



Informational

Make Predictions

Power Up!

Research

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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Make Predictions

Power Up!

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.

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

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

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

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

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

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

P

Unit Objectives

Reading: Use clues to make predictions.

Writing: State an opinion, and support it with reasons.

Unit Overview

The strategy focus for this unit is predicting. Students will preview magazine articles and use text features to make predictions about the topics and the ideas presented in them. They will also identify information that confirms their predictions. Predicting what information an author is going to present and identifying how it is organized will help students start to think about the ideas in the article, set up their notes, and improve their comprehension of the text.

Predicting

Informational Text

1. Before you read, ask:
What clues can help me predict what this text is about?
 - titles
 - headings
 - bold text
 - captions
 - sidebars
 - pictures
2. Use clues to predict the topic of the text. Be prepared to explain your thinking.
3. Can you confirm your prediction?

Literature

1. As you read, ask: What clues can help me predict what might happen?
 - setting
 - events
 - character's actions, thoughts, feelings
 - dialogue
2. Use clues to predict possible outcomes. Be prepared to explain your thinking.
3. Read on to find out if your prediction is confirmed.

You will refer students to the Predicting Strategy Card in their team folders. The Predicting Strategy Card is a tool that prompts your students to look for clues to help them predict what a text is about. Encourage students to use the Predicting Strategy Card throughout this unit and throughout the year to help them make predictions and identify clues, recognize information that confirms their predictions, and improve their comprehension of the text.

During the Lightning Round, use the strategy-use rubric to evaluate responses and give feedback.

Strategy Use The Random Reporter	
100	gives a 90-pt. response and explains how <u>the prediction</u> helped in better understanding the text.
90	gives an 80-pt. response and describes clues used to make the <u>prediction</u>.
80	identifies a <u>prediction</u> that a team member had about the text.

Unit Topic/Content

The text for this cycle is *Power Up!*, which is an issue of *AppleSeeds* magazine. The readings all relate to various kinds of energy, new sources of energy, and innovations and advancements related to energy use and production.

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.

Power Up!
(issue of
AppleSeeds
magazine)

At a Glance

Cycle 1		
Lesson	Text	Media
Lesson 1	pages 2 and 3, "Where Does Energy Come From?"	(Optional) Background video: "Fuel Cells" PBS Learning Media (5:50); www.pbslearningmedia.org/content/eng06.sci.engin.systems.fuelcells
Lesson 2	pages 4–6, "Where Does Energy Come From?" (cont'd)	(Embedded) Background video: "Solar Vehicle Engineer, Travis Lee," Dragonfly TV
Lesson 3	pages 7–9, "Blackout!"	(Optional) PBS Learning Media, "Electricity" (1:53); www.pbslearningmedia.org/content/idptv11.sci.phys.energy.d4kele
Lesson 4	pages 10–14, "Be an Energy Hog Buster," "How Green Can You Be?"	
Lesson 5	writing in response to reading	
Lesson 6	pages 15–17, "Solar Speed Racers"	
Lesson 7	self-selected reading	
Lesson 8	Getting Along Together	

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Cycle 2		
Lesson	Text	Media
Lesson 1	pages 18–20, "The Power of Wind"	(Optional) Background video: "Working at a Wind Farm" PBS Learning Media (2:42); www.pbslearningmedia.org/content/e3bfa345-1281-4bcd-94f7-b53800c4d96f (Embedded) "Fluency"
Lesson 2	pages 21–23, "Poop Power"	(Embedded) Background video: "Science Nation: Bacteria Energy"
Lesson 3	pages 26 and 27, "Surprising Sources of Green Energy"	(Embedded) Background video: "Renewable Energy Scientist, Sandra Begay-Campbell," Dragonfly TV
Lesson 4	pages 28 and 29, "The Veggie Bus"	
Lesson 5	writing in response to reading	
Lesson 6	page 30, "Your Turn: S'More Energy, Please"	
Lesson 7	self-selected reading	
Lesson 8	Getting Along Together	

Cycle 1:

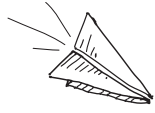
Make
Predictions

Lesson 1

Reading Objective: Use clues to make predictions.

