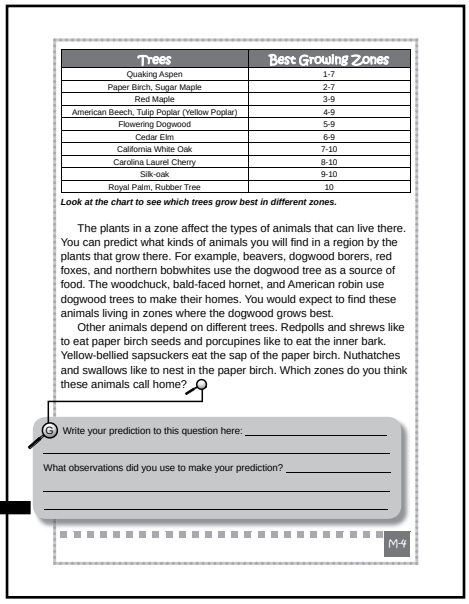
  Suggested Activity –
  Have students add up the total number of zones for each plant on the chart. Explain that zones 9-10 is 2 zones, not just one.

Predicting Lesson 3: *Planting Zones* (Social Studies)

G Write your prediction to this question here:

(1 pt) ***I would expect to find these animals in zones 2-7 because that is where the paper birch tree grows best; the paper birch grows in zones 2-7, so the animals probably live there too; or any other appropriate response.***

What observations did you use to make your prediction? (1 pt) ***I thought about how animals live; I knew that these animals depend on the paper birch and would have to live near it; or any other appropriate response.***



Trees	Best Growing Zones
Quaking Aspen	1-7
Paper Birch, Sugar Maple	2-7
Red Maple	3-9
American Beech, Tulip Poplar (Yellow Poplar)	4-9
Flowering Dogwood	5-9
Cedar Elm	6-9
California White Oak	7-10
Carolina Laurel Cherry	8-10
Silk-oak	9-10
Royal Palm, Rubber Tree	10

Look at the chart to see which trees grow best in different zones.

The plants in a zone affect the types of animals that can live there. You can predict what kinds of animals you will find in a region by the plants that grow there. For example, beavers, dogwood borers, red foxes, and northern bobwhites use the dogwood tree as a source of food. The woodchuck, bald-faced hornet, and American robin use dogwood trees to make their homes. You would expect to find these animals living in zones where the dogwood grows best.

Other animals depend on different trees. Redpolls and shrews like to eat paper birch seeds and porcupines like to eat the inner bark. Yellow-bellied sapsuckers eat the sap of the paper birch. Nuthatches and swallows like to nest in the paper birch. Which zones do you think these animals call home?

G Write your prediction to this question here: _____

What observations did you use to make your prediction? _____

M-4

(2 pts total)

Standards Links (continued):

- **Art 3.1.1** – Identify visual clues in works of art and artifacts that reflect characteristics of a given culture and speculate on where, when, and by whom the work was made.
- **Art 3.1.2** – Speculate on the function or purpose of a work of art and make connections to the culture.
- **Art 3.1.3** – Identify themes and symbols in works of art from various cultures and time-periods.
- **Art 3.2.1** – Recognize and be familiar with works of art from a variety of cultures and identify artist and clues to culture.

Suggested Activity –

Have students get into groups and give each group a packet of pictures that show dwellings, traditional clothing, and other artifacts from a Native American tribe such as Inuit, Northwest Coast Indians, and southern Indian tribes. Have students guess what climate zone they lived in. Discuss how the climate zone may have influenced their art and culture.

Discussion Prompts Following the Lesson:

- Look at Paragraph 1. Where do you think Sadira got the temperature regions map? *She may have received it at school; she might have borrowed it from the library; etc.* Where else could Sadira and her grandfather get this information? *They could look on the Internet, in an almanac, in an encyclopedia, etc.*
- Why do you think that the lines between the different zones don't go straight across, but curve all over? *Temperatures vary a lot from place to place. Just because areas are close together geographically does not mean that they will have similar temperatures. Temperatures will be affected by geographic features such as bodies of water, mountains, etc.*
- Look at Guided Reading Box 3. This is a heading for the next paragraph. What kind of sentence is it? *It is a question.* How could you make this question into a statement? *Regional plant maps are made by collecting data and dividing an area up into zones that have similar temperatures.* Look at the next heading. What would be a good question to use as a subheading for that paragraph? *How are Zone Maps Used?*
- Look at the planting zone map of the United States on Page M-4. What are some plants that grow well in Indiana? *quaking aspen, paper birch, sugar maple, red maple, american beech, tulip poplar; flowering dogwood* How do you know? *You have to look at the Zone Map one Page M-2. It shows you that Indiana is in Zone 5. Then you can look at the chart on Page M-4 and see which plants will grow well in Zone 5.* If students have only mentioned Flowering Dogwood because there is a 5 on the chart, help them understand that 1-7 etc. means all of the zones between those two numbers, including zone 5.

Key Words Lesson 1: *Animal Armor* (Science)

Reading Difficulty: Medium **Guided Reading Boxes:** 4

Instructional Vocabulary:

- glossary
- graphic organizer
- paragraph
- sentence
- strategy
- vocabulary word

Lesson Vocabulary:

- adaptation
- camouflage

Students will need two copies of the Key Words graphic organizer in order to complete this lesson. (Completed graphic organizers for this lesson can be found on page 106 and 107.)

Standards Addressed:

English /Language Arts Focus:

- *3.1.4* – Determine the meanings of words using knowledge of synonyms (words with the same meaning), antonyms (words with opposite meanings), homophones (words that sound the same but have different meanings and spellings), and homographs (words that are spelled the same but have different meanings).
- *3.1.6* – Use sentence and word context to find the meaning of unknown words.
- *3.1.7* – Use a dictionary to learn the meaning and pronunciation of unknown words.
- *3.2.3* – Show understanding by identifying answers in the text.
- *3.4.4* – Use various reference materials (such as a dictionary, thesaurus, atlas, encyclopedia, and online resources).

Science:

- *3.4.1* – Demonstrate that a great variety of living things can be sorted into groups in many ways using various features, such as how they look, where they live, and how they act, to decide which things belong to which group.
- *3.4.3* – Observe that and describe how offspring are very much, but not exactly, like their parents and like one another.

Background Prompt:

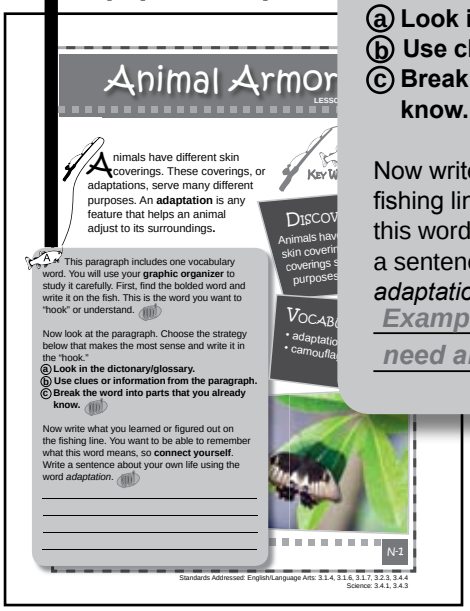
- What are some things that you do on a hot, sunny day to stay cool? How do you dress when it's snowing and cold?

Key Words Lesson 1: *Animal Armor* (Science)

(1 pt) ***Student should have written*** **adaptation** ***on the fish.***

(See graphic organizer example on page 106.)

(3 pts total)



This paragraph includes one vocabulary word. You will use your **graphic organizer** to study it carefully. First, find the bolded word and write it on the fish. This is the word you want to "hook" or understand.

Now look at the paragraph. Choose the strategy below that makes the most sense and write it in the "hook."

ⓐ **Look in the dictonary/glossary.**
ⓑ **Use clues or information from the paragraph.**
ⓒ **Break the word into parts that you already know.**

Now write what you learned or figured out on the fishing line. You want to be able to remember what this word means, so **connect yourself**. Write a sentence about your own life using the word *adaptation*.

Example: If I had to live in the ocean, I would need an adaptation to live underwater.

(1 pt) ***Accept any sentence on the fishing pole that correctly uses the word*** **adaptation** ***in relation to the student's own life.***

(1 pt) ***Student should have selected one of the three strategies listed in the Guided Reading Box, written it in the hook, and supported it with information on the fishing line. Accept any reasonable response on the fishing line that relates to the strategy of choice written on the hook. Students might say, for example, that he or she got the definition "to change" from the glossary, that s/he used the paragraph to find out that it means something that helps an animal adjust to its surroundings, or that s/he broke the words into*** **adapt** ***and*** **tion** ***and figured out that it must be something that helps an animal adapt, etc.***

Additional Practice Activities:

- If students are struggling with using the graphic organizer, have them practice using the graphic organizer with words they already know. This will help them think about the process and prepare them to use it to unlock the meanings of words that are not familiar.
- Have students practice using one strategy "to hook" words one at a time:
  - Practice using context clues to learn the meaning of unknown words; use the Indiana Standards resource lesson- http://www.indianastandards.org/files/eng/ela_3_1_6.pdf
  - Teach students how to make use of an online dictionary and/or the dictionary tool in Microsoft Word. This is often a quicker method for slower readers since they do not need to read through many key word entries to search for a word.
  - Practice breaking up words by looking for words that end with specific suffixes such as *-ing (coverings and surroundings)* or *-tion (adaptation and protection)* and help students figure out the root words.

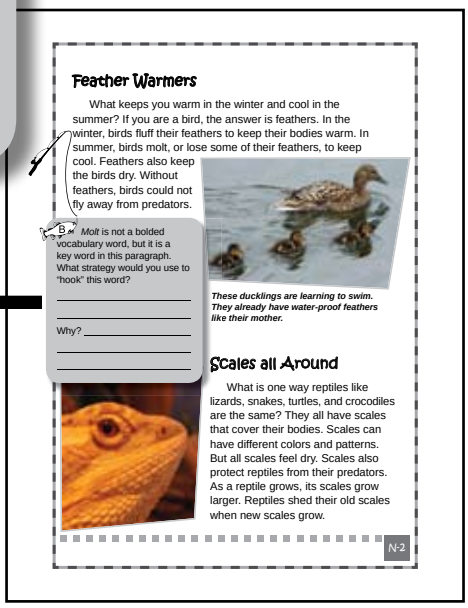
Key Words Lesson 1: *Animal Armor* (Science)

B *Molt* is not a bolded vocabulary word, but it is a key word in this paragraph. What strategy would you use to "hook" this word?

(1 pt) *I would use clues from the paragraph/sentence; I would look it up in the glossary; or any other appropriate response.*

Why? (1 pt) *I saw that there was context in the paragraph that would help me understand what the word means; I knew that I would get the correct definition from the glossary and that looking up the word would help me remember it; or any reasonable response that reflects the strategy listed above.*

(2 pts total)



Feather Warmers

What keeps you warm in the winter and cool in the summer? If you are a bird, the answer is feathers. In the winter, birds fluff their feathers to keep their bodies warm. In summer, birds molt, or lose some of their feathers, to keep cool. Feathers also keep the birds dry. Without feathers, birds could not fly away from predators.

B *Molt* is not a bolded vocabulary word, but it is a key word in this paragraph. What strategy would you use to "hook" this word?

Why?

These ducklings are learning to swim. They already have water-proof feathers like their mother.

Scales all Around

What is one way reptiles like lizards, snakes, turtles, and crocodiles are the same? They all have scales that cover their bodies. Scales can have different colors and patterns. But all scales feel dry. Scales also protect reptiles from their predators. As a reptile grows, its scales grow larger. Reptiles shed their old scales when new scales grow.

N-2

Extension Activities:

- Teach students how to look up the etymology of a word. *Camouflage* comes from the French word *camoufler*, " to disguise." Have students use an online dictionary to look up the origin of animal words such as *raccoon* (Native Am.), *poodle* (German), *kangaroo* (Australian Aboriginal), *walrus* (Dutch), *flamingo* (Portuguese), and *penguin* (Welsh).
- If students have mastered using the graphic organizer and are comfortable working with new vocabulary words, have them work to develop new and creative graphic organizers to share with the class.

Key Words Lesson 1: *Animal Armor* (Science)

(1 pt total)

Slippery Little Critters

Frogs and toads have wet skin and no scales to protect them. Their skin is very slippery, so they are hard to hold on to. They can slip away from predators. Some frogs and toads have poison in their skin that can hurt predators. If attacked, some frogs and toads change their skin to bright colors to confuse the predators. This gives the frog or toad time to get away.

Hair Makes a Difference

Many animals, like dogs, bears, and otters, have fur or hair that covers their skin. Fur traps the air to help keep the body warm. Otters spend most of their time in the water, but their fur still keeps them warm.

An otter's thick fur helps protect its skin from the water.

Some animals' fur changes color as the seasons change. The snowshoe hare sheds, or molts, its thick white winter fur when it gets warm. The new summer fur is brown. Some animals have special kinds of hairs. A dog's whiskers are thick hairs that are sensitive to touch. Whiskers help a dog find its way in the dark.

C How does this paragraph add to or change your understanding of the word *molt*? _____

N-3

C How does this paragraph add to or change your understanding of the word *molt*?

(1 pt) ***It adds the information that animals other than birds molt, that*** **molt** ***can also mean to shed, lose fur, that molting helps some animals blend into their environment since their fur grows back a different color, or any reasonable response.***

Standards Links:

- **Health 3.1.5** – Describe the basic structure and functions of the human body systems.

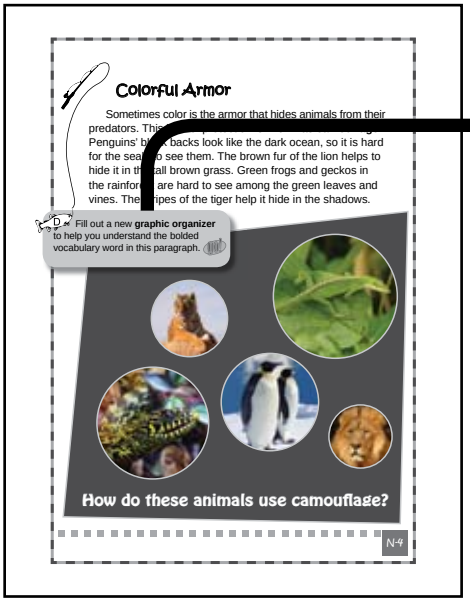
  Suggested Activity –
  Have students work with partners to trace life-size body outlines on butcher paper and identify body systems that help protect them.

- **Social Studies 3.3.5** – Explain how climate affects the vegetation and animal life of a region and describe the physical characteristics that relate to form an ecosystem.

  Suggested Activity –
  Using a climate map of the United States, discuss why certain animals are found in some parts of the country and not others.

Key Words Lesson 1: *Animal Armor* (Science)

(4 pts total)



D Fill out a new **graphic organizer** to help you understand the bolded vocabulary word in this paragraph. go!

Using the graphic organizer the student has:

(1 pt) ***correctly identified the vocabulary word*** **camouflage** ***and has written it on the fish***

(1 pt) ***selected an appropriate strategy for "hooking" the word*** **camouflage** ***and has written it on the fish hook***

(1 pt) ***written a reasonable description of what s/he learned from using the strategy on the fishing line***

(1 pt) ***connected the word to himself/herself by writing a sentence that correctly uses the word*** **camouflage** ***in relation to his/her own life on the fishing pole.*** **Example: I wear camouflage clothes when I go hunting; I didn't see the chameleon at first, because its camouflage allowed it to blend into the leaf, etc.**

(See graphic organizer example on page 107.)

Standards Links (continued):

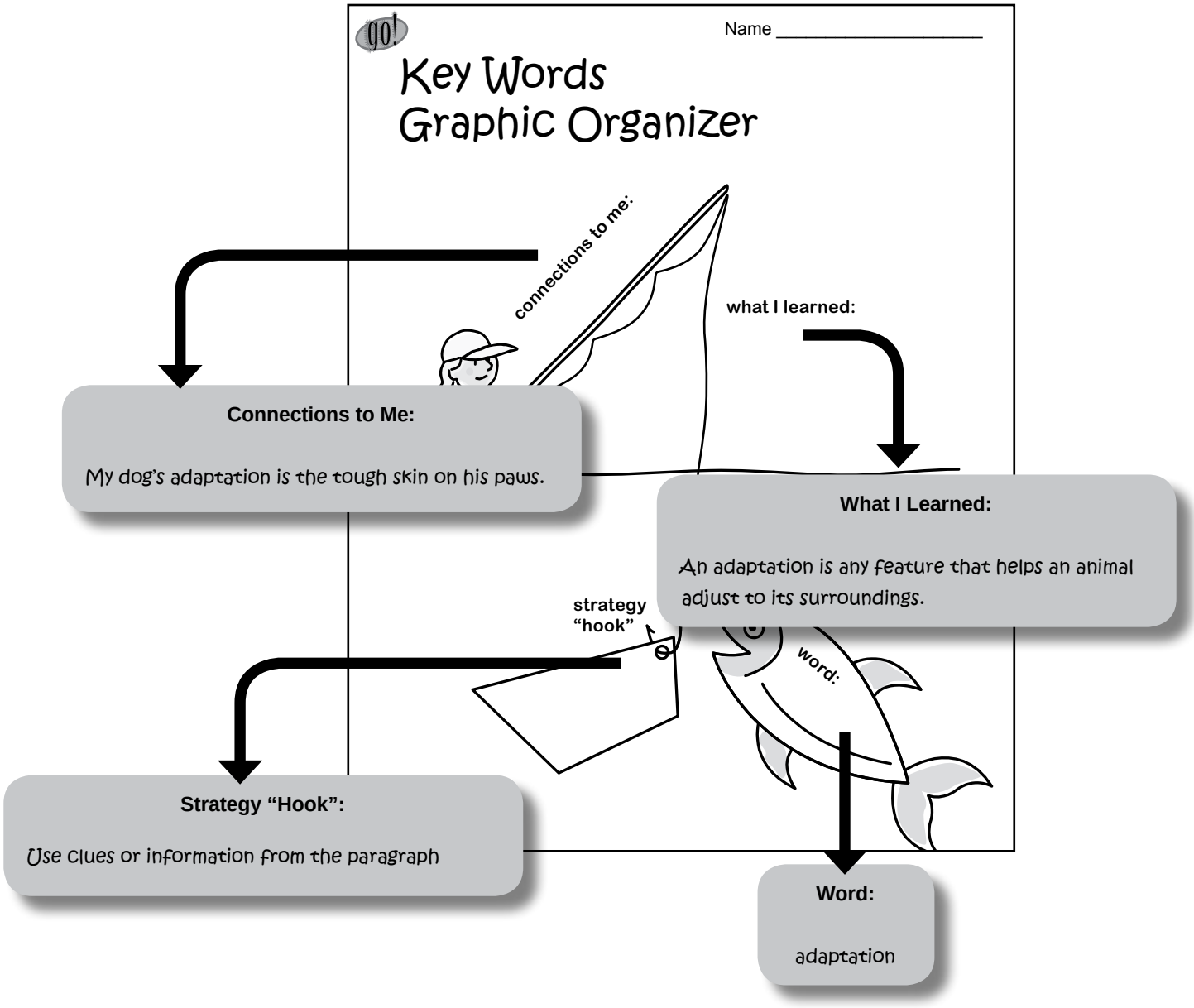
- **Science 3.4.6** – Explain that people need water, food, air, waste removal, and a particular range of temperatures, just as other animals do.

  Suggested Activity –
  Have students compare/contrast certain animals with humans. What do we have in common with a (insert animal name)? What is something a human can do, that a (insert animal name) can't do?

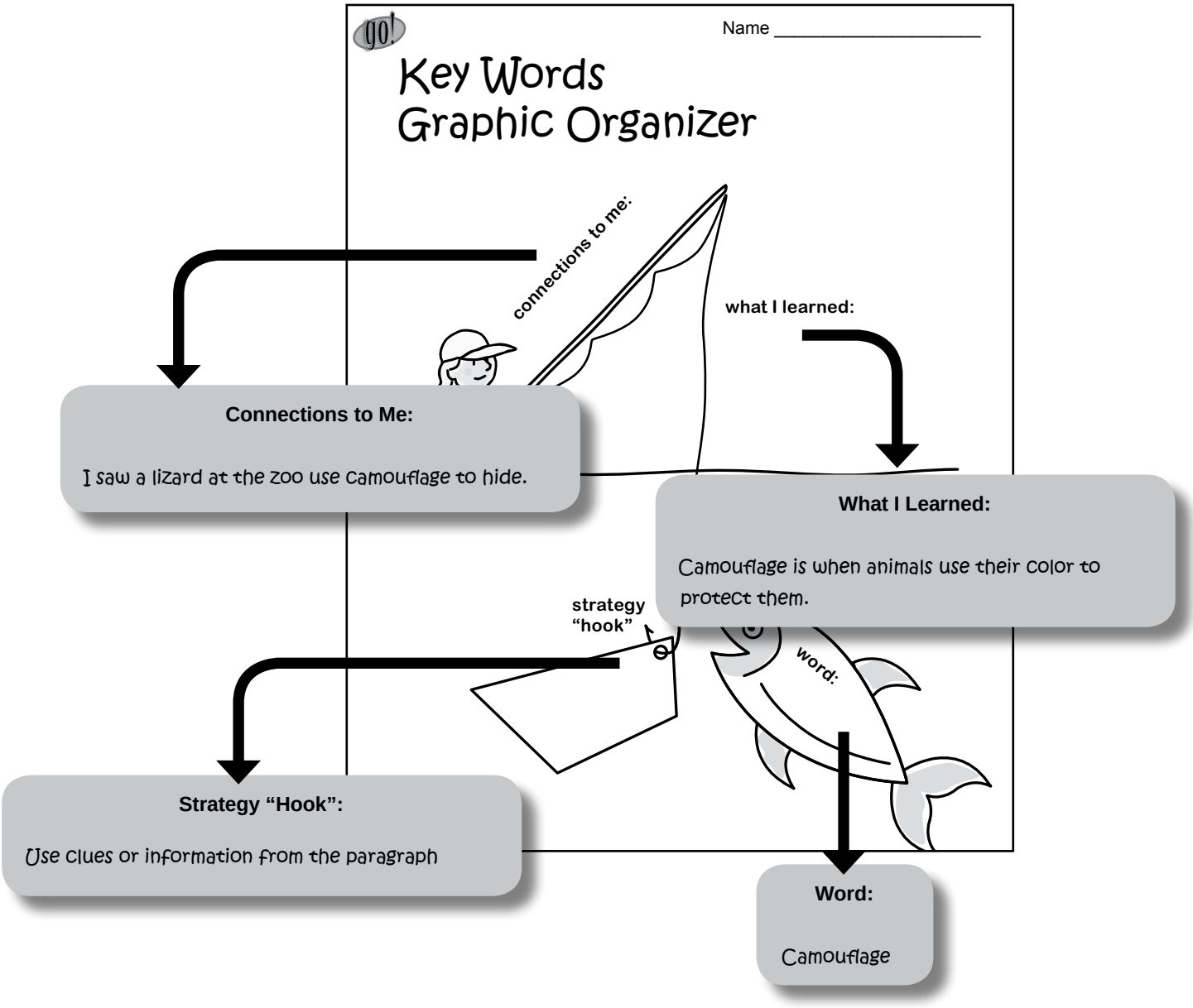
- **Science 3.4.4** – Describe that almost all kinds of animals' food can be traced back to plants.

  Suggested activity –
  Have students choose an animal from the "Animal Armor" lesson. Have them research what the animals eat and if the animals are food for other animals. Students could also create food chain diagrams using their selected animals.

Key Words Lesson 1: *Animal Armor* (Science)



Key Words Lesson 1: *Animal Armor* (Science)



Discussion Prompts Following the Lesson:

- Look at the paragraph from Guided Reading Box A. Find the un-bolded word *adaptation* in the paragraph. Does it come before or after the bolded word *adaptation*? *It is before.* Why do you think *adaptation* is bolded in the third sentence, but not in the second? *The third sentence gives a better definition of the word than the second.*
- Where else on the first page do you see the word *adaptation*? *In the vocabulary* box. Why do you think the book has words in a vocabulary box? *They are in a box so you can easily see the words you need to know, so you can review the words you need to know, so you will pay attention to the words, etc.*
- What other words can you think of that are similar to *adaptation*? Change, adjust, modify *are all similar to* adaptation.
- Look at Guided Reading Boxes B and C. How would you define the word *molt*, based on what you have read? Molt *is when an animal loses its feathers or sheds its fur in warm weather.* Based on this definition could a snake molt? *No.*
- Sometimes reading gives you a clue to what a word means, but it may not tell you all of the definition. How could you find out more about the word *molt*? *Look it up in a dictionary, ask people, read about other animals, etc.* The dictionary definition of *Molt* is "to shed part or all of a body covering." Knowing this, can a snake molt? *Yes.*

Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)

Reading Difficulty: Medium **Guided Reading Boxes:** 6

Instructional Vocabulary:		**Lesson Vocabulary:**
• definition	• strategy	• congruent
• illustration	• suffix	
• lesson		

NOTE: Students will need access to a dictionary in order to complete this lesson. Teachers may want to confirm that classroom dictionaries contain the suffix 'ment' and make alternative arrangements as necessary.

Standards Addressed:

English /Language Arts Focus:

- *3.1.1* – Know and use more difficult word families (*-ight*) when reading unfamiliar words.
- *3.1.4* – Determine the meanings of words using knowledge of synonyms (words with the same meaning), antonyms (words with opposite meanings), homophones (words that sound the same but have different meanings and spellings), and homographs (words that are spelled the same but have different meanings).
- *3.1.8* – Use knowledge of prefixes (word parts added at the beginning of words such as *un-, pre-*) and suffixes (word parts added at the end of words such as *–er, -ful, -less*) to determine the meaning of words.
- *3.2.3* – Show understanding by identifying answers in the text.

