

**Informational**

# Clarify Complex Text

Issue of *Odyssey* magazine:  
**Oil Spill!**

This project was developed at the Success for All Foundation under the direction of Robert E. Slavin and Nancy A. Madden to utilize the power of cooperative learning, frequent assessment and feedback, and schoolwide collaboration proven in decades of research to increase student learning.

## ***The Reading Edge Middle Grades 2nd Edition Teacher Edition***

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# Clarify Complex Text

## Issue of *Odyssey* magazine: Oil Spill!

### The Lightning Round

- Random Reporters share team responses; team reps from other teams may agree, disagree, or add on to these responses.
- Use the following rubrics to evaluate responses and give specific feedback.
- Award points to the teams with 100-pt. responses; add the points to the Team Celebration Points poster.
- Celebrate team successes.

<b>Strategy Use</b>	
The Random Reporter:	
<b>100</b>	gives a 90-pt. response <b>and explains how using the strategy helped in better understanding the text.</b>
<b>90</b>	gives an 80-pt. response <b>and describes a problem and a strategy that was used to solve the problem.</b>
<b>80</b>	<b>identifies a problem that a team member had understanding the text.</b>

<b>Word Power</b>	
The Random Reporter:	
<b>100</b>	gives a 90-pt. response <b>and expands on the meaning, for example, identifies:</b> <ul style="list-style-type: none"> <li>• related words</li> <li>• a second meaning</li> <li>• a word connotation</li> <li>• an antonym</li> </ul>
<b>90</b>	gives an 80-pt. response <b>and explains the meaning in a definition and a meaningful sentence.</b>
<b>80</b>	<b>tells a word or phrase added to the word power journal and why it was added (what makes it important or interesting).</b>

<b>Summary</b>	
The Random Reporter:	
<b>100</b>	gives a 90-pt. response <b>and uses key vocabulary correctly.</b>
<b>90</b>	gives an 80-pt. response <b>and clearly connects relevant ideas in a logical order.</b>
<b>80</b>	<b>presents main ideas and important details in his or her own words and without personal opinion.</b>

<b>Team Talk (oral and written)</b>	
The Random Reporter:	
<b>100</b>	gives a 90-pt. response <b>and connects the answer to the supporting evidence and uses academic language.</b>
<b>90</b>	gives an 80-pt. response <b>and includes supporting evidence and examples (from the text or from experience).</b>
<b>80</b>	<b>uses full sentences to clearly and correctly answer the question.</b>

<b>Fluency</b>	
The Random Reporter:	
<b>100</b>	gives a 90-pt. response <b>and reads smoothly and with expression (shows emotion and changes with punctuation and dialogue).</b>
<b>90</b>	gives an 80-pt. response <b>and reads at just the right pace to understand the text—not too slow and not too fast.</b>
<b>80</b>	<b>reads a short passage and pronounces most of the words correctly.</b>

<b>Graphic Organizer/Notes</b>	
The Random Reporter:	
<b>100</b>	gives a 90-pt. response <b>and explains how the graphic organizer helped in understanding the text.</b>
<b>90</b>	gives an 80-pt. response <b>and includes main points or events and important details.</b>
<b>80</b>	<b>selects a graphic organizer that is appropriate for the text.</b>

## Unit Objectives

**Reading:** Use strategies to clarify complex text.

**Writing:** Support a claim with facts and data.

## Unit Overview

The purpose of this unit is to teach clarifying strategies to improve your students' reading comprehension. When students use clarifying strategies, they check to make sure that they understand what they have read, and then they go back to clear up anything confusing. Clarifying helps students monitor comprehension at both the word and idea levels. Students need a variety of clarifying techniques to help them comprehend increasingly difficult text. Examples of clarifying strategies include:

- looking for familiar parts in words—base words, root words, prefixes and suffixes;
- using context clues to figure out word meaning;
- rereading to review context;
- reading ahead to add context;
- using background knowledge to make connections;
- visualizing what is going on in the text; and
- using a dictionary.

The following is an explanation of *complex text*.

### Complex Text:

As students move through middle school and go on to high school, college, and work, they will be expected to read text that can be described as complex. According to the 2006 ACT report *Reading Between the Lines*, complex text could include the following:

- **Relationships:** Interactions among ideas or characters are involved or difficult to recognize.
- **Richness:** Text contains significant amounts of highly sophisticated information conveyed through data or literary devices.
- **Structure:** Text is organized in elaborate and unconventional ways.
- **Style:** The author's tone and use of language are intricate.
- **Vocabulary:** The author's word choice is demanding and depends upon context.
- **Purpose:** The author's intent in writing the text is implied and open to interpretation.

**Unit Topic/Content**

The title of the text for this unit is *Oil Spill!*, the January 2011 issue of *Odyssey* magazine. Articles in the magazine include information related to the BP oil spill in April 2010 off the coast of Florida, oil-eating microbes, pollution in the world's oceans, methods and machines used to clean up ocean oil spills, the effects of oil spills in oceans, and the history and uses of petroleum.

**Text and Media Selections****Internet/Media Options**

To expand your students' background knowledge, consider using Internet/media options with lessons. Always preview sites for availability and suitability. Please make sure you have the correct plug-ins.

**At a Glance**

**Issue of *Odyssey* magazine:  
Oil Spill!**

Cycle 1		
Lesson	Text	Media
Lesson 1	pages 7, 10, "Blowout!"	(Optional) Background video: "Health Risks of BP Oil Spill" PBS Learning Media (3 min. 32 sec.) <a href="http://www.pbslearningmedia.org/content/envh10.sci.life.eco.spillrisks/">www.pbslearningmedia.org/content/envh10.sci.life.eco.spillrisks/</a> (Embedded) "Team Talk Response"
Lesson 2	pages 16–18, "Invasion of the Oil-Eating Microbes"	(Embedded) Background video: "Oil Spill 101, The Loop Current"
Lesson 3	pages 20–23, "Shadows Across the Gulf"	
Lesson 4	pages 24–26, "Learning From Disasters"	
Lesson 5	writing in response to reading	
Lesson 6	page 11, "Should Offshore Oil Drilling Continue?"	
Lesson 7	self-selected reading	
Lesson 8	Getting Along Together	

## At a Glance

**Issue of *Odyssey* magazine:  
Oil Spill!**

Cycle 2		
Lesson	Text	Media
Lesson 1	pages 27–29, “The Clean Machines”	(Embedded) Background video: “Oil in the Ocean”
Lesson 2	pages 30 and 31, “Where Did the Oil Go?”	
Lesson 3	pages 36–39, “The Pitfalls of Petroleum”	(Optional) Background video: “Interpreting Data: A Different Kind of Fuel,” PBS Learning Media: Part 1 (2 min. 48 sec.) <a href="http://www.pbslearningmedia.org/content/vt107.la.rv.text.lpfuel/#content/4dd2f7f1add2c73bce0039a3">www.pbslearningmedia.org/content/vt107.la.rv.text.lpfuel/#content/4dd2f7f1add2c73bce0039a3</a>
Lesson 4	pages 40–42, “Mary Catherine Seeks Some Oil-ternatives”	(Optional) Background video: “Interpreting Data: A Different Kind of Fuel,” PBS Learning Media: Part 2 (3 min. 21 sec.) <a href="http://www.pbslearningmedia.org/content/vt107.la.rv.text.lpfuel/#content/4dd2f7f1add2c73bce0039a3">www.pbslearningmedia.org/content/vt107.la.rv.text.lpfuel/#content/4dd2f7f1add2c73bce0039a3</a>
Lesson 5	writing in response to reading	
Lesson 6	pages 19, “Beyond Catastrophic Oil Spills: Pollution in Our Oceans”	
Lesson 7	self-selected reading	
Lesson 8	Getting Along Together	

## Cycle 1:

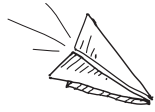
Clarify  
Complex  
Text

## Lesson 1

**Reading Objective:** Use strategies to clarify complex text.

**Teacher Background**

Today students will read about the massive BP oil spill that occurred on April 20, 2010, off the coast of Florida in the Gulf of Mexico.

**Active Instruction** 

(22 minutes)

**Big Question**

Post and present this cycle's Big Question. Have students write a response to the question as they arrive for class.

**The Big Question:** What adverse effects could occur from an oil spill in the ocean?

**Set the Stage**

1. Refer students to today's Big Question. Use **Think-Pair-Share** to ask:

**What adverse effects could occur from an oil spill in the ocean?**

*Animals, such as birds and fish, could die, the ocean would be polluted, beaches could be covered in oil.*

2. Ask students to review their cycle goal. Remind students how to earn team celebration points. Remind them that team celebration points help them to become super teams. Tell them they earn team celebration points during the Lightning Round.

3. Introduce the texts, authors, and reading objective.

4. Refer students to the article "Blowout!" on page 7 of the magazine. Have teams discuss the strategies that they use when they first pick up a text. Use **Random Reporter** to share team responses.

*For example, I scan the text to see if it is informational or literary; look for clues to predict the topic and the author's intent; figure out how the text is set up so I can choose a graphic organizer for notes.*

**T:** The U.S.'s worst oil spill

**I:** To inform the reader about the worst oil spill in U.S. history

**G:** Web to record details

Students write responses to the Big Question.

Discuss the Big Question.



Teams review their cycle goal.

Post and present the reading objective. Students identify the strategies that they use to prepare to read informational text.



## Clarify Complex Text

(Optional) Build background about the topic.  
Show the video.



(Optional) Show the following video to build background about the BP oil spill and its effects:

“Health Risks of BP Oil Spill” PBS Learning Media (3 min. 32 sec.)

[www.pbslearningmedia.org/content/envh10.sci.life.eco.spillrisks/](http://www.pbslearningmedia.org/content/envh10.sci.life.eco.spillrisks/)

Use **Think-Pair-Share** to debrief:

### **What were some of the effects of the BP oil spill?**

*Some workers who assisted with the clean-up effort became sick, and many animals died.*

### **Interactive Read Aloud**

1. This cycle our reading objective is: use strategies to clarify complex text.
2. Tell students that as they move through middle school and go to high school and beyond, they will encounter more and more complex text. Display the following information, and review points with students:

#### **Complex Text:**

- **Relationships:** Interactions among ideas or characters are involved or difficult to recognize.
- **Richness:** Text contains significant amounts of highly sophisticated information conveyed through data or literary devices.
- **Structure:** Text is organized in elaborate and unconventional ways.
- **Style:** The author’s tone and use of language are intricate.
- **Vocabulary:** The author’s word choice is demanding and depends upon context.
- **Purpose:** The author’s intent in writing the text is implied and open to interpretation.

2006 ACT report *Reading Between the Lines*

3. Tell students that in this unit they will practice reading complex text. Tell students that today they will focus on context, familiar word parts, and word roots to improve their understanding. Remind students that many of our words have Latin or Greek roots. Give a common example, such as the Latin root *cent*, meaning a hundred, and the root word for *cents* (100 cents in a dollar), *century* (100 years), and *centipede* (meaning 100 feet, for the insect with many legs).
4. Remind students of the clarifying strategies. Display the following clarifying strategies, and review them with students:

## Clarifying Strategies

- Look for familiar parts in words—base words, root words, prefixes, and suffixes.
- Use context clues.
- Keep reading.
- Use a dictionary.
- Picture what is going on in the text.
- Mark unfamiliar words with sticky notes, and ask someone for help.
- Find basic part of the sentence—noun, verb, object—and qualifying words and causes.

**Teacher:** Read aloud and think aloud to model the target skill or strategy use within the TIGRRS process.

**Students:** Actively listen.

5. Read page 7 (paragraphs 1 and 2) aloud. A sample Think Aloud follows.

### Sample Think Aloud

After reading this first paragraph, I'm not sure that I really understood what I read. There is a lot of complex text here, and terms that I am not very familiar with. To help me to clarify this section, I think it would help me to go back, reread it more slowly, and ask myself questions to be sure that I am understanding the information.

(Model rereading the paragraph, slowly.) So, what exactly is crude oil? Well, first, I want to think about what I already know about crude oil. I know that oil is a black, liquid substance that is used for fuel. I know the word *crude* means unrefined, so crude oil probably means oil that is unrefined or untreated.

Now, I will go back to the text and see if I can further clarify the term "crude oil." The text says crude oil is a mixture of many chemicals, called hydrocarbons, and oil. Let me stop and think about the word *hydrocarbons*. From the text, I see that hydrocarbons are chemicals. I know the first part of the word, *hydro* means related to water, and water is made of hydrogen and oxygen (H<sub>2</sub>O). Hydrocarbons must be chemicals that are made of hydrogen and carbon. I remember learning that carbons are elements that form diamonds and coal, and that they are found in petroleum. So, that makes sense that they would be in crude oil.

**Teacher:** Restate important ideas in the text, and add notes to the graphic organizer.

tps

6. Use **Think-Pair-Share** to ask:

#### **What strategies did I use to help me clarify the complex text?**

*You reread the section again, more slowly, you asked yourself questions as you read, and you used your prior knowledge to help you clarify the complex text.*

#### **What did I do to help me clarify unfamiliar terms or phrases in the text?**

*You stopped and thought about the word first, and then you analyzed and broke up the word to find familiar parts. Also, you made connections to the word using your background knowledge.*

Tell students to monitor their comprehension as they are reading and to use these clarifying strategies to help them understand the complex text.

**Partner pairs:** Read aloud/think aloud with the next passage to practice the skill/strategy.

- Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read page 7 (paragraphs 2 and 3), adding notes to the graphic organizer as they read.
- Debrief partner practice. Use **Think-Pair-Share** to ask:

**What words in the paragraphs did you have to stop and figure out? What strategies did you use?**

*Answers will vary. For example, we had to figure out the term “semisubmersible rig.” We took the word apart to clarify it. We figured out that semi means half, sub means below and a submersible is something that goes underwater. A semisubmersible rig must mean an oil rig that goes halfway or partway under water. We referred to the illustration on page 8 that shows what a submersible rig looks like. We also used context clues because the text refers to bringing in a more permanent rig later, so the semisubmersible rig must be temporary.*

**How did clarifying the word help you better understand the text?**

*Figuring out what “submersible rig” means was important to understanding what the Deepwater Horizon is and what it was for.*

Use **Random Reporter** to debrief.

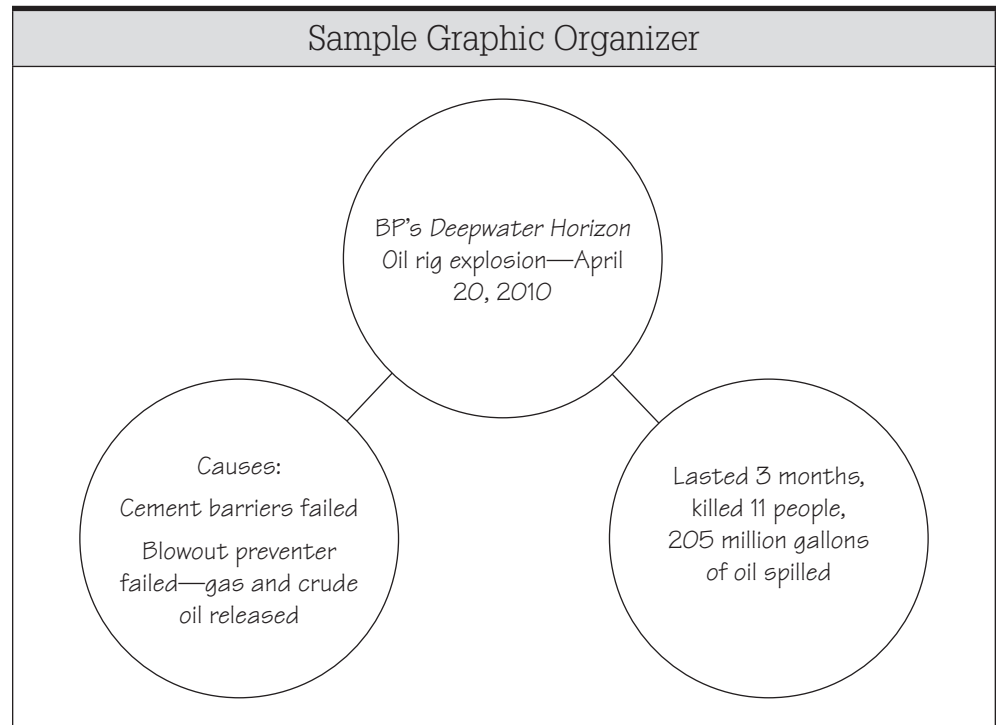
- Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

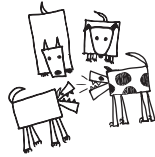
Use **Random Reporter** to debrief. Add student responses to the graphic organizer.

A sample graphic organizer follows.



**Partner pairs:** Review, reread to clarify, and add to the graphic organizer.





# Teamwork tp

(20 minutes)

Cue students to use their student routines for partner reading, word power, fluency, and the TIGRRS process.

## Partner Prep

1. Explain, or review if necessary, the student routines for partner reading, word power, fluency, and the TIGRRS process before having students read and restate: **Sr**  
**pages 7 (starting at paragraph 4)–10 aloud with partners.**
2. Circulate and check for comprehension, evidence of strategy use, and use of the TIGRRS process, for example, restating ideas on the graphic organizer. Give students feedback. Prompt and reinforce their discussions.
3. If some partners finish ahead of their teammates, have them begin looking over the Team Talk questions.

## Team Discussion

Cue students to use their student routines for strategy use and Team Talk discussion.

1. Explain, or review if necessary, how to use role cards and the student routines for strategy use and Team Talk discussion. **Sr**
2. Remind students to use the rubrics on their team folders to prepare each team member to discuss the team's strategy use, oral and written Team Talk responses, word power, and fluency. Each team member must be able to summarize the text and discuss the team's graphic organizer/notes during Class Discussion as indicated.
3. Preview the Team Talk questions. If necessary, ask questions to guide students' reflection as they determine the meaning of the "(Write)" question.

### Team Talk Questions

1. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **(Write) [CV, SA]** (strategy-use rubric)

*Answers will vary.*

*100 = We clarified the word divert on page 7 so we could figure out what happened to the rig. We used clues in the sentence and visualized what was happening to clarify it. The text says that the crew failed to divert gas overboard and it came into the rig. We figured out that divert must mean to change or turn direction. This helped us understand that the fire and explosion happened because the gas was not diverted and came into the rig.*

*90 = We clarified the word divert on page 7 so we could figure out what happened to the rig. We used clues in the sentence and visualized what was happening to clarify it.*

*80 = We clarified the word divert on page 7 so we could figure out what happened to the rig.*

*continued*

Team Talk Questions *continued*

2. Why was it necessary to use robots to repair the blowout? **[MI]** (Team Talk rubric)

100 = Robots were used because the pressure that deep underwater was too great for divers. The blowout was 50 miles offshore and 5,000 feet deep. **According to the text**, at that depth, pressure is 2,000 pounds per square inch. A diver would have been crushed by that kind of pressure, so robots that could withstand the pressure were sent down to the location.

90 = Robots were used because the pressure that deep underwater was too great for divers. The blowout was 50 miles offshore and 5,000 feet deep. At that depth, pressure is 2,000 pounds per square inch.

80 = Robots were used because the pressure that deep underwater was too great for divers.

3. What actions did BP take to limit the oil spill? **[MI]** (Team Talk rubric)

100 = BP attempted to limit the oil spill using several **approaches**, both underwater and on the surface. One **action** that BP tried was collecting the escaping oil from the spill in long tubes and bringing it to the surface to be taken away in tankers. The company also tried using booms to keep surface oil from reaching beaches. **In addition**, BP tried dispersants to break up the oil and make it sink. The company even tried burning the oil. **According to the text**, the spill was so great that none of these approaches was totally successful.

90 = BP tried to limit the oil spill several ways, both underwater and on the surface. One way that BP tried was collecting the escaping oil from the spill in long tubes and bringing it to the surface to be taken away in tankers. The company also tried using booms to keep surface oil from reaching beaches. BP also tried dispersants to break up the oil and make it sink. The company even tried burning the oil.

80 = BP tried to limit the oil spill several ways, both underwater and on the surface.

4. What devastating effects did the Deepwater Horizon disaster have? Explain, using support from the text. **[DC, SA]** (Team Talk rubric)

100 = The Deepwater Horizon disaster caused widespread pollution of water, beaches, and fishing areas. Also, **the text explains** that the disaster hurt the economy of the area, including the industries and communities along the Gulf. Wildlife was also affected, and health risks increased for people who were exposed to chemicals. The Deepwater Horizon disaster affected both the environment and the economies of the Gulf states and may continue to do so.

90 = The Deepwater Horizon disaster had many devastating effects like polluting the water, beaches, and fishing areas. It also damaged the economy of the area, hurt wildlife, plus there were health risks for people who were exposed to chemicals.

80 = The Deepwater Horizon disaster had many devastating effects, like hurting wildlife and the environment.

Cue students to discuss strategy use, graphic organizers, and word power journals.

**Randomly select team representatives who will share:**

- strategy use
- oral and written Team Talk responses
- word power discussions
- fluency selection



Show the video.

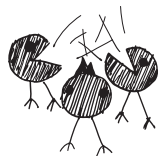


Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

4. Have students thoroughly discuss Team Talk questions before they write individual answers to the skill question marked “(Write).” Allow students to revise their written answers after further discussion if necessary.
5. Prompt teams to discuss comprehension problems and strategy use (their sticky notes), important ideas that they added to their graphic organizers, and words that a team member added to the word power journal.
6. Circulate and give feedback to teams and students. Use rubrics to give specific feedback. Ask questions to encourage further discussion. Record individual scores on the teacher cycle record form.
7. If some teams finish ahead of others, have them practice their fluency.
8. Award team celebration points for good team discussions that demonstrate 100-point responses.