Teacher Background

In today's reading, students will read about the purpose and function of energy and its importance in our world. Also, students will learn about various sources of energy, including renewable and nonrenewable energy sources. Information is presented on nuclear energy and fossil fuels, which are nonrenewable energy sources.

**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 is energy, and how do we use it? Why is energy so important to our world?

Set the Stage

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

What is energy, and how do we use it? Why is energy so important to our world?

Energy is what makes things work, and we use it to power things. It is important to our world because lots of things run on different kinds of energy, such as electricity and gas.

2. Ask students to review their cycle goal. Remind students how to earn team celebration points. Remind them that team celebration points help them become super teams. Tell them they earn team celebration points during the Lightning Round.
3. Introduce the texts, authors, and reading objective.
4. Distribute copies of the *AppleSeeds* magazine issue *Power Up!* Have students preview the text. Use **Think-Pair-Share** to ask:

Is this literature or informational text? How do you know?

This text is informational. The table of contents, chapter titles and headings, and diagrams are evidence that the text is informational.

Students write responses to the Big Question.

Discuss the Big Question.



Teams review their cycle goal.

Post and present the reading objective. Refer students to pages 2 and 3 in the text. Begin the TIGRRS process; review the steps as needed.

Make Predictions

Students use text features to help predict topic and intent of the author.

Students identify a graphic organizer that they will use to make notes.

Build background about the topic.

Refer students to the Predicting Strategy Card for informational text.

5. Use **Think-Pair-Share** to have students predict the topic and identify clues. Randomly select a few students to share.
6. Prompt students to identify the next step of TIGRRS. Use **Think-Pair-Share** to have them predict the author's intent. Randomly select a few students to share.
7. Point out that the next step in the TIGRRS process is to choose a graphic organizer for making notes. Choices include, but are not limited to:
 - Venn diagram
 - timeline/sequence chain
 - T-chart
 - web
 - outline

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

Which graphic organizer(s) will work best with this text? Why?

A web because it will help us organize all the information presented in the article.

T: Energy

I: To inform the reader about energy—what it is and different sources of energy

G: Idea web

(Optional) Use the following video to build background about energy sources:

“Fuel Cells” (5:50); www.pbslearningmedia.org/content/eng06.sci.engin.systems.fuelcells

Interactive Read Aloud

1. This cycle our reading objective is to use clues to make predictions.
2. Refer students to the Predicting Strategy Card in their team folders. Tell students that the card can help them make predictions about the text. Review the steps for informational text.

Predicting

Informational Text

1. Before you read, ask:
What clues can help me predict what this text is about?
 - titles
 - headings
 - bold text
 - captions
 - sidebars
 - pictures
2. Use clues to predict the topic of the text. Be prepared to explain your thinking.
3. Can you confirm your prediction?

Literature

1. As you read, ask: What clues can help me predict what might happen?
 - setting
 - events
 - character's actions, thoughts, feelings
 - dialogue
2. Use clues to predict possible outcomes. Be prepared to explain your thinking.
3. Read on to find out if your prediction is confirmed.

Explain that in this unit, we will use text features, such as photographs, captions, headings, illustrations and diagrams, to make predictions about the information that will be included in the text. This skill is important because it helps to set the purpose for reading, to activate prior knowledge, and to make connections to the main ideas and concepts of the text.

3. Read page 2 aloud. A sample Think Aloud follows.

Sample Think Aloud

Before I read the text, I want to look at the text features in this section. I see that the first heading on this page is a question, "What is energy?" Based on this heading, I predict that this section of text will inform me about the definition of energy.

I will record my predictions in a box so I can refer to them while I am reading the text.

Now that I have looked at the text features and have made a prediction about this section of text, I will read the first paragraph on page 2. While I am reading, I want to think about the predictions I made to see whether my predictions are confirmed in the text.

(Read page 2, paragraph 1 aloud.)

This first paragraph confirms my prediction because I predicted that I would learn the definition of energy, and I did. It's important that I go back and check my predictions to see whether they were confirmed. This will tell me whether I'm on the right track and whether the clues from the text features are helpful and support the text.

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

Students: Actively listen.

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.



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

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

How did I use clues from the text to make predictions about the reading?

You looked at the text features, such as the headings, and then predicted what the information in the article would be about based on the text features.