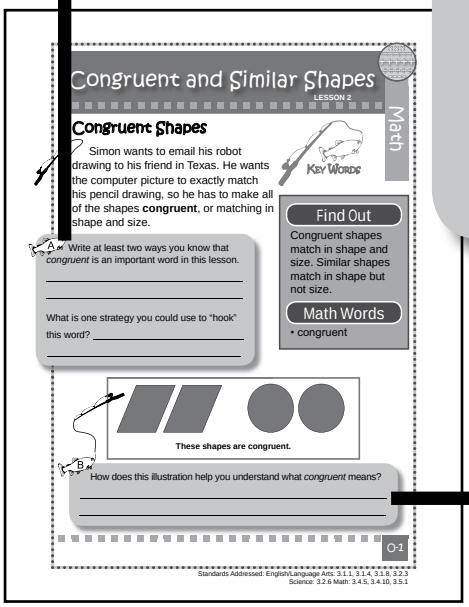
Mathematics Standards Addressed:

- *3.4.5* – Draw a shape that is congruent to another shape.
- *3.4.10* – Recognize geometric shapes and their properties in the environment and specify their locations.

Background Prompt:

- How many different shapes can you identify in our classroom?

Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)



(4 pts total)

A Write at least two ways you know that *congruent* is an important word in this lesson. (2 pts) *Accept any two of the following for 1 pt each:* Congruent *is in the title;* congruent *is in the first heading;* congruent *shapes are shown;* congruent *appears many times on the page;* congruent *appears in the Vocabulary Box;* congruent *appears in the Main Idea Box; or any other reasonable response.*

What is one strategy you could use to "hook" this word? (1 pt) *Look at the other words in the sentence/paragraph; look it up on the Internet; use a dictionary; break it into word parts; or any other appropriate response.*

B How does this illustration help you understand what *congruent* means?

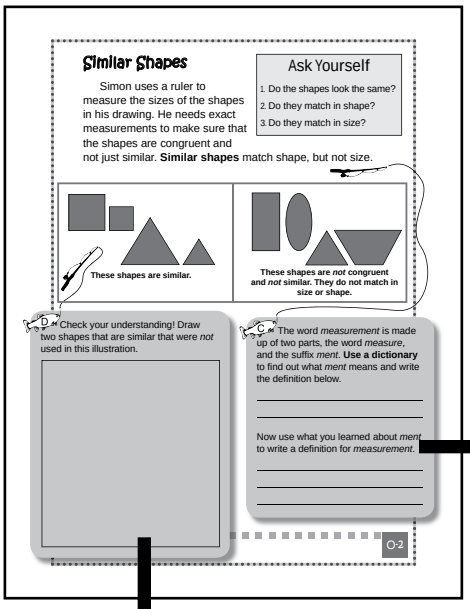
(1 pt) *It shows you what congruent shapes look like; you can see that congruent shapes match in shape and size; or any other appropriate response.*

Additional Practice Activities:

- Drawing pictures can be a helpful strategy to connect important words to the reader in other subjects besides mathematics. Have students create a picture dictionary of important words for a lesson in another textbook.
- Help students who may have difficulty using glossaries or dictionaries with alphabetical order by putting simple words in order before using the glossary.

Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)

(3 pts total)



C The word *measurement* is made up of two parts, the word *measure*, and the suffix *ment*. **Use a dictionary** to find out what *ment* means and write the definition below.

(1 pt) ***-ment—the process of; or any other reasonable response from a dictionary.***

Now use what you learned about *ment* to write a definition for *measurement*.

(1 pt) ***measurement—the process of measuring, or any similar response***

D Check your understanding! Draw two shapes that are similar that were *not* used in this illustration.

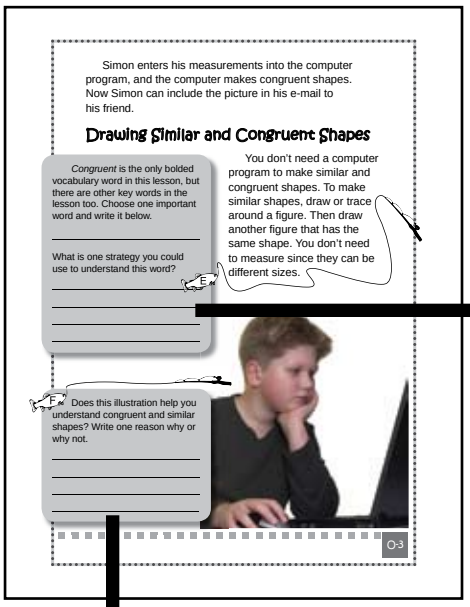
(1 pt) ***Student should have drawn two shapes (other than squares or triangles) that clearly match in shape, but not size.***

Extension Activities:

- Discuss that many names for shapes such as *triangle, hexagon, pentagon,* and *octagon* use prefixes that refer to numbers. Have students find the meaning of any one of these prefixes and look for other words that contain the prefix *(tri-tricycle, tripod, Triceratops, etc.)*
- Have students make up new words by combining base words and suffixes.

Key Words Lesson 2: *Congruent and Similar Shapes* (Mathematics)

(3 pts total)



Simon enters his measurements into the computer program, and the computer makes congruent shapes. Now Simon can include the picture in his e-mail to his friend.

Drawing Similar and Congruent Shapes

Congruent is the only bolded vocabulary word in this lesson, but there are other key words in the lesson too. Choose one important word and write it below.

What is one strategy you could use to understand this word?

You don't need a computer program to make similar and congruent shapes. To make similar shapes, draw or trace around a figure. Then draw another figure that has the same shape. You don't need to measure since they can be different sizes.

F Does this illustration help you understand congruent and similar shapes? Write one reason why or why not.

O-3

E *Congruent* is the only bolded vocabulary word in this lesson, but there are other key words in the lesson too. Choose one important word and write it below.

(1 pt) ***Student should have chosen any one word from the lesson.***

What is one strategy you could use to understand this word?

(1 pt) ***I could look it up in a dictionary or glossary; I could figure out the meaning from context; I could break it up into word parts; or any appropriate response.***

F Does this illustration help you understand congruent and similar shapes? Write one reason why or why not.

(1 pt) ***No. It just shows Simon working on his computer; you cannot see any shapes; or any appropriate response.***

Standards Links:

- **Science 3.1.2** – Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.

  Suggested Activity –
  Give students cut-outs of a variety of shapes. Take students on a guided nature walk. Tell them to look for the shapes in nature. Students may notice shapes in leaves, trees, flowers, etc.

Discussion Prompts Following the Lesson:

- *Similar* is a mathematics vocabulary word in this lesson, but it can also be used in other ways. How else have you heard the word *similar* used? Similar *is often used as a general term meaning things are alike, but not necessarily the same shape.*
- What other words in the lesson have multiple meanings? Shape *can be a noun and a verb,* figure *can mean a shape, an object or person (For example, A dark figure walked past.) or to calculate (figure the cost), etc.*
- Explain that a root word has meaning by itself, but prefixes and suffixes can be added to it to create new words. How can words have the same root word, but mean different things? *They use different prefixes, suffixes, etc.* Can you give an example of how a word can be changed by different suffixes? *(For example, the words* careful *and* careless *have the same root but different meanings.) Encourage students to be creative and to explain their answers*

Key Words Lesson 3: *Household Hazards* (Health)

Reading Difficulty: High **Guided Reading Boxes:** 5

Instructional Vocabulary:		**Lesson Vocabulary:**
• definition	• sentence	• ingestion
• paragraph	• suffix	• inhalation
• prefix		• toxic
• root word		

NOTE: Students will need access to a dictionary in order to complete this lesson. Teachers may want to confirm that classroom dictionaries contain the prefix 'pre' and the suffix 'ous' and make alternative arrangements as necessary.

Standards Addressed:

English /Language Arts Focus:

- *3.1.4* – Determine the meanings of words using knowledge of synonyms (words with the same meaning), antonyms (words with opposite meanings), homophones (words that sound the same but have different meanings and spellings), and homographs (words that are spelled the same but have different meanings).
- *3.1.6* – Use sentence and word context to find the meaning of unknown words.
- *3.1.7* – Use a dictionary to learn the meaning and pronunciation of unknown words.
- *3.1.8* – Use knowledge of prefixes (word parts added at the beginning of words such as *un-*, *pre-*) and suffixes (word parts added at the end of words such as *-er*, *-ful*, *-less*) to determine the meaning of words.
- *3.2.3* – Show understanding by identifying answers in the text.
- *3.4.4* – Use various reference materials (such as a dictionary, thesaurus, atlas, encyclopedia, and online resources).

Science:

- *3.4.8* – Explain that some things people take into their bodies from the environment can hurt them and give examples of such things.

Health:

- *3.3.6* – Develop injury prevention and managment (first aid) strategies for personal health.

Background Prompt:

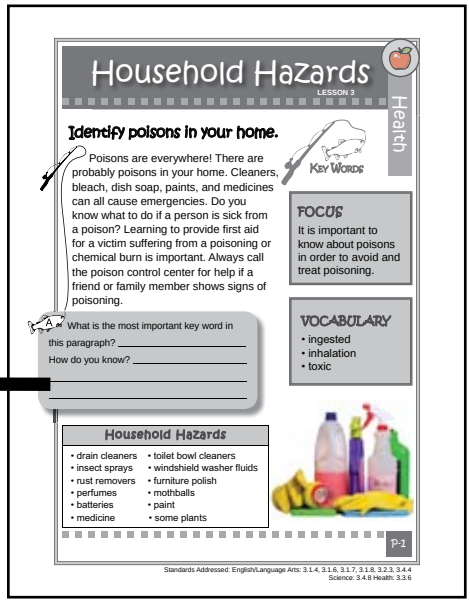
- What are some things in your home that might be dangerous if they are not used correctly?

Key Words Lesson 3: *Household Hazards* (Health)

A What is the most important key word in this paragraph? **(1 pt)** ***poison/poisoning***

How do you know? **(1 pt)** ***It is repeated many times in the paragraph, or any other appropriate response.***

(2 pts total)



Additional Practice Activities:

- Practice with prefixes and suffixes using this lesson covering English /Language Arts standard 3.1.8: *http://www.indianastandards.org/files/eng/ela_3_1_8.pdf*
- Students who are overwhelmed by long words such as *emergencies*, *cosmetics*, *ingestion,* and *inhalation* may need help breaking words into syllables.

Key Words Lesson 3: *Household Hazards* (Health)

B *Precaution* is made up of two word parts: a prefix and a root word. What are they? prefix: **(1 pt) pre**

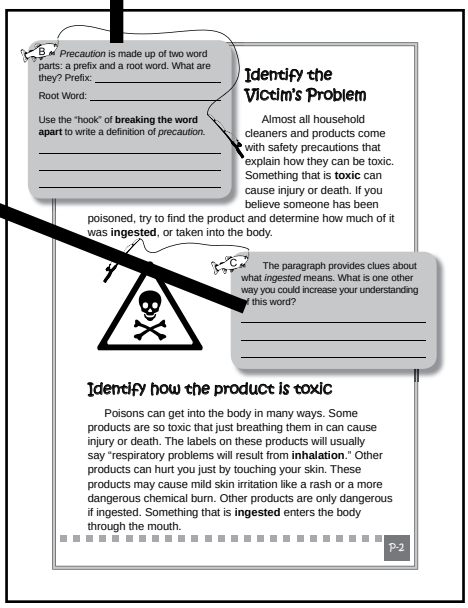
root word: **(1 pt) caution**

Use the "hook" of **breaking the word apart** to write a definition of *precaution.*

(1 pt) *awareness before something happens, being cautious beforehand, or any other appropriate response*

(4 pts total)

C The paragraph provides clues about what *ingested* means. What is one other way you could increase your understanding of this word? **(1 pt) *I could look it up in the dictionary/encyclopedia/on the Internet, etc.; I could break it into word parts; I could ask a friend or teacher; I could think about how I have heard the term used; or any other appropriate response.***

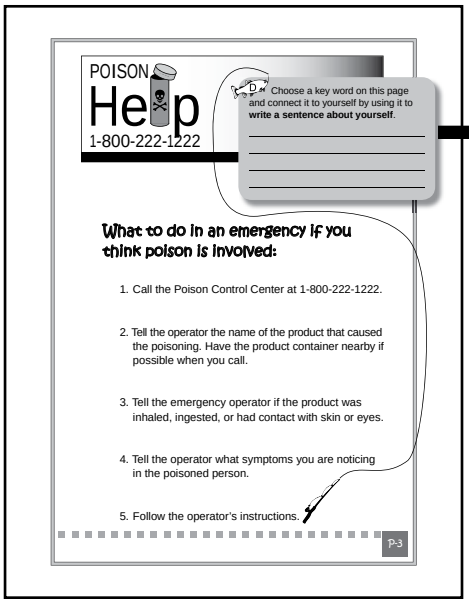


Extension Activities:

- Have students search labels at their homes for difficult words. Have students figure out the definitions of these words.
- Encourage the use of large words (such as *ingested* rather than *ate)* by :
  1. having a word wizard of the day who is tasked with using as many big words or synonyms as he/she can during the day.
  2. having students add interesting words to a Word Wall when they learn the meaning of a new important word.
  3. having students re-write simple children's stories using new vocabulary. (For example, "Snow White ingested a piece of the toxic apple.").

Key Words Lesson 3: *Household Hazards* (Health)

(1 pt total)



D Choose a key word on this page and connect it to yourself by using it to **write a sentence about yourself**.

(1 pt) ***Accept any reasonable sentence that correctly uses a word from the page in relation to the student's life.***

Standards Links:

- **Health 3.1.6** – Describe ways in which a healthful school and community environment influences personal health.
- **Social Studies 3.2.4** – Explain the consequences of violating laws and identify the duties of and selection process for local officials who make, apply, and enforce laws through government.

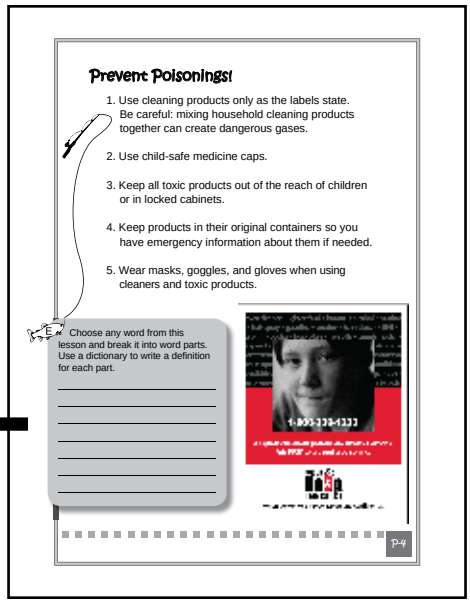
  Suggested Activity –
  Research whether or not there is a hazardous materials dump law in your community. If so, how did it become a law? If not, what would have to be done to make such a law?

Key Words Lesson 3: *Household Hazards* (Health)

Choose any word from this lesson and **break it into word parts**. Use a dictionary to write a definition for each part. ***(1 pt) Student should have chosen a word from the lesson and divided it into word parts. Example:*** **dangerous=danger** ***and*** **-ous**

(2 pts) Student should have used a dictionary to correctly define at least two word parts. Example: **danger–*risk and* -ous–*full of***

(3 pts total)



Standards Links (continued):

- **Science 3.4.4** – Describe that almost all kinds of animals' food can be traced back to plants.

  Suggested Activity –
  Research what happends when soil is contaminated with hazardous materials. Make a class flow chart to show how poisons affect plant and animal life.

Discussion Prompts Following the Lesson:

- This lesson has many difficult words in it. How would you know that the lesson had difficult words, before you even read the lesson? *Look at the vocabulary box. Look at the words in the main idea box. Look at the headings and graphics.*
- Look at the illustration at the bottom of Page P-1. How does this picture help you understand household hazards? *It gives an example of different materials that are potential household hazards.*
- Look at Guided Reading Box B. What other prefixes do you know? *Other prefixes include un-, dis-, mis-, etc.*
- Look at the picture on Page P-2. What does this symbol mean? *It means that something is poisonous/hazardous.* Where have you seen this symbol before? *Answers will vary. Students may have seen this symbol on products such as those described in the lesson. Have them explain and discuss their answers. If students mention pirates, have them think about the connection.*
- Look at Guided Reading Box E. Does it always help to break up long words? *No. Sometimes words (e.g.,* batteries*) cannot be broken into useful/meaningful word parts.* How did you choose which word to break up? *Answers will vary. Students may say that they looked for words containing smaller words, etc. Have them explain their answers.*

Appendix A: Critical Differences in Grade 2 and Grade 3 Textbooks

Difficult Words:

- Difficult words are defined or pronounced within the text but not identified by the publishers as vocabulary terms, or vocabulary words that appear in the text before they are defined.
- Grade 3 students must grapple with 2.5 times as many of these in their science books. Although the number of words did not increase in social studies, there was a noted increase in word complexity.

150%
Increase in Science
0% in Social Studies

Number of Words Per Page

- Grade 3 textbooks have a significantly larger number of words per page than do 2nd grade textbooks.
- Grade 3 students must read an additional 84 words per page on average in science and 56 words per page in social studies.

171%
Increase in Science
89% in Social Studies

Difficult Syntax

- Difficult syntax is defined by the number of complex and compound sentences.
- Grade 3 students must unravel a far greater number of difficult sentences per page in order to understand their lessons.

241%
Increase in Science
34% in Social Studies

Left-Embedded Syntax

- This category includes sentences that begin with a subordinate clause or a left-embedded syntax structure.
- Grade 3 students must grapple with 3 times as many of these in science. Although the overall number of sentences with difficult syntax did not increase in Grade 3, the left embedded structures tend to be longer and more complex, with more for students to read before they reach the subject of the sentence.

218%
Increase in Science
0% in Social Studies

Appendix B: The Scientifically-Based Reading Research (SBRR) Behind Grade 3 ITRI

Grade 3 ITRI is based on scientifically-proven reading comprehension strategies identified by the National Reading Panel in their 2000 report.

The National Reading Panel Report identified the following proven reading comprehension strategies.

- **Question Answering** is a strategy in which teachers pose questions to students during and after reading a text in order to encourage analysis and interpretation. It has been proven effective in increasing comprehension and retention of information.

  Grade 3 ITRI models this strategy through the use of Guided Reading Boxes which pose questions and guide students to analyze text or text features as they read. Teachers facilitate this process through the in-class discussion session which follows each Grade 3 ITRI lesson.

- **Question Generating** trains students to ask who, what, where, when, why, and how questions as they read. This questioning teaches students to become independent and active readers. Questions can be used to make inferences, engage with text, enhance memory, and increase comprehension and comprehension monitoring skills.

  Grade 3 ITRI units about predicting and vocabulary/key words require students to generate questions about the text content in order to answer the questions in the Guided Reading Boxes. Furthermore, the Guided Reading Boxes that appear in all Grade 3 ITRI lessons model this strategy by asking students the kinds of questions that proficient readers ask themselves. Students are taught how to engage in independent critical thinking by responding to the questions in the Guided Reading Boxes. Through repeated practice, students will come to internalize this process and will be able to apply it independently when reading.

- **Summarization** involves identifying the main idea and supporting details of a passage. This skill is a critical part of Indiana's Academic Standards for English/language arts in grade 3.

  Grade 3 ITRI dedicates an entire unit to practicing this strategy and includes a graphic organizer to help students visualize how the main idea and details connect. Guided Reading Boxes throughout all the units ask students to identify key details to aid in effective summarization. In addition, students will see the main idea identified in the text features of all of the lessons.

- **Comprehension Monitoring** provides guidance to students in identifying and resolving their own reading problems. It asks students to engage in "thinking about thinking." Comprehension monitoring has been demonstrated to improve performance on standardized tests of reading comprehension.

  Grade 3 ITRI incorporates this strategy through classroom discussion and Guided Reading Boxes that probe students to identify why they answered a question in a particular way and teach how to effectively scan and use the structural features of informational text.

- **Cooperative Learning** encourages students to work together to increase comprehension. Cooperative learning has been scientifically-proven to increase comprehension and to boost performance on standardized tests.

Each Grade 3 ITRI lesson begins with a large group discussion aimed at activating prior knowledge. In addition, lessons close with a group self-checking session and discussion in which students share their answers and reading strategies in order to learn from each other.

- **Graphic Organizers** help students visualize the relationships between important components of text. They have been proven to improve memory and to boost performance in social studies and science.

  While working through each reading skill area of Grade 3 ITRI, students use a graphic organizer that connects the unit's reading skill to real life experiences rather than abstract relationships. Teachers introduce each graphic organizer before students begin the lessons and the lessons themselves allow students to practice and master the skill.

- **Multiple Strategies** approaches encourage students to employ a variety of comprehension strategies simultaneously. Studies have shown that students whose teachers use demonstrations, guiding, modeling, and scaffolding show improvement on standardized tests. Understanding when to employ specific strategies is key to student success in informational text.

  Grade 3 ITRI lessons demonstrate multiple strategies through the variety of Guided Reading Boxes which help mediate student reading of the text. Guided Reading Boxes model strategies while they also explain what the strategy is and how to use it. As the lessons progress in a unit, students find themselves using more than one strategy and working more independently.

Source: National Institute of Child Health and Human Development. (2000), *Report of the National Reading Panel. Teaching children to read: an evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups* (NIH Publication No. 00-4754). Washington, DC: U.S. Government Printing Office.

ITRI promotes reading skills identified as most important to elementary school students.

Research shows that students' comprehension of expository material is impeded by lack of familiarity with vocabulary, concepts, and text structures. Thus, elementary students often have trouble comprehending informational text. The most successful readers are those who ask themselves questions about content, are aware of organization and page design, think about what they know and do not know about a subject, and actively apply what they read to their own experiences.

Grade 3 ITRI models effective reading strategies through Guided Reading Boxes, which focus student attention on text organization by emphasizing signal words and common text structures and features. The introductory lessons in Grade 3 ITRI focus on text features to ensure that students know and use the right tools for different tasks. Subsequent lessons encourage students to think critically about text features such as graphics, headings, boldface print, etc. Students practice helpful techniques such as previewing vocabulary, scanning, and summarizing. Teacher-led in-class grading discussions improve comprehension and reinforce these skills by encouraging students to share reading strategies and learn from one another.
Sources:

Bakken, J. P., and C. K. Whedon. 2002. Teaching text structure to improve reading comprehension. *Intervention in School and Clinic* 37:229-33.

Olson, M. W., and T. C. Gee. 1991. Content reading instruction in primary grades: perception and strategy. *The Reading Teacher* 45:298-307.

Pressley, M., and R. Wharton. 1997. Skilled comprehension and its development through instruction. *School Psychology Review* 26:448-67.

ITRI uses methods proven to help students improve vocabulary acquisition.

Major differences between vocabulary in literature lessons and content area lessons require students to shift their thinking and teachers to adjust their instruction. Students learn vocabulary better when they are instructed on how to use the text itself to make sense of challenging words.

Grade 3 ITRI includes a unit designed to promote word knowledge comprehension and acquisition. These lessons include a graphic organizer which promotes the use of multiple strategies to decipher and remember challenging words. Guided Reading Boxes throughout this and other units ask students to think about vocabulary and make connections between words and ideas.

Grade 3 ITRI was designed to model the vocabulary structure of Indiana's adopted textbooks. Lessons follow the same number of vocabulary terms per page, the placement and identification of vocabulary terms on the page, and the number of difficult words not identified as vocabulary terms per page. Skills learned though Grade 3 ITRI are therefore easily transferable to textbooks.

Source: Armbruster, B., and W. Nagy. 1992. Vocabulary in content area lessons. *The Reading Teacher* 45:550-51.

ITRI helps students connect what they read to their own experiences.

Research indicates that while elementary students infer in their daily activities, they have a difficult time spontaneously drawing inferences between what they read in school and what they experience outside of the classroom. Studies have shown that students rarely practice their inference skills enough in the classroom to sufficiently enhance their performance on standardized tests. Making predictions prior to reading has been shown to help students integrate what they read with their prior knowledge.

The Predicting lessons in Grade 3 ITRI model thought processes to help students develop and practice their inference skills during their school-related tasks. The Guided Reading Boxes ask students to access their prior knowledge about a subject before they begin the lesson, think about how they made their predictions, and understand why the author provides specific information.

Each Grade 3 ITRI lesson is preceded with a background prompt in which the teacher asks a

question or set of questions to spark discussion and activate prior knowledge and experiences, or think about possible or fantastical situations. A strategy for acquiring word knowledge also draws on this strategy as students are asked to predict word meaning, and to make connections between words they already know and words they are learning. Practicing inference skills in these lessons allows students to transfer them to other content reading.

Sources:

Hansen, J. and Pearson, P.D. 1983. An instruction study: Improving the inferential comprehension of good and poor fourth grade readers. *Journal of Educational Psychology* 75:821-829.

Hansen, J. 1981. The effects of inference training and practice on young children's reading comprehension. *Reading Research Quarterly* 16:391-417.

Grade 3 ITRI builds foundations for a future of enhanced critical thinking skills.

Reasoning skills are essential to students' mental development and knowledge acquisition. Adept problem solving enhances students' abilities to function academically by allowing them to understand abstract concepts in their lives both inside and outside of the classroom. Learning problem solving in the classroom, through reading and writing activities, helps students retain problem solving skills and adapt them to other challenging situations.

Grade 3 ITRI has an entire unit of lessons in which students practice and sharpen their problem solving skills. The lessons in the Problem and Solution unit introduce academic, personal, technological, and social problems as subject matter while the Guided Reading Boxes ask students to identify, assess, and connect problems and solutions described in the text. Students are also asked to go beyond the text to uncover additional problems or solutions not described and to relate problems and solutions to their own experiences.

Sources:

Forgan, J.W. 2003. *Teaching Problem Solving through Children's Literature*. Westport, CT: Teacher Ideas Press.

Roser, N.L. and Keelin, S. 2002. Fostering thought, talk, and inquiry: Linking literature and social studies. *The Reading Teacher* 55:416-426.