## Class Discussion tp

(18 minutes)

### Lightning Round

1. Use **Random Reporter** to have teams share strategy use, oral and written Team Talk responses, word power discussions, and fluency. Ask other teams to agree, disagree, or add on to responses.
2. Use rubrics to evaluate responses and give specific feedback. Award team celebration points for 100-point responses. Record individual scores on the teacher cycle record form.
3. Show the video “Team Talk Response.”

### Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

## Lesson 2

**Reading Objective:** Use strategies to clarify complex text.

### Teacher Background

Today students will read about microbes that consume oil and the process of bioremediation, a phenomenon in which microbes help clean up environmental messes.

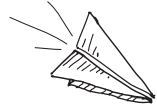
Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams discuss their vocabulary ratings.



Introduce vocabulary.



## Active Instruction tp

(25 minutes)

### Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they copy the words in their word power journals and rate their knowledge of each as they arrive for class.
2. Spot check the Read and Respond homework.

### Vocabulary

1. Have teams discuss their ratings of the words. Ask teams to make a tent with their hands when they are ready to tell a word the entire team rated with a “+” and a word the entire team rated with a “?”.
2. Use **Random Reporter** to have the teams share one word that they know and one word that they need to study further. Award team celebration points.
3. Introduce the vocabulary for this cycle. Read each word aloud, and modeling chunking as needed. Then read the meaning of each word.

Word	Pronunciation	Definition	Sample Sentence
<b>impending</b> (adjective) page 7	im-pen-ding (im-PEN-ding)	happening or likely to happen soon	Due to the <i>impending</i> hurricane, the whole island was evacuated for safety.
<b>divert</b> (verb) page 7	di-vert (die-VURT)	to change direction	After the dam burst, the flood gates were turned alternately to <i>divert</i> the rushing waters away from the town below.
<b>variable</b> (adjective) page 10	var-i-a-ble (VAIR-ee-uh-buhl)	not always the same, likely to change	When you live by the water, the weather can be <i>variable</i> , as it tends to change frequently.

*continued*

Word	Pronunciation	Definition	Sample Sentence
<b>comprise</b> (verb) page 16	com-prise (kuhm-PRIZE)	to make up or form something	Our teacher told us our homework, classwork, and tests would <i>comprise</i> our final grades.
<b>voracious</b> (adjective) page 16	vo-ra-cious (vo-RAY-shuss)	having a huge appetite	My brother had a <i>voracious</i> appetite after his football practice and consumed an entire pizza.
<b>equilibrium</b> (noun) page 16	e-qui-lib-ri-um (ee-kwuh-LIB-ree-uhm)	state of balance or calm	The natural <i>equilibrium</i> was restored after the storm, as the wind stopped and the sun came out.
<b>pristine</b> (adjective) page 24	pris-tine (priss-TEEN)	in perfect condition, completely clean, neat	The new car was in <i>pristine</i> condition, and my father was concerned that we would mess it up.
<b>resilient</b> (adjective) page 26	re-sil-ient (ri-ZILL-yent)	able to become strong, healthy, or successful again after something bad happens	The marsh turned out to be very <i>resilient</i> , as it quickly recovered from the toxic waste spill.

4. Use **Random Reporter** to have teams share a new sentence that uses one of their vocabulary words. Award team celebration points.
5. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.

**Set the Stage**

1. Ask students to review their team’s goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and reading objective.
4. Show the video “Oil Spill 101: The Loop Current.” Use **Think-Pair-Share** to debrief the video.

**How does the information in the video connect to what you have been reading about?**

*It explains how the oil from the BP oil spill in the Gulf of Mexico could be carried by the loop current out into the Atlantic. The effects of the spill could go beyond the Gulf region.*

Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the reading objective.





5. Refer students to the article “Invasion of the Oil-Eating Microbes” on page 16 of the magazine.

Have teams discuss and report on their preview of the text and explain their thinking. Use **Random Reporter** to share team responses.

- T:** Oil-eating microbes
- I:** To inform the reader about microbes that consume oil from oil spills
- G:** Web to record data about the microbes

### Interactive Read Aloud

1. Refer students to the reading objective.

Use **Think-Pair-Share** to ask:

**What strategies can we use to help clarify complex sentences or terms in the text?**

*We can look for familiar word parts, keep reading to see if the text provides more information, use the text features, try to visualize the concept in our minds, use a dictionary, use context clues, and use our background knowledge.*

2. Explain to students that they should continue to use these clarification strategies to help them clarify complex text. Review the following clarification strategies:

Clarifying Strategies	<ul style="list-style-type: none"><li>• Look for familiar parts in words—base words, root words, prefixes, and suffixes.</li><li>• Use context clues.</li><li>• Keep reading.</li><li>• Use a dictionary.</li><li>• Picture what is going on in the text.</li><li>• Mark unfamiliar words with sticky notes, and ask someone for help.</li><li>• Find basic part of the sentence—noun, verb, object—and qualifying words and causes.</li></ul>
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3. Read page 16 (stopping at the end of the third paragraph, after the words “...Hazen says.”) aloud. A sample Think Aloud follows.

Review the skill as necessary.



**Teacher:** Read aloud and think aloud to model target skill or strategy use within the TIGRRS process.

**Students:** Actively listen.

## Sample Think Aloud

I am a little unclear on the word *degrade*. I'm not sure I know what it means. I will go back and reread this paragraph again to see if I can use the context clues to clarify this term. (Model rereading the third paragraph on page 16 again.)

After rereading this paragraph, I see that the paragraph is providing information related to microbes being able to live on basically anything. That makes me think that the word *degrade* here means to consume or eat. I will check the dictionary, which is another way to clarify complex text. (Model verifying the meaning of the word *degrade* in the dictionary.)

OK, the dictionary gives several definitions for *degrade*. As I read through the various definitions, I see that there is one meaning listed for *degrade* that is related to a chemistry context. This definition says that *degrade* means to break down or decompose. That makes sense in this context because the microbes are breaking down the substance as they consume it.

**Teacher:** Restate important ideas in the text, and add notes to the graphic organizer.

**Partner pairs:** Read aloud/think aloud with the next passage to practice the skill or strategy.

4. Use **Think-Pair-Share** to ask:

**What strategies did I use to help me clarify the word *degrade*?**

*You reread the paragraph, looked for context clues, and checked the definition of the word in the dictionary.*

**What information did you learn about microbes in this section of the text?**

*We learned that microbes can basically consume and break down any substance, that microbes represent the majority of life on the planet, and that they exist everywhere.*

5. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students continue reading page 16 and page 17, stopping at the end of the first paragraph (...size of Manhattan). Remind them to use clarifying strategies to assist them with the complex text, and add information to the graphic organizer as they read.
6. Debrief partner practice. Use **Think-Pair-Share** to ask:

**What words, phrases, or passages did you have to stop and figure out? What strategies did you use? How did clarifying the word help you better understand the text?**

*Answers will vary. For example, we had to figure out the word rifts because we were unfamiliar with the word. We used clues in the sentence to figure out its meaning. The text says that oil seeps from rifts in the seafloor. We concluded that if the oil is seeping out, then rifts must be openings or cracks. Figuring out the meaning of rifts helped us understand the author's point that the oil is below the ocean floor and leaks out naturally through cracks or rifts.*

Use **Random Reporter** to debrief.

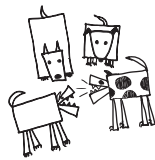
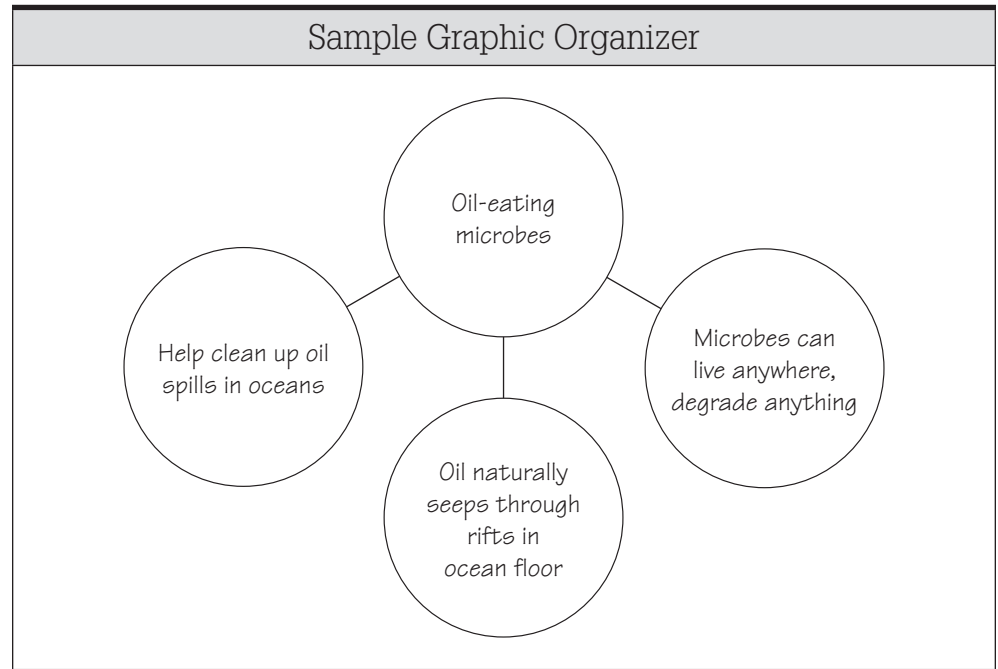
7. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.



**Partner pairs:** Review, reread to clarify, and add to the graphic organizer.

Use **Random Reporter** to debrief. Add student responses to the graphic organizer.

A sample graphic organizer follows.



## Teamwork tp

(20 minutes)

Cue students to use their student routines for partner reading, word power, fluency, and the TIGRRS process.

### Partner Prep

1. Explain, or review if necessary, the student routines for partner reading, word power, fluency, and the TIGRRS process before having students read and restate: sr  
**pages 17 and 18 aloud with partners.**
2. Circulate and check for comprehension, evidence of strategy use, and use of the TIGRRS process, for example, restating ideas on the graphic organizer. Give students feedback. Prompt and reinforce their discussions.
3. If some partners finish ahead of their teammates, have them begin looking over the Team Talk questions.

Cue students to use their student routines for strategy use and Team Talk discussion.

### Team Discussion

1. Explain, or review if necessary, how to use role cards and the student routines for strategy use and Team Talk discussion. **Sf**
2. Remind students to use the rubrics on their team folders to prepare each team member to discuss the team's strategy use, oral and written Team Talk responses, word power, and fluency. Each team member must be able to summarize the text and discuss the team's graphic organizer/notes during Class Discussion as indicated.
3. Preview the Team Talk questions. If necessary, ask questions to guide students' reflection as they determine the meaning of the "(Write)" question.

#### Team Talk Questions

1. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **(Write) [CV, SA]** (strategy-use rubric)

*Answers will vary.*

*100 = We had to clarify the phrase "acting in concert" because it was confusing. We reread the paragraph, used clues in the text, and used our background knowledge to figure it out. According to the text, certain microbes like to eat certain hydrocarbons, and it takes a community of microbes acting in concert to degrade an oil spill. A team member pointed out that a concert is a performance of musicians playing together, so "acting in concert" probably means acting together. This helped us understand that the community of microbes has to act together, each eating the hydrocarbons it likes, to eat a whole oil spill.*

*90 = We had to clarify the phrase "acting in concert" because it was confusing. We reread the paragraph, used clues in the text, and used our background knowledge to figure it out. According to the text, certain microbes like to eat certain hydrocarbons, and it takes a community of microbes acting in concert to degrade an oil spill. A team member pointed out that a concert is a performance of musicians playing together, so "acting in concert" probably means acting together.*

*80 = We had to clarify the phrase "acting in concert" because it was confusing.*

*continued*

Team Talk Questions *continued*

2. Explain why bioremediation is not an easy fix for an oil spill. **[MI, SA]**  
(Team Talk rubric)

100 = *Bioremediation, the use of microbes to clean up the environment, is not an easy fix for oil spills because there are downsides. One downside is that the microbes eating the oil use up oxygen that other species need to survive. Another downside is that microbes living deep in the ocean where it is very cold are **what the author describes as “sluggish”** and take a long, long time to consume the oil. At this point in time, bioremediation is not the complete answer to an oil spill.*

90 = *Bioremediation, the use of microbes to clean up the environment, is not an easy fix for oil spills because there are downsides. One downside is that the microbes eating the oil use up oxygen that other species need to survive. Another downside is that microbes living deep in the ocean where it is very cold take a long, long time to consume the oil.*

80 = *Bioremediation is not an easy fix for oil spills because there are downsides.*

3. What does the ecologist Terry Hazen mean on page 18 when he says “the best thing to do may be to do nothing at all”? **[DC]** (Team Talk rubric)

100 = *The ecologist Terry Hazen means that when it comes to trying to find new ways to clean up oil spills, it might be best to just let nature take its course. **The article explains that Hazen and other ecologists are currently studying the Gulf of Mexico to test the area of the massive oil spill. They are looking for new life and monitoring the progress of microbes degrading the oil in the area. The information they find may indicate that no further action is needed and that the best action may be to do nothing.***

90 = *The ecologist Terry Hazen means that when it comes to trying to find new ways to clean up oil spills, it might be best to just let nature take its course. Hazen and other ecologists are studying the Gulf of Mexico to test the area of the massive oil spill. They are looking for new life and studying microbes eating the oil.*

80 = *The ecologist Terry Hazen means that when it comes to trying to find new ways to clean up oil spills, it might be best to just let nature take its course.*

4. What is a synonym for voracious? What is an antonym for voracious? **[CV]**

*A synonym for voracious is starved. An antonym for voracious is satisfied.*

4. Have students thoroughly discuss Team Talk questions before they write individual answers to the skill question marked “(Write).” Allow students to revise their answers after further discussion if necessary.
5. Prompt teams to discuss comprehension problems and strategy use (their sticky notes), important ideas that they added to their graphic organizers, and words that a team member added to the word power journal.
6. Circulate and give feedback to teams and students. Use rubrics to give specific feedback. Ask questions to encourage further discussion. Record individual scores on the teacher cycle record form.

Cue students to discuss strategy use, graphic organizers, and word power journals.

**Randomly select team representatives who will share:**

- strategy use
- oral and written Team Talk responses
- word power discussions
- fluency selection



Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

7. If some teams finish ahead of others, have them practice their fluency.
8. Award team celebration points for good team discussions that demonstrate 100-point responses.



## Class Discussion tp

(15 minutes)

### Lightning Round

1. Use **Random Reporter** to have teams share strategy use, oral and written Team Talk responses, word power discussions, and fluency. Ask other teams to agree, disagree, or add on to responses.
2. Use rubrics to evaluate responses and give specific feedback. Award team celebration points for 100-point responses. Record individual scores on the teacher cycle record form.

### Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

**Clarify Complex Text**

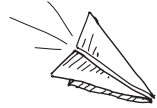
Word	Pronunciation	Definition	Sample Sentence
<b>impending</b> (adjective) page 7	im-pen-ding (im-PEN-ding)	happening or likely to happen soon	Due to the <i>impending</i> hurricane, the whole island was evacuated for safety.
<b>divert</b> (verb) page 7	di-vert (die-VURT)	to change direction	After the dam burst, the flood gates were turned alternately to <i>divert</i> the rushing waters away from the town below.
<b>variable</b> (adjective) page 10	var-i-a-ble (VAIR-ee-uh-buhl)	not always the same, likely to change	When you live by the water, the weather can be <i>variable</i> , as it tends to change frequently.
<b>comprise</b> (verb) page 16	com-prise (kuhm-PRIZE)	to make up or form something	Our teacher told us our homework, classwork, and tests would <i>comprise</i> our final grades.
<b>voracious</b> (adjective) page 16	vo-ra-cious (vo-RAY-shuss)	having a huge appetite	My brother had a <i>voracious</i> appetite after his football practice and consumed an entire pizza.
<b>equilibrium</b> (noun) page 16	e-qui-lib-ri-um (ee-kwuh-LIB-ree-uhm)	state of balance or calm	The natural <i>equilibrium</i> was restored after the storm, as the wind stopped and the sun came out.
<b>pristine</b> (adjective) page 24	pris-tine (priss-TEEN)	in perfect condition, completely clean, neat	The new car was in <i>pristine</i> condition, and my father was concerned that we would mess it up.
<b>resilient</b> (adjective) page 26	re-sil-ient (ri-ZILL-yent)	able to become strong, healthy, or successful again after something bad happens	The marsh turned out to be very <i>resilient</i> , as it quickly recovered from the toxic waste spill.

## Lesson 3

**Reading Objective:** Use strategies to clarify complex text.

### Teacher Background

Today students will read about the various species of wildlife that inhabit the ocean waters, wetlands, and surrounding areas that were impacted by the massive BP oil spill.



## Active Instruction

(25 minutes)

### Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they rerate their knowledge of each vocabulary word as they arrive for class.
2. Spot check the Read and Respond homework.

### Vocabulary

1. Have teams discuss their ratings of the words. Ask teams to make a tent with their hands when they are ready to tell a word the entire team rated with a “+” and a word the entire team rated with a “?”.
2. Use **Random Reporter** to have the teams share one word that they know and one word that they need to study further. Use **Random Reporter** to have teams report on a new sentence using a vocabulary word. Award team celebration points.
3. Choose an important word from the text or class discussion, and model how to explore it in a word power journal entry. A sample Think Aloud and word map follow.

Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams discuss their vocabulary ratings.



Model exploring a word in the word power journal.

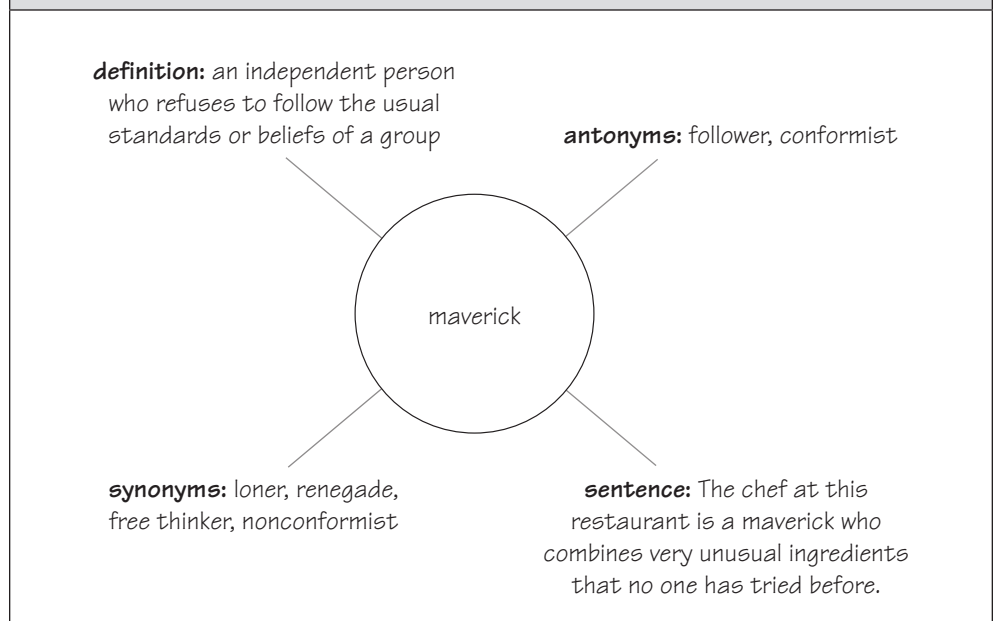
Sample Think Aloud

I chose the word *maverick* from page 18, because I am curious about the meaning of the term in this context. In the sentence, the article refers to the biologist J. Craig Venter as a maverick. I wonder what the author means by this. I know that sometimes the word *maverick* is used to describe someone who does something new or different. I wonder if that is why the author chose this word and if that meaning applies to this context. I will verify the meaning of the word in the dictionary. (Model verifying the meaning of the word *maverick* in the dictionary.)

I see from the dictionary that the word *maverick* means an independent person who refuses to follow the usual standards or beliefs of a group. That makes sense, because the text explains that Venter conducted an astonishing experiment to show that there was an abundance of life in the Sargasso Sea. Venter must have been a free thinker who was convinced of his beliefs and didn't follow the standard scientific theories of thought on this subject. He was thinking "outside of the box."

Some synonyms for this word would be *loner*, *renegade*, *free thinker*, and *nonconformist*. Some antonyms for this word would be *follower* and *conformist*.

Sample Word Map



Review Vocabulary Vault.

4. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.

Teams review their cycle goals.

Post and present the reading objective.



**Teacher:** Read aloud.

**Students:** Practice the skill or strategy.

### Set the Stage

1. Ask students to review their team's goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and reading objective.
4. Have teams discuss and report on their preview of the text and explain their thinking. Use **Random Reporter** to share team responses.