Was my prediction about learning the definition of energy confirmed in the reading? How do you know?

Yes, because the first paragraph explains what energy is and what it does.

Do you think our predictions will always be confirmed in the text? Why or why not?

No, they won't always be confirmed in the text because the clues in the text features may not be very good and may not show what the text will be about. We can only guess based on the clues that the author gives us.

Explain to students that they will now work with partners to practice making predictions based on the text features. Have students look at the globe illustration and speech bubbles in the middle of page 2. Tell students that they will make predictions about the information that they will learn on page 2, paragraphs 2 and 3, and record their predictions on their graphic organizers. Remind them to use their Predicting Strategy cards to help them make predictions.

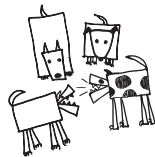
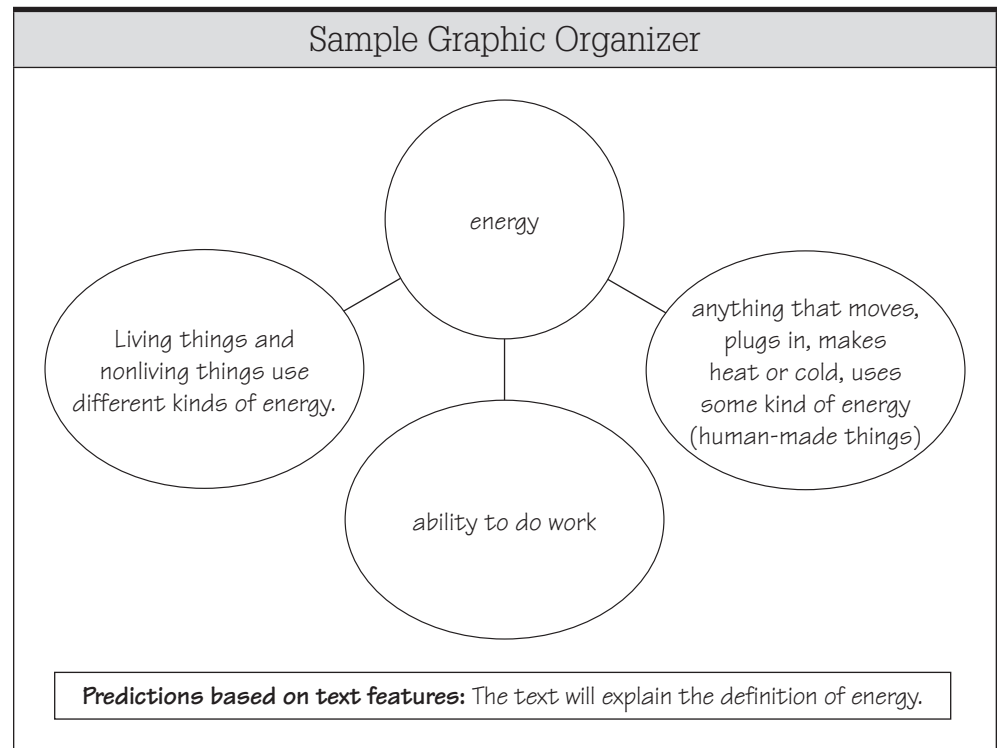
5. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Use **Think-Pair-Share** to have students preview page 2 and make predictions. Then have students read page 2, paragraphs 2 and 3. They should then check for confirmation of their predictions. While reading, students should make notes on the web. Have students look at the text features on page 3 and make predictions about the text. Tell students to record predictions on their graphic organizers. Remind them to check to see whether their predictions were confirmed as they read.

Use **Random Reporter** to debrief.