Appendix C: Chart of Academic Standards Addressed Across the Curriculum

	ITRI Instructional Tool	Standards in English/ Language Arts	Standards in Social Studies	Standards in Science	Standards in Mathematics	Standards in Health
A	Make an Earthworm Composting Center	3.2.1, 3.2.3		3.1.2, 3.1.3, 3.2.2, 3.2.7, 3.4.4, 3.6.4		
B	Skin and Skin Care	3.2.1, 3.2.3		3.4.9		3.1.1, 3.1.8, 3.3.5, 3.6.3
C	Comparing Numbers	3.2.1, 3.2.3			3.1.5	
D	I Pledge...	3.2.1, 3.2.3	3.2.2, 3.2.6			
E	Vibration and Sound	3.2.2, 3.2.3, 3.2.5	3.5.3	3.1.6, 3.3.9		
F	Building Blocks: From the Stone Belt to the Empire State Building	3.2.3, 3.2.5, 3.2.6	3.1.3, 3.1.4, 3.3.3, 3.5.2, 3.5.4	3.1.6		
G	Making Healthful Choices	3.2.3, 3.2.5, 3.2.6	3.4.8	3.4.7, 3.4.8		3.1.1, 3.1.6, 3.2.1, 3.2.3, 3.4.1, 3.4.3
H	What is Elapsed Time?	3.2.6		3.2.1	3.5.9	
I	Cleaning up the Park	3.2.6	3.2.3			
J	Control Your Anger!	3.2.6				3.1.4, 3.5.7
K	Water Wheels Make Water Work	3.1.6, 3.2.2, 3.2.3, 3.2.4, 3.2.6	3.3.7	3.3.8		
L	How Much Can It Hold?	3.1.6, 3.2.2, 3.2.3, 3.2.4		3.1.4, 3.2.3, 3.5.1, 3.5.3	3.5.6, 3.5.12, 3.6.1, 3.6.6	
M	Planting Zones	3.2.2, 3.2.3, 3.2.4	3.3.1, 3.3.3, 3.3.4, 3.3.5	3.4.4		
N	Animal Armor	3.1.4, 3.1.6, 3.1.7, 3.2.3, 3.4.4		3.4.1, 3.4.3		
O	Congruent and Similar Shapes	3.1.1, 3.1.4, 3.1.8, 3.2.3			3.4.5, 3.4.10	
P	Household Hazards	3.1.4, 3.1.6, 3.1.7, 3.2.3, 3.4.4		3.4.8		3.3.6

Appendix D: Metacognitive Reading Survey

Student Name: _____ Date: _____

Scoring Key:

Circle the student's answer in the appropriate column.

When complete, add the total number of responses in each column.

ITEM	Response	Response	Response	Response
A.	(A) likes books with facts	(B) likes books with known words	(C) likes short easy books	(D) likes exciting books
B.	(A) learns from textbooks	(B) reads textbooks quickly	(C) bored by textbooks	(D) confused by textbooks
1.	A	D	B	C
2.	D	B	C	A
3.	C	B	A	D
4.	D	A	C	B
5.	B	C	A	D
6.	D	C	B	A
7.	B	A	D	C
8.	B	A	D	C
9.	D	A	B	C
10.	C	D	A	B
Column Total	**1.**	**2.**	**3.**	**4.**
Focus:	*Text Features* **Student likely uses text features such as glossaries, tables of contents, review questions, titles, headings, graphics, bolded words, cue words, indexes, etc. to learn from textbooks.**	*Decoding* **Student likely uses his or her knowledge of phonics, word parts, etc. to decode words in textbooks.**	*Avoiding/Asking Help* **Student likely relies on peers or adults for help in understanding information in textbooks. Student may sometimes ignore information that he or she can't understand.**	*Comprehending* **Student likely uses context clues, main ideas, background knowledge, and ties information together and to his/her self in order to understand textbooks.**

NOTE:Students should have answers in more than one column. Different strategies work best in certain reading situations. Take note of the strategies particular students use often or avoid and encourage the use of other strategies.

Appendix E: Scoring Sheet: ITRI Assessments

Circle: **Diagnostic** **Follow-Up**

CLASS Average					

	Text Features		Main Idea		Problems & Solutions		Predicting		Key Words	
Student Name	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
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	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	
	TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2		TOTAL /2	

Appendix F: Scoring Sheet: Grade 3 ITRI Lessons

Skill Area: *Circle one*

Text Features | *Main Idea* | *Problems & Solutions* | *Predicting* | *Key Words*

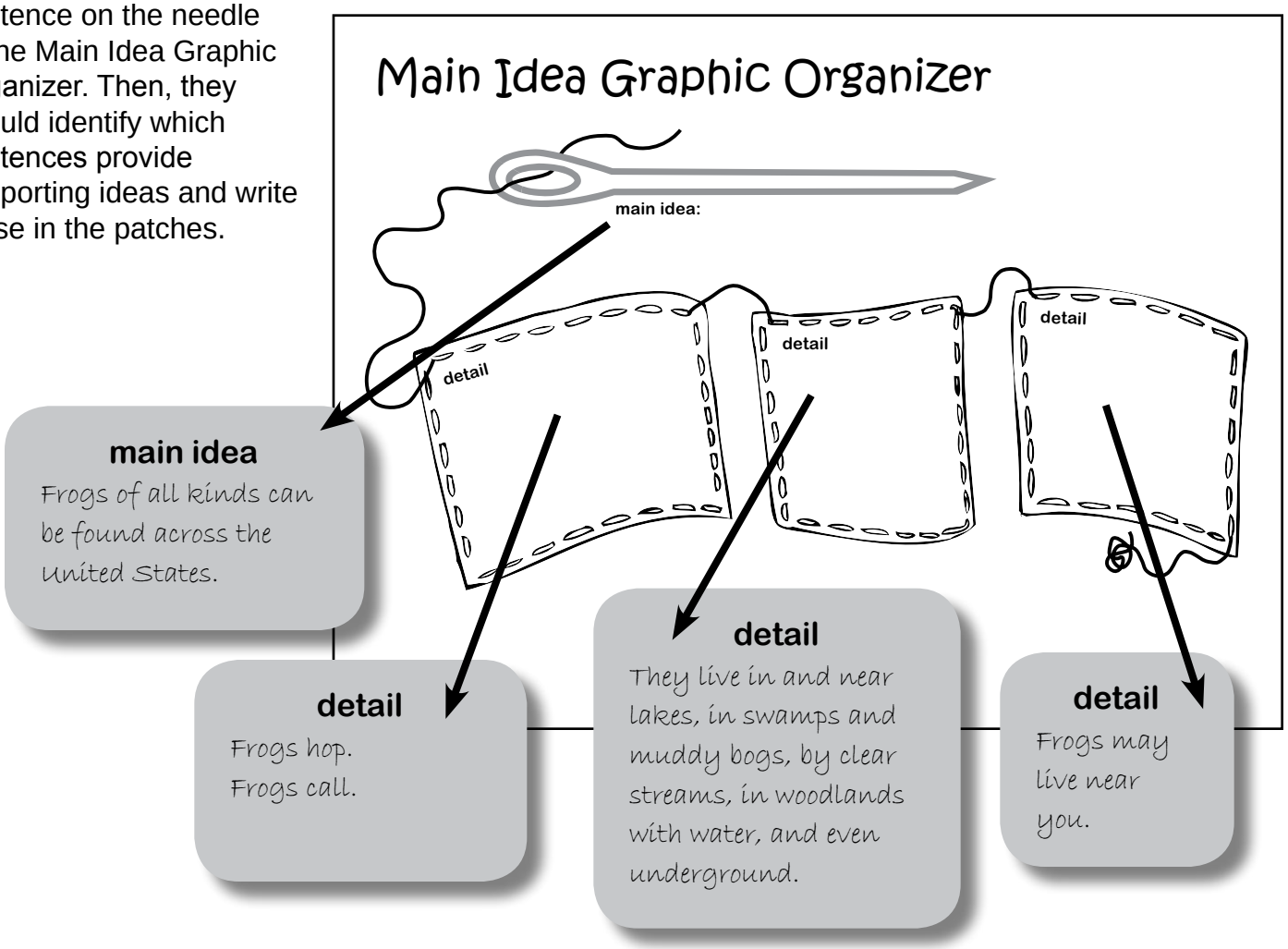
Student Name	Social Studies	Science	Health	Mathematics
Cassie		8	8	9
Martin		6	6	8
John		6	6	7
Dominique		7	7	7
Tamika		9	8	9
Claire		8	8	6
Antonio		10	8	9
Connor		5	5	6
Lucy		7	7	8
Abigail		9	10	9

Appendix G: Instructions for Using Graphic Organizers

Each Grade 3 ITRI reading skill area has its own graphic organizer. Introduce the graphic organizers to students before beginning the first lesson in each reading skill area. A single student lesson, "Hop to It" has been printed for this purpose. Below are instructions for using the graphic organizers and keys for "Hop to It!" It may be most effective to put a blank graphic organizer on an overhead projector and have students fill it out together as part of a class discussion. Teachers may also want to model use of the graphic organizer using a recently completed lesson in a class textbook.

Main Idea

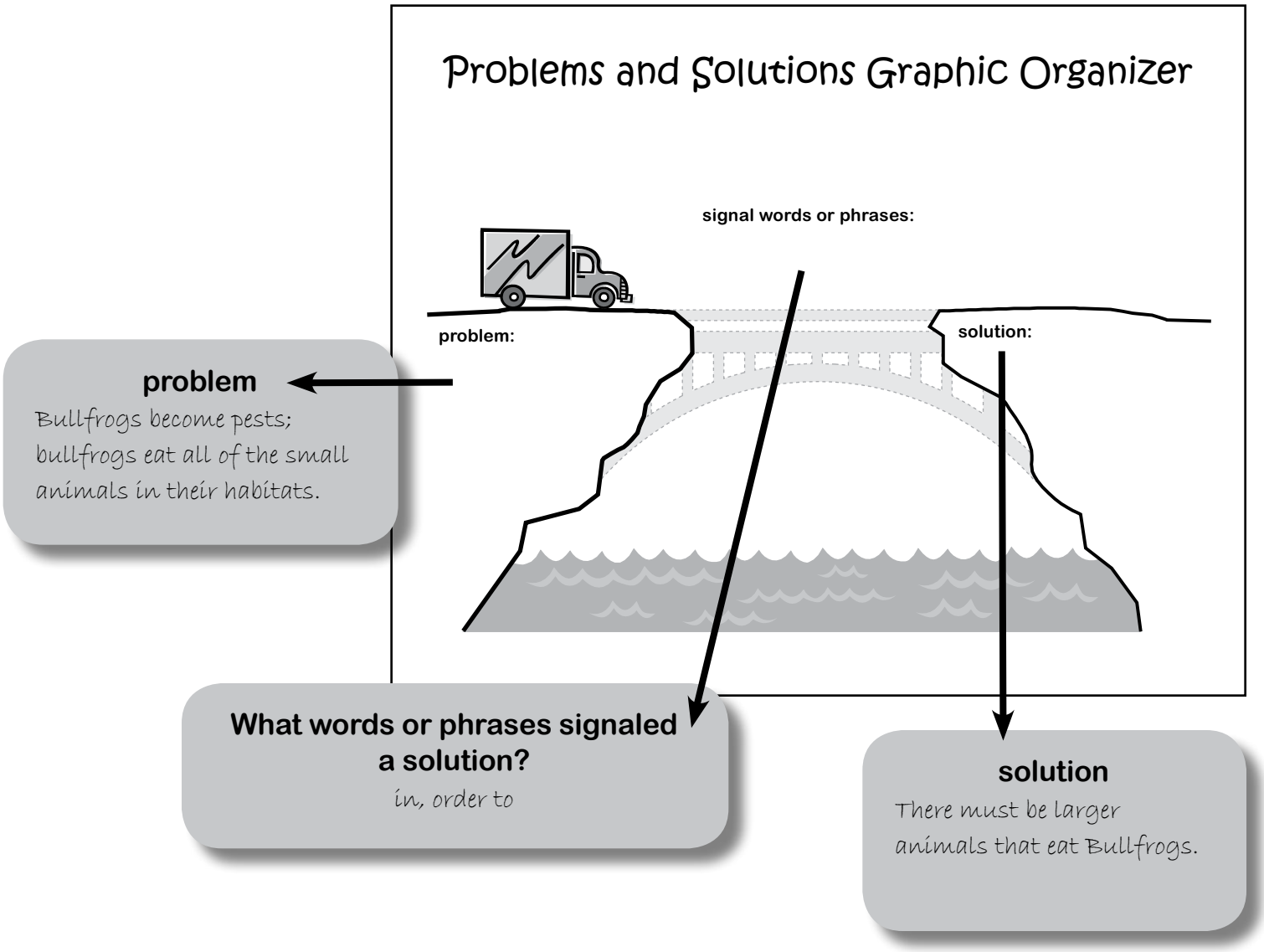
The Main Idea unit of Grade 3 ITRI, helps students understand the structure of a paragraph or lesson by identifying the main idea and supporting details. The class should use the first paragraph of "Hop to It!" to fill out the Main Idea Graphic Organizer. After students have read the first paragraph, ask them to isolate the sentence that states the main idea of the paragraph. Have them write this sentence on the needle of the Main Idea Graphic Organizer. Then, they should identify which sentences provide supporting ideas and write those in the patches.



For more practice identifying main ideas and supporting details, students can fill out additional graphic organizers for the remaining paragraphs of "Hop to It!"

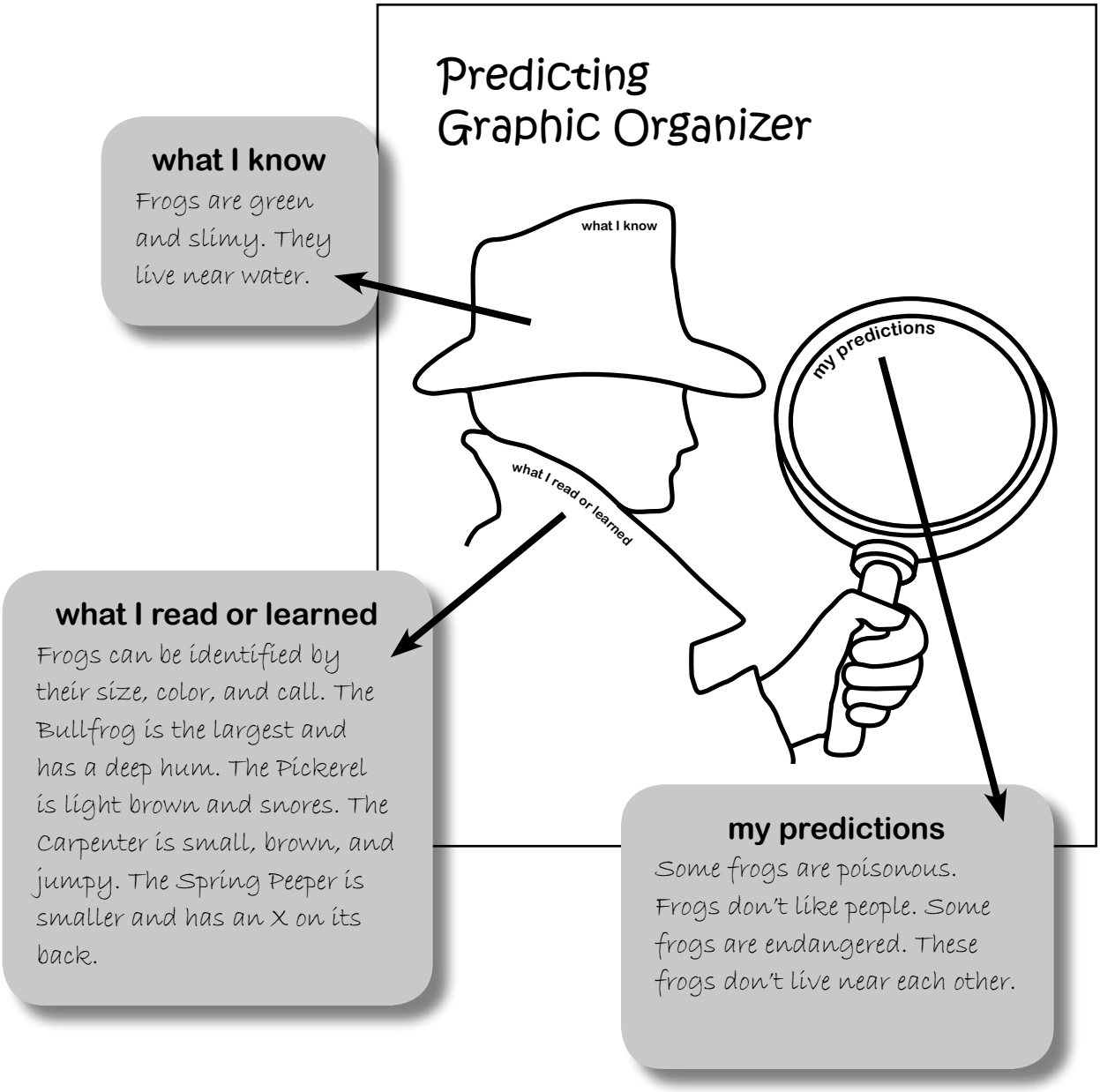
Problems and Solutions

The Problems and Solutions unit of Grade 3 ITRI helps students identify the relationship between problems and solutions. Draw students' attention to the fourth paragraph of "Hop to It!," and have them read it again. Ask them to locate a problem that is mentioned in the paragraph. They should write this problem under the truck in the Problems and Solutions Graphic Organizer. Discuss with students how they identified the problem; they should ask themselves, "Why would it be bad for this problem to go without a solution?" Next, ask students to find a solution for this problem in the text and have them write it on the solution side of the bridge. Finally, students should consider what words or phrases signaled a solution and write their answers within the bridge.



Predicting

The Predicting unit of Grade 3 ITRI asks students to make predictions about what they will learn next based on knowledge they already have and information they have encountered in a lesson. Before returning to the “Hop to It!,” have students write down what they already know about frogs on the detective’s hat in the Predicting Graphic Organizer. Then, have them reread up to the third paragraph of “Hop to It!” and ask them what they read or learned. Have them record what they learned on the detective’s trench coat. Next, ask students to predict what they will learn next about frogs and write these predictions in the magnifying glass on the Predicting Graphic Organizer.



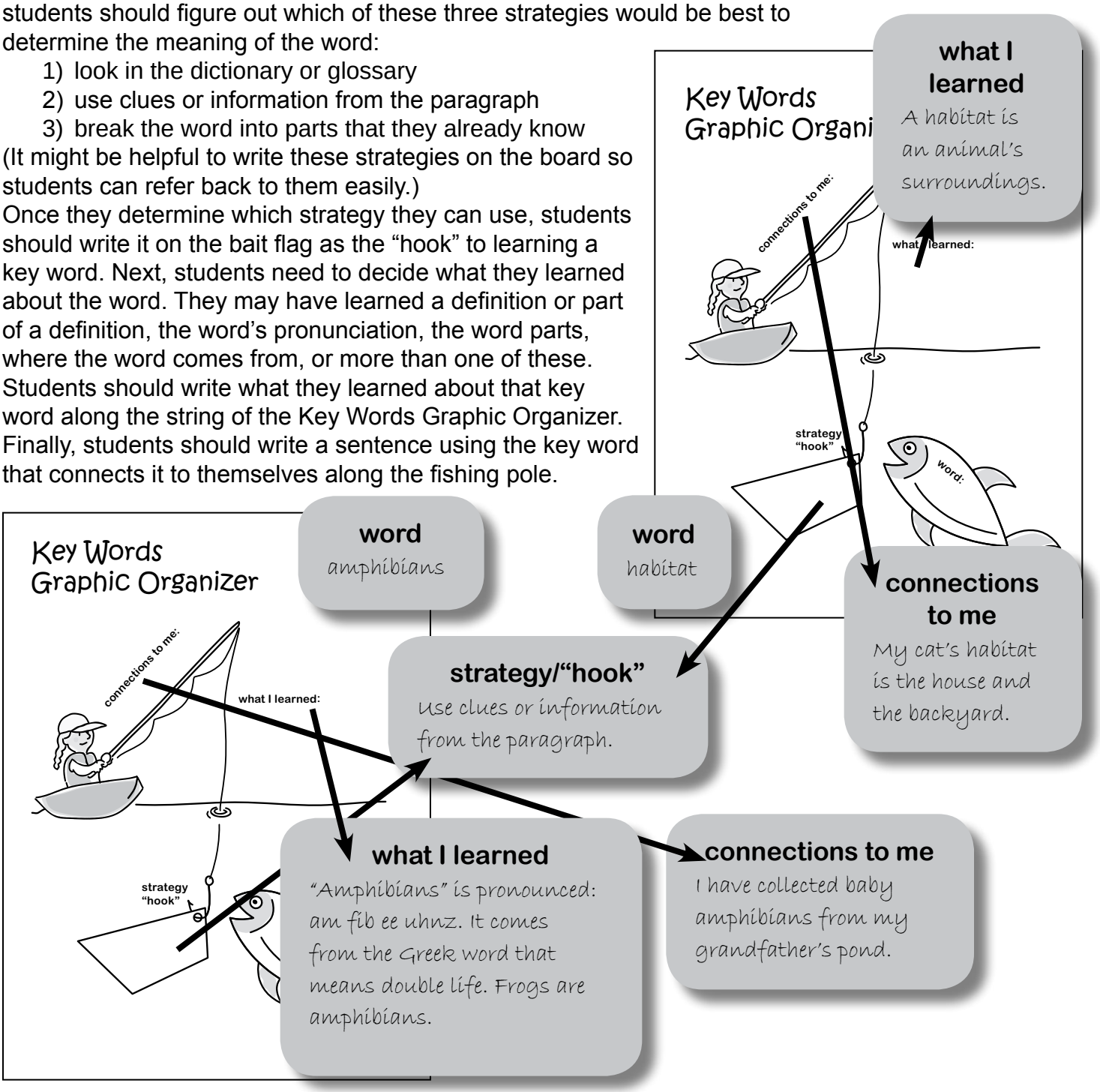
Key Words

The Key Words unit of Grade 3 ITRI helps students notice important words and use different methods for learning important vocabulary. “Hop to It!” has two bolded vocabulary words, one in the second paragraph and one in the last paragraph. Have students reread up to the second paragraph of “Hop to It!” to fill out the first Key Words Graphic Organizer. Then have them finish the lesson to fill out a second Key Words Graphic Organizer.

For the Key Words Graphic Organizer, students should write the bolded word on the fish. Then, students should figure out which of these three strategies would be best to determine the meaning of the word:

1) look in the dictionary or glossary
2) use clues or information from the paragraph
3) break the word into parts that they already know

(It might be helpful to write these strategies on the board so students can refer back to them easily.)
Once they determine which strategy they can use, students should write it on the bait flag as the “hook” to learning a key word. Next, students need to decide what they learned about the word. They may have learned a definition or part of a definition, the word’s pronunciation, the word parts, where the word comes from, or more than one of these. Students should write what they learned about that key word along the string of the Key Words Graphic Organizer. Finally, students should write a sentence using the key word that connects it to themselves along the fishing pole.



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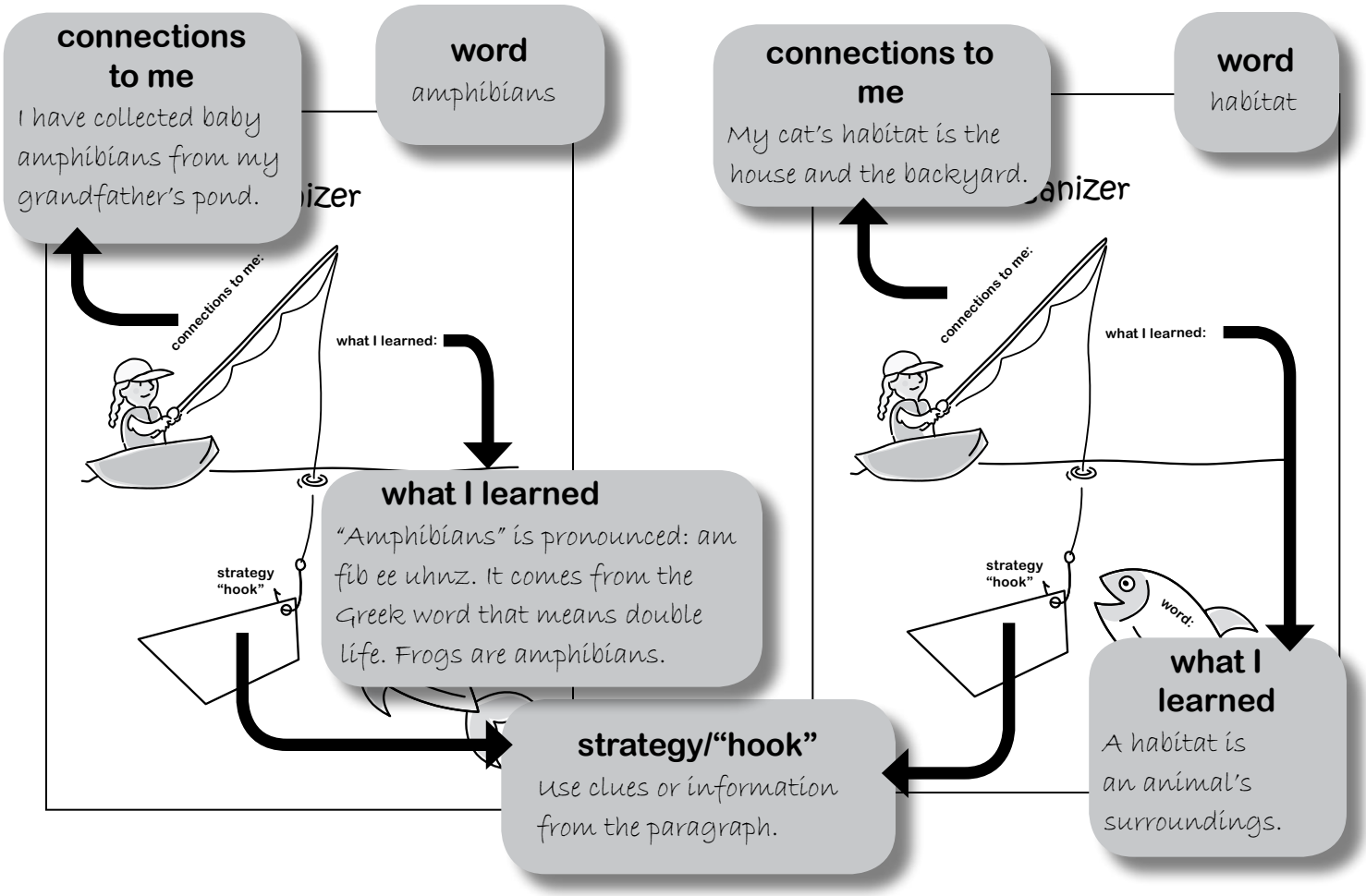

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Appendix H: ITRI Acknowledgements

Abbreviations used to describe placement on the page are as follows: (T) top, (B) bottom, (INS) inset, (C) center, (L) left, and (R) right.