**T:** Wildlife affected by the oil spill in the Gulf of Mexico

**I:** To inform the reader about how wildlife species were affected by the oil spill in the Gulf

**G:** Web

### Interactive Read Aloud

1. Read the first three paragraphs of page 20 aloud. Model clarifying the word *detritus*. A sample Think Aloud follows.

#### Sample Think Aloud

The author has described the wetlands as a "rotten plant factory" and estuaries as "detritus factories." I didn't know the word *detritus* before, but I notice that it is defined in the text as decomposing plant material. To clarify this, I pictured a wetland or marsh and the plants growing up out of the water. The plants grow up, die, and begin to rot and become detritus—food for crabs, shrimp, and snails. I think understanding the word *detritus* is key to understanding the author's main point. He repeats this word several times because his point is that detritus is the basis for the food chain of the coastal wetlands.

tps

Use **Think-Pair-Share** to ask:

#### **Why was it important to clarify the word *detritus*?**

*The author used the terms detritus and "detritus eater" and provided a definition because he thought it was important for the reader to know. The author's main point was about how detritus was the basis of a food chain in the wetlands.*

#### **If the text had not provided clarification for this term, what strategy might you have used to clarify *detritus*?**

*I would have used the dictionary to help me to clarify the word.*

#### **How would you summarize the information from this section of text?**

*Southeast of Baton Rouge, Louisiana, is the Barataria-Terrebonne estuary system, which consists of wetlands, swamps, and mangroves. Much of the Gulf of Mexico's coastal wildlife breeds in this area. The rotting plants of the estuary and wetlands are the basis of the food chain of the estuary and the Gulf.*

## Clarify Complex Text

**Partner pairs:** Read aloud/think aloud with the next passage to practice the skill or strategy.

**Partner pairs:** Review, reread to clarify, and add to the graphic organizer.



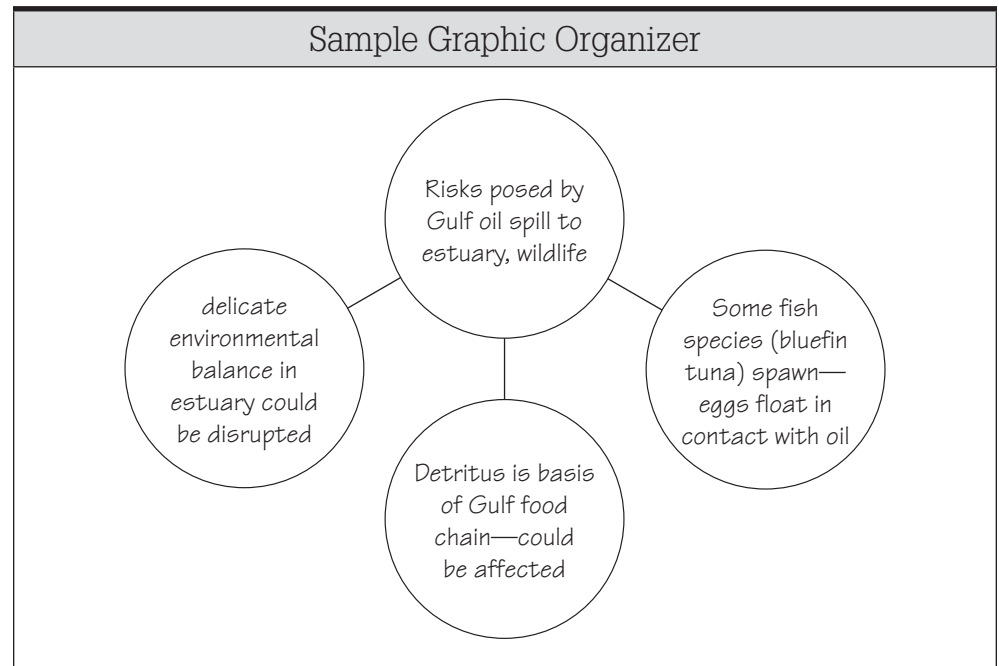
2. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read the rest of page 20 and page 21, stopping at the section “Break It Up!” and adding notes to the graphic organizer as they read.
3. Debrief partner practice. Use **Think-Pair-Share** to ask:

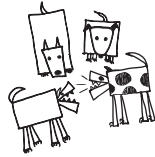
**What words, phrases, or passages did you have to stop and figure out? What strategies did you use? How did clarifying them help you better understand the text?**

*We stopped to figure out the word emulsified in the picture caption. We tried looking for familiar word parts, but that didn't help. We tried looking for clues in the photo, but still couldn't figure it out, so we looked it up in the dictionary. Emulsified means made into a suspension of small droplets. Clarifying the word helped us understand what fish and dolphins were swimming through—droplets of oil suspended in the water.*

4. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

Use **Random Reporter** to debrief. Add student responses to the graphic organizer.





# Teamwork tp

(20 minutes)

Cue students to use their student routines for partner reading, word power, and fluency, and the TIGRRS process.

## Partner Prep

1. Explain, or review if necessary, the student routines for partner reading, word power, fluency, and the TIGRRS process before having students read and restate: sr  
**pages 21 (starting at “Break It Up!” section)–23 aloud with partners.**
2. Circulate and check for comprehension, evidence of strategy use, and use of the TIGRRS process, for example, restating ideas on the graphic organizer. Give students feedback. Prompt and reinforce their discussions.
3. If some partners finish ahead of their teammates, have them begin looking over the Team Talk questions.

## Team Discussion

1. Explain, or review if necessary, how to use role cards and the student routines for strategy use and Team Talk discussion. sr
2. Remind students to use the rubrics on their team folders to prepare each team member to discuss the team’s strategy use, oral and written Team Talk responses, word power, and fluency. Each team member must be able to summarize the text and discuss the team’s graphic organizer/notes during Class Discussion as indicated.
3. Preview the Team Talk questions. If necessary, ask questions to guide students’ reflection as they determine the meaning of the “(Write)” question.

Cue students to use their student routines for strategy use and Team Talk discussion.

Team Talk Questions

1. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **(Write) [CV, SA]** (strategy-use rubric)

*Answers will vary.*

*100 = We clarified the phrase "oily irony" on page 23 because it seemed to be important. The section title uses the word irony, and the text includes the phrase "how ironic!" We looked for familiar word parts and knew the words were probably related because they have the same word part. We tried using context clues, but finally looked it up in the dictionary and found out that one definition of irony is an outcome that is the opposite of what you would expect. Clarifying irony helped us understand why the author used this word. His point was that oil comes from plants that died millions of years ago and the oil spill today is harming the plants today—an outcome that is the opposite of what you'd expect.*

*90 = We clarified the phrase "oily irony" on page 23 because it seemed to be important. The section title uses the word irony, and the text includes the phrase "how ironic!" We looked for familiar word parts and knew the words were probably related because they have the same word part. We tried using context clues, but finally looked it up in the dictionary and found out that one definition of irony is an outcome that is the opposite of what you would expect.*

*80 = We clarified the phrase "oily irony" on page 23 because it seemed to be important. The section title uses the word irony, and the text includes the phrase "how ironic!"*

2. What does the phrase "oil shadow" refer to? **[DC, MI]** (Team Talk rubric)

*100 = "Oil shadow" refers to the potential migration issues created by the oil spill on Gulf-area bird species. **The article goes on to state** that bird scientists from New York's Cornell Lab of Ornithology are on the lookout for an "oil shadow" stretching north from the Gulf. **The text further states** that scientists need help in determining if bird species from the Gulf area are migrating north, as usual. **If they find the birds aren't migrating it would mean that oil contamination is casting an "oil shadow" and that its effects are stretching beyond the Gulf.***

*90 = The phrase "oil shadow" means the possible effects of the oil spill on Gulf-area bird species. Bird scientists from New York's Cornell Lab of Ornithology are on the lookout for an "oil shadow" stretching north from the Gulf. Scientists need help in determining if bird species from the Gulf area are migrating north, as usual.*

*80 = The phrase "oil shadow" is talking about the effects of the oil spill on Gulf-area bird species.*

*continued*

Team Talk Questions *continued*

3. What is the purpose of the section “Learning From Mistakes”? Explain, using information from the text. **[AP, DC, SA]** (Team Talk rubric)

*100 = The purpose of the section “Learning From Mistakes” is to explain how emotions caused human error during the response to the oil spill, and that people shouldn’t get swept away by emotions. Andrew Barron of the Barataria-Terrebonne National Estuary Program explains in this section that a lot of mistakes were made in responding to the oil spill because people were getting very emotional, and he encourages kids to learn all they can about science so they can make good decisions based on facts, not emotions. So, the purpose of the section is to show that facts, not emotions, should drive scientific decisions.*

*90 = The purpose of the section “Learning From Mistakes” is to explain how emotions caused human error during the response to the oil spill, and that people shouldn’t get swept away by emotions. Andrew Barron of the Barataria-Terrebonne National Estuary Program says a lot of mistakes were made because people were getting very emotional, and he encourages kids to learn all they can about science so they can make good decisions based on facts, not emotions.*

*80 = The purpose of the section “Learning From Mistakes” is to explain how emotions caused human error during the response to the oil spill, and that people shouldn’t get swept away by emotions.*

4. What word from the vocabulary list belongs in the blank? How do you know? **[CV, SA]**

The baby birds in the nest are very \_\_\_\_\_ because they were able to survive the incredible heat and vicious storms.

*Resilient, because the sentence says that the baby birds were able to survive despite terrible conditions, and resilient means overcoming difficulties and surviving.*

4. Have students thoroughly discuss Team Talk questions before they write individual answers to the skill question marked “(Write).” Allow students to revise their written answers after further discussion if necessary.
5. Prompt teams to discuss comprehension problems and strategy use (their sticky notes), important ideas that they added to their graphic organizers, and words that a team member added to the word power journal.
6. Circulate and give feedback to teams and students. Use rubrics to give specific feedback. Ask questions to encourage further discussion. Record individual scores on the teacher cycle record form.
7. If some teams finish ahead of others, have them practice their fluency.
8. Award team celebration points for good team discussions that demonstrate 100-point responses.

Cue students to discuss strategy use, graphic organizers, and word power journals.

Randomly select team representatives who will share:

- strategy use
- oral and written Team Talk responses
- word power discussions
- fluency selection



Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.



# Class Discussion

(15 minutes)

## Lightning Round

1. Use **Random Reporter** to have teams share strategy use, oral and written Team Talk responses, word power discussions, and fluency. Ask other teams to agree, disagree, or add on to responses.
2. Use rubrics to evaluate responses and give specific feedback. Award team celebration points for 100-point responses. Record individual scores on the teacher cycle record form.

## Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

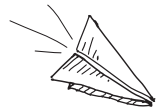
- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

## Lesson 4

**Reading Objective:** Use strategies to clarify complex text.

### Teacher Background

In this article, comparisons are made between the *Exxon-Valdez* and *Deepwater Horizon* oil spills. Two research scientists who were involved in the aftermath of both oil spills discuss the strategies that were used to attempt to clean up the disastrous spills, as well as the lessons that were learned from these environmental accidents.



## Active Instruction

(25 minutes)

Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams discuss their vocabulary ratings.



Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the reading objective.



### Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they rerate their knowledge of each vocabulary word as they arrive for class.
2. Spot check the Read and Respond homework.

### Vocabulary

1. Have teams discuss their ratings of the words. Ask teams to make a tent with their hands when they are ready to tell a word the entire team rated with a “+” and a word the entire team rated with a “?”.
2. Use **Random Reporter** to have the teams share one word that they know and one word that they need to study further. Use **Random Reporter** to have teams report on a new sentence using a vocabulary word. Award team celebration points.
3. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.

### Set the Stage

1. Ask students to review their team’s goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and reading objective.
4. Have teams discuss and report on their preview of the text and explain their thinking. Use **Random Reporter** to share team responses.

**T:** The *Exxon-Valdez* and *Deepwater Horizon* oil spills

**I:** To inform the reader about the two oil spills

**G:** Venn diagram to compare the two oil spills



**Teacher:** Read aloud.

**Students:** Practice the skill or strategy.

**Partner pairs:** Read aloud/think aloud with the next passage to practice the skill or strategy.

**Partner pairs:** Review, reread to clarify, and add to the graphic organizer.



### Interactive Read Aloud

1. Read page 24 aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

Use **Think-Pair-Share** to ask:

**What does the author include on this page to help clarify the word *booms* and how they function?**

*There is a caption on the side of the page that describes what booms are, and the author says that they are like fences to hold the oil in one place.*

**Is smell a reliable test for the presence of oil? Why or why not?**

*No, smell is not a reliable test for the presence of oil because the article says that other smells can make the oil smell, and it is still there, even if you can't smell it.*

2. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read the first two questions and answers on page 25 and add information to their graphic organizer as they read.

3. Remind students to use clarifying strategies to help them in understanding the complex text in the article.

4. Debrief partner practice. Use **Think-Pair-Share** to ask:

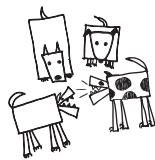
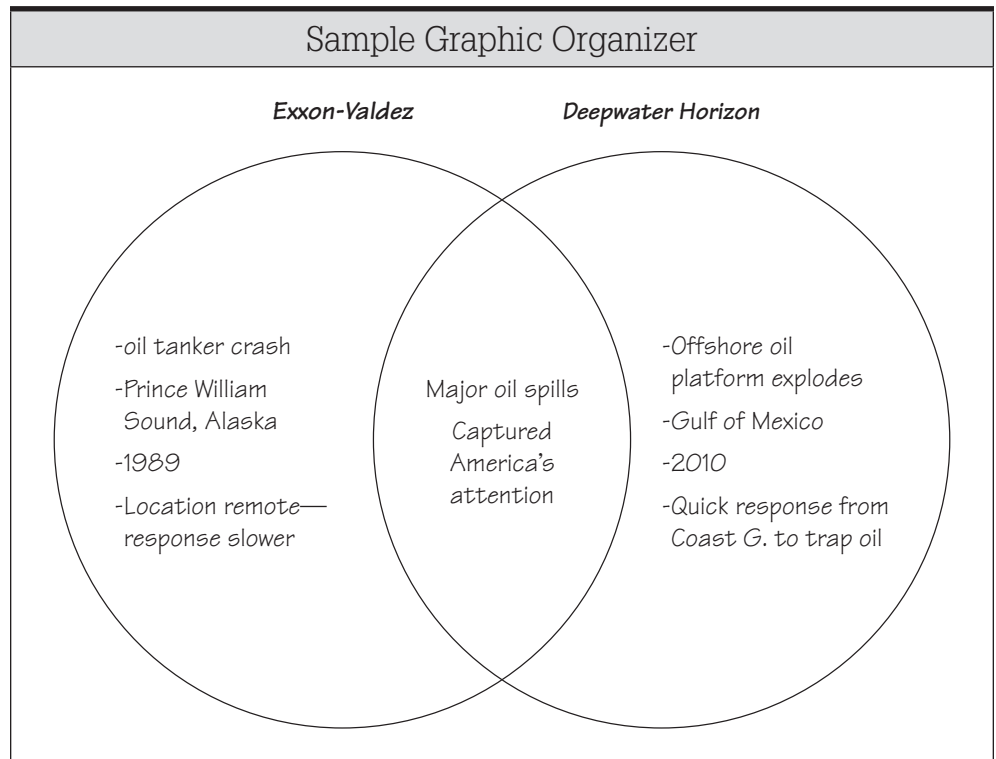
**What words, phrases, or passages did you have to stop and figure out? What strategies did you use? How did clarifying them help you better understand the text?**

*We stopped to clarify the word deploy because it appears to be a verb and is important to understanding the sentence. We used context clues to figure it out. The sentence talks about difficult options to deploy in Alaska. We guessed that deploy means try out because options are choices. That made sense in the sentence. When we looked it up in the dictionary, the meaning of deploy is arrange in a position of readiness. This helped us understand that getting the options ready to use in Alaska was difficult because the place is remote.*

5. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

Use **Random Reporter** to debrief. Add student responses to the graphic organizer.

A sample graphic organizer follows.



## Teamwork tp

(20 minutes)

### Partner Prep

1. Explain, or review if necessary, the student routines for partner reading, word power, fluency, and the TIGRRS process before having students read and restate: sr  
**pages 25 and 26 aloud with partners.**
2. Circulate and check for comprehension, evidence of strategy use, and use of the TIGRRS process, for example, restating ideas on the graphic organizer. Give students feedback. Prompt and reinforce their discussions.
3. If some partners finish ahead of their teammates, have them begin looking over the Team Talk questions.

Cue students to use their student routines for partner reading, word power, fluency, and the TIGRRS process.

Cue students to use their student routines for strategy use and Team Talk discussion.

**Team Discussion**

1. Explain, or review if necessary, how to use role cards and the student routines for strategy use and Team Talk discussion. **Sf**
2. Remind students to use the rubrics on their team folders to prepare each team member to discuss the team’s strategy use, oral and written Team Talk responses, word power, and fluency. Each team member must be able to summarize the text and discuss the team’s graphic organizer/notes during Class Discussion as indicated.
3. Preview the Team Talk questions. If necessary, ask questions to guide students’ reflection as they determine the meaning of the “(Write)” question.

Team Talk Questions
<p>1. What is a word, phrase, or passage in today’s reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. <b>(Write) [CV, SA]</b> (strategy-use rubric)</p> <p><i>Answers will vary.</i></p> <p><i>100 = We clarified the phrase “aggressive treatment” on page 26. We’ve heard the word aggressive used to describe an aggressive player on a team, one who goes after the ball, but we didn’t know how that meaning relates to aggressive treatment. Using the context, we figured out that aggressive treatments result in harm to the environment, so aggressive might mean too harsh. We looked it up in the dictionary, and one of the definitions of aggressive is combative or attacking. This helped us understand that aggressive treatments are attacks on the problem, like using lots of detergent, that can have bad short-term effects.</i></p> <p><i>90 = We clarified the phrase “aggressive treatment” on page 26. We’ve heard the word aggressive used to describe an aggressive player on a team, one who goes after the ball, but we didn’t know how that meaning relates to aggressive treatment. Using the context, we figured out that aggressive treatments result in harm to the environment, so aggressive might mean too harsh. We looked it up in the dictionary, and one of the definitions of aggressive is combative or attacking.</i></p> <p><i>80 = We clarified the phrase “aggressive treatment” on page 26. We’ve heard the word aggressive used to describe an aggressive player on a team, one who goes after the ball, but we didn’t know how that meaning relates to aggressive treatment.</i></p>

*continued*

Team Talk Questions *continued*

2. What are dispersants, and how did you clarify this word? **[CV]**  
(strategy-use rubric)

*100 = Dispersants are also called detergents. They break up oil into droplets and make it easier for microbes to eat them. I clarified dispersants by reading on and finding clarification of the term in a sidebar. Clarifying the word helped me understand that the detergent we use to wash dishes does the same thing—it breaks up oil or grease into droplets.*

*90 = Dispersants are also called detergents. They break up oil into droplets and make it easier for microbes to eat them. I clarified the word dispersants by reading on and finding clarification of the term in a sidebar.*

*80 = Dispersants are also called detergents. They break up oil into droplets and make it easier for microbes to eat them.*

3. Why is an oil spill from a tanker less likely now than it was in 1989? **[DC, SA]**  
(Team Talk rubric)

*100 = Since 1989, oil tanker design and safety training have changed. The text explains that as a result of the Exxon-Valdez oil spill, tankers are now required to be built with double hulls, which makes them less likely to get punctured and spill oil. Also the officers on tankers must go through additional safety training to avoid accidents. Better trained officers are less likely to make mistakes that cause a tanker to run into a reef like the Exxon-Valdez did.*

*90 = Since 1989, oil tanker design and safety training have changed. Tankers are now built with double hulls, and tanker officers go through extra safety training to avoid accidents.*

*80 = Since 1989, oil tanker design and safety training have changed.*

*continued*

Team Talk Questions *continued*

4. Write a summary of the text you read today. **[MI]** (summary rubric)

*100 = The Exxon-Valdez in 1989 and the Deepwater Horizon in 2010 were both serious oil spills that affected the environment. In the case of the Exxon-Valdez, an oil tanker crashed into a reef in Alaska’s Prince William Sound. Because the area was remote, the response to the spill was slower. Oil coated the shorelines and needed to be physically removed. The response to the oil platform explosion in the Gulf in 2010 was quicker, and the Coast Guard used booms, skimmers, and burning to keep it from reaching the shoreline. The text explained oil cleanup methods such as naturally occurring, oil-eating microbes that have adapted to various temperatures and conditions. Adding fertilizer (nutrients) to water speeds up the microbes’ breakdown of oil. Dispersants can also break down oil into smaller droplets, which degrade faster, but they have to be used sparingly because they can hurt the environment. Improvements in tanker construction and increased safety training for tanker officers are helping to prevent future accidents. These are lessons learned from oil spills.*

*90 = The Exxon-Valdez and the Deepwater Horizon were both serious oil spills. The Exxon-Valdez was an oil tanker that crashed in Alaska’s Prince William Sound. Oil coated the shorelines and needed to be removed. The response to the oil platform explosion in the Gulf in 2010 was quicker, and the Coast Guard worked to keep the oil from reaching the shoreline. Oil cleanup methods included oil-eating microbes that eat oil from oil spills. Dispersants can also break down oil into smaller droplets that degrade faster. To prevent accidents, tankers have double hulls, and there is more safety training for tanker officers.*

*80 = The Exxon-Valdez and the Deepwater Horizon were oil spills. The Exxon-Valdez was an oil tanker that crashed in Alaska and coated the shorelines with oil. When the oil platform exploded in the Gulf, the Coast Guard worked to keep the oil from reaching the shoreline. One way to clean up oil is letting microbes eat the oil. Dispersants can also break down oil into smaller droplets. To prevent accidents, tankers now have double hulls, and there is more safety training for tanker officers.*

5. Use two vocabulary words in a question. **[CV]** (strategy-use rubric)

*Did the workers divert the flow of oil because of the impending hurricane?*

4. Have students thoroughly discuss Team Talk questions before they write individual answers to the skill question marked “(Write).” Allow students to revise their written answers after further discussion if necessary.
5. Prompt teams to discuss comprehension problems and strategy use (their sticky notes), important ideas that they added to their graphic organizers, and words that a team member added to the word power journal.
6. Circulate and give feedback to teams and students. Use rubrics to give specific feedback. Ask questions to encourage further discussion. Record individual scores on the teacher cycle record form.

Cue students to discuss strategy use, graphic organizers, and word power journals.

**Randomly select team representatives who will share:**

- strategy use
- oral and written Team Talk responses
- word power discussions
- fluency selection



Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

7. If some teams finish ahead of others, have them practice their fluency.
8. Award team celebration points for good team discussions that demonstrate 100-point responses.