6. 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**

After making and recording predictions using the text features on page 3, students will read page 3 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 was a prediction about the text on page 3? What clues did you use to make this prediction? How did the prediction help you better understand the text? (Write) [DC, RE, SA] (strategy-use rubric)</p> <p><i>100 = I predicted that the information on page 3 would be about two nonrenewable energy sources. The section headings are Nuclear Energy and Fossil Fuels, so I predicted that the information would include the definition of these sources of energy. Predicting what information the author was going to present helped me set up my notes and start thinking about the ideas in the article.</i></p> <p><i>90 = I predicted that the information would be about two nonrenewable energy sources. The section headings are Nuclear Energy and Fossil Fuels, so I predicted that the information would include the definition of these sources of energy.</i></p> <p><i>80 = I predicted that the information would be about two nonrenewable energy sources.</i></p> <p>2. Was a prediction you made about the information on page 3 confirmed? Use support from the text to explain your answer. [RE, SA] (Team Talk rubric)</p> <p><i>100 = My prediction about the information was confirmed. I predicted that I would learn where nuclear energy comes from, and that information was presented in the article. Nuclear energy comes from splitting the nucleus of a uranium atom.</i></p> <p><i>90 = My prediction was confirmed because I predicted that I would learn about fossil fuels, and that was in the article.</i></p> <p><i>80 = My prediction was confirmed because I read about the information that I predicted would be included in the article.</i></p>

continued

Team Talk Questions *continued*

3. What does the term *nonrenewable* mean? Use information from the text to support your answer. **[MI, RE, SA]** (Team Talk rubric)

100 = *The term nonrenewable refers to sources of energy that can't be remade or reused. For example, the text says that once nonrenewable energy sources are used up, there won't be any more. So I know that nonrenewable means that there are limited amounts of these energy sources, and that they cannot be reused or replaced.*

90 = *Nonrenewable means that the energy sources cannot be made again. Once nonrenewable energy sources are used up, there won't be any more of them.*

80 = *Nonrenewable means that it cannot be renewed.*

4. Which of the following is NOT an example of a fossil fuel? **[MI, RE]** (Team Talk rubric)

- A. oil
- B. wood
- C. natural gas
- D. coal

How do you know? Use information from the text to support your answer. **[SA]**

100 = *I know that wood is not an example of a fossil fuel because the text says that fossil fuels were made from the rotting bodies of animals and plants that lived millions of years ago. Also, the fossil fuels that are included in the article are oil, natural gas, and coal. So I know that wood is not a fossil fuel.*

90 = *Wood is not a fossil fuel. Fossil fuels were made from rotting plants and animals from millions of years ago, and wood is not made from rotting things.*

80 = *Wood is not a fossil fuel.*

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.

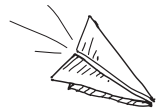
- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

Lesson 2

Reading Objective: Use clues to make predictions.

Teacher Background

In today’s reading, students learn about renewable resources, including solar power, wind power, biomass power, and geothermal power.



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, and model chunking as needed. Then read the meaning of the word.

Word	Pronunciation	Definition	Sample Sentence
nuclear (adjective) page 3	nu-cle-ar (NEW-klee-ur)	powered or operated by atomic energy	The <i>nuclear</i> reactor was malfunctioning, so an atomic engineer came out to inspect it.
hydroelectric (adjective) page 4	hy-dro-e-lec-tric (hi-droh-ee-LEK-trik)	related to the creation of electricity by using machines powered by moving water	The workers at the <i>hydroelectric</i> dam opened all the gates to help produce more electricity after the blackout.
organic (adjective) page 5	or-gan-ic (or-GAN-ik)	relating to or obtained from living things	The scientists collected <i>organic</i> material from the landfill to study in their lab.

continued

Word	Pronunciation	Definition	Sample Sentence
matter (noun) page 5	mat-ter (MAT-er)	material that forms physical objects or occupies space	In science class, we learned about the different forms of <i>matter</i> , which are solid, liquid, and gas.
turbine (noun) page 6	tur-bine (TUR-bin, TUR-bayhn)	an engine that has a part containing blades that spin by pressure from water, steam, or air	The wind farmer demonstrated how the wind <i>turbine</i> spins, which helps to produce electricity for the power plant.
hydropower (noun) page 6	hy-dro-pow-er (HI-droh-pow-ur)	electricity that is produced by machines that are run by moving water	At the convention, scientists raved about the benefits of using <i>hydropower</i> as a renewable source of energy.
blackout (noun) page 7	black-out (BLAK-out)	a period of time when electricity is out because of an electrical power failure	During the <i>blackout</i> , my family used candles for light and played board games together.
conserve (verb) page 9	con-serve (kuhn-SURV)	to manage or use wisely to preserve, save	We try to <i>conserve</i> energy by turning off lights, taking short showers, and hanging our laundry outside to dry.