Diagnostic Assessment

Sister Cities 1 B stock photo **2 T** Center for Innovation in Assessment **3 T** Center for Innovation in Assessment

Text Features

Make an Earthworm Composting Center A-1 B stock photo **A-2** stock photos **A-3 TR** stock photo **LC** stock photo **RC** stock photo **BC** stock photo **A-4 TR** stock photo **BR** stock photo **Skin and Skin Care B-1 BR** stock photo **B-2 BC** Center for Innovation in Assessment **B-3 BL** stock photo **B-4 BR** stock photo **Comparing Numbers C-2 T** stock photo **C-3 BR** stock photo **I Pledge… D-1 BC** stock photo **D-2 C** Center for Innovation in Assessment **D-3 LC** stock photo

Main Idea

Vibration and Sound E-1 BL stock photo **E-2 B** stock photo **E-4 R** Mark Wood photo courtesy of Mark Wood Music Productions **Building Blocks F-1 BR** Center for Innovation in Assessment **F-2 B** photo courtesy of Stone Belt Freight Lines, Inc. **F-3 B** (clockwise from top right) stock photo, image courtesy of limestonecountry.com/ Jennifer Anderson, stock photo, stock photo **F-4 INS** photo courtesy of Robert Schoeller (Austria) **Making Healthful Choices G-1 TL** stock photo **BC** stock photo **G-2 BC** stock photo **G-3 C** image courtesy of Bruno Souza Leao **G-4 BR** stock photo

Problem/Solution

Elapsed Time H-1 C Center for Innvation in Assessment **BR** stock photo **H-3 R** Center for Innovation in Assessment **H-4 TR** stock photo **C** Center for Innovation in Assessment **Cleaning Up the Park I-1 CL** stock photo **I-3 T** stock photo **BR** stock photo **I-4 B** stock photo **Control Your Anger J-1 BL** stock photo **J-2 B** stock photo **J-3 BR** stock photo **J-4 T** stock photo

Predicting

Water Wheels Make Water Work K-1 BL Center for Innovation in Assessment **K-2 BL** stock photo **K-3 TR** Center for Innovation in Assessment **K-4 T** stock photo **How Much Can it Hold? L-1 BR** stock photos **L-2 BR** stock photo **L-4 C** Center for Innovation in Assessment **Planting Zones M-1 CL** stock photo **M-2 T** Center for Innovation in Assessment **M-3 B** stock photo

Appendix H: ITRI Acknowledgements (cont.)

Key Words

Animal Armor N-1 BR stock photo **N-2 TR** stock photo **BL** stock photo **N-3 TL** photo courtesy of Roberto Valdés M. **CR** stock photo **BL** photo courtesy of Charles Krebs **N-4 INS** stock photos **Congruent and Similar Shapes O-1 B** Center for Innovation in Assessment **O-2 C** Center for Innovation in Assessment **O-3 BR** stock photo **Household Hazards P-1 BR** stock photo **P-2 CL** stock image **P-3 T** image courtesy of American Association of Poison Control Centers / Elena L. Juris **P-4 R** image courtesy of American Association of Poison Control Centers/ Elena L. Juris

Follow up Assessment

Clarksville 1 BR stock photo **2 BR** Center for Innovation in Assessment **3 T** stock photo

We would like to thank the following third grade teachers who participated in the 2005-2006 field test of the Grade 3 ITRI materials, and whose detailed feedback has been invaluable in improving these materials for classroom use:

Gail Bouslog, Western Intermediate
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Cheryl Hodapp, Southside Elementary
Nancy Hole, Western Intermediate
Janice Marler, Fox Hill Elementary
Cindy Moody, Bloomfield Elementary
Denise Pearson, Fox Hill Elementary
Carolyn Rankin, Washington Elementary
Janet Shirley, Bloomfield Elementary
Sharlet Spaulding, Columbian Elementary
Mary Stalcup, Bloomfield Elementary
Carol Talbott, Bloomfield Elementary

ITRI
INFORMATIONAL TEXT READING INVENTORY

Grade 3

Student Materials

Developed by the Center for Innovation in Assessment in conjunction with the Indiana Department of Education

Reading Survey

Name:_____ **Date:** _____

Fill in the circle next to the answer that best explains how you think about reading. There are no wrong or right answers.

Practice

A. When I read a book, I like to read a book that _____.
- Ⓐ has lots of facts
- Ⓑ uses words I can say
- Ⓒ is short and easy to read
- Ⓓ tells something exciting or interesting

B. When I read textbooks (like science or math books), I _____.
- Ⓐ learn a lot
- Ⓑ read them quickly
- Ⓒ get bored very easily
- Ⓓ become easily confused

1. Before I read a lesson in my textbook, I _____.
- Ⓐ look at the titles, pictures, and important words
- Ⓑ ask the teacher why we are reading it
- Ⓒ think about what I already know about the subject
- Ⓓ look to see if the words are too hard for me to read

2. To figure out the main idea of a lesson, I _____.
- Ⓐ figure out what most of the sentences tell about
- Ⓑ make sure I can read all of the ideas in the lesson
- Ⓒ listen to what the teacher says the lesson will be about
- Ⓓ check to see if there is a main idea at the beginning of the chapter

3. If a sentence in my textbook is confusing, I _____.
- Ⓐ ask someone to explain it to me
- Ⓑ reread it and try to sound out the words I don't know
- Ⓒ check if it is important to the main idea of the paragraph
- Ⓓ find out how it relates to the other sentences in the paragraph

4. If I don't know the answer to a question at the end of a lesson, I ____.
- Ⓐ reread the question and slowly say the words
- Ⓑ reread the whole lesson so that I understand it
- Ⓒ go to the next question and see if I know the answer
- Ⓓ check the headings so I know where to look for the answer

5. When I don't understand a word in a textbook, I _____.
   Ⓐ ask a teacher what the word means
   Ⓑ look to see if the word is in the book's glossary
   Ⓒ break the word into syllables and try to figure out the word parts
   Ⓓ read the other words in the sentence to see what would make sense

6. When I'm reading and I need to understand why something happened, I _____.
   Ⓐ reread so I understand the cause
   Ⓑ ask a friend or adult to explain it to me
   Ⓒ make sure I can read the vocabulary words
   Ⓓ look for words like so, because, or other clue words

7. When I need to decide which details in a lesson are most important, I _____.
   Ⓐ look for the longest words and sentences
   Ⓑ look for vocabulary words, titles, and questions
   Ⓒ look for sentences that tell about the main idea
   Ⓓ look to see what the other students are reading

8. If I see a word I have never read before in my textbook, I _____.
   Ⓐ try to sound it out
   Ⓑ check if it is a vocabulary word or if there is a pronunciation key
   Ⓒ reread the sentence it is in to see if I can figure it out
   Ⓓ ignore it since it is probably not a common word that I need to know

9. When I don't understand something in my textbook, I _____.
   Ⓐ read it again and say the words aloud
   Ⓑ skip over it because it is too hard
   Ⓒ draw a picture of what is happening so I can understand it
   Ⓓ look to see if there are pictures or drawings that help me understand

10. If I want to remember new words from a textbook lesson, I ____.
   Ⓐ ask someone to quiz me
   Ⓑ think how they are like words I already know
   Ⓒ look them up in the glossary and copy the definitions
   Ⓓ write them three times to practice spelling them

Sister Cities

Carrie and Danielle are third graders in Bloomington, Indiana. They are learning about their community in school. They are excited to learn that their town has sister cities around the world.

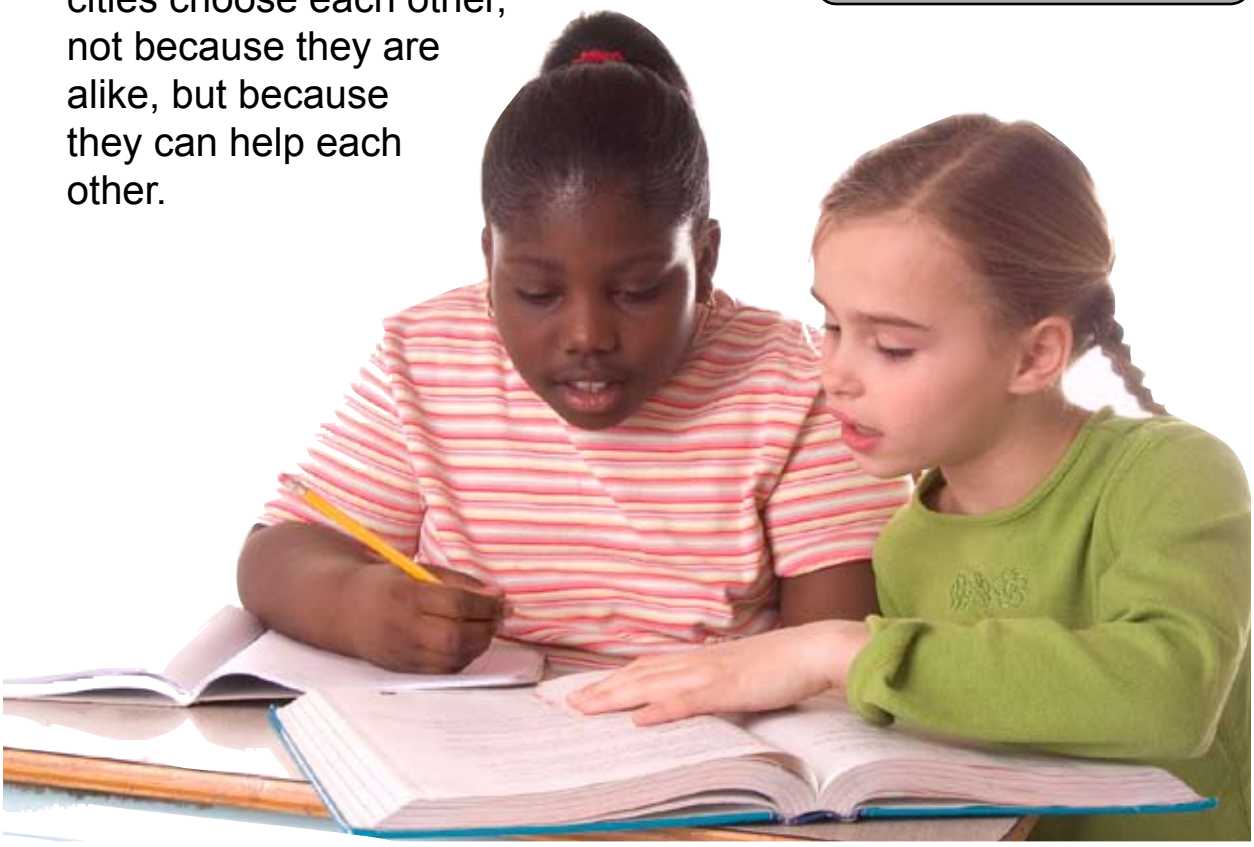
Sister cities are cities in different parts of the world that share a special connection. They might both be famous for their schools. They might both be farm communities. Sometimes sister cities choose each other, not because they are alike, but because they can help each other.

Main Idea

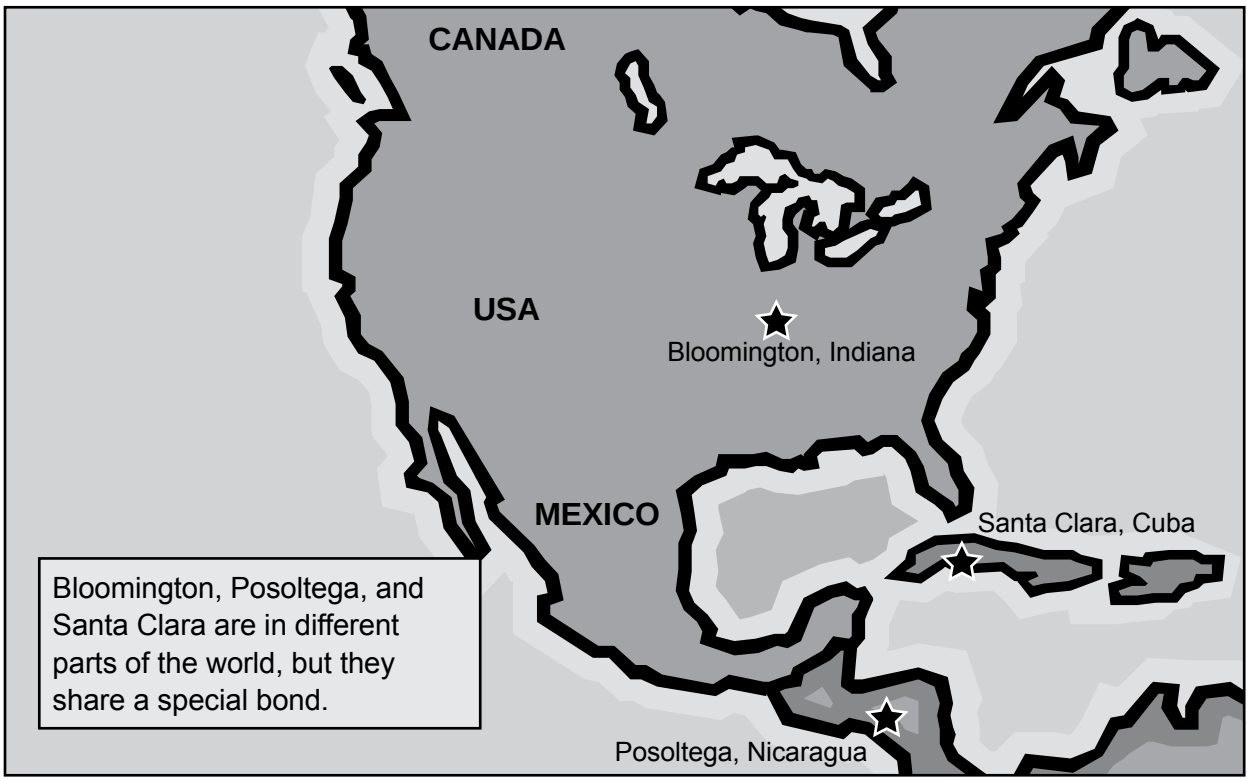
Bloomington has a special connection with its sister cities.

Vocabulary

- Posoltega
- Santa Clara
- sister cities



Standards Addressed: Social Studies: 3.2.5, 3.5.2



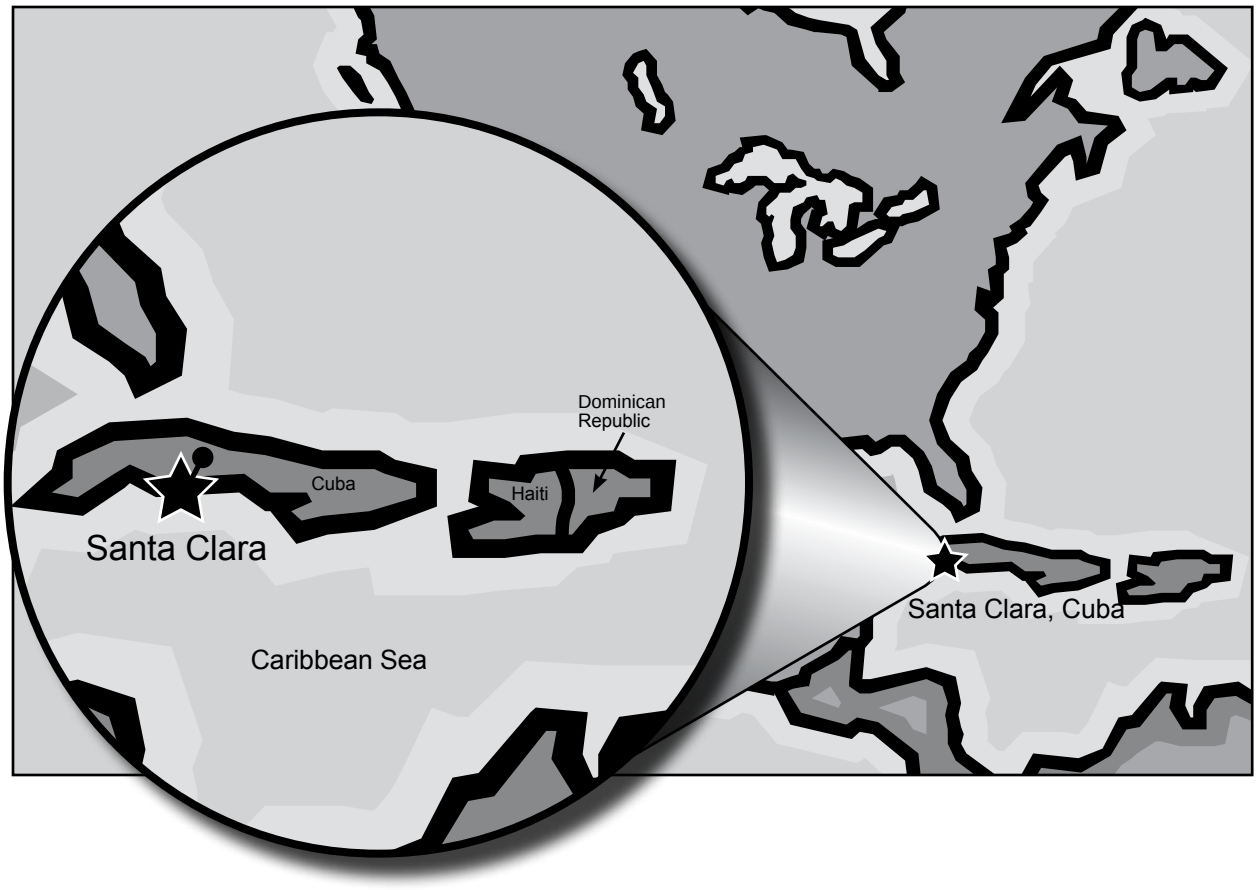
Bloomington, Posoltega, and Santa Clara are in different parts of the world, but they share a special bond.

Posoltega

One of Bloomington's sister cities is the town of **Posoltega** (POS-ul-TAY-gah), Nicaragua. Nicaragua is a small country in Central America. About 5,000 people live in Posoltega. That is much smaller than Bloomington's population of about 69,000 people. Many people in Posoltega are very poor.

After Posoltega became Bloomington's sister city in 1988, people from Bloomington began sending food and medicine to the people of Posoltega. In 1998, much of Posoltega was destroyed by Hurricane Mitch. People in Bloomington raised money to help the people of their sister city.

People in Bloomington have also gained a lot from their special friendship with Posoltega. Citizens of Bloomington have the chance to learn about life in Nicaragua through the sister cities program.



Santa Clara

Posoltega is not Bloomington's only sister city. **Santa Clara**, Cuba also shares a special friendship with Bloomington. Cuba is an island in the Caribbean. Bloomington and Santa Clara became sister cities in 1999. These two cities have a lot in common. Bloomington is home to Indiana University. Santa Clara is home to the Central University of Las Villas. Both cities are also full of beautiful parks.

The governments of Cuba and the United States disagree about many things. But the people of Santa Clara and Bloomington are working to understand each other. They hope to overcome these differences and learn about the culture of their sister city.

Does your town have a sister city? What would you like to ask the kids who live there? What would you like to tell them about your community?

Name: _____

1. Which of these is a heading in the lesson?
O Sister Cities
O Santa Clara
O Social Studies
O Standards Addressed

2. Which of these is *least* important to understanding the lesson?
O the Main Idea Box
O the Vocabulary Box
O the sister cities map
O the photo of the girls

3. What is the lesson's main idea?
O Carrie and Danielle are learning about sister cities.
O Carrie and Danielle are third graders in Bloomington, Indiana.
O Bloomington has a special connection with its sister cities.
O Bloomington and Posoltega have been sister cities since 1988.

4. What is the main idea of the section "Posoltega?"
O Nicaragua is a small country.
O Posoltega is smaller than Bloomington.
O Being sister cities has helped Posoltega and Bloomington.
O Hurricane Mitch destroyed much of Posoltega in 1998.

5. Why did the people of Bloomington *first* send food to Posoltega?
O Many people in Posoltega are poor.
O Much of Posoltega was destroyed by Hurricane Mitch.
O The population of Posoltega is too small to grow enough food.
O The farmers in Bloomington needed a place to send their extra crops.

6. What is one problem faced by the people of Santa Clara and Bloomington?
O They have dirty parks and universities.
O They don't have enough medicine.
O Their governments do not agree.
O Their towns are too small.

7. Which of these do you think is *most* likely to happen in the future?
O Carrie's family will move to Santa Clara.
O Posoltega will adopt Santa Clara as a sister city.
O People in Bloomington will learn more about life in Cuba.
O Posoltega will send medicine and supplies to Bloomington.

8. Based on what you know, which of the following would you be *most* likely to find in Posoltega?
O crowds of people
O beautiful parks
O tall buildings
O small homes

9. Which of these helps you understand the definition of *Posoltega*?
O *Posoltega* is pronounced POS-ul-TAY-gah.
O Looking up Posoltega in the table of contents.
O Noticing that *Posoltega* has ten letters.
O Reading "Posoltega is in Nicaragua."

10. How would you break the word *government* into word parts to understand it better?
O go-ver-ment
O govern-ment
O gover-nme-nt
O gov-ern-ment

Hop to It!

Science

Learning About Frogs

Have you ever watched a frog hop or heard its call? Frogs of all kinds can be found across the United States. They live in and near lakes, in swamps and muddy bogs, by clear streams, in woodlands with water, and even underground. What kinds of frogs live near you?

DISCOVER

Frogs are amphibians.

VOCABULARY

- amphibians
- habitat

What kind of animal is a frog?

All frogs are part of a group of animals known as amphibians. **Amphibians** (am FIH bee yuns) are cold-blooded and have moist skin without fur. The word amphibian comes from Greek words that mean *double life*. Amphibians begin their young lives looking one way and then look very different as adults. Frogs begin their lives as swimming tadpoles without any legs.

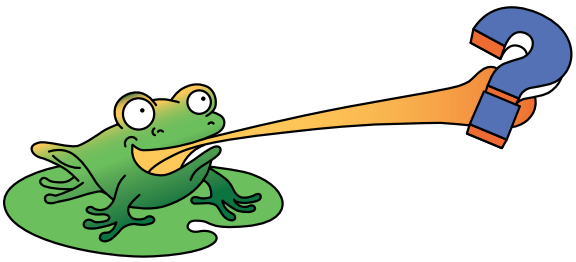
Are all frogs the same?

Frogs can be identified by their size, color, and call. The largest frog that lives in the United States is the Bullfrog. Bullfrogs are from 3½ to 8 inches long and are usually

Standards Addressed: Science: 3.4.1

Carpenter frog

greenish. Their call is a deep hum. The Pickerel is a medium-sized, light brown frog with black, square-shaped spots. It makes a sound like a low snore. The Carpenter frog is very jumpy and smaller than the Pickerel. It is brown with tan or yellowish stripes on its side. It makes a sound like a hammer hitting a nail. The Spring Peeper is smaller than the Carpenter frog and less than an inch long. It can be tan, brown, or gray. Its back has a mark that looks like an X. It makes a sound like a high-pitched whistle.



What do frogs eat?

Most frogs eat insects and spiders. Bullfrogs also eat small animals including other frogs like Peepers. Bullfrogs stay away from eating Pickerels because Pickerels have a poison in their skin that tastes bad. When there are too many Bullfrogs, they can become pests by eating up all of the small frogs, snakes, and little turtles in their surroundings called their **habitat**. In order to keep the Bullfrogs from eating all the small animals, there must be larger animals that eat Bullfrogs.

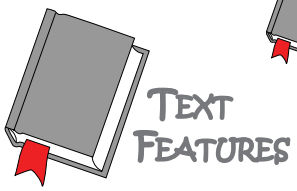
Review Questions:

1) What is the biggest frog that lives in the United States?

2) Predict what you would find in a frog's habitat.

Table of Contents

Text Features



What are text features?

Text features are parts of your textbook that have been created to help you locate and learn information. **Text features** are used in designing and organizing the pages of your textbook. The title page and table of contents are **text features** you can find at the beginning of books. Headings, graphics, main idea boxes, and bolded words are some of the **text features** you will find in the middle of your book. Reference pages like glossaries, indexes, and atlases are some **text features** you might find at the end of your book.

Below is a list of **text features**. How many can you find in your book?

- ☐ title page
- ☐ headings
- ☐ bolded or highlighted words
- ☐ vocabulary boxes
- ☐ main idea boxes
- ☐ glossaries
- ☐ graphics (pictures, graphs, charts, etc.)
- ☐ table of contents
- ☐ review questions
- ☐ index
- ☐ atlas
- ☐ chapter titles

Why should you look at the text features?

Looking at **text features** will help you know what is most important in a lesson and help you locate information quickly. Looking at the titles in the table of contents or on a page can quickly tell you what information you will learn about. Reference pages such as the glossary can help you find out more about a certain topic or word.

How do you use text features?

Knowing which **text features** to use and when to use them is important. The chart below can help you decide which **text features** to look at when you want to understand your book better.

To understand words and vocabulary use:
- glossary
- vocabulary boxes
- bolded or highlighted words

To find main ideas and topics use:
- table of contents
- headings
- index
- main idea boxes
- review questions

To find data or places use:
- maps
- atlas
- charts
- tables

Make an Earthworm Composting Center

LESSON 1

Science

TEXT FEATURES

A This lesson helps you understand Text Features. Look at the ITRI **table of contents**. Write the titles of two other Text Features lessons.

_____

_____

_____

DISCOVER

Earthworms are natural recyclers.

VOCABULARY

- compost

There are many ways people in your community recycle. Some collect bottles and cans. Others reuse old materials such as newspaper. Did you know that earthworms also help with recycling? A community of earthworms can make **compost** out of leftover fruits, vegetables, grass, leaves, or other materials. Compost is added to gardens to help plants grow.

B Which of the following do you think you are most likely to read about in this **lesson**?