## Class Discussion tp

(15 minutes)

### Lightning Round

1. Use **Random Reporter** to have teams share strategy use, oral and written Team Talk responses, word power discussions, and fluency. Ask other teams to agree, disagree, or add on to responses.
2. Use rubrics to evaluate responses and give specific feedback. Award team celebration points for 100-point responses. Record individual scores on the teacher cycle record form.

### Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

## Lesson 5

**Writing Objective:** Support a claim with facts and data.

### Teacher Background

For this writing project, students will use the information they have learned from the text to determine which oil spill, the *Exxon-Valdez* or the *Deepwater Horizon*, could have the worst long-term effects and why.

Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams discuss their vocabulary ratings.

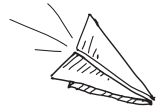


Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the writing objective.

Introduce the writing project.



## Active Instruction tp

(10 minutes)

### Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they rerate their knowledge of each vocabulary word as they arrive for class.
2. Spot check the Read and Respond homework.

### Vocabulary

1. Have teams discuss their ratings of the words. Ask teams to make a tent with their hands when they are ready to tell a word the entire team rated with a “+” and a word the entire team rated with a “?”.
2. Use **Random Reporter** to have the teams share one word that they know and one word that they need to study further. Award team celebration points.
3. Use **Random Reporter** to have teams share a new sentence that uses one of their vocabulary words. Award team celebration points.
4. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.

### Set the Stage

1. Ask students to review their team’s goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and writing objective.
4. Tell students that they will be using information from the text to state a claim. Remind students to use their clarifying strategies to help them in analyzing facts and data in the text. This will assist them in determining which oil spill could have the most environmentally disastrous long-term effects.

- Refer students to the following writing prompt in their student editions. Read the writing prompt aloud.

Read the prompt aloud.

**Writing Prompt**

Based on the information presented in the text, which oil spill could potentially have worse long-term effects: the *Exxon-Valdez* or the *Deepwater Horizon*? Explain, using support from the text in your answer.



Use **Think-Pair-Share** to ask:

**Read the prompt. What is it asking you to do: support a claim with reasons, explain ideas or information on a topic, or write a literary response? How do you know?**

*Support a claim with reasons, because it asks us to make a determination about which oil spill will have the worst long-term effects.*

Students identify the purpose for writing.

- Refer students to the following writer’s guide in their student editions. Point out that this Writing to Support a Claim with Reasons writer’s guide is the criteria for writing. Point out that using the writer’s guide will help them write a quality response.

Refer students to the appropriate writer’s guide in their student editions.

Writing to Support a Claim with Reasons	
<b>Ideas</b>	<ul style="list-style-type: none"> <li>Clearly state a position (claim) and include good reasons that support that position.</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>Begin by stating a position (claim).</li> <li>In the middle, tell supporting reasons.</li> <li>End with a closing statement.</li> </ul>
<b>Style</b>	<ul style="list-style-type: none"> <li>Use words and phrases that help the audience see how the reasons are related to the claim.</li> </ul>
<b>Mechanics</b>	<ul style="list-style-type: none"> <li>Use correct punctuation, capitalization, spelling, and grammar.</li> </ul>

Highlight the writing objective.

Briefly review the guide, noting the four aspects of writing: ideas, organization, style, and mechanics.

Use **Think-Pair-Share** to ask:

**Which guideline relates to our writing objective: support a claim with facts and data?**

*Organization, because we are supporting a claim with facts and data.*

- Tell students that this 10-minute writing project is practice to prepare them to write a quality answer for the writing section (part II) of the cycle test. Remind them that this section of the test is worth one third of their test score.

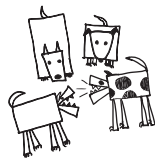
Model planning using a graphic organizer.

**Model a Skill**

Remind students that the first step in the writing process is planning, or prewriting. Model using the writing prompt and writer’s guide to create a prewriting graphic organizer. Point out that planning helps them organize their ideas and makes drafting easier.

Use the following graphic organizer to model paragraph construction for supporting a claim. Model locating supporting facts and data from the text.

Sample Graphic Organizer	
<b>Prewriting</b>	
<b>Claim:</b>	<i>Without the existence of oil-eating microbes, the effects of oil spills on the environment would be far worse.</i>
Support:	<i>Oil would remain in the waters, and the oceans would be black and sludgy. (last paragraph, page 16)</i>
Support:	<i>Oil would be trapped in huge deep-water plumes. (paragraph 1, page 17)</i>
Support:	<i>The earth could not maintain a healthy equilibrium. (paragraph 2, page 17)</i>
<b>Closing Statement:</b>	
<i>These effects due to the actions of oil-eating microbes demonstrate how important they are to the health of the environment.</i>	



**Teamwork** 

(20 minutes)

**Independent Work**

Tell students that they have 10 minutes to plan and write drafts of their responses to the writing prompt. Remind them to write on every other line to leave room for revisions. Suggest that they refer to the writing prompt to be sure that they include all the required elements and to the writer’s guide to check the quality of their response.

Students write for 10 minutes.

Monitor discussions as partners and teams give feedback.

Students revise and edit their writing projects.

### Team Discussion

1. Refer students to the peer feedback checklist in their student editions, and review how to get/give feedback.
2. Have students share their drafts in teams. Allow 5 minutes for students to revise their writing projects based on feedback and to edit them using the editing checklist in their student editions.
3. Have teams put their writing projects in a pile in the middle of their tables so a writing project can be randomly selected.



## Class Discussion

(30 minutes)

### Lightning Round

Randomly select a writing project from one or two teams' piles without revealing their authors. Display a writing project, and read it aloud.

Refer students to the writer's guide for writing to support a claim with reasons and the writing objective—support a claim with facts and data.

Using the writer's guide, discuss and evaluate the selected writing project(s) with the class.

For example, ask:

- **Does the writer state the claim clearly?**
- **Does the writer include facts and data to support the claim?**
- **Does the writer end with a closing statement that supports the information?**
- **Does the writer use appropriate academic language and full sentences?**

Award points to teams whose writing projects meet the criteria. Record these points on the team poster.

### Reflection on Writing

Have students reflect on their use of the writing process. Ask:

**How did creating and using a graphic organizer work for you? How did it help you write your draft?**

*Answers will vary.*

**What was the most useful feedback that you received? How did it affect your revisions?**

*Answers will vary.*

Display and evaluate randomly selected writing projects using the writer's guide.

**Did you find it easy or difficult to include facts and data to support the claim? Do you think the support was effective?**

*Answers will vary.*

**Celebrate**

Celebrate team successes!

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

The top team chooses a cheer.

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.

Remind students of the Read and Respond homework assignment.

2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

## Writing Prompt

Based on the information presented in the text, which oil spill could potentially have worse long-term effects: the *Exxon-Valdez* or the *Deepwater Horizon*? Explain, using support from the text in your answer.

Writing to Support a Claim with Reasons	
<b>Ideas</b>	<ul style="list-style-type: none"> <li>Clearly state a position (claim) and include good reasons that support that position.</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>Begin by stating a position (claim).</li> <li>In the middle, tell supporting reasons.</li> <li>End with a closing statement.</li> </ul>
<b>Style</b>	<ul style="list-style-type: none"> <li>Use words and phrases that help the audience see how the reasons are related to the claim.</li> </ul>
<b>Mechanics</b>	<ul style="list-style-type: none"> <li>Use correct punctuation, capitalization, spelling, and grammar.</li> </ul>

## Lesson 6

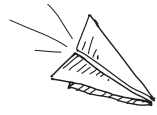
**Reading Objective:** Use strategies to clarify complex text.

**Writing Objective:** Support a claim with facts and data.

### Teacher Background

Today's cycle test challenges students to use strategies to clarify complex text. In writing, students will support a claim with facts and data from the text.

Students will read about the sources of pollution in the earth's oceans.



## Active Instruction tp

(5 minutes)

Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams review their cycle goal.

Post and present the reading and writing objectives.

Review Vocabulary Vault.

### Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they rerate their knowledge of each vocabulary word as they arrive for class.
2. Spot check the Read and Respond homework.

### Set the Stage

1. Ask students to review their team's goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and reading and writing objectives.
4. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.



## Prepare Students for the Test tp

(5 minutes)

tps

### Partner Review

1. Remind students that they have been practicing using strategies to clarify complex text and supporting a claim with facts and data. Use **Think-Pair-Share** to ask:

**What strategies have we used in this cycle to clarify complex text?**

*Some strategies we have used to clarify complex text are rereading, reading on, using the context, visualizing, and looking for familiar word parts.*

Tell students that they will use these strategies as they take the cycle test.

2. Have partners review their notes and word power journals for this cycle. Allow 2 or 3 minutes for this activity.

### Test Directions

1. Remind students that the test is independent work. Students should not ask their partners for help as they read, but they may use sticky notes if they would like.
2. Distribute the test so students can preview the questions. Point out that some of the test questions are multiple choice for which they will choose the best answer. Other questions require them to write a short answer or create a graphic organizer. Part II of the cycle test requires them to write a long answer. Remind them that their writing project was practice for writing the long answer for part II of the test.
3. Point out that question #4 asks about clarifying the text.
4. Ask students to identify key words or phrases in question #4.

4. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **[CV, SA]**

5. Introduce the text that students will read. Tell what it is about, but do not give additional information or details.

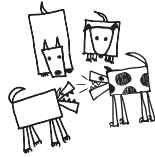
**Today you will read about offshore oil drilling.**



## Test tp

(30 minutes)

Tell students that they have 30 minutes for the test and that they may begin. Give students a 5-minute warning before the end of the test.



## Teamwork tp

(10 minutes)

Teams discuss the answers to the test questions.

### Team Discussion

1. Pass out a colored pen to each student.
2. Explain or review, if necessary, the student routine for team discussions after the test.
3. Have teams discuss their answers to the test questions. As you monitor team discussions, ask additional questions to prompt their thinking about the important ideas in the reading and about the skills and strategies that they have been using.



## Class Discussion tp

(10 minutes)

Random Reporters share team discussion of a test question.



### Lightning Round

1. Use **Random Reporter** to have teams share team discussions of the test questions and explain their thinking.
2. Award team celebration points.
3. Collect test answers. Score original answers, and add extra points for improved answers.

### Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.

2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

## Cycle 1 Test

## Clarify Complex Text

**Directions:** Read *Oil Spill!* page 11. Use the TIGRRS process, and answer the following questions on a separate piece of paper.

Some of the questions are based on today's reading, and other questions are about the text that you read in previous lessons. You may refer to your notes from this cycle.

**Part I. Comprehension** (100 points)

1. What is the topic?

*5 points = Offshore oil drilling*

What is the author's intent?

*5 points = To inform the reader about offshore oil drilling*

Write a short summary of the text. Include the graphic organizer or notes that you used to organize the information and your thoughts. **[MI, AP]**

*10 points = This article addresses the drawbacks of offshore oil drilling and the potential hazards associated with drilling offshore. Many environmental groups oppose increasing offshore oil drilling, as it could result in a massive oil spill in the ocean. Oil spills that occur in the ocean can negatively affect the ocean food webs. Environmental groups that oppose offshore oil drilling want alternative energy sources to be used. Those who are in favor of expanding offshore oil drilling are concerned that if more oil drilling is not done domestically, oil will have to be imported from foreign sources, which can be unreliable and would cause job loss for oil workers in this country.*

2. What are some of the environmental risks associated with offshore oil drilling? Use support from the text. **[DC, SA]**

*20 points = There are several environmental risks associated with offshore oil drilling. For example, the text states that an oil spill is one of the most destructive things for the ocean, as huge amounts of oil will never be cleaned up. Since crude oil contains many toxic chemicals, oxygen levels can be affected. Additionally, beaches may have to be closed because of unsafe health conditions. These negative consequences are why many people believe that offshore oil drilling should not continue.*

*15 points = There are several environmental risks with offshore oil drilling and oil spills that occur. Most of the oil will never be cleaned up, and since crude oil contains many toxic chemicals, oxygen levels can be affected. Beaches sometimes have to be closed because of unsafe health conditions.*

*10 points = There are environmental risks with offshore oil drilling because of oil spills that can happen.*

3. How did the Gulf oil spill affect offshore oil drilling safety policies? Explain, using support from the text. **[DC, SA]**

20 points = *The Gulf oil spill affected offshore oil drilling safety policies because it caused people to think about the safety of oil drilling. The article states that because of the Gulf oil spill, everyone is taking a look at safety all over again. Additionally, the text says that new regulation and safety measures are now being developed because of the oil spill that occurred in the Gulf. In these ways, the Gulf oil spill affected offshore oil drilling safety policies and regulations.*

15 points = *The Gulf oil spill affected offshore oil drilling safety policies because everyone is taking a look at safety all over again. New regulation and safety measures are now being developed because of the oil spill that occurred in the Gulf.*

10 points = *The Gulf oil spill affected offshore oil drilling safety policies because it caused people to think about the safety of oil drilling.*

4. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **[CV, SA]**

*Answers will vary.*

20 points = *I had to clarify the passage about ocean food webs because I couldn't follow what it was saying about dissolved oxygen levels and a process. I reread the passage several times and then remembered reading the other article about oil-eating microbes. I used my notes, and they reminded me that when oil-eating microbes are in a "feeding frenzy," they use up the oxygen in the water. Rereading and clarifying helped me understand that the process in the passage refers to oil-eating microbes eating a lot, hogging the oxygen, and affecting other animals.*

15 points = *I had to clarify the passage about ocean food webs because I couldn't follow what it was saying about dissolved oxygen levels and a process. I reread the passage several times and then remembered about oil-eating microbes using up oxygen.*

10 points = *I had to clarify the passage about ocean food webs because I couldn't follow what it was saying about dissolved oxygen levels and a process.*

5. Explain why Greenpeace would be concerned about offshore oil drilling. **[DC, SA]**

20 points = *According to the article, Greenpeace is an organization that works to preserve endangered species and protect the environment. Offshore oil drilling has resulted in oil spills that threaten the environment because crude oil contains toxic chemicals that affect ocean animals and can damage wetlands*

and the animals that live there. Greenpeace **opposes offshore oil drilling because of the environmental consequences.**

15 points = Greenpeace works to preserve endangered species and protect the environment. When things go wrong during offshore oil drilling, oil spills can happen that hurt the environment because crude oil contains toxic chemicals and can damage wetlands and the animals that live there.

10 points = Greenpeace works to preserve endangered species and protect the environment. When things go wrong during offshore oil drilling, oil spills can happen that hurt the environment.

## **Part II. Writing** (100 points)

Write at least a paragraph to answer the following question:

Based on the information you read in this article, do you believe offshore oil drilling should continue? Why or why not? Be sure to support your claim with data and facts from the text.

*Based on the information I read in this article, I believe that offshore oil drilling should continue, but with stricter environmental and safety laws to protect the oceans. One reason I think offshore oil drilling should continue is because the article states that even by using alternative energy sources, such as solar and wind power, the country would have one-fifth of its energy supplied. Also, the article states that if the United States stops developing offshore oil resources, the country will become more dependent on foreign oil sources, which are unreliable, and there would be fewer oil industry jobs here. For these reasons, and with stricter environmental and safety laws in place to protect the oceans, I believe that offshore oil drilling should continue.*

The following guide is used to score part II of the cycle test.

Writing to Support a Claim with Reasons		
<b>Ideas</b>	<ul style="list-style-type: none"> <li>Clearly states a position (claim) and includes good reasons that support that position</li> </ul>	<b>0–25 pts.</b>
<b>Organization</b>	<ul style="list-style-type: none"> <li>Begins by stating a position (claim)</li> <li>In the middle, tells supporting reasons</li> <li>Ends with a closing statement</li> </ul>	<b>0–25 pts.</b>
<b>Style</b>	<ul style="list-style-type: none"> <li>Uses words and phrases that help the audience see how the reasons are related to the claim</li> </ul>	<b>0–25 pts.</b>
<b>Mechanics</b>	<ul style="list-style-type: none"> <li>Uses correct punctuation, capitalization, spelling, and grammar</li> </ul>	<b>0–10 pts.</b>
<b>Writing Objective</b>	<ul style="list-style-type: none"> <li>Support a claim with facts and data.</li> </ul>	<b>0–15 pts.</b>

**Part III. Vocabulary** (100 points)

1. Write a meaningful sentence using the word *pristine*. **[CV]**

*The beach was clean and pristine, as the bright morning sun reflected off the white sand and light blue water.*

2. Use two vocabulary words in a question. **[CV]**

*Will the resilient creatures survive the impending hurricane?*

3. What is a synonym for the word *divert*? What is an antonym for the word *divert*? **[CV]**

*A synonym for the word divert is deflect. An antonym for the word divert is stay.*

4. By the time I got home for dinner, I had a \_\_\_\_\_ appetite and ate everything on my plate.

Choose the word that belongs in the blank. **[CV]**

- A. victorious
  - B. voracious
  - C. various
  - D. vicious
5. In which of the following sentences is the word *equilibrium* used incorrectly? **[CV]**
- A. The aquarium worker explained how the fish and sharks live in equilibrium in the tank.
  - B. When my father returned from his business trip, the equilibrium in our house was restored.
  - C. Our music teacher said symphony music is often used in hospitals to create calm and equilibrium.
  - D. *My partner and I used an equilibrium to weigh the two objects in our science class experiment.*

6. Write a meaningful sentence using the word *comprise*. **[CV]**

*My mother told me that flour, sugar, oil, and chocolate chips are the ingredients that comprise the cookies.*

7. Use two vocabulary words in a question. **[CV]**

*Can the scientists divert the oil or is it too variable to alter?*

8. What is a synonym for the word *variable*? What is an antonym for the word *variable*? **[CV]**

*A synonym for the word variable is uncertain. An antonym for the word variable is constant.*

9. What is one word that you or your teammates explored in your word power journal this cycle? Give the meaning of this word, and then use it in a meaningful sentence. **[CV]**

*We explored the word biodegrade, which means to decay and become absorbed by the environment, as in: Our science teacher created a compost spot for food scraps and other items that biodegrade.*

10. As used in the sentence “ODYSSEY spoke with two research scientists involved in the aftermath of these disasters to get some answers about what lessons were learned,” *aftermath* most nearly means— **[CV]**

- A. destruction.
- B. outcomes.
- C. transportation.
- D. construction.

Explain how you figured out the meaning of *aftermath*.

*Students will explain their thinking. For example, I used the context. The passage talks about the lessons that were learned from the disasters, so I knew that aftermath most nearly means outcomes.*

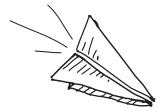
Question Codes			
<b>[DC]</b>	Make inferences; interpret data; draw conclusions.	<b>[AA]</b>	Analyze an argument.
<b>[SA]</b>	Support an answer; cite supporting evidence.	<b>[AP]</b>	Identify author’s intent or purpose.
<b>[MI]</b>	Identify the main idea that is stated or implied.	<b>[RE]</b>	Analyze relationships (ideas, story elements, text structures).
<b>[CV]</b>	Clarify vocabulary.	<b>[AC]</b>	Author’s craft; literary devices

# Lesson 7

**Reading Objective:** Use strategies to clarify complex text.

## Teacher Background

During Class Discussion, students orally present evaluations of their homework reading selections. During Teamwork, students use their Read and Respond notes and answers to the homework questions to make final preparations for these presentations. Team members share their responses and give one another feedback. During the oral presentations, students use their revised responses to the questions to describe the kind of texts they read, the strategies that helped them understand the text, and whether they will recommend their reading selections to others.



## Active Instruction tp

(20 minutes)

### Two-Minute Edit

1. Display and have students complete the Two-Minute Edit as they arrive for class.
2. Use **Random Reporter** to check corrections. Award team celebration points.

### Vocabulary

Ask teams if they have a Vocabulary Vault word that they would like to share. Award team celebration points.

### Set the Stage

1. Ask students to review their team’s goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Have students get out their reading selections and Read and Respond forms. Remind them that today, with the help of their teams, they will each prepare a presentation about their individual reading selections.

Challenge students to think about the strategies and skills that they used to read their self-selected texts, share their answers to the Read and Respond questions, discuss their thinking, and prepare evaluations of their selections.

4. Remind students to add to the notes on their Read and Respond forms as they discuss their selections and prepare oral presentations about their selections. Students will use their answers to the questions on the Read and Respond form as the basis for their presentations.

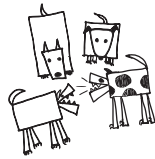
Two-Minute Edit



Vocabulary Vault

Teams review their cycle goal.

Connect the cycle objective to students’ homework reading selections.



# Teamwork tp

(25 minutes)

## Team Discussion

1. Tell students that they will use the Read and Respond questions as a guide as they discuss their homework reading and prepare evaluations of their reading selections to share with their teams.
2. As students prepare their answers, check in with those students for whom you do not have individual scores for graphic organizer/notes, written Team Talk responses, word power journal, and/or a fluency score. Have them show you examples from the cycle. Point out areas of success, and give feedback to improve student performance.
3. As you visit teams, take this opportunity to check students' homework for completion (Read and Respond forms). Enter the information on your teacher cycle record form.

Students prepare, share, and revise presentations about their reading selections.

Give students feedback on classwork.

### Teacher's Note:

Have students who are ready for a new selection take turns choosing reading material from the classroom library. Make sure that every student has a Read and Respond form for next cycle.

## Read and Respond Questions

1.	Is your selection informational or literature? Summarize your reading. (summary rubric)
2.	Why did you choose this reading? What is your purpose for reading? (Team Talk rubric)
3.	Choose a word, phrase, or passage that you did not understand at first. How did you figure it out? (strategy-use rubric)
4.	Write down a question that you had or a prediction that you made as you read. Were you able to answer or confirm it? Explain. (strategy-use rubric)
5.	Would you recommend this selection to others to read? State your opinion, and support it with reasons. (Team Talk rubric)
6.	Choose a short section of the text that you think is important or especially interesting. Tell your teammates why you chose it. Read it aloud smoothly and with expression. (fluency rubric)



# Class Discussion

(15 minutes)

Team responses and feedback

Teams report on their review of the texts and Read and Respond discussions.