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.

Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the reading objective.

Refer students to pages 4–6 in the text.



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

Build background about solar energy.

Show the video.



Review the skill as necessary.

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 preview today's text. Use **Think-Pair-Share** to ask:

Is this literature or informational text? How do you know?

This text is informational. The section titles, such as "Solar Power" and "Wind Power," are evidence that the text is informational.

5. Refer students to the TIGRRS process. Use **Think-Pair-Share** to have students predict the topic and identify clues. Randomly select a few students to share.
6. Prompt students to identify the next step of TIGRRS. Use **Think-Pair-Share** to have them predict the author's intent. Randomly select a few students to share.
7. Use **Think-Pair-Share** to ask:

Which graphic organizer(s) will work best with this text? Why?

A web for each topic will work best because there are different topics and information related to each of those topics.

T: Renewable energy sources

I: To inform the reader about different types of renewable sources of energy

G: A web for each of the different sections

8. Show the video "Solar Vehicle Engineer, Travis Lee." Use **Think-Pair-Share** to ask:

What are the advantages of a solar-powered vehicle?

A solar-powered vehicle uses the sun for energy, and that energy doesn't run out. You wouldn't need to add fuel. It wouldn't produce pollution.

Interactive Read Aloud

1. Refer students to the reading objective. Explain to students that our reading objective is to use clues to make predictions. Remind students to refer to their Predicting Strategy cards for informational text. Tell students that prior to reading the text selections, we will use the text features to make, and then record, our predictions. After reading, we will revisit the predictions, using information from the text to try to confirm them.
2. Have students use the text features on pages 4–6 to make and record their predictions.

Make Predictions

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

Students: Actively listen.

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.



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

3. Read page 4, paragraph 1 aloud. A sample Think Aloud follows.

Sample Think Aloud

I have already made my predictions based on the text features and recorded them on my graphic organizer. Now I will read page 4, paragraph 1, the section on solar power.

(Read page 4, paragraph 1 aloud.)

Now that I have read this section of text, let me revisit my predictions to look for confirmation. Looking back at my predictions, I see that the information in the article confirmed my prediction that I would learn the definition of solar power and how solar power is used as an energy source.

I also predicted that the panels in the illustration were solar panels, which capture solar energy. I predicted this based on the speech bubble in the illustration that tells the panels to get back to work providing electricity. This was not confirmed in the reading, however, because the article did not explain what solar panels are or what they do.

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

What did I do after I read the section of text?

You went back to your predictions and checked for confirmation from the text.

Is that an important part of the process of making predictions? Why or why not?

Yes, because it helps you better understand the text and make connections to the information in the articles.

Were all of my predictions confirmed in the text? How do you know?

No, because the text didn't include information about solar panels, and you had predicted that you would read about them in the article.