ⓐ how to do something
ⓑ how two things are the same
ⓒ why you should do something

How do you know? _____

_____

_____

Standards Addressed:
English/Language Arts: 3.2.1, 3.2.3 Science 3.1.2, 3.1.3, 3.2.2, 3.2.7, 3.4.4, 3.6.4

C The lesson does not give you a definition of the word *castings*. Look it up in the ITRI **glossary** and write the definition in the space below.

_____

_____

_____

What could you do to find out the definition of this word if it weren't included in the **glossary**?

_____

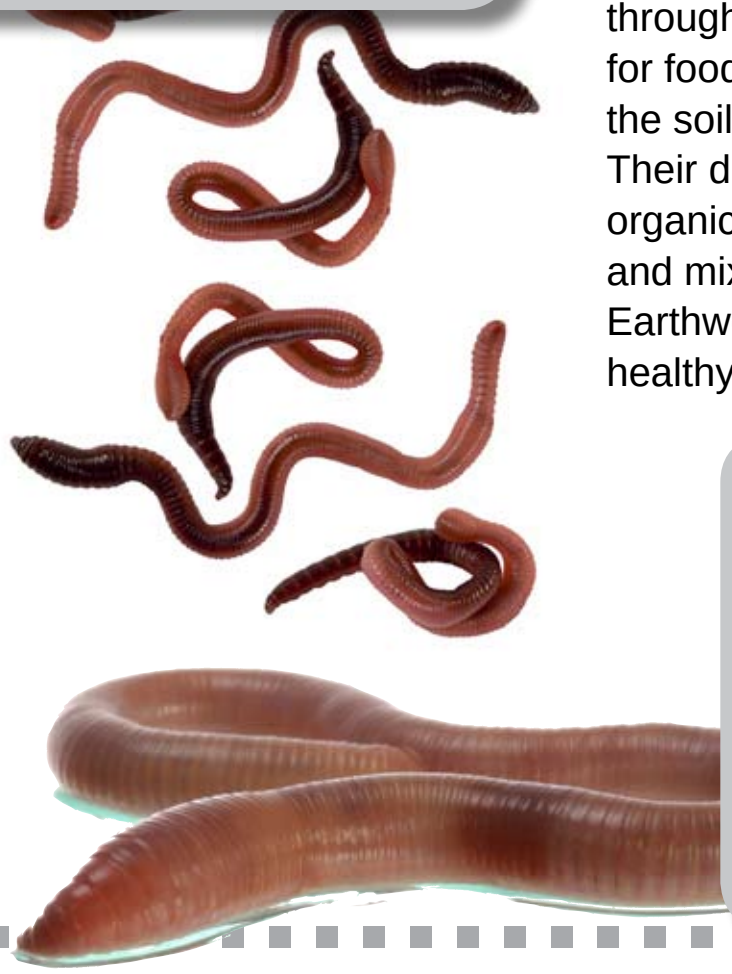
_____

_____

_____

Like you, earthworms love to eat. They especially like to eat plants. If you mix leftover fruits and vegetables into soil and add some earthworms, the earthworms will eat the leftovers. When they are finished eating, they produce castings. The castings are full of minerals that plants need to grow. The earthworms leave behind a rich soil that helps plants grow.

Earthworms help the soil in another way. They dig or tunnel through the soil as they search for food. Their tunnels help keep the soil loose for the plants. Their digging also helps to bring organic material from the top and mix it with the soil below. Earthworms help keep the soil healthy.



D This **section** tells about earthworms. Use the **index** of your book to find one other page with information about animals.

_____

_____

_____

_____

Let's watch the earthworms at work.
You will need:

1. a see-through plastic box with a lid, about one foot square by six inches deep

Punch air holes along the sides of the box and in the lid.

2. about two dozen earthworms

3. chopped vegetable and fruit scraps

Carrots are easy to see in the box.

4. soil

E

Why is this part of the lesson written as a **list**? _____

_____

How do the **pictures** help you understand this **list**? _____

_____

Here's how to start your worm composting center:

1) Put two inches of rich soil in the bottom of the container.
2) Put two inches of chopped vegetable and fruit scraps on top of the soil.
3) Move some of the scraps so you can see them through the box. This way you can see daily changes.
4) Cover the scraps with two inches of soil.
5) Add water to get the soil a little wet.
6) Measure the height of the soil mixture and write the measurement in a chart.
7) Put about two dozen worms on the wet soil.
8) Put the lid on the box.

F What word in this **heading** helps you know these are ordered steps, not just a list of items?

_____

Worms like the dark. When you are done looking at the worms, put the box in a dark place. Check the box every day for changes.

After two weeks:

Measure the height of the soil mixture. Record the measurement on your chart. How has the height changed from the first time you measured it? Have the worms been doing their job?

Skin and Skin Care

LESSON 2

Health

Mr. Ortega's third graders did an experiment to find out how hand washing affects health. They washed their hands thoroughly four times a day at school. During this experiment, fewer students were absent from school. Why?

Skin protects your body, and it is important to keep it clean. Washing your hands frequently keeps your skin clean and healthy, so it can protect you.

TEXT FEATURES

FOCUS

Your skin is your body's armor, so you need to take good care of it.

VOCABULARY

- oil glands
- pores

Are You Washing Properly?

1. Wet your hands.
2. Put soap on your hands.
3. Lather and scrub. Don't forget to wash between your fingers. This should take 15–20 seconds.
4. Rinse and dry.

A Why is this information in a box instead of the paragraph? _____

_____

_____

Standards Addressed: English/Language Arts: 3.2.1, 3.2.3 Science: 3.4.9 Health: 3.1.1, 3.1.8, 3.3.5, 3.6.3

B Write one way you know that *oil glands* is a **vocabulary word** in this lesson.

_____

Skin Protects Your Body

Skin protects you in many ways. It has **oil glands** that produce oil. The oil comes out where the little hairs on your skin grow from follicles. The oil makes your skin soft and waterproof so you don't get soggy when you get wet.

Your skin also cools you down. Your body is cooled by sweat that comes out of your pores. **Pores** are tiny holes in your skin. When you get too hot, your sweat glands release sweat from pores to cool you down.

C The lesson does not tell you very much about *follicles*. Look this word up in your **glossary** and write the definition below. _____

_____

_____

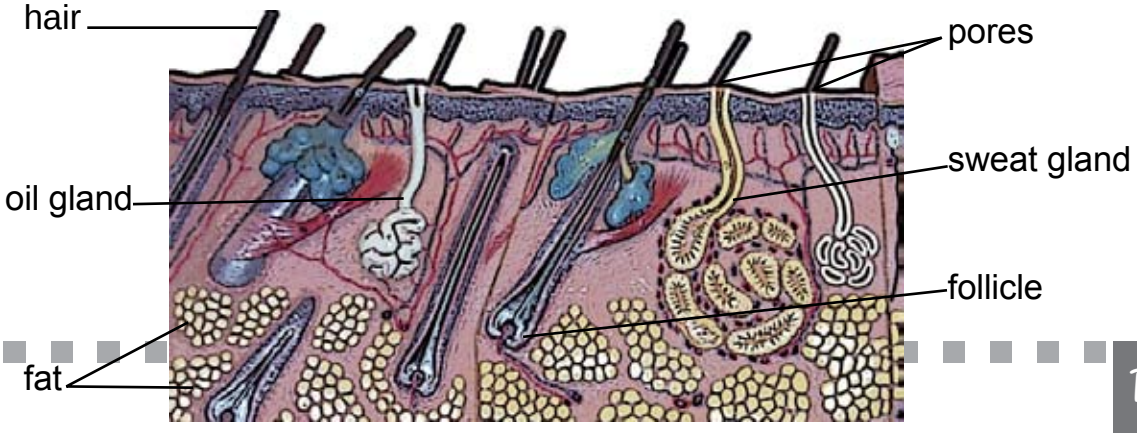
The definition of *follicles* includes the difficult words *secretion* and *excretion*. Which of these will come first in your glossary?

_____

Write the definitions of both of these words in the space below:

secretion: _____

excretion: _____



Taking Care of Your Skin

Since your skin is so important, you need to take care of it. One easy way to protect it is by keeping it clean. When you wash your hands, you wash away dirt and germs. Dirt and germs from your hands can easily get inside you through your eyes, mouth, or a cut. To stop these germs, wash your hands with soap and warm water.

Scrapes and cuts are dangerous breaks in your skin. When you get a cut or scrape, clean it with soap and water. Then put on a bandage. The cut will heal faster, and the bandage will protect you from germs.

Another way to take care of your skin is to shield it from the sun. The sun's harmful rays will dry out your skin and give you wrinkles. When the sun burns your skin, it is called sunburn. Sunburns hurt and can lead to a disease called skin cancer. Using sunscreen and wearing clothing such as hats, pants, and long sleeves protects your skin against the sun's harmful rays.

D

Use the word *how* to write this **heading** as a question. _____

_____

Write two answers to this question from this section. _____

_____

_____

_____

Don't forget to protect your skin when you are outdoors by wearing sunscreen.

Taking care of your skin is part of taking care of you. Your skin keeps your organs in and germs out. Help your skin protect you, and keep your largest organ happy, healthy, and looking good!

Always Wash Your Hands:
• after you blow your nose, cough, or sneeze
• after playing outside
• before you eat or handle any food
• after you use the bathroom

E Does this **chart** help you understand the main idea of the lesson? Write one reason why or why not. _____

_____

_____

Always wash your hands before eating or handling food.

Comparing Numbers

LESSON 3

MATH

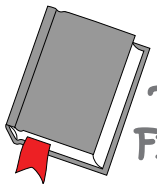
A Which of the following do you think you are *most* likely to read about in this **lesson**?

ⓐ what something is like
ⓑ how two or more things are different
ⓒ why some people are taller than other people

How do you know? _____

_____

_____



TEXT FEATURES

Find Out

You can use the greater than (>) and less than (<) symbols to compare numbers.

Math Words

- greater than (>)
- less than (<)

Who is the Tallest?

Josh's family wants to take a picture. His mom thought it would be a good idea if they lined up from shortest to tallest. Josh's dad and mom are both 70 inches tall. Josh is 53 inches tall. His sister Mia is 65 inches, and his brother Andrew is 58 inches. In what order will they get into line?

B This **paragraph** tells a story about Josh and his family. How is it related to the main idea of the lesson? _____

_____

_____

Why did the author include the story?_____

_____

Standards Addressed:
English/Language Arts: 3.2.1, 3.2.3 Mathematics: 3.1.5

Fill in the Chart

In the chart below, arrange the people in Josh's family in order from the tallest to the shortest and write in their heights. The first one is done for you.

Family Member	Height in Inches
Dad	*70 inches*

C How does this **chart** help you understand the main idea of lesson?

Comparing Numbers Using Symbols

Special symbols can be used to compare numbers. Josh can use them to compare the heights of people in his family.

The symbol **<** means **less than**. The symbol **>** means **greater than**. Josh is 53 inches. Andrew is 58 inches. Josh's height is less than Andrew's height. Josh's height < Andrew's height.

D

Explain why some words in this paragraph are in **bold** print. _____

_____

_____

_____

E

The word *symbol* is not defined in the lesson. Is it in the book's **glossary**? _____

How would you define the **word** *symbol*? _____

_____

_____

_____

Use the **<** and **>** symbols to compare the heights of Josh's family members.

Josh's height ____ Mom's height
Josh's height ____ Dad's height
Josh's height ____ Mia's height
Dad's height ____ Mom's height
Mia's height ____ Andrew's height

F

Use the **index** to find the page numbers of one other lesson that tells about working with numbers and write it below: _____

Now use the **table of contents** to find that lesson's title and write it below:

_____

_____

_____

I Pledge...

LESSON 4

Social Studies

A Promise for a Pet

The kids in room 23 were excited because they were going to get a class pet. They went to the pet store to get their hamster. Before they could take the hamster to school, the pet store owner asked them to sign a "Pet Care Pledge."

Text Features

Pet Care Pledge

I pledge to take good care of my pet:
I will treat my pet gently,
love my pet always,
feed my pet regularly,
wash my pet and keep her/his home clean,
keep her/him healthy, and
make sure my pet is safe from harm.

Kimiko N. Rosa Ann Trenton Allison Luca T'Shawn Eden Alayna Brennan Mark B.J. Connor Claire Wren

Main Idea

People sign and say pledges to show they mean what they say.

Vocabulary

- Pledge
- Pledge of Allegiance

A Does the Pet Care Pledge help you understand what this **lesson** will be about? Write one reason why or why not.

_____

_____

_____

Standards Addressed: English/Language Arts: 3.2.1, 3.2.3
Social Studies: 3.2.2, 3.2.6

A Pledge is a Promise

B How does this **heading** help you understand what you are about to read?

_____

_____

_____

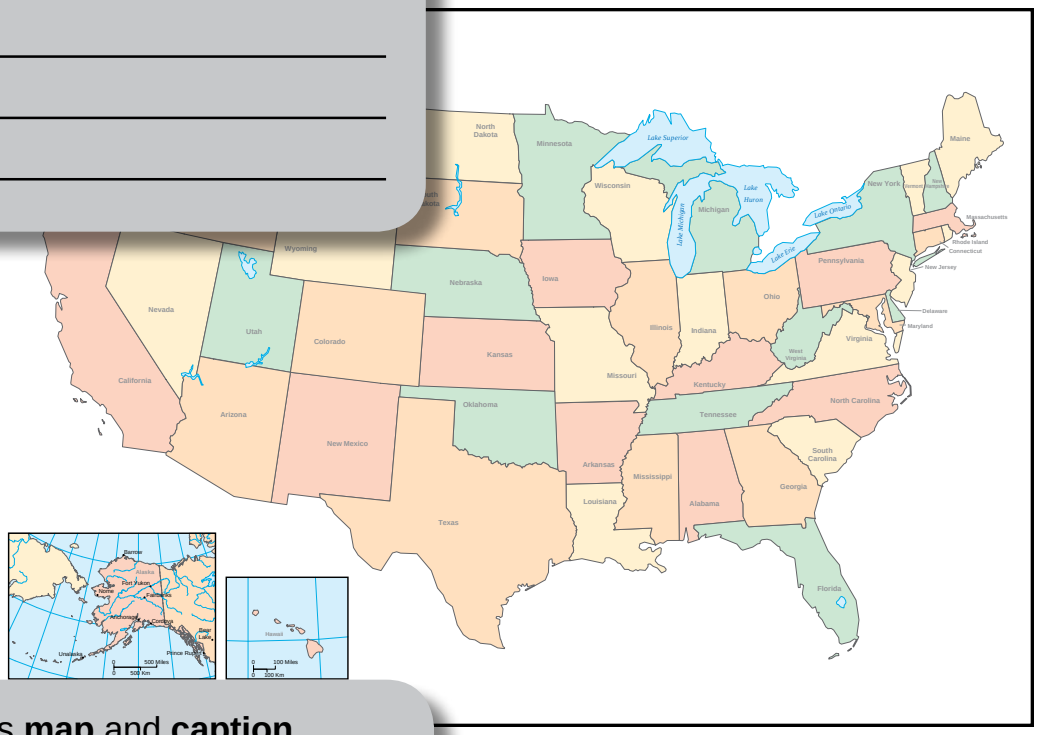
Have you ever signed a pledge? A **pledge** is a formal promise. Sometimes people recite or say pledges. Many groups like the Girl Scouts have pledges or promises for their members. Do you say a pledge at your school? Some students say a pledge to do their best work and behave correctly. Our country even has an official pledge called the **Pledge of Allegiance**.

C Where else in your textbook could you look to find a **map** of the United States?

_____

_____

_____



The United States has one pledge for all 50 states.

D Do this **map** and **caption** help you understand the Pledge of Alliegiance? Why or why not?

_____

_____

_____

The Pledge of Allegiance

The Pledge of Allegiance was written a long time ago by a man named Francis Bellamy. He called his pledge the “Pledge to the Flag.” He had this pledge printed in a magazine in 1892. He wanted children to say the Pledge on Columbus Day for a special celebration. Soon many children learned the Pledge. The Pledge became an official part of our county’s rules in the 1942 U.S. Flag Code. The government later changed the name of this pledge to “The Pledge of Allegiance.”

Over the years, the words to The Pledge of Allegiance have changed, but today children and adults are still reciting it. It is a pledge that many Americans say when they stand before the American flag. They put their hands on their hearts to show they mean what they promise. Then they recite the words to the Pledge to show they promise to be loyal to their country.

E *Loyal* is a key word in this paragraph. To find its meaning, you should look in a(n)

- ○ table of contents
- ○ glossary
- ○ index
- ○ atlas

F Does this picture help you understand the Pledge of Allegiance? Write one reason why or why not.

_____

_____

_____

_____

G What other picture would you put here to help other students understand the Pledge? Why?

_____

_____

_____

_____

Understanding the Pledge of Allegiance

The Pledge begins with the words, “I pledge allegiance to the flag of the United States of America.” To understand the Pledge, you need to know the meaning of the words. You already know that a pledge is a promise. There are other words in The Pledge of Allegiance that you may not know as well. Look at the chart below to find the meaning of some words in the Pledge.

I pledge allegiance to the flag of the United States of America, and to the Republic for which it stands, one Nation, under God, indivisible, with liberty and justice for all.
allegiance *(UH-lee-jance)* strong feelings of loyalty
indivisible *(IN-di-VIZ- uh- bull)* cannot be split up
justice *(JUST-iss)* fairness
liberty *(LI-burr-tee)* freedom
pledge *(Plej)* a formal promise
republic *(Re-PUB-lick)* a government where the lawmakers and leaders are chosen by votes

H Why did the author include (*UH-lee-jance*) after the word *allegiance*?

_____

_____

Where else can you see words written like this?_____

_____

Main Idea

What is a main idea?

A **main idea** is the most important idea in a lesson or paragraph. It ties all of the ideas in the lesson or paragraph together. When good readers read, they look for the **main idea** to test their understanding.

Why should you look for a main idea?

Recognizing the **main idea** will help you understand the lesson or paragraph.

When should you look for a main idea?

Look for a **main idea** whenever you read.

- Before you read, look to see if the **main idea** of the lesson is listed on the first page or in the first paragraph. If not, skim the lesson's paragraphs, headings, and graphics to see if you can figure out its **main idea**.

- As you read each paragraph, ask yourself what is most important. What idea ties everything together?

- After you read, ask yourself what you learned. Why did the author write the lesson or paragraph? How does understanding the **main idea** help you understand the lesson?

How do you find the main idea?

Much of the time, the **main idea** of a paragraph is in its first sentence. Other times, you will need to read the entire paragraph to find the **main idea**.

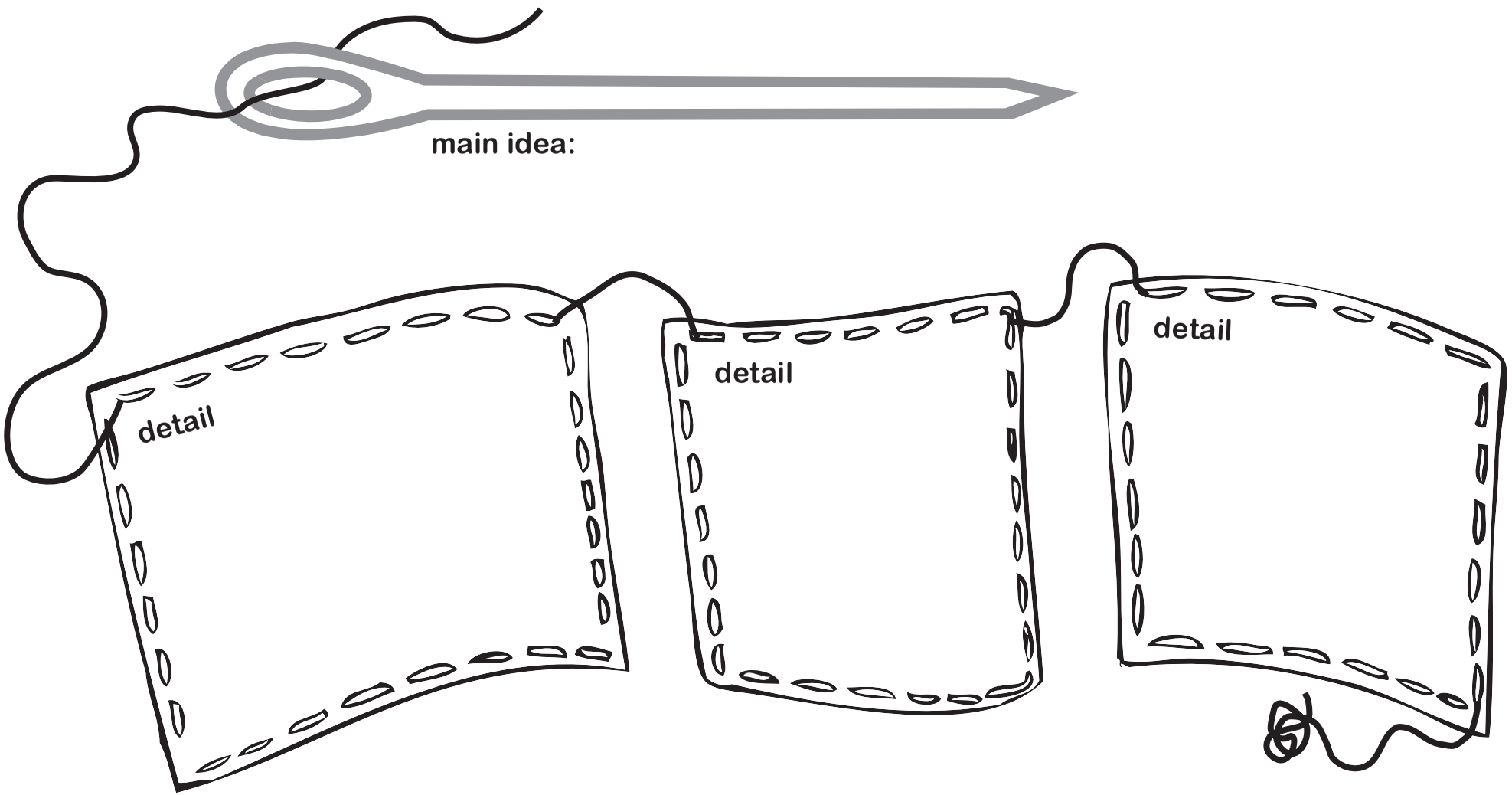
Use the **main ideas** of the paragraphs to check your understanding of the lesson's **main idea**. Look for words or ideas that are repeated in the text. Be sure to look at:

- graphics
- captions
- titles
- headings
- review questions
- paragraphs
- vocabulary

Decide what is most important. What information must the lesson include in order for you to understand it?

Name _____

Main Idea Graphic Organizer



Add more squares if needed.

Vibration and Sound

LESSON 1

Science

A Underline the sentence in this paragraph that the author most wants you to learn. Write it on the needle of the **graphic organizer**. go!

MAIN IDEA

BEEP! BEEP! BEEP! The ringing of your alarm clock wakes you from a deep sleep. As you yawn and stretch, you hear birds singing outside your window. You hear cars driving past outside. The world around you is full of sounds.

DISCOVER

Sound is a kind of energy caused by vibration.

VOCABULARY

- vibrate

B Write the sentence "Beep!" on one of the squares. How is "Beep!" tied to the idea that you wrote on the sewing needle? _____

_____

_____

_____

_____

C Now write two other important ideas from the paragraph on the other squares. Check that each sentence is tied to the idea on the sewing needle. go!

Standards Addressed: English/Language Arts: 3.2.2, 3.2.3, 3.2.5
Social Studies: 3.5.3 Science: 3.1.6, 3.3.9

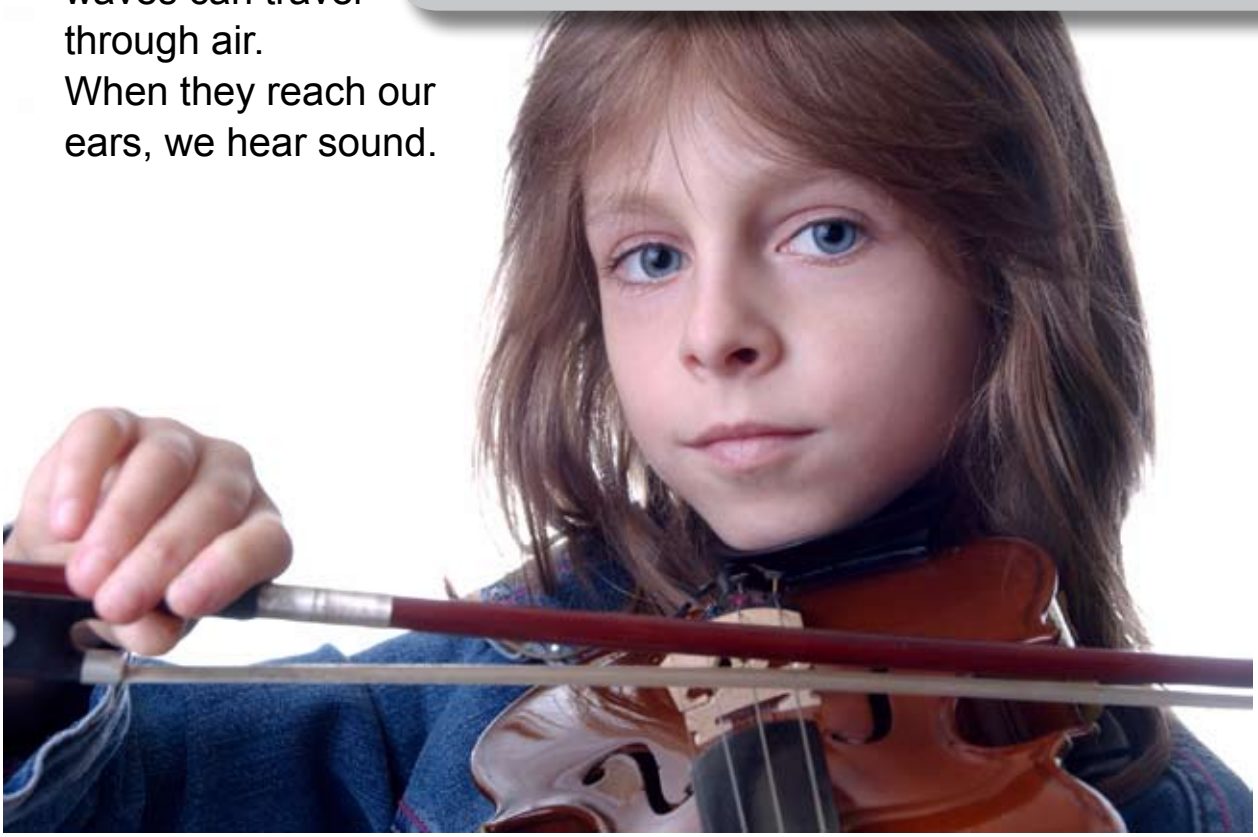
What is Sound?