Celebrate team successes!

Final tally for this cycle



Record team celebration points on the teacher cycle record form.

Collect Read and Respond forms for this cycle.

## Lightning Round

Use **Random Reporter** to have students present their evaluations of their homework reading selections (responses to the Read and Respond questions). Use rubrics to evaluate responses, give specific feedback, and award points.

## Celebrate

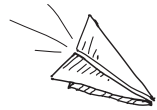
1. Tally up this cycle's points on the poster.
2. Tell students that their scored tests will be returned at the beginning of the next lesson. Poster points and the teams' test scores will determine which teams earn the status of super team, great team, or good team for the cycle.
3. Be sure to record each team's total celebration points from the poster into the teacher cycle record form. Remind students that team celebration points and team test averages are used to determine team scores.
4. Collect students' Read and Respond forms, and pass out new forms.
5. Tally up the number of Read and Respond signatures on students' forms, and record the number on the teacher cycle record form after class.

# Lesson 8

**Objectives:** Celebrate successes, and set new goals. Hold a Class Council meeting.

## Teacher Background

In this lesson, students learn and complete a new opening activity, the Two-Minute Edit. Next, they review their test results and their final scores for the cycle and compare them with their goals. They celebrate success and set new goals. Then students hold their first Class Council in which they practice using “I” Messages, Think-It-Through, and the Peace Path to resolve a class problem. The class reflects on the process, sets a goal for improving teamwork, and identifies criteria for evaluating success. The lesson ends with a brain game and a short debriefing of the thinking that students used to play the game.



## Active Instruction

(2 minutes)

### Two-Minute Edit

1. Display and have students complete the Two-Minute Edit as they arrive for class.
2. Use **Random Reporter** to check corrections. Award team celebration points.



## Celebrate/Set Goals

(20 minutes)

1. Distribute students' scored cycle tests. Allow a few moments for students to review them.
2. Distribute team score sheets to teams and celebration certificates to students. Remind students that the cycle's top-scoring teams are determined by their points on the poster and their test scores.
3. Recognize and celebrate the super, great, and good teams. Remind the teams of the impact of bonus points that are added to team members' cycle scores.
4. Have each team discuss and set a goal for the next cycle and record it on their team score sheet. Use the questions below to analyze and discuss the students' scores.

**What was your team's highest score?**

**What score do you want to improve?**

**What can the team do to improve that score?**

Two-Minute Edit



Distribute scored cycle tests.

Distribute team score sheets and celebration certificates.

Class celebration! Celebrate team successes with a class cheer.

Each team sets a team goal for the next cycle.

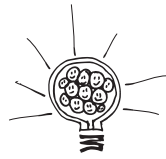


Use **Random Reporter** to ask:

**What is your team's goal for the next cycle? Why did you choose that goal?**

*Accept supported answers.*

5. Use the poster to award team celebration points for responses that include the team's reasons for choosing the goal, thus beginning the accumulation of points for the next cycle.
6. Have students record their cycle test scores and their areas of greatest strength and improvement on their progress charts.



## Class Council

(30 minutes)

1. Share class compliments.
2. Review the class goal that was set at the last Class Council. Using the agreed-upon measure of progress, was the goal met? Why or why not?
3. Discuss a class concern, or use the scenario and discussion hints provided.
4. Have teams discuss and use **Random Reporter** to share responses.
5. After debriefing how they resolved the problem, help students set a goal and a measure of progress that they can use at the next Class Council.



## Brain Games

(5 minutes)

1. Choose a brain game from the card set, and then play the game.
2. Use the following questions to debrief and remind students of self-regulatory strategies:

**What did this game require your brain to do?**

**How will use of this skill improve your success in other classes?**

## Cycle 2:

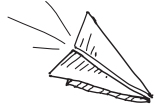
Clarify  
Complex  
Text

## Lesson 1

**Reading Objective:** Use strategies to clarify complex text.

**Teacher Background**

Today's reading describes various machines that are used in the cleanup of massive oil spills.

**Active Instruction** 

(22 minutes)

**Big Question**

Post and present this cycle's Big Question. Have students write a response to the question as they arrive for class.

**The Big Question:** How do you think an ocean oil spill is cleaned up?

**Set the Stage** 

1. Refer students to today's Big Question. Use **Think-Pair-Share** to ask:

**How do you think an ocean oil spill is cleaned up?**

*I think they use boats and large rubber sheets to collect the oil. We read about the use of booms, skimmers, and long tubes to suck up the oil. Also we read about naturally occurring microbes that eat oil.*

2. Ask students to review their cycle goal. Remind students how to earn team celebration points. Remind them that team celebration points help them to become super teams. Tell them that they can earn team celebration points during the Lightning Round.
3. Introduce the texts, authors, and reading objectives.
4. Have teams discuss and report on their preview of the text and explain their thinking. Use **Random Reporter** to share team responses.

**T:** Machines that clean up oil spills

**I:** To inform the reader about machines that are used to clean up oil spills in oceans

**G:** Table to record information on different machines

5. Show the video "Oil in the Ocean" to build background about oil-spill cleanup and the sources of oil pollution in the ocean. Use **Think-Pair-Share** to debrief the video.

**According to the video, what is the major source of oil pollution in the ocean?**

*The major source is oil runoff from roads and parking lots and dumping oil in storm drains. Oil spills make up only five percent of oil pollution in the oceans.*

Students write responses to the Big Question.

Discuss the Big Question.



Teams review their cycle goal.

Post and present the reading objective.



Build background about oil-spill cleanup.

Show the video.



**Teacher:** Read aloud.

**Students:** Practice the skill or strategy.



**Partner pairs:** Read aloud/think aloud with the next passage to practice the skill/strategy.

**Partner pairs:** Review, reread to clarify, and add to the graphic organizer.



**Interactive Read Aloud**

1. Refer to the reading objective, and review the skill if necessary.
2. Read page 27 aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

Use **Think-Pair-Share** to ask:

**Explain what the author means by the oil/water molecular feud.**

*The author means that oil and water don't mix. Oil and water molecules separate, forming a clean boundary between each other. Oil molecules also spread out and cover the water thinly over large distances.*

3. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read the section “Looking to the Future,” adding notes to the graphic organizer as they read.

4. Debrief partner practice. Use **Think-Pair-Share** to ask:

**What words, phrases, or passages did you have to stop and figure out? What strategies did you use? How did clarifying them help you better understand the text?**

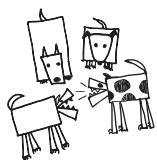
*We had to clarify the word nanofabric. We saw the familiar word part fabric but didn't know what nano means. Then my partner used background knowledge and remembered that a nanosecond is a very, very tiny piece of a second, so we figured out that nano must mean very, very tiny. That helped us understand that “a rolling carpet of oil-attracting nanofabric to filter oil” must be fabric with very, very tiny holes to let water through and catch the oil.*

5. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

Use **Random Reporter** to debrief. Add student responses to the graphic organizer.

A sample graphic organizer follows.

Sample Graphic Organizer	
Oil Cleaning Machines	Form and Function—how they end oil/water molecular feud
Aerogels	Super-light, super-insulating materials used as sponges to absorb spilled oil
Robot with nanofabric	Oil-attracting fabric to filter out oil



# Teamwork tp

(20 minutes)

Cue students to use their student routines for partner reading, word power, fluency, and the TIGRRS process.

## Partner Prep

1. Explain, or review if necessary, the student routines for partner reading, word power, fluency, and the TIGRRS process before having students read and restate: sr  
**pages 28 and 29 aloud with partners.**
2. Circulate and check for comprehension, evidence of strategy use, and use of the TIGRRS process, for example, restating ideas on the graphic organizer. Give students feedback. Prompt and reinforce their discussions.
3. If some partners finish ahead of their teammates, have them begin looking over the Team Talk questions.

## Team Discussion

Cue students to use their student routines for strategy use and Team Talk discussion.

1. Explain, or review if necessary, how to use role cards and the student routines for strategy use and Team Talk discussion. sr
2. Remind students to use the rubrics on their team folders to prepare each team member to discuss the team's strategy use, oral and written Team Talk responses, word power, and fluency. Each team member must be able to summarize the text and discuss the team's graphic organizer/notes during Class Discussion as indicated.
3. Preview the Team Talk questions. If necessary, ask questions to guide students' reflection as they determine the meaning of the "(Write)" question.

Team Talk Questions

1. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **(Write) [CV, SA]** (strategy-use rubric)

*Answers will vary.*

*100 = A passage I needed to clarify was the one about detergent molecules being mediators because there were several words that were unfamiliar. I clarified this passage by rereading and using the description provided in the text in parentheses to clarify the word emulsion. I also visualized what is happening to detergent molecules. I did not know the meaning of mediator, so I looked it up in the dictionary and found out it means someone who helps two opposing sides come to an agreement. This helped me understand that detergent molecules get in between the oil and water like a mediator. The detergent molecules surround the oil so it is separate from the water and divides it into tiny globules.*

*90 = A passage I needed to clarify was the one about detergent molecules being mediators because there were several words that were unfamiliar. I clarified this passage by rereading and using the description provided in the text in parentheses to clarify the word emulsion. I also visualized what is happening to detergent molecules. I did not know the meaning of mediator, so I looked it up in the dictionary and found out it means someone who helps two opposing sides come to an agreement.*

*80 = A passage I needed to clarify was the one about detergent molecules being mediators because there were several words that were unfamiliar.*

2. If you were in charge of cleaning up an oil spill, which of the cleanup tools would you use first? Why? **[DC, SA]** (Team Talk rubric)

*100 = I think the first tools to use in an oil spill cleanup would be booms. Because its **molecules** do not **attract** one another as much as water molecules, oil spreads on top of water and it can spread until a slick covers a great distance. Using a boom would help corral the oil so it does not spread and would keep it from reaching the shoreline. Once it is corralled, the oil would be easier to clean up using the other tools.*

*90 = I think the first tools to use in an oil spill cleanup would be booms. Oil spreads on water, and it can spread until it covers a great distance. Using a boom would help corral the oil.*

*80 = I think the first tools to use in an oil spill cleanup would be booms to corral the oil.*

*continued*

Team Talk Questions *continued*

3. What is the hydrophobic/oleophilic principle? What two clean machines you read about use this principle to remove oil? **[MI, RE]** (Team Talk rubric)

*100 = This **principle** relates to hydrophobic/oleophilic materials that **repel** water while they **attract** oil. These materials are used in polarity skimmers that are dragged through the water from boats and collect oil. These materials are also used in sorbents that are dropped into the water to soak up oil and then fished out to discard. Both clean machines use the hydrophobic/oleophilic principle to separate the oil from the water.*

*90 = Hydrophobic/oleophilic relates to the materials that separate oil from water. They are used in polarity skimmers that are dragged through the water from boats and collect oil and in sorbents dropped into the water to soak up oil and then fished out to discard.*

*80 = Hydrophobic/oleophilic relates to the materials that separate oil from water. They are used in polarity skimmers and in sorbents.*

4. Would the separation tanks be a good clean machine choice for a mid-ocean oil spill? Why or why not? **[DC, SA]** (Team Talk rubric)

*100 = For a mid-ocean oil spill, separation tanks would be a good clean machine choice. They are carried by huge ships that are **capable** of getting to a mid-ocean **location**. Smaller ships or boats could have a problem getting there. Another reason it is a good choice is because once the oil floats in the tanks, it can be pumped off and even taken back to be recycled.*

*90 = Separation tanks would be a good clean machine choice. They are carried by huge ships that can get to a mid-ocean spill. Smaller ships or boats could have a problem getting there.*

*80 = Separation tanks would be a good clean machine choice because they could get to a mid-ocean spill.*

4. Have students thoroughly discuss Team Talk questions before they write individual answers to the skill question marked "(Write)." Allow students to revise their written answers after further discussion if necessary.
5. Prompt teams to discuss comprehension problems and strategy use (their sticky notes), important ideas that they added to their graphic organizers, and words that a team member added to the word power journal.
6. Circulate and give feedback to teams and students. Use rubrics to give specific feedback. Ask questions to encourage further discussion. Record individual scores on the teacher cycle record form.
7. If some teams finish ahead of others, have them practice their fluency.
8. Award team celebration points for good team discussions that demonstrate 100-point responses.

Cue students to discuss strategy use, graphic organizers, and word power journals.

Randomly select team representatives who will share:

- strategy use
- oral and written Team Talk responses
- word power discussions
- fluency selection



Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.



# Class Discussion

(18 minutes)

## Lightning Round

1. Use **Random Reporter** to have teams share strategy use, oral and written Team Talk responses, word power discussions, and fluency. Ask other teams to agree, disagree, or add on to responses.
2. Use rubrics to evaluate responses and give specific feedback. Award team celebration points for 100-point responses. Record individual scores on the teacher cycle record form.

## Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

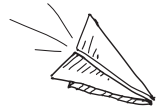
- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

# Lesson 2

**Reading Objective:** Use strategies to clarify complex text.

## Teacher Background

Today students will read information related to where the 205 million gallons of oil from the Gulf of Mexico oil spill went, and the research efforts by scientists to study the environmental consequences of the oil spill.



## Active Instruction tp

(25 minutes)

Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams discuss their vocabulary ratings.



Introduce vocabulary.

## Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they copy the words in their word power journals and rate their knowledge of each as they arrive for class.
2. Spot check the Read and Respond homework.

## Vocabulary

1. Have teams discuss their ratings of the words. Ask teams to make a tent with their hands when they are ready to tell a word the entire team rated with a “+” and a word the entire team rated with a “?”.
2. Use **Random Reporter** to have the teams share one word that they know and one word that they need to study further. Award team celebration points.
3. Introduce the vocabulary for this cycle. Read each word aloud, and modeling chunking as needed. Then read the meaning of each word.

Word	Pronunciation	Definition	Sample Sentence
<b>buoyancy</b> (noun) page 29	buoy-an-cy (BOY-uhn-see)	the ability of an object to float in water or air	Our science project was to test the <i>buoyancy</i> of various objects to see if they would sink or float.
<b>tolerate</b> (verb) page 29	tol-er-ate (TOL-uh-rayt)	to experience something harmful or unpleasant without being harmed	My dad said the trees we planted could <i>tolerate</i> heat and cold equally well, so they had a good chance of surviving.

*continued*

Word	Pronunciation	Definition	Sample Sentence
<b>mediators</b> (noun) page 29	me-di-a-tors (MEE-dee-ay-tors)	independent parties who work with opposing sides in a dispute to work out an agreement or resolution	My sister and her friend served as <i>mediators</i> to help my brother and me come up with a reasonable resolution to our argument.
<b>decompose</b> (verb) page 37	de-com-pose (dee-kuhm-POHZ)	to cause something to be slowly destroyed and broken down by natural processes, chemicals, etc.	Even though I hate flies, I know they hold an important job in helping to <i>decompose</i> food scraps and dead organisms.
<b>originates</b> (verb) page 37	o-rig-in-ates (or-IDJ-in-ayts)	produced or created from	This breed of dog <i>originates</i> in China, where they were used to guard temples in ancient times.
<b>demise</b> (noun) page 37	de-mise (dih-MYZ)	an end of life	My mother's flower met its <i>demise</i> when I forgot to water it each day.
<b>organic</b> (adjective) page 37	or-gan-ic (or-GAN-ik)	of, relating to, or obtained from living things	We watched as the weaver used the loom to turn the <i>organic</i> wool from the sheep into a blanket.
<b>terrestrial</b> (adjective) page 37	ter-res-tri-al (tuh-RES-tree-uhl)	relating to or occurring on the earth	Solar energy from the sun can be used to make <i>terrestrial</i> power sources, such as electricity.

4. Use **Random Reporter** to have teams share a new sentence that uses one of their vocabulary words. Award team celebration points.
5. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.

**Set the Stage**

1. Ask students to review their team's goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and reading objective. Refer students to page 30.

Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the reading objective.



- Have teams discuss and report on their preview of the text and explain their thinking. Use **Random Reporter** to share team responses.

**T:** The oil spill in the Gulf of Mexico

**I:** To inform the reader about the location of the oil and where it all went

**G:** Web

### Interactive Read Aloud

- Read the first three paragraphs of page 30 aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

Use **Think-Pair-Share** to ask:

**Explain the word *plumes* as it is used here. What helped you to clarify the meaning of this word?**

*Plumes as it is used here means large clouds of oil forming under the water. I used the context, rereading, visualization, and my background knowledge to help me clarify the meaning of the word.*

**What two significant discoveries were made by Professor Joye?**

*The two significant discoveries made by Professor Joye were that oily material from the spill was found on the seafloor, and that plumes of oil were forming under the water during the oil spill.*

- Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read page 30, starting at the section “A Great Mystery,” through page 31, stopping at the end of the paragraph that carries over from page 30, adding notes to the graphic organizer as they read.

Use **Random Reporter** to debrief.

- Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

Use **Random Reporter** to debrief. Add student responses to the graphic organizer.

A sample graphic organizer follows.

**Teacher:** Read aloud.

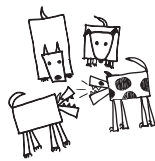
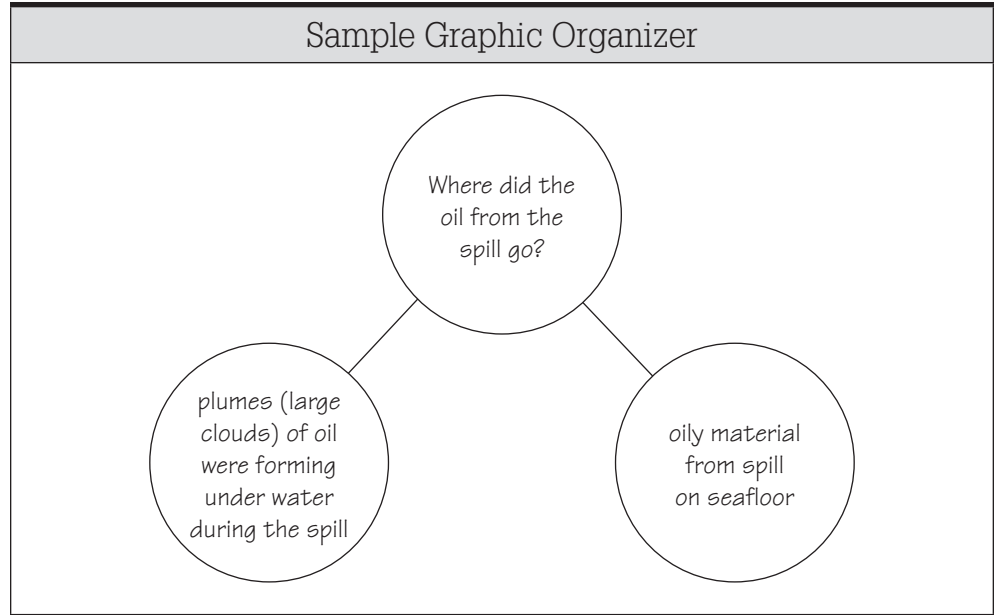
**Students:** Practice the skill or strategy.



**Partner pairs:** Read aloud/think aloud with the next passage to practice the skill or strategy.



**Partner pairs:** Review, reread to clarify, and add to the graphic organizer.



## Teamwork tp

(20 minutes)

Cue students to use their student routines for partner reading, word power, fluency, and the TIGRRS process.

### Partner Prep

1. Explain, or review if necessary, the student routines for partner reading, word power, fluency, and the TIGRRS process before having students read and restate: sr  
**page 31 (paragraph 1) aloud with partners.**
2. Circulate and check for comprehension, evidence of strategy use, and use of the TIGRRS process, for example, restating ideas on the graphic organizer. Give students feedback. Prompt and reinforce their discussions.
3. If some partners finish ahead of their teammates, have them begin looking over the Team Talk questions.

### Team Discussion

1. Explain, or review if necessary, how to use role cards and the student routines for strategy use and Team Talk discussion. sr
2. Remind students to use the rubrics on their team folders to prepare each team member to discuss the team's strategy use, oral and written Team Talk responses, word power, and fluency. Each team member must be able to summarize the text and discuss the team's graphic organizer/notes during Class Discussion as indicated.
3. Preview the Team Talk questions. If necessary, ask questions to guide students' reflection as they determine the meaning of the "(Write)" question.

Cue students to use their student routines for strategy use and Team Talk discussion.