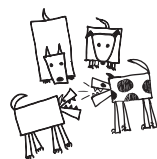
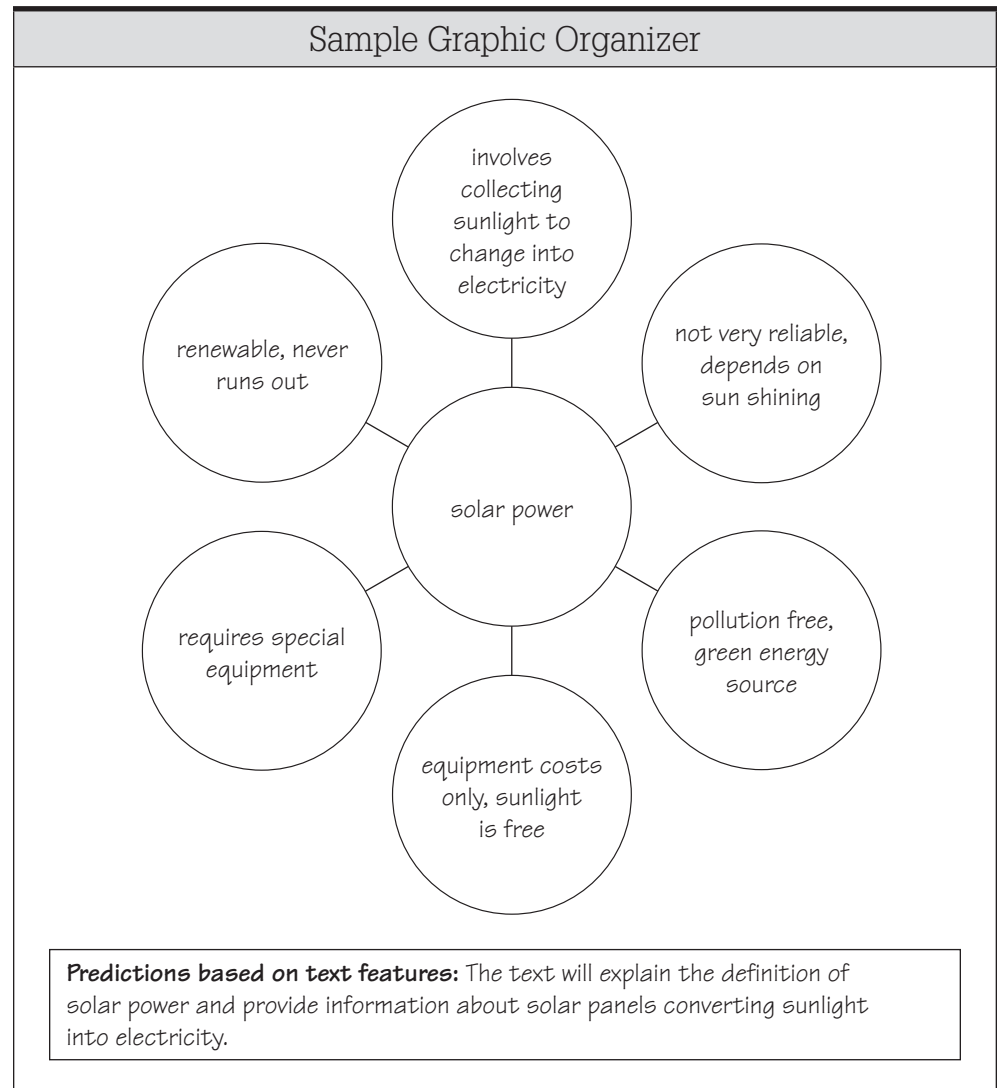
5. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read page 4, paragraph 2, the section on wind power. Tell students to revisit their predictions to check for confirmation from the text.

Use **Random Reporter** to debrief.

6. 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 5 and 6 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.

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.

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. **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 was your prediction about the text on page 6? What clues did you use to make this prediction? How did the prediction help you better understand the text? (Write) [DC, RE, SA] (strategy-use rubric)</p> <p><i>100 = I predicted that the information on page 6 would explain how hydropower works. The clues I used to make the prediction were the diagram and the heading “Hydropower.” My prediction helped me focus on the diagram to find out how it was related to the information in the text.</i></p> <p><i>90 = I predicted that the information on page 6 would explain how hydropower works. The clues I used to make the prediction were the diagram and the heading “Hydropower.”</i></p> <p><i>80 = I predicted that the information on page 6 would explain how hydropower works.</i></p> <p>2. Were your predictions confirmed in the text? Why or why not? Support your answer with information from the text. (Write) [RE, MI, SA] (Team Talk rubric)</p> <p><i>100 = Some of my predictions were confirmed, and some were not. For example, I predicted that the geothermal section would explain how steam is converted into electricity based on the illustration at the bottom of the page. However, the text did not include that information, so that prediction was not confirmed. The text did confirm my prediction that I would learn what the word geothermal means. Geothermal means heat from the earth.</i></p> <p><i>90 = Most of my predictions were confirmed by the text, but one was not. Based on the illustration, I predicted that I would learn how garbage is turned into an energy source, but the section of text did not include that information, so that prediction was not confirmed.</i></p> <p><i>80 = Some of my predictions were confirmed, but others weren’t.</i></p>

continued

Team Talk Questions *continued*

3. Which of the following is NOT a renewable energy source? **[RE, MI]**
(Team Talk rubric)

- A. hydropower
- B. geothermal power
- C. *nuclear power*
- D. solar power

How do you know? Use information from the text to support your answer. **[SA]**

100 = *From the text, I know that nuclear power is not a renewable energy source.*