Sound is a kind of energy. Sound begins when something vibrates. It might be your vocal cords, or a musical instrument. To **vibrate** means to move back and forth quickly. Put your hand on your throat while you are talking. Can you feel the vibrations as you speak? When something vibrates, it makes the air around it vibrate too. Waves of sound move outward from the vibrating object. Sound waves can travel through air. When they reach our ears, we hear sound.

D This paragraph begins with an important sentence, but it is only part of the main idea of the paragraph. Read the paragraph and then choose the main idea below.

ⓐ Sound is energy caused by vibration.
ⓑ We feel sound vibrations in our throat.
ⓒ We feel vibrations from sound in our ears.
ⓓ Sound vibrations move back and forth quickly.

Underline the sentence or sentences where you find this main idea.



Sometimes headings can give you a clue to the main idea of the paragraph or section. Find the main idea by underlining the answer to this heading's question.

Where can sound waves travel?

Sound waves travel in the air and also in liquids and solids. Have you ever tried to talk to someone under water? Then you know that you can hear sounds through water. Since sound waves don't travel at the same speed under water as they do through the air, voices sound different. You may also have noticed that your voice sounded funny underwater.

Sound waves can also travel through solids like wood or metal. If you put your hand on the floor next to a loud radio speaker, you can feel the vibrations in your hand. A sound, like a boom of thunder, can be so loud that you can feel the vibrations throughout your whole body.

How fast does sound travel?

In Air	343 meters per second
In Water	1,493 meters per second
In Rubber Bands	1,550 meters per second
In Gold	3,240 meters per second
In Diamond	12,000 meters per second

Playing with Sound

Mark Wood is a musician and music teacher who loves to play the violin. He wanted a violin that he could use to play rock music, but he couldn't find a violin that made the sounds he wanted. He decided to invent a new violin called the Viper. He included more strings, changed the shape of the violin, and added electricity.

The Viper needs electricity to produce sound because it isn't hollow. Most violins make sound when vibrations from their strings travel through the air inside their hollow bodies. Mark Wood's Viper violins are not hollow. Instead, the vibrations are picked up electronically. They are then sent through an electric amplifier to produce sound. The Viper is an electric violin that makes sounds.

F Use this paragraph to fill out another **graphic organizer**. Make sure to include at least two details.

Mr. Wood's Viper Violin

The Viper violin has seven strings instead of four. It has straight sides.

Building Blocks:
From the Stone Belt to the Empire State Building

LESSON 2

Social Studies

Indiana limestone is used all over the world. Have you heard people in Indiana talk about the Stone Belt? The Stone Belt is not a belt you wear. It is the area in Indiana where Indiana limestone is quarried, or removed from the ground. The **Stone Belt** runs from Stinesville in Monroe County to Bedford in Lawrence County. Limestone from the Stone Belt has been used in the Empire State Building in New York City, the Pentagon in Washington D.C., and Covent Garden in London, England.

MAIN IDEA

A What three words or phrases are repeated the most in this paragraph?

_____

_____

_____

Now use these words to write a main idea for the paragraph. Remember: it should tie together the details.

_____

_____

_____

_____

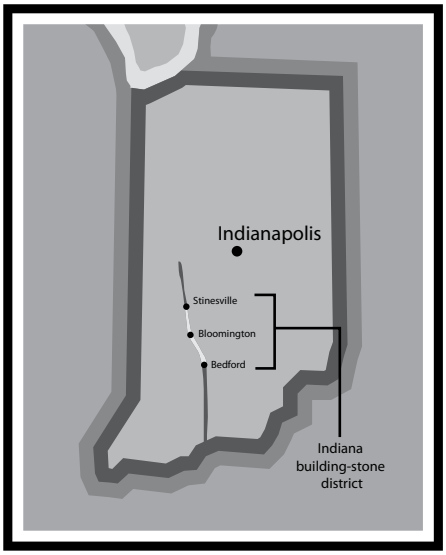
_____

Main Idea

Indiana limestone is important to many communities.

Vocabulary

- Skywalkers
- Stone Belt



The Indiana Stone Belt

Standards Addressed: English/Language Arts: 3.2.3, 3.2.5, 3.2.6
Social Studies: 3.1.3, 3.1.4, 3.3.3, 3.5.2, 3.5.4 Science: 3.1.6

Problems and Solutions

People have used Indiana limestone for many years. After the Chicago fire in 1871, builders began looking for building materials that would not burn easily. They started using Indiana limestone. Other builders liked Indiana limestone because of its plain color. But Indiana limestone is very heavy. So everyone needed a way to move it from the quarry to the building sites.

Quarry companies built short railroad tracks to connect them with the main railroad tracks. Soon trains were carrying Indiana limestone all over the country. By the 1940s, trucks were getting bigger and stronger. There were fewer railroads. Quarries started using trucks to move the limestone.

B Look at the heading. What two things do you expect the main idea of this section to be about?

_____

_____

_____

_____

This truck carried Indiana limestone to Washington, D.C. to help repair the Pentagon in 2001.

C Underline the sentence that means almost the same thing as the heading "Indiana Limestone leads to Jobs."

Indiana Limestone Leads to Jobs

Many people have jobs because there are so many uses for Indiana limestone. Workers in the quarries cut the limestone into blocks. Stone carvers use it to make statues. Builders use it for houses, bridges, and large buildings. Builders hire many workers to help them. Truck drivers haul the limestone from quarries to carvers and builders.

How Limestone Moves

D How many sentences in this paragraph give details about the main idea? _____

List two of the details. _____

_____

The Empire State Building

In the 1930s, the Empire State Building was built in New York City. Indiana limestone was used to build it, with steel beams for support. It is 1,472 feet tall. Because the Empire State Building was taller than any other building in New York City in the 1930s, many workers were needed to help build it.

E This paragraph about Skywalkers doesn't really support the lesson's main idea. Why did the author include it? _____

_____

_____

_____

Skywalkers

American Indians, mainly from the Mohawk tribe, have traveled from Canada to New York City for jobs as ironworkers for over 120 years. Ironworkers build the steel frame of skyscrapers, like the Empire State Building. These Mohawk ironworkers are called Skywalkers. Skywalkers have to walk across the steel beams to get to different parts of the building. From the ground, it looks like they are walking in the sky. Skywalkers helped build the Empire State Building. You can still find Skywalkers working in New York City.

Making Healthful Choices

LESSON 3

Health

Every day, you make choices that affect your health and well being. You decide what kinds of foods to eat. You decide what products you use to keep yourself clean and healthy. How do you make these decisions? If you are like most students, your choices are influenced by the world around you.

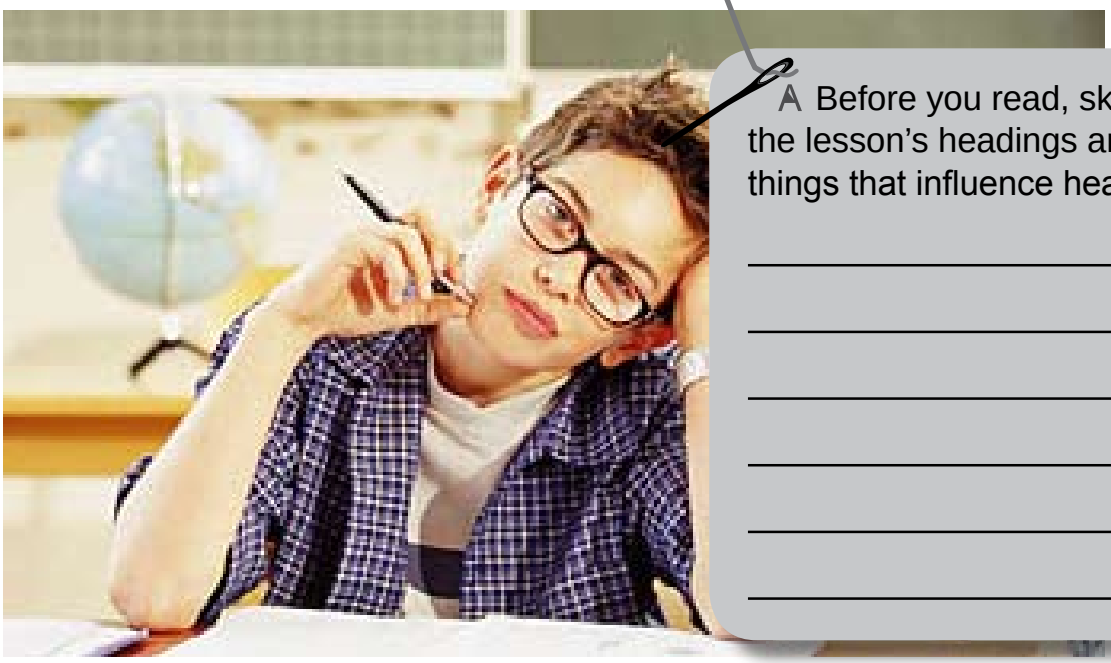
Main Idea

Focus

Your health choices are influenced by the world around you.

Vocabulary

- media



A Before you read, skim the lesson's headings and write two things that influence health choices.

_____

_____

_____

_____

_____

_____

Standards Addressed: English/Language Arts: 3.2.3, 3.2.5, 3.2.6
Social Studies: 3.4.8 Science: 3.4.7, 3.4.8 Health: 3.1.1, 3.1.6, 3.2.1, 3.2.3, 3.4.1, 3.4.3

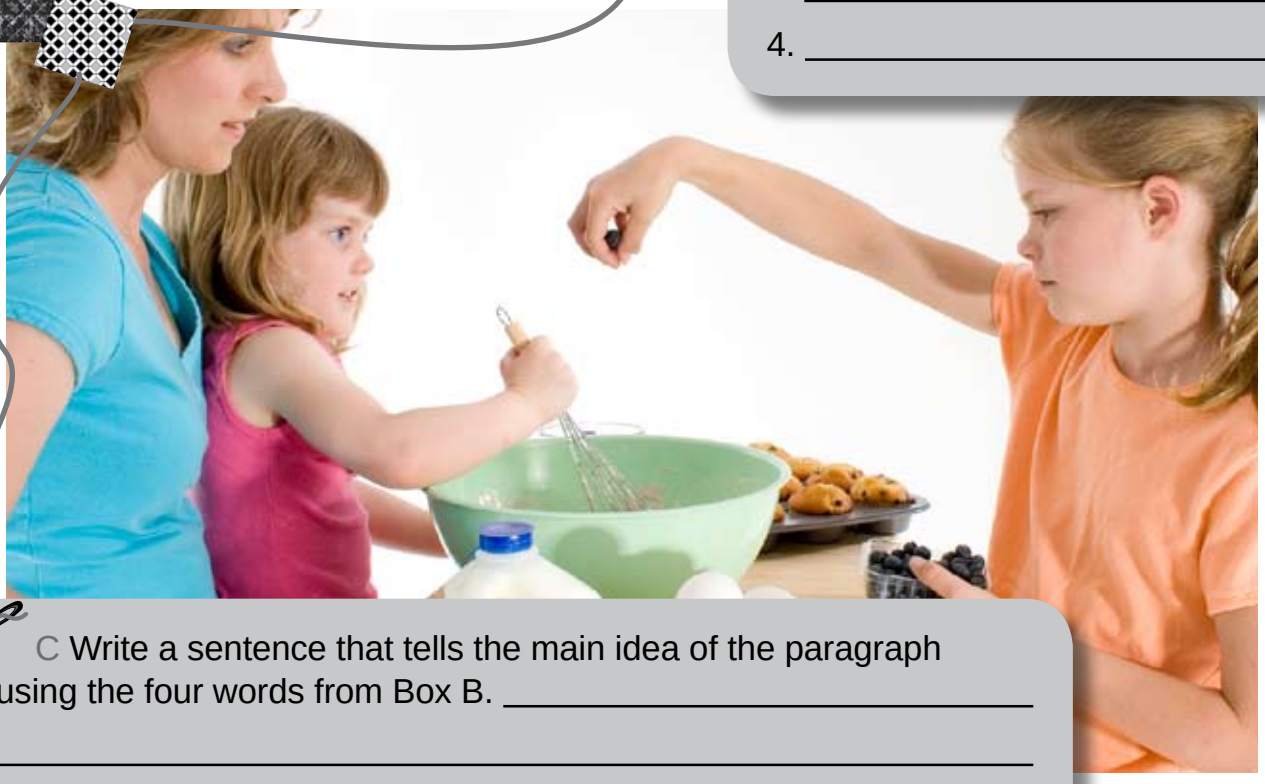
Families

Often, your family has a big effect on the health choices that you make. You probably developed your first ideas about healthful living from your family. You watched what your family members did. You learned about your family's preferences.

As you grow up, your family will continue to play an important role in the choices you make. Your family members will share information with you about what choices are healthful, and which choices are harmful. If you are unsure of what decisions to make, talk to a family member. He or she will be glad to help you make healthful choices.

B What four words are repeated in this section?

1. _____
2. _____
3. _____
4. _____



C Write a sentence that tells the main idea of the paragraph using the four words from Box B. _____

_____

_____

_____

_____

_____

D What is the vocabulary word in this paragraph?

_____

How is it tied to the main idea of the lesson?

_____

_____

_____

The Media

Have you ever seen a television commercial and wanted to buy the product that was advertised? This is one example of how **media**, such as television, movies, magazines, and advertisements, can influence the way you think about certain issues related to your health. The media can influence the way you want to present yourself, or the products you want to buy and use.

Because you see and hear many different media messages, you need to learn how to sort out good information from bad information. You need to learn how to find out the truth about the products that are advertised.

E Use the heading and the first sentence to write the main idea of this paragraph in fewer than 10 words. _____

_____

_____

Community

The people around you in your school, your neighborhood, and your town can affect the choices you make. Your gym teacher encourages you to keep fit. Your dentist encourages you to brush your teeth. The school nurse helps you choose healthy foods. But you might still be tempted by unhealthful choices.

At some time in your life, you might feel pressured to make an unhealthful choice, like using tobacco, or trying illegal drugs. You will be more likely to make the right choice if you live in a community that emphasizes healthy choices.

Whether you are choosing a new shampoo or deciding how to answer when someone offers you tobacco, you are making a choice that affects your health. You may be influenced by the people around you and the media. But you need to stand up for what you know is the right health choice for you. You will be happier and healthier.

Communities can encourage healthful behaviors by banning smoking in public places.

Problems and Solutions

What are problems and solutions?

When good readers read, they pay attention to how events or ideas in a lesson are related. Sometimes events or ideas are related because one is a **problem** and one is a **solution**. A **problem** is something that needs to be figured out or fixed. A **solution** is a way of fixing a **problem**.

Why should you look for problems and solutions?

Understanding how events and ideas in the lesson are related will help you read the lesson better. Recognizing **problems** and **solutions** will help you connect and understand the most important ideas in the lesson.

When should you look for problems and solutions?

Whenever you read, you should try to figure out how the lesson is organized.

- Before you read, look to see if the lesson is divided into two sections—one for **problems** and one for **solutions**. Skim the lesson's paragraphs, headings, and graphics to see if you can figure out if the lesson describes a **problem** and its **solution**.

- As you read, ask yourself how ideas in the lesson are related.

- After you read, ask yourself what you learned. Why did the author include the events and ideas that you read about? How are these events and ideas related? How does understanding a **problem** and its **solution** help you understand the lesson?

How do you find problems and solutions?

In order to understand **problems** and **solutions**, you need to ask yourself questions as you read. Think about how events and ideas in the lesson are related.

Problem:

- Ask: What needs to be figured out or fixed?

- Look for special **problem** signal words or phrases (*problem*, *figure out*, *since*, *because*, *needs*, *in order to* etc.)

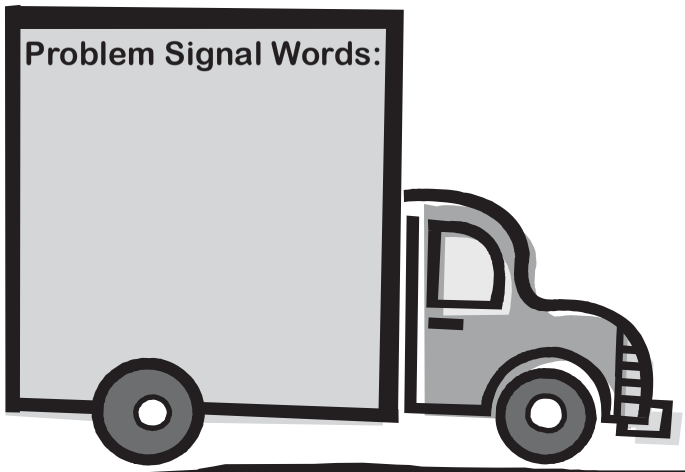
Solution:

- Ask: Was the problem solved? How was it figured out or fixed?

- Look for special **solution** signal words or phrases (*solution, fixed, figured out, so, accomplished, improved, helped*, *calculated* etc.)

Name _____

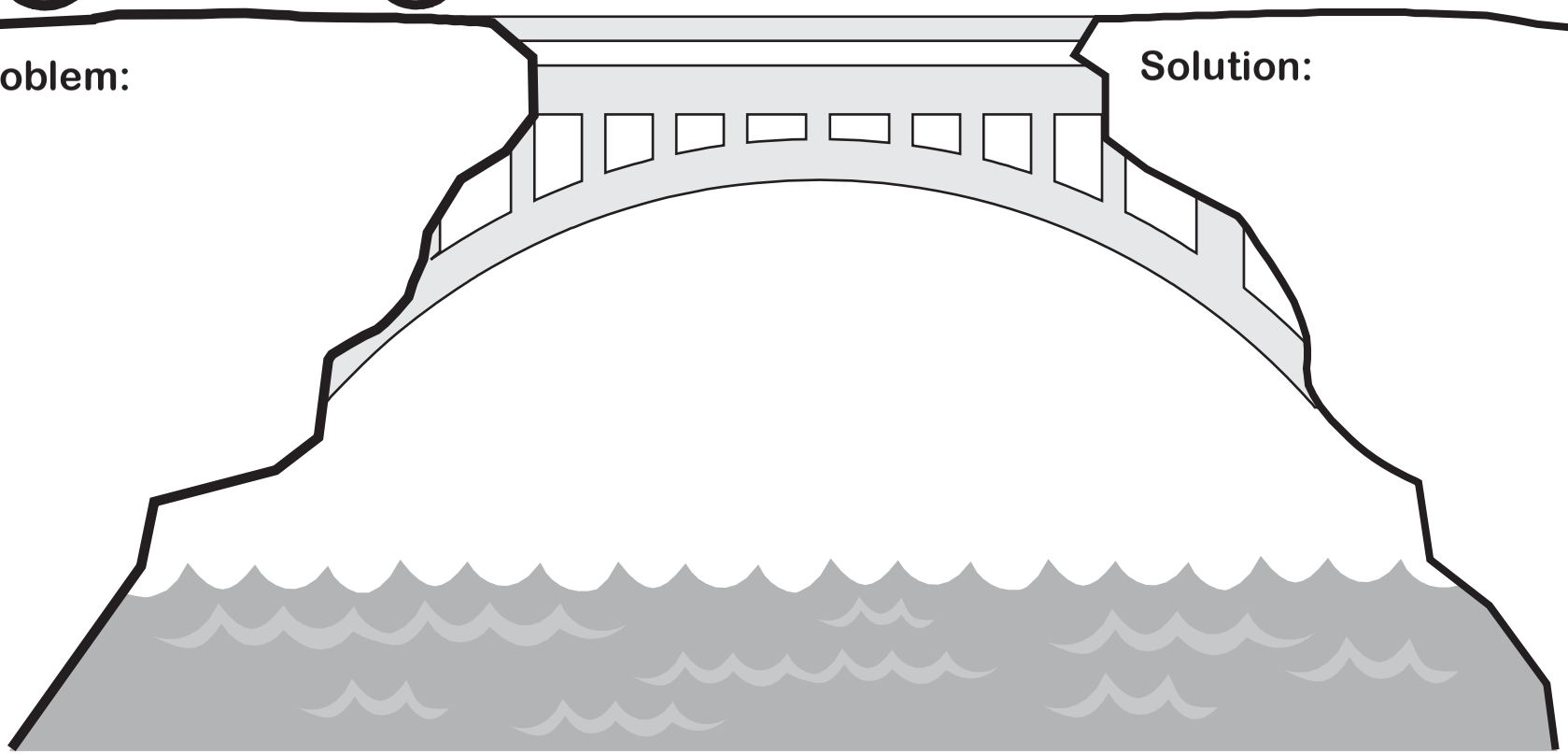
Problems and Solutions Graphic Organizer



Solution Signal Words:

Problem:

Solution:



Elapsed Time

LESSON 1

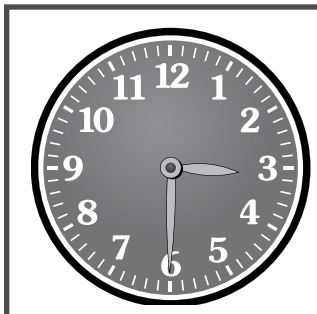
Math

Problems and Solutions

Understanding Elapsed Time

Paul is in third grade. His sister Janna is in seventh grade. At breakfast, Paul complains that his school day is longer than Janna's.

Paul gets dismissed at 3:30, but Janna's junior high school ends at 2:15.



Paul's Dismissal Time

Janna's Dismissal Time

Janna laughs and tells him to check his math. She says her school day is longer. Who is right?

Find Out

Elapsed time is the total time that passes from the beginning to the end of an event or activity.

Math Words

- elapsed time

A This is a math lesson. Would you expect problems and solutions to be presented differently in math lessons than in other kinds of lessons? Write one reason why or why not.

_____

_____

_____

B What problem should you focus on while reading this lesson?

O Paul and Janna disagree.
O Paul gets home later than Janna.
O Paul needs to figure out who has a longer day.
O Paul needs to figure out how to get to school on time.

Standards Addressed: English/Language Arts: 3.2.6
Science: 3.2.1 Math: 3.5.9

Elapsed time has a beginning and an ending

In order to find out who has the longer school day, Paul figures out the amount of elapsed time. **Elapsed time** is the total time that passes from the beginning to the end of an event or activity. To figure out the elapsed time, Paul needs to know the beginning and ending times for each of their school days.

Paul records the beginning and ending times:

Paul's Elementary School:

Beginning Time 9:30am
Ending Time 3:30pm

Janna's Junior High School:

Beginning Time 8:00am
Ending Time 2:15pm

C Use your **graphic organizer** to help you understand the problem and solution that you read about in this paragraph.

What word or words signal that you are reading about a problem? Write your answer on the **truck** in the **graphic organizer**. go!

Write the problem on the left side of the cliff on your **graphic organizer**. go!

What word or words signal a solution? Write your answer on the bridge. go!

Write the solution on the right side of the cliff. go!

Elapsed time is the total number of hours and minutes that have passed

First, Paul figures out the elapsed time for his school day. He draws two clocks, one for the beginning time and one for the ending time. He counts the number of hours between the beginning and the ending of his day.

From 9:30 to 10:30 is one hour. From 10:30 to 11:30 is one more hour. He counts all of the hours until he reaches the end of his day at 3:30. He counts six hours total.

Solve It!

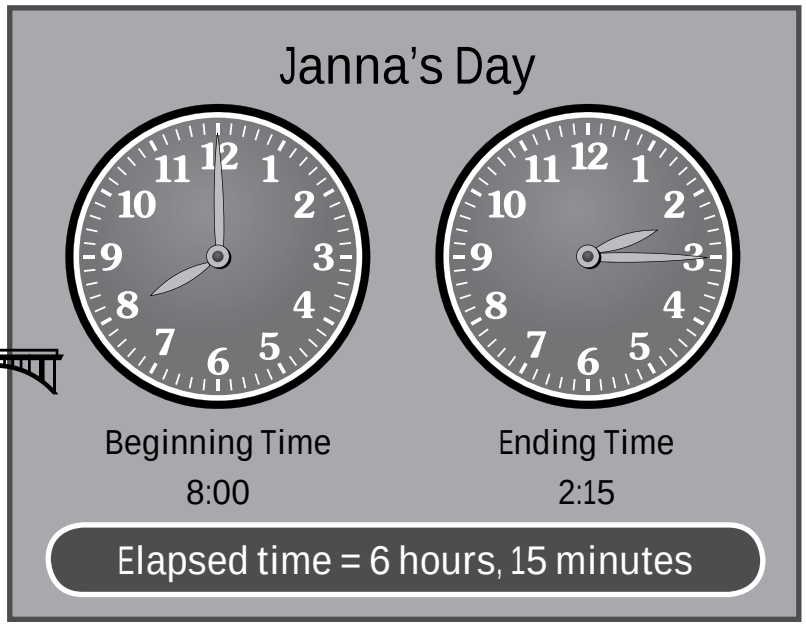
1. **Start at the beginning time.**
2. **Count the hours until the ending time.**
3. **If necessary, count the minutes until the ending time.**

D This solution has more than one step. What word signals that this solution has steps? Write this on the bridge too. go!

Write Paul's first step under your solution and number it with a 1. go!

Next Paul counts the hours in Janna's school day from the beginning time of 8:00 am to the end time of 2:15 pm. From 8:00 to 9:00 is one hour. From 9:00 to 10:00 is one more hour. He counts all the way until he reaches 2:00. He can't count from 2:00 to 3:00 because her school ends at 2:15, so he counts the minutes. From 2:00 to 2:15 is 15 minutes. He counts 6 hours and 15 minutes total.

Finally, Paul compares the time elapsed during his day to the time elapsed during Janna's. Who was in school for a longer time, Paul or Janna?



E This section tells you the last two steps in finding out who has the longer day. Number these steps 2 and 3 and write them on your **graphic organizer**. go!