## Team Talk Questions

1. Explain the word *biodiversity*, and describe how you clarified this term. **(Write) [CV]** (strategy-use rubric)

*100 = Biodiversity means variety among plant and animal life in an environment. I clarified this term by using the context, familiar word parts, my background knowledge, and a dictionary. For example, the text states that the seafloor is home to some amazing creatures, including microbes, shrimp, clams, mussels, and corals, so I knew there is a variety of life there. Additionally, I know that bio means life, and diversity means different. To verify the meaning further, I checked a dictionary. Clarifying the word helped me understand the importance of the vents in the seafloor that support an ecosystem.*

*90 = Biodiversity means different plant and animal life in an environment. I used the context, familiar word parts, my background knowledge, and a dictionary to help me. It says that the seafloor is home to some amazing creatures, including microbes, shrimp, clams, mussels, and corals, so I knew there is a variety of life there. I know that bio means life, and diversity means different. To be sure, I checked a dictionary.*

*80 = Biodiversity means different plant and animal life in an environment. I used clarifying strategies to figure it out.*

2. What do the microbes on the seafloor feed off, and why is this necessary for their survival? Explain, using support from the text. **[DC, SA]** (Team Talk rubric)

*100 = The microbes on the seafloor feed off oil because there is no sunlight at the bottom of the ocean. The text explains that microbes that live on the seafloor must feed off oil that naturally seeps from the bottom, as sunlight cannot reach the seafloor. Therefore, in order to survive, the microbes use oil as their source of energy.*

*90 = The microbes on the seafloor feed off oil because there is no sunlight at the bottom of the ocean. It says in the text that microbes that live on the seafloor must feed off oil that naturally seeps from the bottom, as sunlight cannot reach the seafloor.*

*80 = The microbes on the seafloor feed off of oil because there is no sunlight at the bottom of the ocean.*

*continued*

Team Talk Questions *continued*

3. What were the results of the research team’s fourteen-day expedition to the spill area? Explain, using information from the text. **[MI, DC, SA]** (Team Talk rubric)
- 100 = *The research team found giant plumes of oil **suspended** underwater and an oily layer on the seafloor that had killed marine life. **The text explains that** because the oil well was deep in the water, pressure was great enough to keep the oil from coming to the surface. Use of dispersants broke the oil into tiny droplets that were **suspended** in the plumes. The oily layer on the seafloor was found seventy miles away from the Deepwater Horizon well, where it had sunk to the bottom and killed shrimp, tube worms, and other creatures. People expected more oil to wash up on shorelines from Deepwater Horizon. Joye’s research team showed where that oil was.*
- 90 = *The research team found giant plumes of oil underwater and an oily layer on the seafloor that had killed marine life. Because the oil well was deep in the water, pressure was great enough to keep the oil from coming to the surface. Use of dispersants broke the oil into tiny droplets that were in the plumes. The oily layer on the seafloor was found seventy miles away from the Deepwater Horizon well, where it had sunk to the bottom and killed shrimp, tube worms, and other creatures.*
- 80 = *The research team found giant plumes of oil underwater and an oily layer on the seafloor that had killed marine life.*
4. Why is information related to the Gulf of Mexico valuable and relevant? Support your answer with information from the text. **[MI, SA]** (Team Talk rubric)
- 100 = ***Information related to the Gulf of Mexico is valuable and relevant** because the Gulf contains a **variety of aquatic life** and helps to support the area economy. **The text explains** that learning about the Gulf of Mexico is important because the fish from the Gulf provide food and jobs for people. **Additionally**, clean and healthy beaches attract tourists to vacation in area hotels and help to support area businesses. The ocean also stores some of the carbon dioxide that causes global warming. **Information gained from scientific study of the Gulf can help in solving problems that affect both the environment and the economy of the region.***
- 90 = *Information on the Gulf of Mexico is important because the Gulf contains ocean life and helps to support the area economy. Learning about the Gulf of Mexico is important because the fish from the Gulf provide food and jobs for people. Clean beaches attract tourists to vacation in area hotels and help to support area businesses.*
- 80 = *Information on the Gulf of Mexico is important because the Gulf has different fish and helps to support the area economy.*
5. What word from the vocabulary list belongs in the blank? How do you know? **[CV]**
- All of our lettuce plants died, as we did not realize they could not \_\_\_\_\_ cold temperatures, and we had planted them too early in the season.
- Tolerate, because the words died and cold were clues. The lettuce plants died because they couldn’t tolerate, or survive, the cold.

Cue students to discuss strategy use, graphic organizers, and word power journals.

**Randomly select team representatives who will share:**

- strategy use
- oral and written Team Talk responses
- word power discussions
- fluency selection

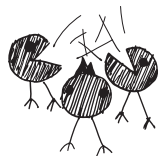


Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

4. Have students thoroughly discuss Team Talk questions before they write individual answers to the skill question marked “(Write).” Allow students to revise their written answers after further discussion if necessary.
5. Prompt teams to discuss comprehension problems and strategy use (their sticky notes), important ideas that they added to their graphic organizers, and words that a team member added to the word power journal.
6. Circulate and give feedback to teams and students. Use rubrics to give specific feedback. Ask questions to encourage further discussion. Record individual scores on the teacher cycle record form.
7. If some teams finish ahead of others, have them practice their fluency.
8. Award team celebration points for good team discussions that demonstrate 100-point responses.



## Class Discussion tp

(15 minutes)

### Lightning Round

1. Use **Random Reporter** to have teams share strategy use, oral and written Team Talk responses, word power discussions, and fluency. Ask other teams to agree, disagree, or add on to responses.
2. Use rubrics to evaluate responses and give specific feedback. Award team celebration points for 100-point responses. Record individual scores on the teacher cycle record form.

### Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

**Clarify Complex Text**

Word	Pronunciation	Definition	Sample Sentence
<b>buoyancy</b> (noun) page 29	buoy-an-cy (BOY-uhn-see)	the ability of an object to float in water or air	Our science project was to test the <i>buoyancy</i> of various objects to see if they would sink or float.
<b>tolerate</b> (verb) page 29	tol-er-ate (TOL-uh-rayt)	to experience something harmful or unpleasant without being harmed	My dad said the trees we planted could <i>tolerate</i> heat and cold equally well, so they had a good chance of surviving.
<b>mediators</b> (noun) page 29	me-di-a-tors (MEE-dee-ay-tors)	independent parties who work with opposing sides in a dispute to work out an agreement or resolution	My sister and her friend served as <i>mediators</i> to help my brother and me come up with a reasonable resolution to our argument.
<b>decompose</b> (verb) page 37	de-com-pose (dee-kuhm-POHZ)	to cause something to be slowly destroyed and broken down by natural processes, chemicals, etc.	Even though I hate flies, I know they hold an important job in helping to <i>decompose</i> food scraps and dead organisms.
<b>originates</b> (verb) page 37	o-rig-in-ates (or-IDJ-in-ayts)	produced or created from	This breed of dog <i>originates</i> in China, where they were used to guard temples in ancient times.
<b>demise</b> (noun) page 37	de-mise (dih-MYZ)	an end of life	My mother's flower met its <i>demise</i> when I forgot to water it each day.
<b>organic</b> (adjective) page 37	or-gan-ic (or-GAN-ik)	of, relating to, or obtained from living things	We watched as the weaver used the loom to turn the <i>organic</i> wool from the sheep into a blanket.
<b>terrestrial</b> (adjective) page 37	ter-res-tri-al (tuh-RES-tree-uhl)	relating to or occurring on the earth	Solar energy from the sun can be used to make <i>terrestrial</i> power sources, such as electricity.

## Lesson 3

**Reading Objective:** Use strategies to clarify complex text.

### Teacher Background

Today students will read about the La Brea Tar Pits in Los Angeles, how petroleum is formed, the history of petroleum as a source of energy, and the process of refining petroleum.

#### Teacher's Note:

Use the Interactive Read Aloud if your students need additional support. Otherwise, build background, and then go directly to teamwork. Adjust partner reading page numbers accordingly.

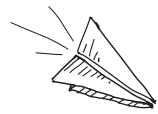
Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams discuss their vocabulary ratings.



Model exploring a word in the word power journal.



## Active Instruction

(15–25 minutes)

### Partner Vocabulary Study

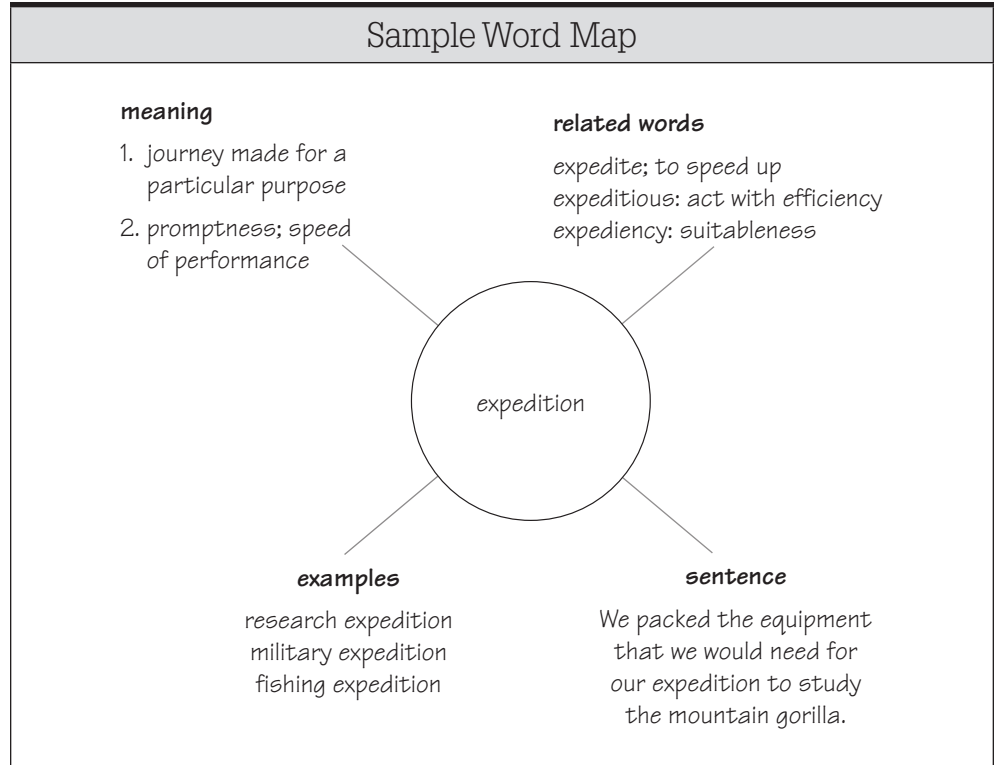
1. Display the vocabulary words. Have students use the vocabulary study routine as they rerate their knowledge of each vocabulary word as they arrive for class.
2. Spot check the Read and Respond homework.

### Vocabulary

1. Have teams discuss their ratings of the words. Ask teams to make a tent with their hands when they are ready to tell a word the entire team rated with a “+” and a word the entire team rated with a “?”.
2. Use **Random Reporter** to have the teams share one word that they know and one word that they need to study further. Use **Random Reporter** to have teams report on a new sentence using a vocabulary word. Award team celebration points.
3. Choose an important word from the text or class discussion, and model how to explore it in a word power journal entry. A sample Think Aloud and word map follow.

### Sample Think Aloud

I chose this word *expedition* from page 31. I have heard this word used before to describe a big trip to an out-of-the-way place, like the research expedition into the depths of the Gulf of Mexico, but I want to know more about this word and where it came from. When I look up the word *expedition* in the dictionary, I find that it means a journey made for a particular purpose. It also has a second definition: promptness or speed of performance.



Review Vocabulary Vault.

4. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.

Teams review their cycle goal.

**Set the Stage**

1. Ask students to review their team’s goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and reading objective.
4. Have students discuss and report on their preview of the text and explain their thinking. Use **Random Reporter** to share team responses.

Post and present the reading objective.



Refer students to pages 36–39 in the text.

Students begin the TIGRRS process by predicting the topic and author’s intent and choosing a graphic organizer.

*For example, I scan the text to see if it is informational or literary; look for clues to predict the topic and the author’s intent; figure out how the text is set up so I can choose a graphic organizer for notes.*

- T:** Petroleum
- I:** To inform the reader about petroleum
- G:** Web

(Optional) Build background about fossil fuels as energy sources.

(Optional) Show the following video to build background on energy sources: PBS Learning Media: “Interpreting Data: A Different Kind of Fuel,” Part 1 (stop at 2 min. 48 sec.) [www.pbslearningmedia.org/content/vt107.la.ws.process.diffuel/](http://www.pbslearningmedia.org/content/vt107.la.ws.process.diffuel/)



Use **Think-Pair-Share** to ask:

**What is the downside of relying on fossil fuels, such as petroleum, for energy?**

*They aren't renewable and will run out eventually.*

**Why is it necessary for researchers to search for alternative fuel sources?**

*Because the earth will eventually run out of fossil fuels, and the population of earth keeps increasing, meaning that the need for energy sources also keeps increasing.*

### Interactive Read Aloud

1. Read page 36 aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

Use **Think-Pair-Share** to ask:

**How do the text features help to clarify complex terms on this page?**

*The text features help to clarify complex terms because there are text bubbles that provide the definitions of the terms succumb and resin.*

**Remember that an analogy is a comparison between two like things.**

**What analogy does the author make in the first paragraph that helps to clarify why tar pits were hazardous? How does this help the reader?**

*The author makes an analogy by comparing the tar pits to treacherous glue traps. This helps me to visualize what it would be like for the giant prehistoric animals to be caught in the tar pits.*

2. Explain to students that authors of science texts frequently use analogies to help clarify complex processes, ideas, or terms within the text. This assists the reader in clarifying difficult concepts through comparisons and analogies that the reader can relate to and understand.
3. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read page 36, (paragraph 1), adding notes to the graphic organizer as they read.

Use **Random Reporter** to debrief.

4. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

Use **Random Reporter** to debrief. Add student responses to the graphic organizer.

**Teacher:** Read aloud.

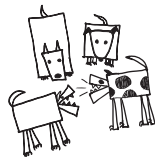
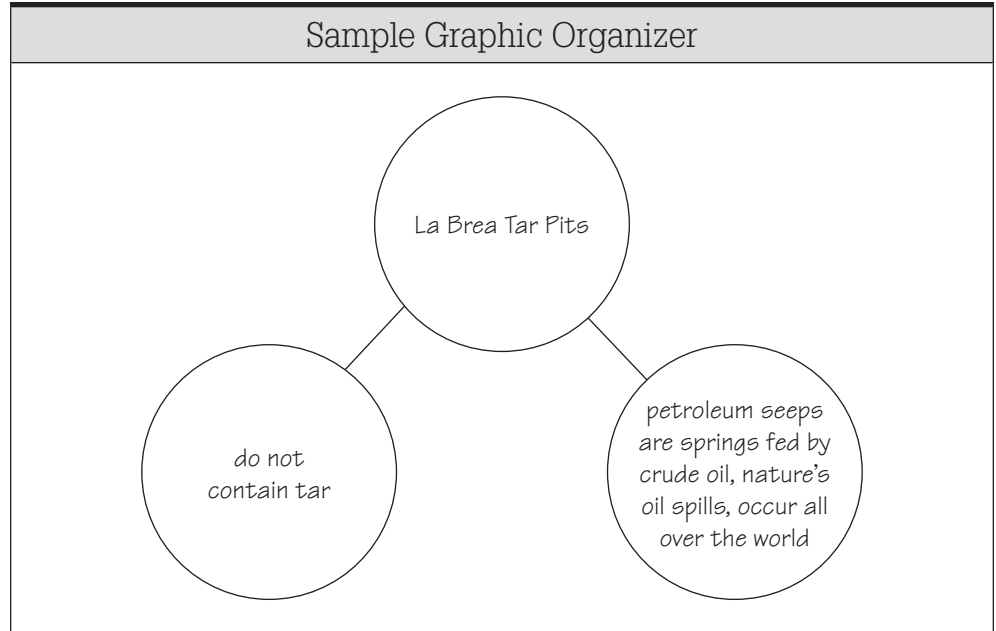
**Students:** Practice the skill or strategy.



**Partner pairs:** Read aloud/think aloud with the next passage to practice the skill or strategy.



**Partner pairs:** Review, reread to clarify, and add to the graphic organizer.



## Teamwork tp

(20–30 minutes)

Cue students to use their student routines for partner reading, word power, fluency, and the TIGRRS process.

### Partner Prep

1. Explain, or review if necessary, the student routines for partner reading, word power, fluency, and the TIGRRS process before having students read and restate: sr  
**pages 37 (starting at section “From Goo to Oil: It’s All Natural”)–39 aloud with partners.**
2. Circulate and check for comprehension, evidence of strategy use, and use of the TIGRRS process, for example, restating ideas on the graphic organizer. Give students feedback. Prompt and reinforce their discussions.
3. If some partners finish ahead of their teammates, have them begin looking over the Team Talk questions.

### Team Discussion

1. Explain, or review if necessary, how to use role cards and the student routines for strategy use and Team Talk discussion. sr
2. Remind students to use the rubrics on their team folders to prepare each team member to discuss the team’s strategy use, oral and written Team Talk responses, word power, and fluency. Each team member must be able to summarize the text and discuss the team’s graphic organizer/notes during Class Discussion as indicated.

Cue students to use their student routines for strategy use and Team Talk discussion.

3. Preview the Team Talk questions. If necessary, ask questions to guide students' reflection as they determine the meaning of the "(Write)" question.

### Team Talk Questions

1. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **(Write) [CV, SA]** (strategy-use rubric)

*Answers will vary.*

*100 = I stopped to clarify the word percolates because it was important to understanding what happens in Figure 1. There were context clues in the sentence because it says that crude oil percolates up, so percolates must mean some kind of movement. I checked the dictionary, and percolates means trickles through a filter. This helped me understand that crude oil trickles up through the holes in reservoir rocks and collects there.*

*90 = I stopped to clarify the word percolates because it was important to understanding what happens in Figure 1. There were context clues in the sentence because it says that crude oil percolates up, so percolates must mean some kind of movement. I checked the dictionary, and percolates means trickles through a filter.*

*80 = I stopped to clarify the word percolates because it was important to understanding what happens in Figure 1.*

2. How does crude oil form? **[MI, SA]** (Team Talk rubric)

*100 = Crude oil forms in a process that starts with solar energy and takes millions of years. **The text states that the energy from crude oil comes from solar nuclear energy, which plants convert to chemical energy through photosynthesis. Animals eat the plants, absorbing their energy, and pass it to other creatures in the food chain. Ancient marine organisms that possessed the energy were buried under the sediments on the bottom of oceans. Heat and pressure changed them into kerogen, which is a waxy substance that turns to crude oil. The formation of oil is a process that involves energy passed along a food chain and then locked in sediments for millions of years under heat and pressure.***

*90 = Crude oil forms in a process that starts with solar energy and takes millions of years. Energy from crude oil comes from solar nuclear energy, which plants change to chemical energy. Animals eat the plants, take in their energy, and pass it to other creatures in the food chain. Sea animals with the energy were buried under the sediments on the bottom of oceans and finally changed to crude oil.*

*80 = Crude oil forms in a process that starts with solar energy and takes millions of years.*

*continued*

Team Talk Questions *continued*

3. "Asphalt takes a long time to weather away. It's a long term parking lot of chemical energy, a cul-de-sac in the food chain."

What does this mean, and what did you use to help you clarify this passage? Support your answer with information from the text. **[CV, SA]** (strategy-use rubric)

*100 = The passage means that natural asphalt is very difficult to break down and is a long-term parking place for chemical energy. To clarify the passage, I had to reread and check the definition of a cul-de-sac. I reread the text slowly and realized that the chemical energy is stored in the natural asphalt for a long time, since it takes so long to break down. I also pictured what was happening in the text in my mind. Figuring out the analogy the author was using helped me understand that asphalt truly is a dead end in the food chain. The energy is locked up in it.*

*90 = The passage means that natural asphalt is very difficult to break down and is a parking place for chemical energy. To clarify the passage, I had to reread and check the definition of a cul-de-sac. I reread the text slowly and realized that the chemical energy is stored in the natural asphalt for a long time, since it takes so long to break down. I also pictured what was happening in the text in my mind.*

*80 = The passage means that natural asphalt is very difficult to break down and is a parking place for chemical energy.*

4. What graphic organizer did you use to make notes concerning the refining of oil? Explain how making notes on your graphic organizer helped you better understand this process. **[MI, RE, SA]** (graphic organizer rubric)

*100 = I used a sequence chain to make notes on the process of refining oil. I made notes of the steps in the process: 1) crude oil pumped into boiler 2) lighter hydrocarbons sent to distilling unit 3) separated into petrol. prod. like gasoline and kerosene 4) heavy hydrocarbons go to cracking unit—break down into heat and chemicals 5) left over: coking unit-solid carbon. Making notes helped me clarify the steps in the process that changes crude oil that comes out of the ground into usable products.*

*90 = I used a sequence chain and made notes of the steps in the refining process: 1) crude oil pumped into boiler 2) lighter hydrocarbons sent to distilling unit 3) separated into petrol. prod. like gasoline and kerosene 4) heavy hydrocarbons go to cracking unit—break down into heat and chemicals 5) left over: coking unit-solid carbon.*

*80 = I used a sequence chain and made notes of the steps in the refining process.*

5. Choose a word from the vocabulary list, and write a meaningful sentence using the word correctly. **[CV]**

*Accept a sentence that shows the student knows the meaning of the word and can use it correctly. For example: The blanket was constructed of organic cotton fibers.*

4. Have students thoroughly discuss Team Talk questions before they write individual answers to the skill question marked "(Write)." Allow students to revise their written answers after further discussion if necessary.

Cue students to discuss strategy use, graphic organizers, and word power journals.

**Randomly select team representatives who will share:**

- strategy use
- oral and written Team Talk responses
- word power discussions
- fluency selection



Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

5. Prompt teams to discuss comprehension problems and strategy use (their sticky notes), important ideas that they added to their graphic organizers, and words that a team member added to the word power journal.
6. Circulate and give feedback to teams and students. Use rubrics to give specific feedback. Ask questions to encourage further discussion. Record individual scores on the teacher cycle record form.
7. If some teams finish ahead of others, have them practice their fluency.
8. Award team celebration points for good team discussions that demonstrate 100-point responses.



## Class Discussion tp

(20 minutes)

### Lightning Round

1. Use **Random Reporter** to have teams share strategy use, oral and written Team Talk responses, word power discussions, and fluency. Ask other teams to agree, disagree, or add on to responses.
2. Use rubrics to evaluate responses and give specific feedback. Award team celebration points for 100-point responses. Record individual scores on the teacher cycle record form.

### Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

## Lesson 4

**Reading Objective:** Use strategies to clarify complex text.

### Teacher Background

In today’s reading, students will read a play about a group of science classmates assigned the task of designing and drawing a car for the future that doesn’t rely on petroleum. The students quickly realize how pervasive petroleum is and how virtually all automotive parts are constructed with petroleum ingredients in some capacity.

#### Teacher’s Note:

Use the Interactive Read Aloud if your students need additional support. Otherwise, build background, and then go directly to teamwork. Adjust partner reading page numbers accordingly.

Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don’t know this word; it’s totally new to me.

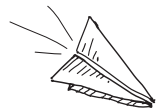
Teams discuss their vocabulary ratings.



Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the reading objective.



## Active Instruction tp

(15–25 minutes)

### Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they rerate their knowledge of each vocabulary word as they arrive for class.
2. Spot check the Read and Respond homework.

### Vocabulary

1. Have teams discuss their ratings of the words. Ask teams to make a tent with their hands when they are ready to tell a word the entire team rated with a “+” and a word the entire team rated with a “?”.
2. Use **Random Reporter** to have the teams share one word that they know and one word that they need to study further. Use **Random Reporter** to have teams report on a new sentence using a vocabulary word. Award team celebration points.
3. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.

### Set the Stage

1. Ask students to review their team’s goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and reading objective.

Refer students to pages 40–42 in the text.



Students begin the TIGRRS process by predicting the topic and author's intent and choosing a graphic organizer.

(Optional) Build background about the search for alternative fuel sources.



**Teacher:** Read aloud.

**Students:** Practice the skill or strategy.



4. Have teams discuss and report on their preview of the text and explain their thinking. Use **Random Reporter** to share team responses.

**T:** Finding oil alternatives

**I:** To inform the reader about alternatives to oil

**G:** Web

(Optional) Continue the video that was introduced in yesterday's lesson, to build background on alternative fuel sources:

PBS Learning Media: "Interpreting Data: A Different Kind of Fuel," Part 2 (3 min. 21 sec.) (start video at 2 min. 48 sec.)

[www.pbslearningmedia.org/content/vt107.la.rv.text.lpfuel/#content/4dd2f7f1add2c73bce0039a3](http://www.pbslearningmedia.org/content/vt107.la.rv.text.lpfuel/#content/4dd2f7f1add2c73bce0039a3)

Use **Think-Pair-Share** to ask:

**What is a catalyst?**

*A catalyst is something that increases the chemical reaction of two or more forces.*

**What are the benefits of "artificial photosynthesis," and how are researchers trying to harness hydrogen through this process?**

*The benefits of artificial photosynthesis are that it could produce much more energy than solar power alone, and it would produce hydrogen that would not be converted to electrical power. Researchers are trying to recreate the structure of leaves artificially to produce artificial photosynthesis.*

### Interactive Read Aloud

1. Read page 40 aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

Use **Think-Pair-Share** to ask:

**What does the word *polymerization* mean, and how did you clarify this term?**

*Polymerization is the process chemists use to turn petroleum into plastic. They use heat and pressure to combine small molecules in petroleum into long chains of molecules—plastic. I clarified this term by reading on in the text and using visualization to pick the chains of molecules changing in my mind.*

**Using what you now know about plastic and petroleum, do you think the students' assignment will be as easy as they had thought? Why or why not?**

*I think their assignment will be harder than they thought because they didn't realize that petroleum is used to make so many different products, including plastic. So, it will be difficult to make a car that doesn't contain petroleum.*

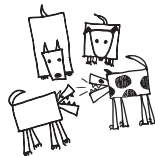
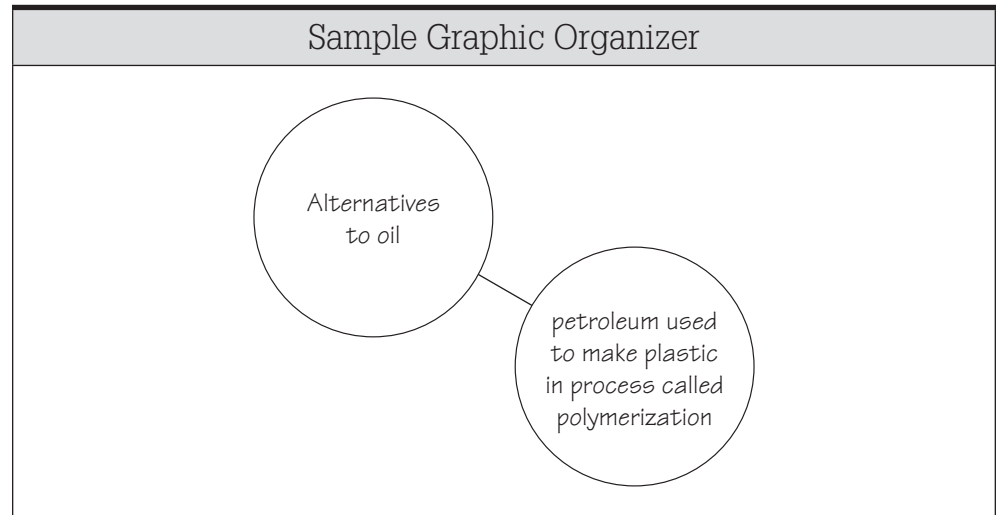
**Partner pairs:** Read aloud/think aloud with the next passage to practice the skill or strategy.



**Partner pairs:** Review, reread to clarify, and add to the graphic organizer.

2. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read page 41, adding notes to their graphic organizer as they read. Use **Random Reporter** to debrief.
3. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers. Use **Random Reporter** to debrief. Add student responses to the graphic organizer.

A sample graphic organizer follows.



## Teamwork tp

(20–30 minutes)

Cue students to use their student routines for partner reading, word power, fluency, and the TIGRRS process.

### Partner Prep

1. Explain, or review if necessary, the student routines for partner reading, word power, fluency, and the TIGRRS process before having students read and restate: **Sr**  
**page 42 aloud with partners.**
2. Circulate and check for comprehension, evidence of strategy use, and use of the TIGRRS process, for example, restating ideas on the graphic organizer. Give students feedback. Prompt and reinforce their discussions.
3. If some partners finish ahead of their teammates, have them begin looking over the Team Talk questions.

Cue students to use their student routines for strategy use and Team Talk discussion.

### Team Discussion

1. Explain, or review if necessary, how to use role cards and the student routines for strategy use and Team Talk discussion. **Sf**
2. Remind students to use the rubrics on their team folders to prepare each team member to discuss the team's strategy use, oral and written Team Talk responses, word power, and fluency. Each team member must be able to summarize the text and discuss the team's graphic organizer/notes during Class Discussion as indicated.
3. Preview the Team Talk questions. If necessary, ask questions to guide students' reflection as they determine the meaning of the "(Write)" question.

#### Team Talk Questions

1. Identify three objects in your classroom that are made of petroleum-based products. Cite evidence from the article to support your answer. **[DC, SA]** (Team Talk rubric)

*Answers will vary.*

*100 = The plastic parts of a backpack, an eraser, and the outside of the computer (computer case) are made of petroleum-based products. The **article** **explains** that through a process of polymerization, petroleum is made into other materials, including plastics. These objects were made from plastics, and so they come from petroleum.*

*90 = The plastic parts of a backpack, an eraser, and the outside of the computer (computer case) are made of petroleum-based products. Through a process of polymerization, petroleum is made into other materials, including plastics.*

*80 = The plastic parts of a backpack, an eraser, and the outside of the computer (computer case) are made of petroleum-based products.*

2. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **(Write) [CV, SA]** (strategy-use rubric)

*Answers will vary.*

*100 = I stopped to clarify the passage about bio-plastics, bio-rubber, and bio-fabrics because I didn't understand what they are. I reread the passage and saw that the examples in the text referred to corn, sugar cane, and vegetables, so I figured out that these materials are made of plants. That helped me understand the statement about scientists combining molecules of carbon and hydrogen to make new materials.*

*90 = I stopped to clarify the passage about bio-plastics, bio-rubber, and bio-fabrics because I didn't understand what they are. I reread the passage and saw that the examples in the text referred to corn, sugar cane, and vegetables, so I figured out that these materials are made of plants.*

*80 = I stopped to clarify the passage about bio-plastics, bio-rubber, and bio-fabrics because I didn't understand what they are.*

*continued*

Team Talk Questions *continued*

3. Why do you think the teacher gave the students this assignment, and what did they learn from it? Support your answer with information from the text.

**[DC, RE, SA]** (Team Talk rubric)

*100 = I think the teacher gave the students this assignment to help them realize how many products are petroleum-based. For example, at the beginning of the assignment, the students thought it would be easy to design a car that does not rely on petroleum. However, they quickly learned that almost everything on a car is petroleum-based, and they were very surprised. Jimmy says, "It seems like petroleum-based products are all around us." So, the teacher gave the students this assignment to help them learn how many products are actually petroleum-based.*

*90 = I think the teacher gave the students this assignment to help them realize how many products are petroleum-based. The students thought it would be easy to design a car that doesn't use petroleum, but they quickly saw that almost everything on a car is petroleum-based, and they were very surprised.*

*80 = I think the teacher gave the students this assignment to help them realize how many products are petroleum-based, and that's what they learned.*

4. Write a summary of the text you read today. **[MI]** (summary rubric)

*100 = This article uses a play to describe a school assignment in which students must design a car for the future that does not rely on petroleum-based products. Through this assignment, the students learn that a vast number of products are petroleum-based or use petroleum in some capacity. For example, all rubber and plastic materials are petroleum-based. So, through this article, I learned that petroleum-based products are much more prevalent than I, or the students in this play, thought.*

*90 = This article uses a play to tell about a school assignment in which students must design a car for the future that does not use petroleum-based products. Through this assignment, the students learn that a huge number of products are petroleum-based, such as anything made of rubber or plastic.*

*80 = This article is a play about students who learn the different products that are petroleum-based or use petroleum in some way, like rubber and plastic.*

5. What is a synonym for *demise*? What is an antonym for *demise*? **[CV]**

*A synonym for demise is death. An antonym for demise is birth.*

4. Have students thoroughly discuss Team Talk questions before they write individual answers to the skill question marked "(Write)." Allow students to revise their written answers after further discussion if necessary.
5. Prompt teams to discuss comprehension problems and strategy use (their sticky notes), important ideas that they added to their graphic organizers, and words that a team member added to the word power journal.
6. Circulate and give feedback to teams and students. Use rubrics to give specific feedback. Ask questions to encourage further discussion. Record individual scores on the teacher cycle record form.

Cue students to discuss strategy use, graphic organizers, and word power journals.

**Randomly select team representatives who will share:**

- strategy use
- oral and written Team Talk responses
- word power discussions
- fluency selection



Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

7. If some teams finish ahead of others, have them practice their fluency.
8. Award team celebration points for good team discussions that demonstrate 100-point responses.



## Class Discussion tp

(20 minutes)

### Lightning Round

1. Use **Random Reporter** to have teams share strategy use, oral and written Team Talk responses, word power discussions, and fluency. Ask other teams to agree, disagree, or add on to responses.
2. Use rubrics to evaluate responses and give specific feedback. Award team celebration points for 100-point responses. Record individual scores on the teacher cycle record form.

### Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

## Lesson 5

**Writing Objective:** Support a claim with facts and data.

### Teacher Background

For this writing project, students will be writing to explain the dependency our culture has on petroleum and why this dependency is a concern.

Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams discuss their vocabulary ratings.

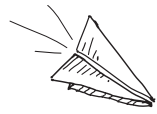


Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the writing objective.

Introduce the writing project.



## Active Instruction tp

(10 minutes)

### Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they rerate their knowledge of each vocabulary word as they arrive for class.
2. Spot check the Read and Respond homework.

### Vocabulary

1. Have teams discuss their ratings of the words. Ask teams to make a tent with their hands when they are ready to tell a word the entire team rated with a “+” and a word the entire team rated with a “?”.
2. Use **Random Reporter** to have the teams share one word that they know and one word that they need to study further. Use **Random Reporter** to have teams report on a new sentence using a vocabulary word. Award team celebration points.
3. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.

### Set the Stage

1. Ask students to review their team’s goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and writing objective.
4. This writing project requires students to analyze the information they have read and to use the facts and data presented in the text to describe the dependence our country has on petroleum as an energy source. Students will also explain why this is concerning, supporting their claim with facts and data from the text.
5. Refer students to the following writing prompt in their student editions. Read the writing prompt aloud.

Read the prompt aloud.



**Writing Prompt**

Using the information you have read in the text, consider the following: How dependent on petroleum is our country, and why is this concerning? Explain, using facts and terms from the text to support your answer.

Use **Think-Pair-Share** to ask:

**Read the prompt. What is it asking you to do: support a claim with reasons, explain ideas or information on a topic, or write a literary response? How do you know?**

*Support a claim with reasons, because we are stating how dependent the United States is on petroleum.*

Students identify the purpose for writing.

- Refer students to the following writer’s guide in their student editions. Point out that this Writing to Support a Claim with Reasons writing guide is the criteria for writing. Point out that using the writer’s guide will help them write a quality response.

Refer students to the appropriate writer’s guide in their student editions.

Writing to Support a Claim with Reasons	
<b>Ideas</b>	<ul style="list-style-type: none"> <li>Clearly state a position (claim) and include good reasons that support that position.</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>Begin by stating a position (claim).</li> <li>In the middle, tell supporting reasons.</li> <li>End with a closing statement.</li> </ul>
<b>Style</b>	<ul style="list-style-type: none"> <li>Use words and phrases that help the audience see how the reasons are related to the claim.</li> </ul>
<b>Mechanics</b>	<ul style="list-style-type: none"> <li>Use correct punctuation, capitalization, spelling, and grammar.</li> </ul>

Highlight the writing objective.

Briefly review the guide, noting the four aspects of writing: ideas, organization, style, and mechanics.

Use **Think-Pair-Share** to ask:

**Which guideline relates to our writing objective: support a claim with facts and data?**

*Organization, because we are including facts and data to support our claim.*

- Tell students that this 10-minute writing project is practice to prepare them to write a quality answer for the writing section (part II) of the cycle test. Remind them that this section of the test is worth one third of their test score.

Model planning reviewing and editing a paragraph.

Blackline master provided.

### Model a Skill

Remind students that the first step in the writing process is planning, or prewriting. Model using the writing prompt and writer's guide to create a prewriting graphic organizer. Point out that planning helps them organize their ideas and makes drafting easier.

Review the following paragraph with students:

People rely too much on computers. Over eighty-eight percent of American homes have computers and use them an average of three hours a day. But my mom uses her computer all day. People should get outside more to lower obesity. If data on the computer is lost, there is no way to get it back. For these reasons, people rely too much on computers.

Have students determine if the facts and data included in the paragraph support the claim, giving an explanation that supports their thoughts. Students should note that the statements are opinions, not facts supported by data. Introduce the following data and statistics:

- E-mail now makes up eighty-four percent of all interpersonal communications.
- Researchers advise taking a technological vacation at least once a week for three to four hours to reduce stress and eye strain from computer use.
- Permanently lost and unrecoverable data, including worksheets, pictures, and videos, occurs on an average of four to five times in the life of a computer (average computer life is four years).

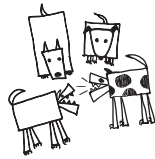
Ask students if these statements better support the claim and why. Students should note that these statements include statistics and data that is measurable and relevant. Have students rewrite the paragraph to include these supporting facts.

Revised Paragraph:

People rely too much on computers. Over eighty-eight percent of American homes have computers and use them an average of three hours a day. E-mail now makes up eighty-four percent of all interpersonal communications. Researchers advise taking a technological vacation at least once a week for three to four hours to reduce stress and eye strain from computer use. Permanently lost and unrecoverable data, including worksheets, pictures, and videos, occurs on an average of four to five times in the life of a computer (average computer life is four years). For these reasons, people rely too much on computers.

Blackline master provided.

Have students explain which paragraph supports the claim more effectively and why.



## Teamwork tp

(20 minutes)

Students write for 10 minutes.

Monitor discussions as partners and teams give feedback.

Students revise and edit their writing projects.

### Independent Work

Tell students that they have 10 minutes to plan and write drafts of their responses to the writing prompt. Remind them to write on every other line to leave room for revisions. Suggest that they refer to the writing prompt to be sure that they include all the required elements and to the writer's guide to check the quality of their response.

### Team Discussion

1. Refer students to the peer feedback checklist in their student editions, and review how to get/give feedback.
2. Have students share their drafts in teams. Allow 5 minutes for students to revise their writing projects based on feedback and to edit them using the editing checklist in their student editions.
3. Have teams put their writing projects in a pile in the middle of their tables so a writing project can be randomly selected.



## Class Discussion tp

(30 minutes)

Display and evaluate randomly selected writing projects using the writer's guide.

### Lightning Round

Randomly select a writing project from one or two teams' piles without revealing their authors. Display a writing project, and read it aloud.

Refer students to the writer's guide for writing to support a claim with reasons and the writing objective—support a claim with facts and data.

Using the writer's guide, discuss and evaluate the selected writing project(s) with the class.

For example, ask:

- **Does the writer state the claim clearly?**
- **Does the writer include facts and data to support the claim?**
- **Does the writer end with a closing statement that supports the information?**
- **Does the writer use appropriate academic language and full sentences?**

Award points to teams whose writing projects meet the criteria. Record these points on the team poster.

### Reflection on Writing

Have students reflect on their use of the writing process. Ask:

**How did creating and using a graphic organizer work for you? How did it help you write your draft?**

*Answers will vary.*

**What was the most useful feedback that you received? How did it affect your revisions?**

*Answers will vary.*

**Did you find it easy or difficult to include facts and data to support the claim? Do you think the support was effective?**

*Answers will vary.*

### Celebrate

Celebrate team successes!

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

The top team chooses a cheer.

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.

Remind students of the Read and Respond homework assignment.

2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

People rely too much on computers. Over eighty-eight percent of American homes have computers and use them an average of three hours a day. But my mom uses her computer all day. People should get outside more to lower obesity. If data on the computer is lost, there is no way to get it back. For these reasons, people rely too much on computers.

People rely too much on computers. Over eighty-eight percent of American homes have computers and use them an average of three hours a day. E-mail now makes up eighty-four percent of all interpersonal communications. Researchers advise taking a technological vacation at least once a week for three to four hours to reduce stress and eye strain from computer use. Permanently lost and unrecoverable data, including worksheets, pictures, and videos, occurs on an average of four to five times in the life of a computer (average computer life is four years). For these reasons, people rely too much on computers.

## Writing Prompt

Using the information you have read in the text, consider the following: How dependent on petroleum is our country, and why is this concerning? Explain, using facts and terms from the text to support your answer.

Writing to Support a Claim with Reasons	
<b>Ideas</b>	<ul style="list-style-type: none"> <li>Clearly state a position (claim) and include good reasons that support that position.</li> </ul>
<b>Organization</b>	<ul style="list-style-type: none"> <li>Begin by stating a position (claim).</li> <li>In the middle, tell supporting reasons.</li> <li>End with a closing statement.</li> </ul>
<b>Style</b>	<ul style="list-style-type: none"> <li>Use words and phrases that help the audience see how the reasons are related to the claim.</li> </ul>
<b>Mechanics</b>	<ul style="list-style-type: none"> <li>Use correct punctuation, capitalization, spelling, and grammar.</li> </ul>

## Lesson 6

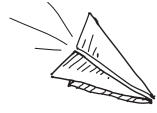
**Reading Objective:** Use strategies to clarify complex text.

**Writing Objective:** Support a claim with facts and data.

### Teacher Background

Today's cycle test challenges students to use strategies to clarify complex text.

Students will read about the various sources and extent of pollution in the world's oceans.



## Active Instruction

(5 minutes)

Students use the vocabulary study routine to rate their knowledge of each vocabulary word:

- + I know this word and can use it.
- ✓ This word looks familiar; it has something to do with...
- ? I don't know this word; it's totally new to me.

Teams review their cycle goal.

Post and present the reading and writing objectives.

Review Vocabulary Vault.

### Partner Vocabulary Study

1. Display the vocabulary words. Have students use the vocabulary study routine as they rerate their knowledge of each vocabulary word as they arrive for class.
2. Spot check the Read and Respond homework.

### Set the Stage

1. Ask students to review their team's goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Remind students of the texts, authors, and reading and writing objectives.
4. Remind teams that if they find a word from the vocabulary list used in another place, such as in a magazine, textbook, TV ad, etc., they can bring in or copy the sentence in which the word was used and put it in the Vocabulary Vault to earn team points.



## Prepare Students for the Test tp

(5 minutes)

tps

### Partner Review

1. Remind students that they have been practicing using strategies to clarify complex text and supporting a claim with facts and data.

Use **Think-Pair-Share** to ask:

**What do you do if you encounter a passage, specific sentence, or term that is complex and confusing?**

*I use the clarification strategies we have used in this cycle, such as read on, use the context, use a dictionary, etc.*

Tell students that they will use this skill as they take the cycle test.

2. Have partners review their notes and word power journals for this cycle. Allow 2 or 3 minutes for this activity.

### Test Directions

1. Remind students that the test is independent work. Students should not ask their partners for help as they read, but they may use sticky notes if they would like.
2. Distribute the test so students can preview the questions. Point out that some of the test questions are multiple choice for which they will choose the best answer. Other questions require them to write a short answer or create a graphic organizer. Part II of the cycle test requires them to write a long answer. Remind them that their writing project was practice for writing the long answer for part II of the test.
3. Point out that questions #2 and #3 ask about clarifying complex text.
4. Ask students to identify key words or phrases in question #3.

- |   |
|---|
| <ol style="list-style-type: none"> <li>3. Explain the meaning of the phrase “nominal amount,” and describe the strategies you used to clarify this phrase. <b>[CV, SA]</b></li> </ol> |
|---|

5. Introduce the text that students will read. Tell what it is about, but do not give additional information or details.

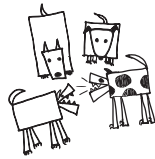
**Today you will read about pollution in the world’s oceans.**



## Test tp

(30 minutes)

Tell students that they have 30 minutes for the test and that they may begin. Give students a 5-minute warning before the end of the test.



## Teamwork tp

(10 minutes)

Teams discuss the answers to the test questions.

### Team Discussion

1. Pass out a colored pen to each student.
2. Explain or review, if necessary, the student routine for team discussions after the test.
3. Have teams discuss their answers to the test questions. As you monitor team discussions, ask additional questions to prompt their thinking about the important ideas in the reading and about the skills and strategies that they have been using.



## Class Discussion tp

(10 minutes)

Random Reporters share team discussion of a test question.



### Lightning Round

1. Use **Random Reporter** to have teams share team discussions of the test questions and explain their thinking.
2. Award team celebration points.
3. Collect test answers. Score original answers, and add extra points for improved answers.

### Celebrate

1. Tally the team scores on the poster, and celebrate teams that are accumulating points. Have teams reflect on the following questions:

**How many points did your team earn today?**

**How can your team earn more points?**

Remind students that top-scoring teams will earn bonus points that will be added to their cycle scores.

- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.

2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

## Cycle 2 Test

## Clarify Complex Text

**Directions:** Read *Oil Spill!* page 19. Use the TIGRRS process, and answer the following questions on a separate piece of paper.

Some of the questions are based on today's reading, and other questions are about the text that you read in previous lessons. You may refer to your notes from this cycle.

**Part I. Comprehension** (100 points)

1. What is the topic?

*5 points = Pollution in the world's oceans.*

What is the author's intent?

*5 points = To inform the reader about ocean pollution.*

Write a short summary of the text. Include the graphic organizer or notes that you used to organize the information and your thoughts. **[MI, AP]**

*10 points = This article explains how oil spills and other factors contribute to the pollution of the world's oceans. One of these contributing factors is natural seepage, which is caused by oil leaking into the oceans from natural deposits within the earth. Runoff pollution occurs from commercial sources such as storage facility leaks, industrial and municipal waste, and from oil dumping in storm drains, trash cans, and on the ground. Aging oil pipelines and sunken, decomposing oil tankers also pollute oceans by leaking oil. All of these sources contribute to the pollution of the earth's oceans.*

2. What is a word, phrase, or passage in today's reading that you clarified? Explain which clarifying strategies you used to figure out the word, phrase, or passage. Explain how figuring out the word, phrase, or passage helped you better understand the text. **[CV, SA]**

*Answers will vary.*

*20 points = A phrase from the text that I needed to clarify was "natural seepage" because I couldn't picture it. To clarify this term, I used clues in the text, visualization, and familiar terms to help me. For example, the text explains that natural seepage is oil that leaks from natural deposits. Also, I recognize the word natural and know that it relates to something that originates from nature. I visualized the oil leaking from deposit sources beneath the ocean, and it helped me imagine what natural seepage would look like.*

15 points = A phrase from the text that I needed to clarify was “natural seepage” because I couldn’t picture it. I used clues from the text, visualization, and familiar terms to help me. I learned from the text that natural seepage is oil that leaks from natural deposits. Also, I know that the word natural means having to do with nature.

10 points = A phrase from the text that I needed to clarify was “natural seepage” because I couldn’t picture it.

3. Explain the meaning of the phrase “nominal amount,” and describe the strategies you used to clarify this phrase. **[CV, SA]**

20 points = The phrase “nominal amount” refers to a miniscule quantity, and I used the text features and my background knowledge to assist me in clarifying this phrase. The text states that the oil from oil spills amounts to a nominal amount compared to the overall pollution. The author includes information in parentheses that explains that oil spills represent only 15.5 percent of the ocean pollution globally and 4.7 percent in North America. I know that is a very low amount, so that helped me to clarify that “nominal amount” refers to a tiny quantity.

15 points = The phrase “nominal amount” means a tiny amount, and I used the text features to help me with this phrase. The information in parentheses tells that oil spills make up only 15.5 percent of the ocean pollution globally and 4.7 percent in North America. I know that is a very small amount.

10 points = The phrase “nominal amount” means a small amount.

4. What pollution source is responsible for nearly half of the yearly oil that enters the world’s oceans? How do you know? Support your answer with information from the text. **[DC, SA]**

20 points = **The pollution source that is responsible for nearly half of the yearly oil that enters the world’s oceans is natural seepage, which is oil that leaks from natural deposits. The text states that a yearly average of 375 million gallons of oil enters the ocean’s water, and that nearly half of that amount is from natural seepage. The rest of the oil is from man-made pollution sources.**

15 points = **Nearly half of the yearly oil that enters the world’s oceans is from natural seepage, which is oil that leaks from natural deposits. A yearly average of 375 million gallons of oil enters the ocean’s water, and nearly half of that amount is from natural seepage.**

10 points = **Nearly half of the yearly oil that enters the world’s oceans is from natural seepage.**

5. What is the author's purpose in writing this article, and why is it included in this magazine? Support your answer with information from the text.  
[AP, DC, SA]

20 points = *The author's purpose in writing this article is to explain the various sources of ocean pollution, and it is included in this magazine to show that there are other sources of ocean pollution besides oil spills. For example, the author states that oil spills actually account for only a small portion of the overall ocean pollution. There are many other sources of ocean pollution, including oil runoff, natural seepage, leaking crude-oil pipelines, and sunken, decomposing oil tankers. Even a massive oil spill like the Deepwater Horizon contributes less pollution than other sources.*

15 points = *The author's purpose in writing this article is to tell where ocean pollution comes from, and it is included in this magazine to show that there are other sources of ocean pollution besides oil spills. The text says that oil spills make up only a small part of the overall ocean pollution. There are many other sources of ocean pollution, including oil runoff, natural seepage, leaking crude-oil pipelines, and sunken, decomposing oil tankers.*

10 points = *The author's purpose in writing this article is to tell where ocean pollution comes from, and it is included in this magazine to show that there are other sources of ocean pollution besides oil spills.*

### Part II. Writing (100 points)

Write at least a paragraph to answer the following question:

Analyze this statement: The ocean pollution problem could be solved by simply powering cars and heating homes with alternative fuel sources. Does the information in the text support this statement? Why or why not? Explain, using support from the text.

*The information in the text does not support the statement that the ocean pollution problem could be solved by simply powering cars and heating homes with alternative fuel sources, as there are other sources of ocean pollution. For example, the text states that even if people stopped using oil as a source of energy, there would still be ocean pollution from oil. The reasons for this are that there are sunken, decomposing oil tankers that are leaking oil as they sit on the bottom of the ocean floor. The text further explains that there are hundreds of sunken World War II oil tankers, some fully loaded, that are decomposing, as well as over a thousand shipwrecks in the Pacific Ocean, of which an unknown number are tankers. Additionally, in the North Atlantic, there are 452 sunken oil tankers. Another source of pollution is aging oil pipelines, which many countries can't afford to maintain. For these reasons, the text does not support the statement that the ocean pollution problem could be solved by simply powering cars and heating homes with alternative fuel sources.*

The following guide is used to score part II of the cycle test.

Writing to Inform or Explain		
<b>Ideas</b>	<ul style="list-style-type: none"> <li>Clearly introduces the topic</li> <li>Develops the topic with relevant details</li> </ul>	<b>0–25 pts.</b>
<b>Organization</b>	<ul style="list-style-type: none"> <li>Begins by introducing the topic</li> <li>In the middle, provides facts, examples, or events that help a reader understand the information</li> <li>Ends with a closing statement that supports the information</li> </ul>	<b>0–25 pts.</b>
<b>Style</b>	<ul style="list-style-type: none"> <li>Uses words and phrases that help a reader understand how the facts or events are related</li> <li>Includes details or examples that help a reader make a mind movie</li> </ul>	<b>0–25 pts.</b>
<b>Mechanics</b>	<ul style="list-style-type: none"> <li>Uses correct punctuation, capitalization, spelling, and grammar</li> </ul>	<b>0–10 pts.</b>
<b>Writing Objective</b>	<ul style="list-style-type: none"> <li>Support a claim with facts and data</li> </ul>	<b>0–15 pts.</b>

**Part III. Vocabulary** (100 points)

1. Write a meaningful sentence using the word *mediators*. **[CV]**

*Accept responses that show the student knows the meaning of the word and can use it correctly. For example: The teachers served as mediators between the student council and the administration.*

2. Use two vocabulary words in a question. **[CV]**

*After its demise, did the banana tree begin to decompose immediately?*

3. What is a synonym for the word *tolerate*? What is an antonym for the word *tolerate*? **[CV]**

*A synonym for the word tolerate is withstand. An antonym for the word tolerate is unaccepting.*

4. Electricity is an example of a \_\_\_\_\_ energy source, as it is present on earth.

Choose the word that belongs in the blank. **[CV]**

- A. thorough
- B. *terrestrial*
- C. territorial
- D. torrential

5. Write a meaningful sentence for the word *buoyancy*. **[CV]**

*Accept responses that show the student knows the meaning of the word and can use it correctly. For example: The cork was very light and had natural buoyancy in the water.*

6. Use two vocabulary words in a question. **[CV]**

*Do you know if that organic cotton blanket originates in Mexico?*

7. What is a synonym for the word *demise*? What is an antonym for the word *demise*? **[CV]**

*A synonym for the word demise is end. An antonym for the word demise is birth.*

8. This type of olive tree \_\_\_\_\_ from Greece, where it was grown to make olive oil.

Choose the word that belongs in the blank. **[CV]**

- A. alleviates
  - B. collaborates
  - C. orchestrates
  - D. originates
9. What is one word that you or your teammates explored in your word power journal this cycle? Give the meaning of this word, and then use it in a meaningful sentence. **[CV]**

*One word that my teammates and I explored this cycle was molecules, which means the smallest possible amount of a compound that has all the same characteristics of that compound. Our sentence is: Our science teacher showed us that sugar molecules are too small to be seen with a microscope.*

10. As used in the sentence “Booms corral the spill to let cleanup begin,” *corral* most nearly means— **[CV]**

- A. contain.
- B. compress.
- C. conduct.
- D. convert.

Explain how you figured out the meaning of *corral*.

*Students will explain their thinking. For example, I used the context. The passage talks about booms that are used to corral the spill, or contain the spill, so cleanup can begin.*

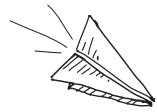
Question Codes			
<b>[DC]</b>	Make inferences; interpret data; draw conclusions.	<b>[AA]</b>	Analyze an argument.
<b>[SA]</b>	Support an answer; cite supporting evidence.	<b>[AP]</b>	Identify author’s intent or purpose.
<b>[MI]</b>	Identify the main idea that is stated or implied.	<b>[RE]</b>	Analyze relationships (ideas, story elements, text structures).
<b>[CV]</b>	Clarify vocabulary.	<b>[AC]</b>	Author’s craft; literary devices

# Lesson 7

**Reading Objective:** Use strategies to clarify complex text.

## Teacher Background

During Class Discussion, students orally present evaluations of their homework reading selections. During Teamwork, students use their Read and Respond notes and answers to the homework questions to make final preparations for these presentations. Team members share their responses and give one another feedback. During the oral presentations, students use their revised responses to the questions to describe the kind of texts they read, the strategies that helped them understand the text, and whether they will recommend their reading selections to others.



## Active Instruction tp

(20 minutes)

### Two-Minute Edit

1. Display and have students complete the Two-Minute Edit as they arrive for class.
2. Use **Random Reporter** to check corrections. Award team celebration points.

### Vocabulary

Ask teams if they have a Vocabulary Vault word that they would like to share. Award team celebration points.

### Set the Stage

1. Ask students to review their team’s goal for this cycle and assess their progress.
2. Review the Team Celebration Points poster, and challenge teams to build on their successes.
3. Have students get out their reading selections and Read and Respond forms. Remind them that today, with the help of their teams, they will each prepare a presentation about their individual reading selections.

Challenge students to think about the strategies and skills that they used to read their self-selected texts, share their answers to the Read and Respond questions, discuss their thinking, and prepare evaluations of their selections.

4. Remind students to add to the notes on their Read and Respond forms as they discuss their selections and prepare oral presentations about their selections. Students will use their answers to the questions on the Read and Respond form as the basis for their presentations.

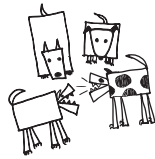
Two-Minute Edit



Vocabulary Vault

Teams review their cycle goal.

Connect the cycle objective to students’ homework reading selections.



# Teamwork tp

(25 minutes)

## Team Discussion

1. Tell students that they will use the Read and Respond questions as a guide as they discuss their homework reading and prepare evaluations of their reading selections to share with their teams.
2. As students prepare their answers, check in with those students for whom you do not have individual scores for graphic organizer/notes, written Team Talk responses, word power journal, and/or a fluency score. Have them show you examples from the cycle. Point out areas of success, and give feedback to improve student performance.
3. As you visit teams, take this opportunity to check students' homework for completion (Read and Respond forms). Enter the information on your teacher cycle record form.

Students prepare, share, and revise presentations about their reading selections.

Give students feedback on classwork.

### Teacher's Note:

Have students who are ready for a new selection take turns choosing reading material from the classroom library. Make sure that every student has a Read and Respond form for next cycle.

## Read and Respond Questions

1.	Is your selection informational or literature? Summarize your reading. (summary rubric)
2.	Why did you choose this reading? What is your purpose for reading? (Team Talk rubric)
3.	Choose a word, phrase, or passage that you did not understand at first. How did you figure it out? (strategy-use rubric)
4.	Write down a question that you had or a prediction that you made as you read. Were you able to answer or confirm it? Explain. (strategy-use rubric)
5.	Would you recommend this selection to others to read? State your opinion, and support it with reasons. (Team Talk rubric)
6.	Choose a short section of the text that you think is important or especially interesting. Tell your teammates why you chose it. Read it aloud smoothly and with expression. (fluency rubric)



# Class Discussion

(15 minutes)

Team responses and feedback



Teams report on their review of the texts and Read and Respond discussions.

Celebrate team successes!

Final tally for this cycle

Record team celebration points on the teacher cycle record form.

Collect Read and Respond forms for this cycle.

## Lightning Round

Use **Random Reporter** to have students present their evaluations of their homework reading selections (responses to the Read and Respond questions). Use rubrics to evaluate responses, give specific feedback, and award points.

## Celebrate

1. Tally up this cycle's points on the poster.
2. Tell students that their scored tests will be returned at the beginning of the next lesson. Poster points and the teams' test scores will determine which teams earn the status of super team, great team, or good team for the cycle.
3. Be sure to record each team's total celebration points from the poster into the teacher cycle record form. Remind students that team celebration points and team test averages are used to determine team scores.
4. Collect students' Read and Respond forms, and pass out new forms.
5. Tally up the number of Read and Respond signatures on students' forms, and record the number on the teacher cycle record form after class.

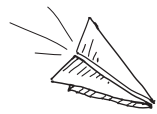
# Lesson 8

**Objective:** Celebrate successes, and set new goals. Hold a Class Council meeting.

## Teacher Background

In the first part of this lesson, students review their test results and their final scores for the cycle and compare them with their goals. They celebrate success and set new objectives for further improvement.

In the second part of the lesson, students participate in Class Council.



## Active Instruction tp

(2 minutes)

### Two-Minute Edit

1. Display and have students complete the Two-Minute Edit as they arrive for class.
2. Use **Random Reporter** to check corrections. Award team celebration points.



## Celebrate/Set Goals

(20 minutes)

1. Distribute students' scored cycle tests. Allow a few moments for students to review them.
2. Distribute team score sheets to teams and celebration certificates to students. Remind students that the cycle's top-scoring teams are determined by their points on the poster and their test scores.
3. Recognize and celebrate the super, great, and good teams. Remind the teams of the impact of bonus points that are added to team members' cycle scores.
4. Have each team discuss and set a goal for the next cycle and record it on their team score sheet. Use the questions below to analyze and discuss the students' scores.

**What was your team's highest score?**

**What score do you want to improve?**

**What can the team do to improve that score?**

Use **Random Reporter** to ask:

**What is your team's goal for the next cycle? Why did you choose that goal?**

*Accept supported answers.*

Two-Minute Edit



Distribute scored cycle tests.

Distribute team score sheets and celebration certificates.

Class celebration!  
Celebrate team successes with a class cheer.

Each team sets a team goal for the next cycle.



5. Use the poster to award team celebration points for responses that include the team's reasons for choosing the goal, thus beginning the accumulation of points for the next cycle.
6. Have students record their cycle test scores and their areas of greatest strength and improvement on their progress charts.



## Class Council

(30 minutes)



1. Share class compliments.
2. Review the class goal that was set at the last Class Council. Using the agreed-upon measure of progress, was the goal met? Why or why not?
3. Discuss a class concern, or use the scenario and discussion hints provided.
4. Have teams discuss and use **Random Reporter** to share responses.
5. After debriefing how they resolved the problem, help students set a goal and a measure of progress that they can use at the next Class Council.



## Brain Game

(5 minutes)

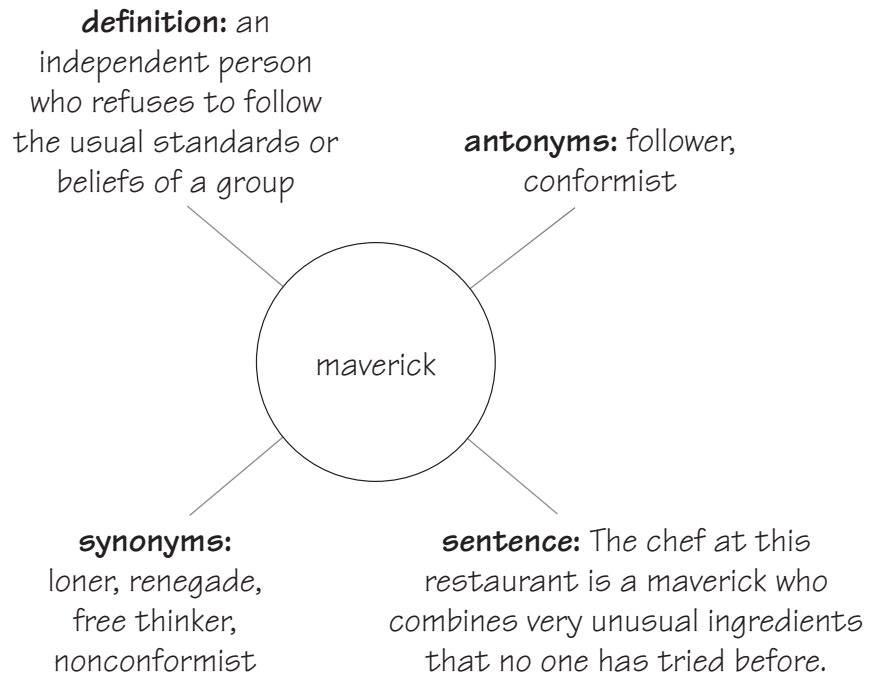
1. Choose a brain game from the card set, and then play the game.
2. Use the following questions to debrief and remind students of self-regulatory strategies:

**What did this game require your brain to do?**

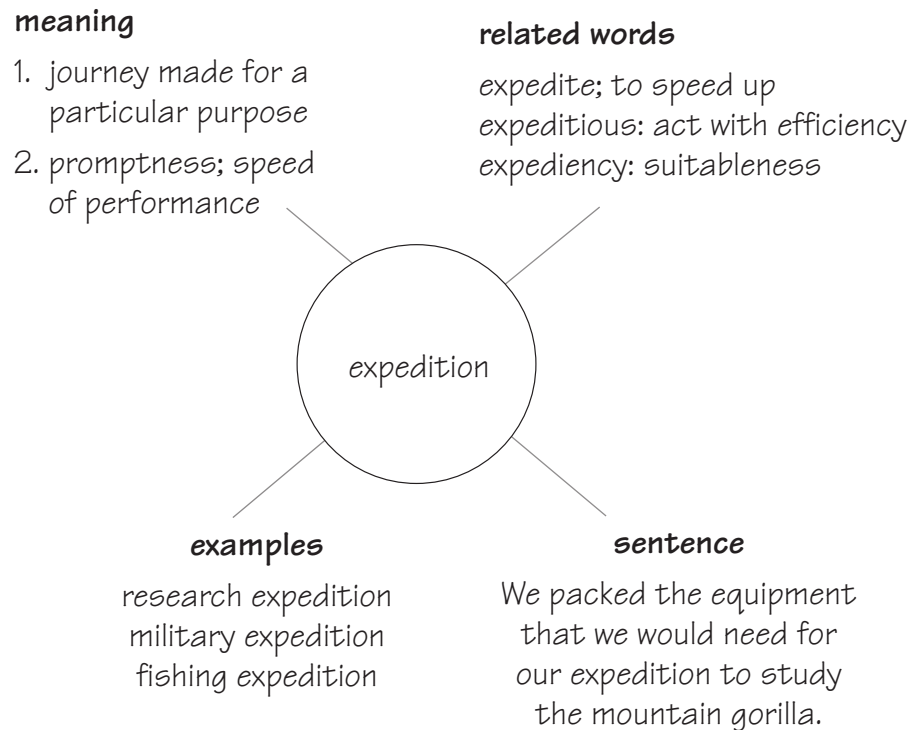
**How will use of this skill improve your success in other classes?**

Word Power Journal Sample Entries

**Sample Word Map  
Cycle 1**



**Sample Word Map  
Cycle 2**



## Common Core State Standards

The following Common Core State Standards are addressed in this unit.

Full program alignments can be found on the Reading Edge online resources.

Contact your SFA coach for more information.

### Level 7H Clarify Complex Text

#### **English Language Arts Standards » Reading: Informational Text**

##### **Craft and Structure**

RI.8.4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

#### **English Language Arts Standards » Science and Technical Subjects**

RST.6-8.4. Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics.

##### **Integration of Knowledge and Ideas**

RST.6-8.7. Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).

##### **Key Ideas and Details**

RST.6-8.1. Cite specific textual evidence to support analysis of science and technical texts.

#### **English Language Arts Standards: Writing**

##### **Writing Text Types and Purposes**

W.8.1-2. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.

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