Cleaning Up the Park

LESSON 2

Social Studies

Problems and Solutions

What a Mess!

One day, Julia was playing in the park. She found trash all over the ground. There were empty cans in the sandbox. She looked at the playground. There were food wrappers around the swing set. Gum was stuck to the monkey bars, and there were empty bottles and some broken glass near the slide. Julia wondered how the park had gotten so dirty. Then, she noticed that there wasn't a garbage can anywhere nearby.

Main Idea

Governments provide many important services to citizens.

Vocabulary

- government services
- recreation

A How does the title give you a clue that you will be reading about a problem and a solution?

_____

_____

_____

_____

_____

B This paragraph explains one big problem and lots of smaller problems. What is the big problem?

_____

_____

What are two of the smaller problems?

_____

_____

_____

Standards Addressed: English/Language Arts: 3.2.6
Social Studies: 3.2.3

That night, Julia figured out a plan to help the park. The first step of her plan was to clean it up. This would be easy. She just needed to gather some friends to work together. The second step of her plan involved putting a garbage can near the playground, so people would throw away their litter. In order to accomplish this step, Julia needed some help from her government.

C Write at least one word or phrase in this paragraph that gives you a clue that you are reading about a solution.

_____

Getting Help

Governments are created to help people like Julia. One important role of government is to provide services for its people. These services, also known as **government services**, include public schools, police and fire departments, and transportation such as buses. Governments also provide recreation for their communities. **Recreation** is any activity that is done for enjoyment. You may have heard of a parks and recreation department, which takes care of public parks and swimming pools. This is part of the government, too. The parks and recreation department makes sure that public areas are clean and safe for everyone to enjoy.

D This paragraph explains a lot of government services.

Choose one and write it here: _____

_____

What problem does this service solve? _____

_____

_____

After Julia and her friends cleaned up the park, Julia's mom helped her find information about her city's parks and recreation department on the Internet. She called them and told them about the mess in the park. She told them about her efforts to get it clean. She suggested that they put a trash can near the playground. The people at the parks and recreation department were happy to help Julia. They said they were glad to hear from a young person who was so interested in helping her community.

E Is this paragraph more about problems or solutions?

_____

How do you know?_____

_____

_____

_____

_____

Clean Again!

The next time Julia went to the park, there was a garbage can. The park looked great! There was no litter in the sandbox, near the swings, or at the picnic table. And the monkey bars were clean. People could throw away their trash in the garbage can. Julia's plan was a success!

F What word or phrase in this paragraph signals that a problem has been solved?

_____

Control Your Anger

LESSON 3

Health

PROBLEMS AND SOLUTIONS

A Look at this title. What problem do you think you will read about in the lesson? _____

_____

What solution do you think you will read about?

_____

_____

FOCUS

Stress can be dangerous, so it is important to control it.

VOCABULARY

- stress
- therapy writing

Have you ever been so angry that you just couldn't hold in your anger, and you yelled or hit something? Controlling anger can be hard. But being angry can cause stress. **Stress** is an unhealthy condition in which your body reacts to things that upset you. Stress can make you lose your concentration and make you more likely to have accidents. Stress can raise your blood pressure or wear down your body's protection against illness. You can get sick.

B What is one problem that causes stress?

_____

Stress is a problem. But it also leads to other problems. Write two of them below.

_____

_____

_____

Standards Addressed: English/Language Arts: 3.2.6 Health: 3.1.4, 3.5.7

What Causes Stress?

There are many different reasons for anger and stress. Doing poorly on a test at school, moving to a new house, losing something, feeling left out, being made fun of, or even the death of a friend or family member can leave you feeling angry and under stress.

Signs of Stress

- headache
- lack of motivation
- nail biting
- foot tapping
- yelling
- crying
- having trouble sleeping
- getting colds or the flu easily

C Why might it be helpful to know the signs of stress? _____

_____

_____

_____

_____

Recognizing and Relieving Stress

Stress can build up inside you without you knowing it. It can cause very powerful feelings. A common first reaction to stress is "fight or flight," which means to either prepare for a fight or run away. Neither of these is the best way to deal with anger and stress.

When you feel stressed or angry, the best thing to do is to stop, count to ten, take a deep breath, or walk away until you are calm. Once you are calm, the best way to deal with these feelings is to talk about them. Find a parent, friend, or teacher you can talk to. If you have trouble talking about what is making you angry, it may help to write about it. This is called **therapy writing**. Keeping a journal of your thoughts may help you sort through your problems and figure out how to deal with them in a positive way.

D Does this paragraph offer any solutions to the problem of stress?

Why or why not? _____

_____

_____

E Write one possible solution for dealing with stress.

_____

_____

How does the author signal that it is a solution?

_____

_____

_____

_____

Therapy writing helps relieve stress.

Controlling stress makes life more fun.

Your body will likely react to stress in the same or similar ways each time. You should learn to recognize those reactions. Most anger and stress can be controlled. When you figure out what is causing the anger and do something about it, you can relieve a lot of stress.

F How is knowing your body's reaction to stress an important solution to the problems stress causes? _____

_____

_____

_____

_____

_____

Predicting

What is a prediction?

A **prediction** is a guess about what will happen next in a story or lesson. A **prediction** is based on what you already know. Before good readers read, they use what they already know to **predict** what they might learn. As good readers read, they use what they already know to predict what might come next.

Why should you make predictions?

Predictions make reading interesting. They also help you think about what you are reading.

When should you make predictions?

Make **predictions** whenever you read.

- Before you read, **predict** what you might learn based on what you know and clues from the lesson (headings, vocabulary, etc.).
- As you read, check to see if your **predictions** were right. Make new **predictions** based on what you read. Always ask yourself what you think will come next.
- After you read, think about the **predictions** you made. How did they help you understand the lesson? How could you make better **predictions** next time?

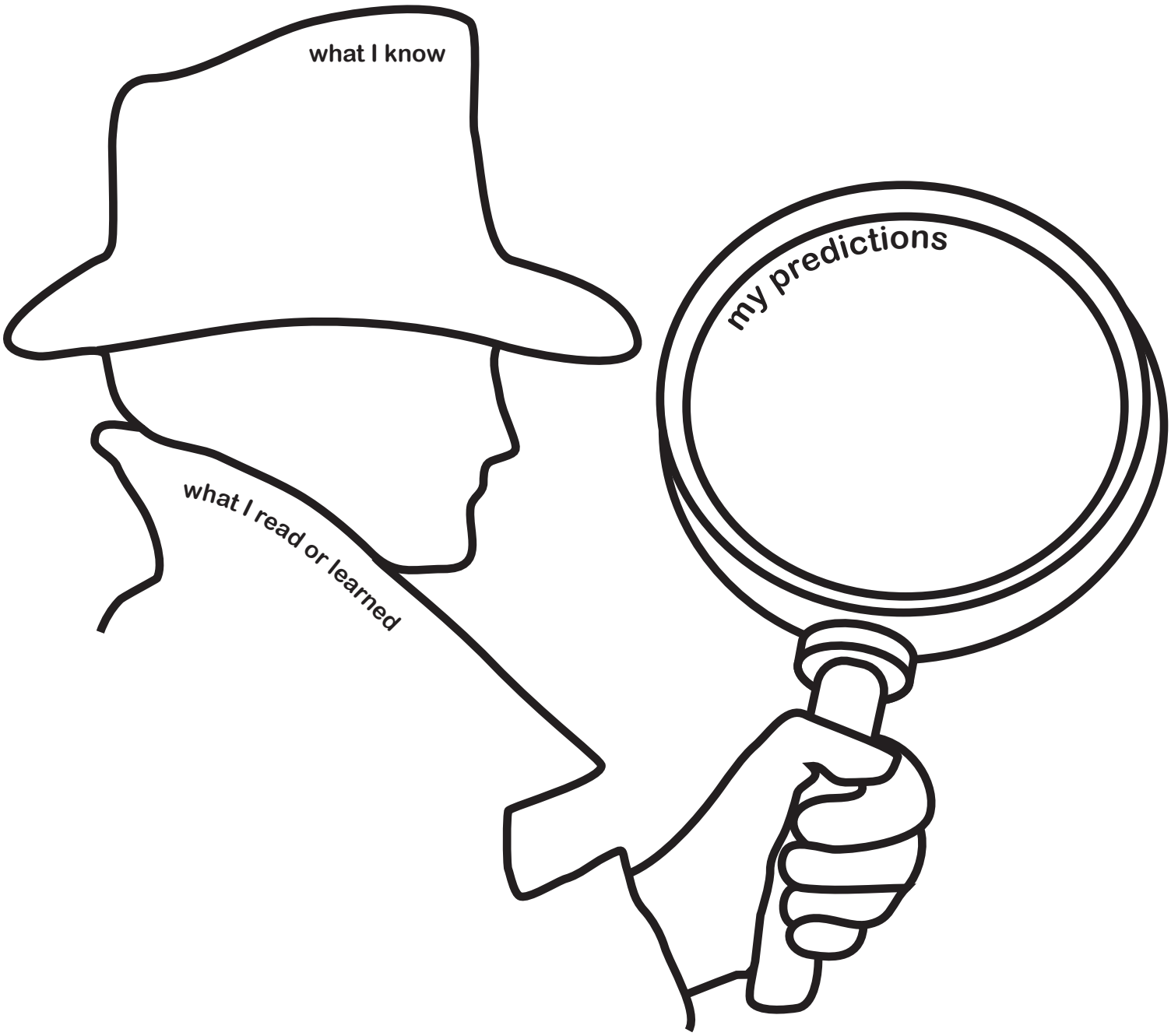
How do you make predictions?

When you read, use what you already know, clues from the lesson, and your thinking skills to predict what a lesson will be about or what will come next.

- Brainstorm what you already know about the topic.
- Read and take notes. Look at anything that looks important or interesting, including:
  - graphics
  - titles
  - headings
  - vocabulary words
  - captions
  - main ideas
- Use what you know and what you notice to make **predictions**.

Name _____

Predicting Graphic Organizer



Water Wheels Make Water Work

LESSON 1

Science

Predicting

Before you begin reading, ask yourself: what on this page can help me predict what I will read about in this lesson? List two ideas:

_____

_____

_____

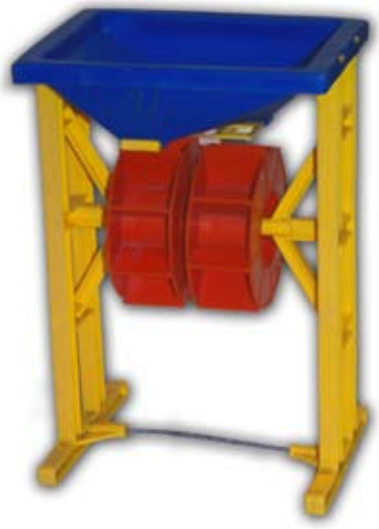
Discover

Water wheels are tools that make work easier

Vocabulary

- horizontal water wheel
- vertical water wheel
- water wheel

You are traveling down a river in a small boat. Up ahead, you see a giant wheel turning around and around. It looks like a giant bathtub toy. What is this wheel for? Why did someone build it?



Water wheels make fun toys, but they are also a good source of power.

K-1

Standards Addressed: English/Language Arts: 3.1.6, 3.2.2, 3.2.3, 3.2.4, 3.2.6
Social Studies: 3.3.7 Science: 3.3.8

What is a Water Wheel?

B This heading asks you a question. Before you read the paragraph, ask yourself: "What do I already know about water wheels?" Write what you know about water wheels in the "What I Know" space of your **graphic organizer**. go!

A **water wheel** is a tool that uses water to do work. As water pushes against the blades or spokes of a water wheel, the wheel turns. The energy from the moving wheel can then be used to do work.

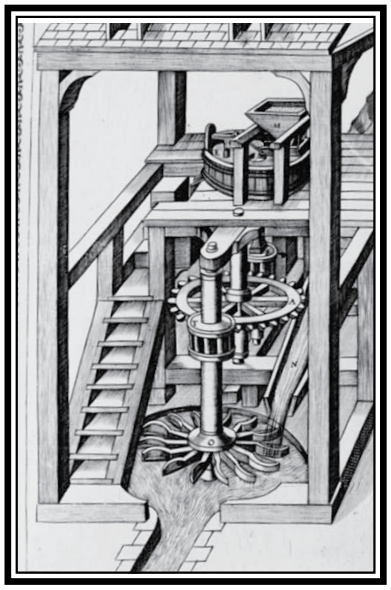
Scientists believe humans have been using water wheels for nearly 2,000 years. Early people used water to turn stones in order to grind grain. The water made it easier to grind the grain, so people did not have to work as hard. Five hundred years ago, water wheels provided much of the energy used for grinding grain, mining minerals, powering boats, and even chopping wood. People learned to build different kinds of water wheels over time. These kinds of wheels are based on the same scientific idea, but they work in different ways.

This photo shows an undershot water wheel used to grind grain.

C Now that you have read the paragraph, write down some of your observations in the "What I Read or Learned" space of your **graphic organizer**. go!

Using what you know and have read, predict what you will learn about in the rest of the lesson. Write this in the "My Predictions" space of your **graphic organizer**. go!

Horizontal Water Wheels



One kind of water wheel is a **horizontal water wheel**. Horizontal water wheels were the first kind of water wheel to be used. They lay flat in the water. They are easy to make, but they do not work very well. You can see a drawing of a horizontal water wheel here.

Vertical Water Wheels

Because the horizontal water wheels were not very effective, people developed the **vertical water wheel**. There are different kinds of vertical water wheels. A water wheel with one side in the water and the other side in the air is known as an undershot water wheel. As running water moves under the wheel, it turns. Undershot wheels can be effective in providing energy. But they are not the most effective kind of water wheel.

D Some sentences have clues that can lead you to make predictions. Sentences that start with words like *because*, *but*, *however*, and *thus* give clues that you can make a prediction. When you read "Because the … wheels were not effective…" you could predict which <u>two</u> of the following?

O people made lots of them
O people stopped using them
O people kept using them
O people invented better ones

E This is another sentence that may lead you to predict what will follow in the lesson. What do you predict the lesson will explain next? _____

_____

Use what you know to predict what would make the water wheel more effective. _____

_____

_____

Pipes are often used to bring water from a river or stream to the top of an overshot wheel.

This is because they depend on the speed of the current. If a river's current is not steady, the water wheel will not always provide the same amount of energy. There will not be much energy if the river is not moving very fast.

A water wheel in which water reaches the wheel from above is known as an overshot water wheel. As it falls down over the wheel, the wheel turns. Overshot wheels are the most effective kind of water wheel, because they do not depend as much on the flow of the current. Overshot wheels do not even need to be built on a stream or river. Pipes can be used to bring water from the river to the top of the water wheel.

F Check your prediction. What makes the overshot water wheel the most effective water wheel? _____

_____

_____

Does this match your prediction? Circle: yes no

How Much Can It Hold?

LESSON 2

Math

PREDICTING

A The title of this lesson is a question. How does it help you predict what the lesson will be about?

_____

_____

_____

Nick's classroom is getting ready for a holiday party. Nick and his friend Sherry are making punch. Nick's mother lent them her punch bowl, but they don't know how much punch it can hold.

B Predict what Nick and Sherry will do next.

_____

_____

How did you make your prediction? _____

_____

_____

Find Out

Capacity is the amount an object can hold.

Math Words

- capacity
- cup (c)
- pint (pt)
- quart (qt)
- gallon (g)

Each of these objects has a different capacity.

L-1

Standards Addressed: English/Language Arts: 3.1.6, 3.2.2, 3.2.3, 3.2.4 Science: 3.1.4, 3.2.3, 3.5.1, 3.5.3
Math: 3.5.6, 3.5.12, 3.6.1, 3.6.6

C When you read unknown words, you can predict what they mean by looking at the other words in the sentence. Write your own definition of the word *capacity* before reading any further.

_____

_____

What word or words helped you predict your definition? _____

_____

Nick and Sherry need a way to measure the capacity of the punch bowl. The **capacity** of a container is the amount it can hold. In the United States, we usually use customary units to measure capacity. Customary units of capacity include cups, pints, quarts, and gallons.

D *Capacity* is defined in this sentence. Write the definition here:

_____

_____

If the lesson did not include a definition of *capacity*, how could you find out if your predicted definition was correct?

_____

_____

_____

How much do you think each container holds?

Ask Yourself

1. **What am I going to measure?**
2. **What should I use to measure it?**
3. **What size unit of measure would I use? Small (a cup)?**

E Does Question 1 help you predict what you will read about in the lesson? Write one reason why or why not.

_____

_____

_____

_____

The chart below shows how to convert customary units. Which unit do you think Nick and Sherry should use to measure the capacity of the punch bowl?

Customary Unit of Capacity		
Unit	Abbreviation	Conversion
cup	c	
pint	pt	2 cups
quart	qt	2 pints
gallon	gal	4 quarts

F Math lessons may ask you questions about problems. This is another way you can predict when you are reading. Write your answer to this question here:

_____

Read on to find out what Nick and Sherry use to measure.

Try It!

1. **2 qt = _____ pt**
2. **1 gal = _____ qt**
3. **2 pt = _____ cups**
4. **1 qt = _____ cups**
5. **2 gal = _____ qt**

G Sometimes graphics in your textbook help you predict. How does the "Solve It" strategy help you predict?

_____

_____

Solve It!

1. **What do I know?**
2. **What do I need to know?**
3. **What operations should I use?**

Nick and Sherry find a pint bottle. They fill it with water and pour the water into the punch bowl, marking a tally mark on a piece of paper for every pint they pour into the bowl.

When the bowl is full of water, Nick and Sherry count the tally marks.

The punch bowl holds 16 pints. How many cups does it hold? How many quarts? How many gallons?

Planting Zones

LESSON 3

Social Studies

Sadira's family just moved to a new community in northern Indiana. Her grandpa wants to plant trees around their new house. But he doesn't know what trees would grow well there. Sadira gives him a map. It shows temperature regions where different plants grow best.

PREDICTING

Main Idea

Temperature region maps help us know which plants and animals live in an area.

Vocabulary

- region

A What did you look at first to help you predict what you would be reading about? _____

_____

_____

What is one other part of the lesson you could look at to predict what it is about? _____

_____

_____

B Predict the type of graphics that would be helpful in this lesson.

_____

_____

_____

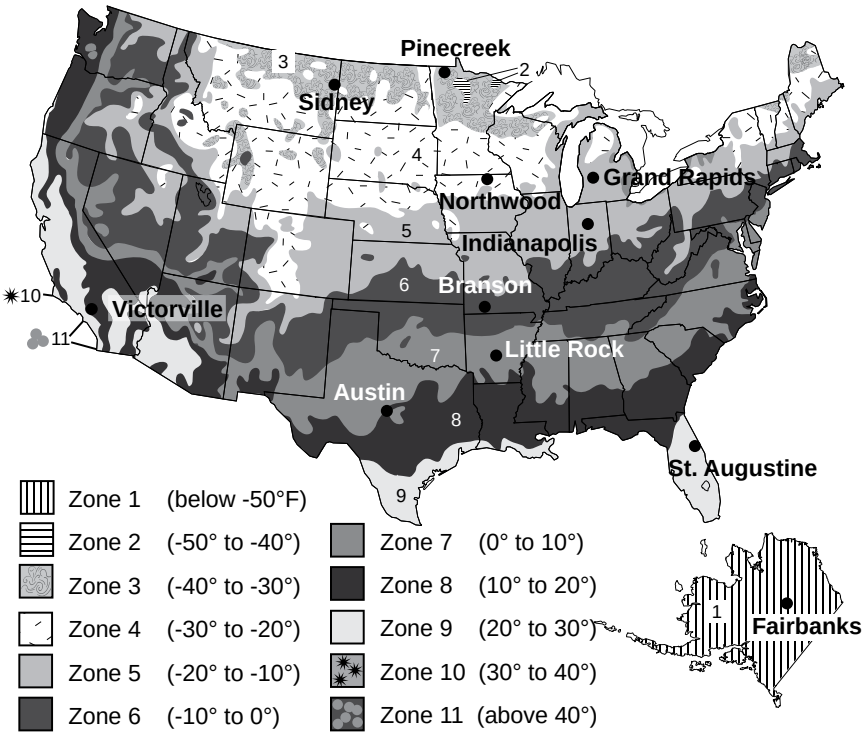
_____

_____

Standards Addressed: English/Language Arts: 3.2.2, 3.2.3, 3.2.4
Social Studies: 3.3.1, 3.3.3, 3.3.4, 3.3.5 Science: 3.4.4

Your community is on the map. What zone are you in?

RANGE OF AVERAGE ANNUAL MINIMUM TEMPERATURES FOR EACH ZONE



C Using the map, predict which city might have plants similar to those found in Indianapolis.

_____

How is a regional plant map made?

D Predict something you will learn from this section.

_____

_____

The United States Department of Agriculture (USDA) charted the lowest temperatures for different parts of the United States over many years. Then they grouped places with similar low temperatures into regions. A **region** is made up of areas that have certain features in common.

The regions on the USDA map are called zones. In Zone 10, the average coldest temperatures range from 30° to 40°. In Zone 9, the average coldest temperatures range from 20° to 30°F, and in Zone 8 from 10° to 20° F. Each zone is marked by a different pattern on the map.

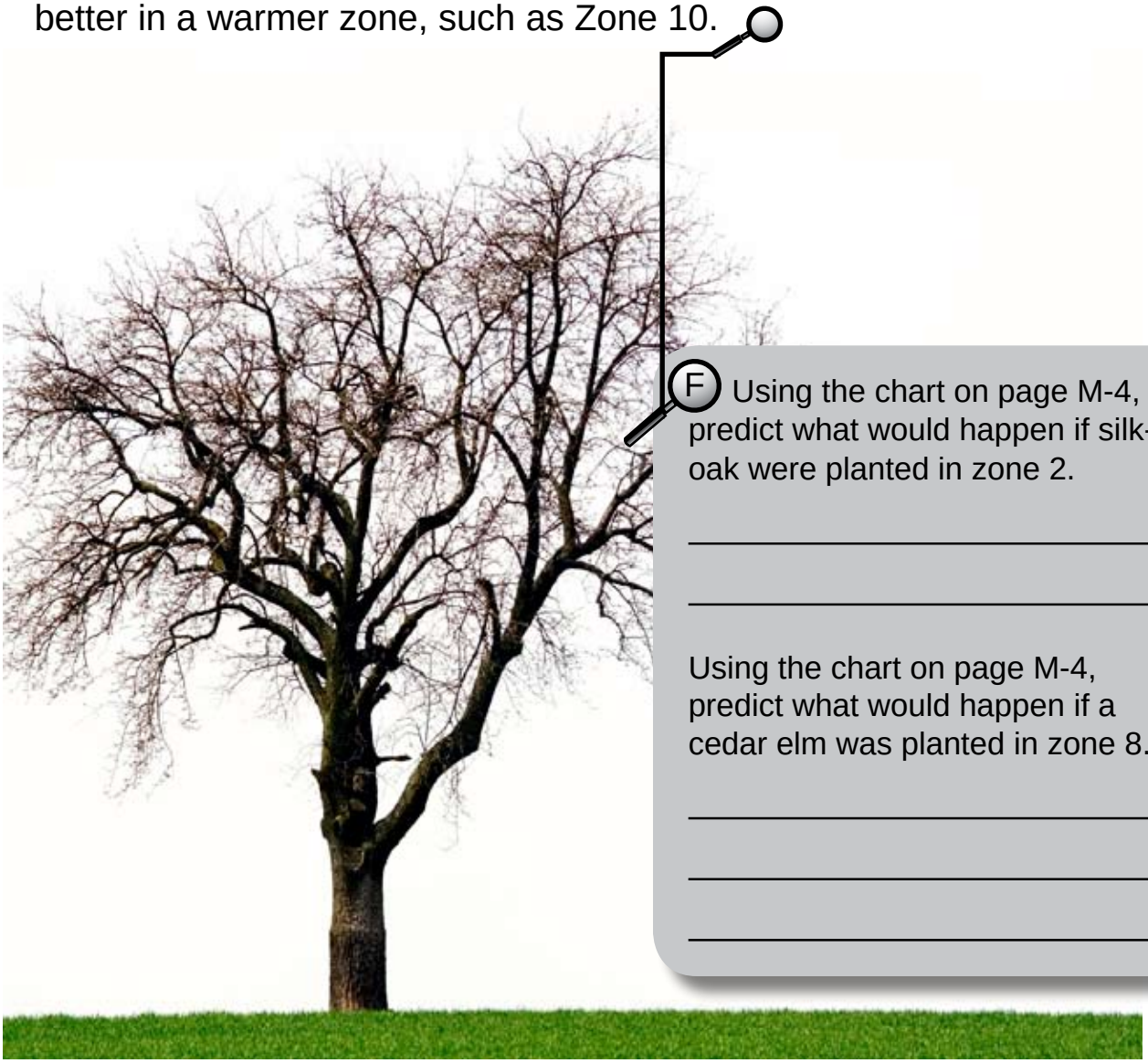
E Write something you learned that you did not predict you would learn from this section. _____

_____

Using a Zone Map

First, find your zone. Then look to see which plants grow well there. It is important to choose plants that will grow well where you live.

Some plants can grow well in zones where the temperatures drop below freezing. Zone 1 can get very cold. It has below-freezing temperatures. Plants must be able to survive harsh winters to grow there. Other plants won't survive well in areas where the ground freezes in the winter. These plants will do better in a warmer zone, such as Zone 10.



F Using the chart on page M-4, predict what would happen if silk-oak were planted in zone 2.

_____

_____

Using the chart on page M-4, predict what would happen if a cedar elm was planted in zone 8.

_____

_____

_____

Trees	Best Growing Zones
Quaking Aspen	1-7
Paper Birch, Sugar Maple	2-7
Red Maple	3-9
American Beech, Tulip Poplar (Yellow Poplar)	4-9
Flowering Dogwood	5-9
Cedar Elm	6-9
California White Oak	7-10
Carolina Laurel Cherry	8-10
Silk-oak	9-10
Royal Palm, Rubber Tree	10

Look at the chart to see which trees grow best in different zones.

The plants in a zone affect the types of animals that can live there. You can predict what kinds of animals you will find in a region by the plants that grow there. For example, beavers, dogwood borers, red foxes, and northern bobwhites use the dogwood tree as a source of food. The woodchuck, bald-faced hornet, and American robin use dogwood trees to make their homes. You would expect to find these animals living in zones where the dogwood grows best.

Other animals depend on different trees. Redpolls and shrews like to eat paper birch seeds and porcupines like to eat the inner bark. Yellow-bellied sapsuckers eat the sap of the paper birch. Nuthatches and swallows like to nest in the paper birch. Which zones do you think these animals call home?

G Write your prediction to this question here: _____

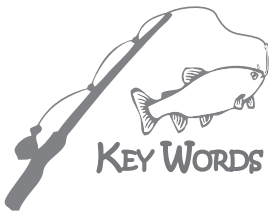
_____

What observations did you use to make your prediction? _____

_____

_____

Key Words



What are key words?

When good readers read, they pay attention to each word. They figure out which words are most important. **Key words** are words you need to learn in order to understand your lesson. They might be vocabulary words that are printed in **bold** type in your lesson. They might be words that you need to know in order to understand vocabulary words or other important ideas in a lesson. You need to know these words when you answer questions about the lesson or take a test.

Why should you learn key words?

Learning **key words** will help you understand the big ideas in a lesson. It will help you understand important people, places, and ideas.

When should you look for key words?

Whenever you read, you should look for **key words**.

- Before you read, look to see if vocabulary words are listed on the first page of the lesson. Skim the lesson's paragraphs to see if vocabulary words are printed in bold type, highlighted, or defined in boxes on the sides of pages. These are all **key words.**
- Look for words that are new to you.
- Look for words that have been pronounced for you in your textbook.

What helps you understand key words?

There are several strategies that can help you understand the meaning of key words.

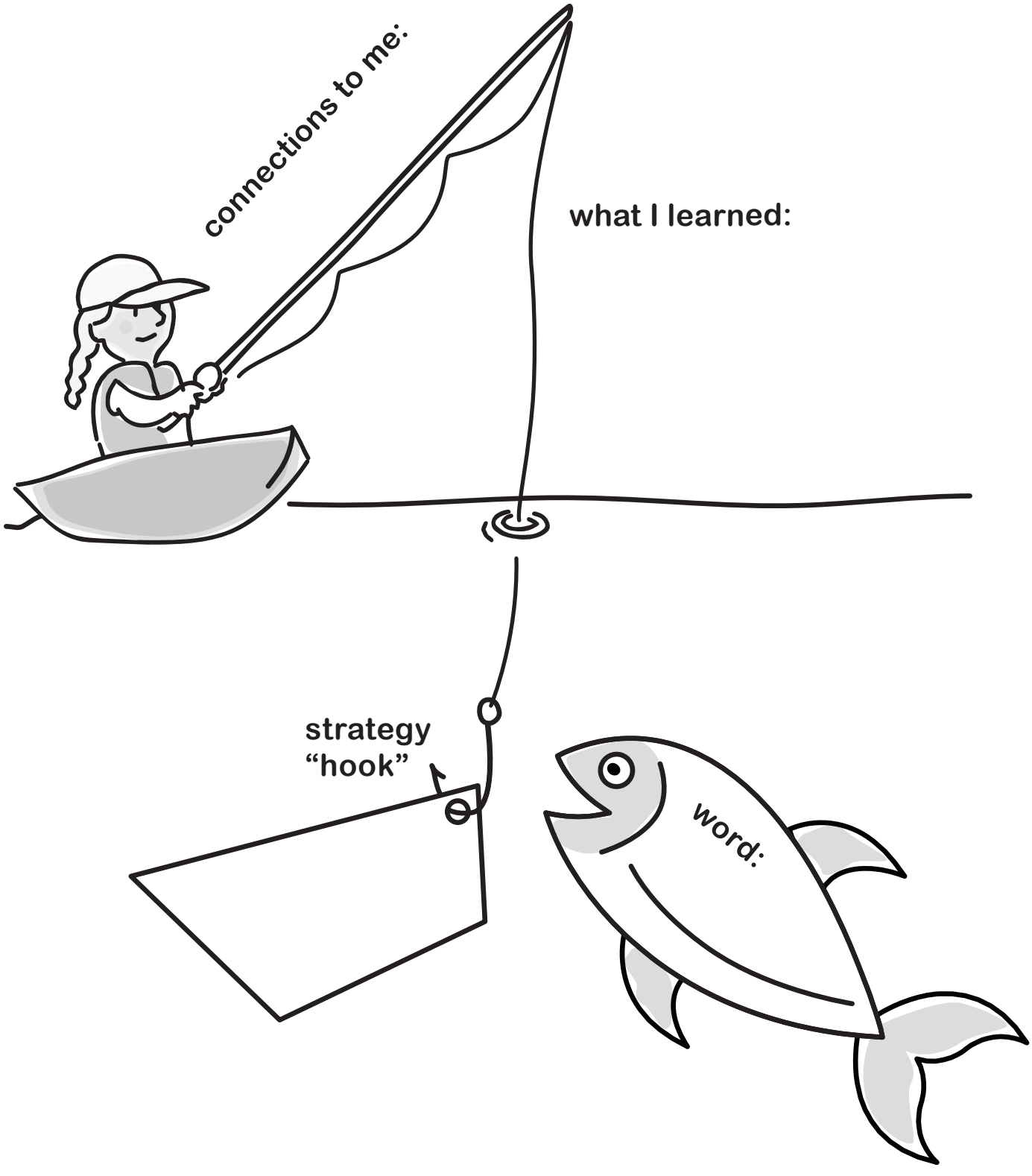
- Look up the words in a glossary or dictionary.
- Use context clues from the sentence or paragraph.
- Break the words into meaningful word parts.
- Ask for help.

How can you remember what key words mean?

- Draw pictures to illustrate the words.
- Use the words in sentences that connect them to you.
- Review the meaning of the words and check your understanding.

Name _____

Key Words Graphic Organizer



Animal Armor

LESSON 1

Science

Animals have different skin coverings. These coverings, or adaptations, serve many different purposes. An **adaptation** is any feature that helps an animal adjust to its surroundings**.**

Key Words

Discover

Animals have different skin coverings. These coverings serve many purposes

Vocabulary

- adaptation
- camouflage

This paragraph includes one vocabulary word. You will use your **graphic organizer** to study it carefully. First, find the bolded word and write it on the fish. This is the word you want to "hook" or understand. go!

Now look at the paragraph. Choose the strategy below that makes the most sense and write it in the "hook."

ⓐ **Look in the dictonary/glossary.**
ⓑ **Use clues or information from the paragraph.**
ⓒ **Break the word into parts that you already know.** go!

Now write what you learned or figured out on the fishing line. You want to be able to remember what this word means, so **connect yourself**. Write a sentence about your own life using the word *adaptation*. go!

_____

_____

_____

_____

Standards Addressed: English/Language Arts: 3.1.4, 3.1.6, 3.1.7, 3.2.3, 3.4.4
Science: 3.4.1, 3.4.3

Feather Warmers

What keeps you warm in the winter and cool in the summer? If you are a bird, the answer is feathers. In the winter, birds fluff their feathers to keep their bodies warm. In summer, birds molt, or lose some of their feathers, to keep cool. Feathers also keep the birds dry. Without feathers, birds could not fly away from predators.

These ducklings are learning to swim. They already have water-proof feathers like their mother.

B *Molt* is not a bolded vocabulary word, but it is a key word in this paragraph. What strategy would you use to "hook" this word?

_____

_____

Why? _____

_____

_____

Scales all Around

What is one way reptiles like lizards, snakes, turtles, and crocodiles are the same? They all have scales that cover their bodies. Scales can have different colors and patterns. But all scales feel dry. Scales also protect reptiles from their predators. As a reptile grows, its scales grow larger. Reptiles shed their old scales when new scales grow.

Slippery Little Critters

Frogs and toads have wet skin and no scales to protect them. Their skin is very slippery, so they are hard to hold on to. They can slip away from predators. Some frogs and toads have poison in their skin that can hurt predators. If attacked, some frogs and toads change their skin to bright colors to confuse the predators. This gives the frog or toad time to get away.

Hair Makes a Difference

Many animals, like dogs, bears, and otters, have fur or hair that covers their skin. Fur traps the air to help keep the body warm. Otters spend most of their time in the water, but their fur still keeps them warm.

An otter's thick fur helps protect its skin from the water.

Some animals' fur changes color as the seasons change. The snowshoe hare sheds, or molts, its thick white winter fur when it gets warm. The new summer fur is brown. Some animals have special kinds of hairs. A dog's whiskers are thick hairs that are sensitive to touch. Whiskers help a dog find its way in the dark.

C How does this paragraph add to or change your understanding of the word *molt*? _____

_____

_____

Colorful Armor

Sometimes color is the armor that hides animals from their predators. This kind of protection is known as **camouflage**. Penguins' black backs look like the dark ocean, so it is hard for the seals to see them. The brown fur of the lion helps to hide it in the tall brown grass. Green frogs and geckos in the rainforest are hard to see among the green leaves and vines. The stripes of the tiger help it hide in the shadows.

D Fill out a new **graphic organizer** to help you understand the bolded vocabulary word in this paragraph. GO!

How do these animals use camouflage?

Congruent and Similar Shapes

LESSON 2

Math

Congruent Shapes

Simon wants to email his robot drawing to his friend in Texas. He wants the computer picture to exactly match his pencil drawing, so he has to make all of the shapes **congruent**, or matching in shape and size.

KEY WORDS

Find Out

Congruent shapes match in shape and size. Similar shapes match in shape but not size.

Math Words

- congruent

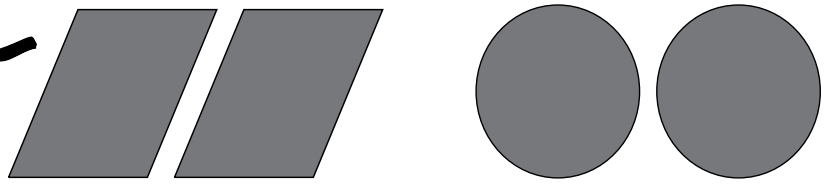
A Write at least two ways you know that *congruent* is an important word in this lesson.

_____

_____

What is one strategy you could use to "hook" this word? _____

_____



These shapes are congruent.

B How does this illustration help you understand what *congruent* means?

_____

_____

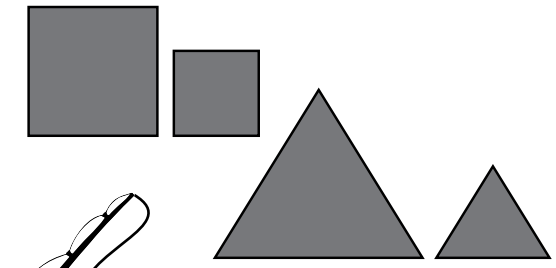
Standards Addressed: English/Language Arts: 3.1.1, 3.1.4, 3.1.8, 3.2.3
Science: 3.2.6 Math: 3.4.5, 3.4.10, 3.5.1

Similar Shapes

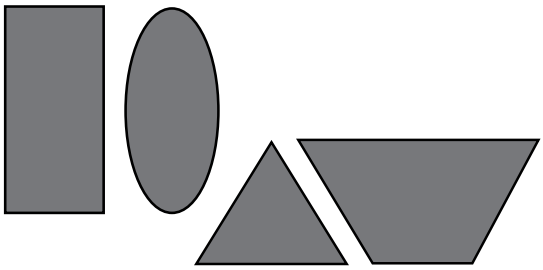
Simon uses a ruler to measure the sizes of the shapes in his drawing. He needs exact measurements to make sure that the shapes are congruent and not just similar. **Similar shapes** match shape, but not size.

Ask Yourself

1. Do the shapes look the same?
2. Do they match in shape?
3. Do they match in size?



These shapes are similar.



These shapes are *not* congruent and *not* similar. They do not match in size or shape.

D Check your understanding! Draw two shapes that are similar that were *not* used in this illustration.

C The word *measurement* is made up of two parts, the word *measure*, and the suffix *ment*. **Use a dictionary** to find out what *ment* means and write the definition below.

_____

_____

Now use what you learned about *ment* to write a definition for *measurement*.

_____

_____

_____

Simon enters his measurements into the computer program, and the computer makes congruent shapes. Now Simon can include the picture in his e-mail to his friend.

Drawing Similar and Congruent Shapes

Congruent is the only bolded vocabulary word in this lesson, but there are other key words in the lesson too. Choose one important word and write it below.

_____

What is one strategy you could use to understand this word?

_____

_____

_____

_____

You don't need a computer program to make similar and congruent shapes. To make similar shapes, draw or trace around a figure. Then draw another figure that has the same shape. You don't need to measure since they can be different sizes.

E

F

Does this illustration help you understand congruent and similar shapes? Write one reason why or why not.

_____

_____

_____

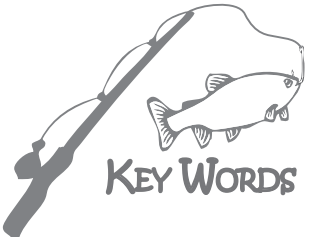
_____

Household Hazards

LESSON 3

Health

Identify poisons in your home.



Poisons are everywhere! There are probably poisons in your home. Cleaners, bleach, dish soap, paints, and medicines can all cause emergencies. Do you know what to do if a person is sick from a poison? Learning to provide first aid for a victim suffering from a poisoning or chemical burn is important. Always call the poison control center for help if a friend or family member shows signs of poisoning.

FOCUS

It is important to know about poisons in order to avoid and treat poisoning.

A What is the most important key word in this paragraph? _____

How do you know? _____

_____

_____

VOCABULARY

- ingested
- inhalation
- toxic

Household Hazards

- drain cleaners
- insect sprays
- rust removers
- perfumes
- batteries
- medicine
- toilet bowl cleaners
- windshield washer fluids
- furniture polish
- mothballs
- paint
- some plants

Standards Addressed: English/Language Arts: 3.1.4, 3.1.6, 3.1.7, 3.1.8, 3.2.3, 3.4.4
Science: 3.4.8 Health: 3.3.6

B *Precaution* is made up of two word parts: a prefix and a root word. What are they? Prefix: _____

Root Word: _____

Use the "hook" of **breaking the word apart** to write a definition of *precaution.*

_____

_____

_____

Identify the Victim's Problem

Almost all household cleaners and products come with safety precautions that explain how they can be toxic. Something that is **toxic** can cause injury or death. If you believe someone has been poisoned, try to find the product and determine how much of it was **ingested**, or taken into the body.

C The paragraph provides clues about what *ingested* means. What is one other way you could increase your understanding of this word?

_____

_____

_____

Identify how the product is toxic

Poisons can get into the body in many ways. Some products are so toxic that just breathing them in can cause injury or death. The labels on these products will usually say "respiratory problems will result from **inhalation**." Other products can hurt you just by touching your skin. These products may cause mild skin irritation like a rash or a more dangerous chemical burn. Other products are only dangerous if ingested. Something that is **ingested** enters the body through the mouth.

POISON

Help

1-800-222-1222

Choose a key word on this page and connect it to yourself by using it to **write a sentence about yourself**.

_____

_____

_____

_____

What to do in an emergency if you think poison is involved:

1. Call the Poison Control Center at 1-800-222-1222.

2. Tell the operator the name of the product that caused the poisoning. Have the product container nearby if possible when you call.

3. Tell the emergency operator if the product was inhaled, ingested, or had contact with skin or eyes.

4. Tell the operator what symptoms you are noticing in the poisoned person.

5. Follow the operator's instructions.

Prevent Poisonings!

1. Use cleaning products only as the labels state. Be careful: mixing household cleaning products together can create dangerous gases.

2. Use child-safe medicine caps.

3. Keep all toxic products out of the reach of children or in locked cabinets.

4. Keep products in their original containers so you have emergency information about them if needed.

5. Wear masks, goggles, and gloves when using cleaners and toxic products.

E Choose any word from this lesson and break it into word parts. Use a dictionary to write a definition for each part.

_____

_____

_____

_____

_____

_____

_____

Lesson Glossary

adaptation: A feature that helps an animal adjust to its surroundings.

agriculture: Activities related to farming.

allegiance: ***1*** Strong feelings of loyalty; ***2*** the loyalty owed by a citizen to his country or government.

amplifier: A device that makes sounds louder, especially one used to increase the sound level of musical instruments.

camouflage: ***1*** Cover (especially color) used to blend into the environment to avoid being seen by predators or prey; ***2*** to give a false appearance in order to conceal or disguise.

cancer: A very harmful growth in the body that tends to spread and destroy the healthy tissues and organs of the body.

capacity: ***1*** The amount a container can hold; ***2*** the ability to learn or do.

castings: The mineral rich droppings that worms leave behind.

compost: A mixture of decayed plants and other organic matter.

congruent: Matching in shape and size.

convert: ***1*** To change units of one measuring or calculating system into units of another; ***2*** to cause to change from one belief to another.

customary units: Units of measurement that include cups, pints, quarts, and gallons.

elapsed time: The total time that passes from the beginning to the ending of an event or activity.

excretion: The act of eliminating waste from the blood, body tissues, or organs.

fight-or-flight: The body's reaction to a stressful situation like increased heart rate.

follicle: A small gland involved in secretion or excretion.

government services: Services provided to the public, such as public schools, police and fire departments, and transportation such as buses.

healthful choices: Choices that are good for one's physical and/or mental health.

horizontal water wheel: A water wheel that lays flat in the water.

household: The people who live together in a single home.

immune system: The body's system for recognizing organisms that are not part of itself.

indivisible: Not capable of being divided.

informative: Providing useful information.

ingestion: To take into the body by mouth.

inhalation: Intake of air through the nose or mouth into the lungs.

justice: ***1*** Fairness; ***2*** trial and judgement by process of law.

liberty: ***1*** Freedom; ***2*** right or power to do as one pleases.

Lesson Glossary

loyal: Remaining faithful to a country, person, ruler, government, or ideal.

media: Communication through television, movies, magazines, advertisements, newspapers, and/or radio.

molt: To lose feathers, fur, hair, or skin.

non-verbal communication: Communicating without speaking by using gestures or body language.

observation: A remark or comment about something that has been noticed.

oil glands: Small organs in the skin that secrete oil.

operator: Someone who operates machinery, an instrument, or other equipment.

ore: A naturally occurring mineral from which certain metals can be extracted.

organ: ***1*** Any body part that is fitted to do certain things in life; ***2*** a musical instrument that has pipes of different lengths and often several sets of keys.

organic: ***1*** Of, having to do with, or gotten from plants or animals; ***2*** grown by using decaying plant and animal matter instead of artificial fertilizers.

original: ***1*** Something that existed first; ***2*** not copied or imitated.

pledge: ***1*** A formal promise; ***2*** something given to show favor or love.

pores: Very small openings in the skin that sweat comes through.

preference: ***1*** A person's choice of one thing over another; ***2*** the act or attitude of liking better.

quarried: Removed from the ground.

recreation: Any activity that is done for enjoyment.

region: ***1*** An area that has certain features in common; ***2*** any large part of the Earth's surface; ***3*** a part of the body.

republic: A government in which the lawmakers and leaders are chosen by votes.

result: Something that happens because of another action or event.

secretion: The process of releasing a substance from the blood or cells of the body.

similar: Shapes that match in shape, but not in size.

skyscraper: An extremely tall modern building.

Skywalker: A worker who walks across a building's steel beams to get to different parts of the building.

sound waves: Energy waves that you can hear.

Stone Belt: The area in Indiana where limestone is quarried, or removed from the ground.

stress: ***1*** An unhealthy condition in which your body responds to things that upset you; ***2*** pressure or force; ***3*** to emphasize.

Lesson Glossary

therapy writing: Keeping a journal of thoughts and problems in order to figure out how to deal with them in a positive way.

toxic: Capable of causing injury or death.

unhealthful choices: Choices that have a bad effect on one's health.

vertical water wheel: A water wheel that stands upright in the water.

vibrate: To move back and forth quickly.

victim: Somebody who is hurt or killed by someone or something.

water wheel: A tool that uses water to make power.

zone: ***1*** An area with certain types of organisms determined mainly by the environment; ***2*** area or district in a city or town under special restrictions as to building.

Instructional Glossary

bold/bolded type: Thick, dark type used to indicate important information. In ITRI lessons, bold type is used to indicate vocabulary words.

caption: Written information that appears near a graphic. Captions may summarize or add to the information provided in the printed text, or they may describe the graphic.

chart: A graphic that organizes and displays information, often to show how different objects or groups are related. A chart is a useful tool for comparing and contrasting people, objects, and ideas.

context: The words, phrases, or passages that come before and after a particular word or passage and help to explain its full meaning.

definition: The meaning of a word.

description: A statement that provides details about a person, object, or event.

diagram: A graphic that displays information visually.

glossary: A small dictionary included within a book which defines important terms used in the text.

graphic organizer: A picture that shows the relationship between ideas.

heading: A line of text above a paragraph or section. A heading provides a title for the paragraph or section that follows, and often indicates its main idea. Headings help readers understand how a lesson is organized.

illustration (graphic): Usually a picture or other visual information included in a text. An illustration may add information or clarity to a written text, or it may merely decorate it.

index: An alphabetical list, usually at the end of a book, of people, places, or topics, and the page numbers where they are mentioned.

italicized: Slanted type used to identify words being discussed. For example, “the word *botanist* means a scientist who studies plants and trees.”

layout: The way things are arranged on a page.

lesson: A small section in a textbook that discusses a specific topic.

map: A graphic that illustrates the features of any part of the Earth or sky.

paragraph: The building blocks of a lesson. A paragraph is a group of sentences that are all related to a central topic. A paragraph is made up of a main idea and supporting details.

phrase: Two or more words that work together in a sentence.

prefix: A letter or group of letters added to the beginning of a word to alter its meaning.

section: A part of a larger written document.

Instructional Glossary

sentence: The building blocks of a paragraph. A sentence has a noun and a verb and ends with a punctuation mark. In ITRI, sentences are usually identified as either main ideas or details.

signal words/phrases: Words that offer clues to the meaning of a word, sentence, or paragraph.

strategy: A certain approach or plan that aids in figuring something out.

suffix: A letter or group of letters added to the end of a word to alter its meaning.

synonym: A word having a meaning that is the same or nearly the same as that of another word.

table of contents: An arrangement of information, usually at the beginning of a book, that lists headings and page numbers.

text: The written part of a lesson, or the lesson (or book) itself.

title: The name given to a book, chapter, or lesson.

topic: The subject of a sentence, paragraph, lesson, chapter, book, etc.

vocabulary word: A word and/or phrase that is defined within a text.

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Clarksville: A Special Hoosier Community

Soo Jin is proud of her town, **Clarksville.** It is a town on the Ohio River. It played an important role in the growth of Indiana.

Main Idea

Clarksville has played an important role in Indiana history.

Vocabulary

- Clarksville
- coral reef
- Falls of the Ohio

A Coral Reef in Indiana

About 400 million years ago, during the Devonian (de-VO-nee-an) Period, Clarksville was actually under the ocean! It was home to a coral reef. A **coral reef** is a ridge of coral found in the water. Many sea plants and animals lived in this reef. People have found many fossils of these living things in Clarksville at a place called the Falls of the Ohio.

Standards Addressed: Social Studies: 3.1.3, 3.1.4, 3.5.1 Science: 3.1.6

The **Falls of the Ohio** has one of the largest fossil beds you can visit. These fossils help us understand what life was like in Indiana millions of years ago.

A Growing Community

Clarksville played an important role in the growth of Indiana. As Earth changed over time, Clarksville was no longer under water. Millions of years later, it became home to American Indian tribes including the Shawnee, Miami, Potawatomi, and Wyandote. Later, French and English settlers came to Clarksville. Many people believe Clarksville was the first American settlement in Indiana. Clarksville grew as more people moved west.

Clarksville is located on the Ohio River, which brought the first settlers to Indiana.

In the early 1800s, steamboat travel helped Clarksville grow. Because it was on the river, it was an important stop for goods heading west. Later, the railroad came through Clarksville. It linked Clarksville with cities like Indianapolis and Chicago.

After a while, Clarksville stopped growing. There weren't very many people living there. The town could not compete with its bigger neighbors. After many slow years, a highway was built through Clarksville. It became easier to ship goods to and from Clarksville, so many companies came there. These companies brought jobs and Clarksville grew. Today, Clarksville is busy again!

Name: _____

1. Which of these is a heading in the lesson?
O Clarksville: A Special Hoosier Community
O Clarksville played a role in Indiana History
O A Growing Community
O Standards Addressed

2. Which of these is *least* important to understanding the lesson?
O the Main Idea Box
O the Vocabulary Box
O the Clarksville map
O the photo of Soo Jin

3. What is the lesson's main idea?
O Soo Jin is proud of her community.
O The people of Clarksville are proud of their town.
O Clarksville has played an important role in Indiana history.
O During the Devonian Period there was a coral reef in what is now Clarksville.

4. What is the main idea of the section titled "A Coral Reef in Indiana?"
O The Falls of the Ohio is a special place to the people of Indiana.
O Clarksville was home to a coral reef 400 million years ago.
O People have found fossils at the Falls of the Ohio.
O A coral reef is a ridge of coral found in water.

5. Why did companies come to Clarksville after its slow years?
O Steamboats made travel easier.
O A new highway was built.
O The town had big neighbors.
O Clarksville was busy again.

6. What was one problem that the town of Clarksville faced?
O There were too many railroads coming through the town.
O The homes and businesses in the town were under water.
O There were not enough people living in the town.
O The town did not have enough neighbors.

7. Which of these people do you think would be *most* likely to visit the Falls of the Ohio for work?
O a fossil collector
O a police officer
O a fisherman
O a car maker

8. Based on what you know, which of the following would be *most* likely to bring new businesses to a city?
O airports
O coral reefs
O large fossil beds
O American Indians

9. Which of these helps you understand the definition of *Devonian*?
O *Devonian* is pronounced de-VO-nee-an
O Looking up Devonian in the table of contents.
O Noticing that *Devonian* has eight letters.
O Reading "400 million years ago, during the Devonian Period…"

10. How would you break the word settlement into word parts to understand it better?
O sett-leme-nt
O se-ttlement
O settle-ment
O set-tle-ment