*The text **states** that renewable energy sources include solar power, wind power, biomass power, geothermal power, and hydropower. Renewable energy sources never run out. Nuclear energy is a nonrenewable energy source because it can run out and cannot be reused or remade.*

90 = *I know that nuclear power is not a renewable energy source because the text said that renewable energy sources never run out.*

80 = *Nuclear power is a nonrenewable source of energy.*

4. Compare the text features in the geothermal power section on page 5 with the hydropower section on page 6. Which article uses better text features that allow the reader to make a prediction about the text? Support your answer with information from the text. **[AC, DC, SA]** (Team Talk rubric)

100 = *The hydropower section uses better text features to help the reader make predictions. **For example**, the geothermal section just has an illustration with some people looking at steam coming from a hole with a sign next to it that says, "Old Faithful." The speech bubble has an electric bolt saying that steam can make electricity. But the article doesn't explain what Old Faithful is or how the steam is turned into electricity. But the hydropower section has a **detailed** diagram showing how water from a reservoir goes through a dam to be turned into electricity. The article explains more about the diagram, so the text features in the hydropower section helped me make a prediction that was confirmed.*

90 = *The hydropower section uses better text features than the geothermal section. The hydropower section includes a diagram showing how water is converted into electricity, so the reader can make a prediction. But the illustration in the geothermal section does not show what the article is about.*

80 = *The hydropower section uses better text features than the geothermal section.*

5. What is a synonym for *conserve*? What is an antonym for *conserve*? **[CV]**
A synonym for conserve is save, and an antonym for conserve is waste.

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.

Make Predictions

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

(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.

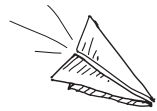
Word	Pronunciation	Definition	Sample Sentence
nuclear (adjective) page 3	nu-cle-ar (NEW-klee-ur)	powered or operated by atomic energy	The <i>nuclear</i> reactor was malfunctioning, so an atomic engineer came out to inspect it.
hydroelectric (adjective) page 4	hy-dro-e-lec-tric (hi-droh-ee-LEK-trik)	related to the creation of electricity by using machines powered by moving water	The workers at the <i>hydroelectric</i> dam opened all the gates to help produce more electricity after the blackout.
organic (adjective) page 5	or-gan-ic (or-GAN-ik)	relating to or obtained from living things	The scientists collected <i>organic</i> material from the landfill to study in their lab.
matter (noun) page 5	mat-ter (MAT-er)	material that forms physical objects or occupies space	In science class, we learned about the different forms of <i>matter</i> , which are solid, liquid, and gas.
turbine (noun) page 6	tur-bine (TUR-bin, TUR-bayhn)	an engine that has a part containing blades that spin by pressure from water, steam, or air	The wind farmer demonstrated how the wind <i>turbine</i> spins, which helps to produce electricity for the power plant.
hydropower (noun) page 6	hy-dro-pow-er (HI-droh-pow-ur)	electricity that is produced by machines that are run by moving water	At the convention, scientists raved about the benefits of using <i>hydropower</i> as a renewable source of energy.
blackout (noun) page 7	black-out (BLAK-out)	a period of time when electricity is out because of an electrical power failure	During the <i>blackout</i> , my family used candles for light and played board games together.
conserve (verb) page 9	con-serve (kuhn-SURV)	to manage or use wisely to preserve, save	We try to <i>conserve</i> energy by turning off lights, taking short showers, and hanging our laundry outside to dry.

Lesson 3

Reading Objective: Use clues to make predictions.

Teacher Background

In today's reading, students will learn about the biggest blackout in the history of the United States, which occurred on August 14, 2003.



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.



Model exploring a word in the word power journal.

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 the word *reservoirs* on page 5 in the sentence “We can get this heat from hot springs, volcanoes, and reservoirs (big pools) of hot water below Earth’s surface.” I think this word is interesting because it reminds me of a lake or pond.

Additionally, I want to delve into this word more and gain more understanding of its definitions and uses. Even though the sentence tells me that reservoirs are big pools, I don’t feel that I have enough information about these reservoirs under the Earth’s surface. I will verify the meaning in the dictionary.

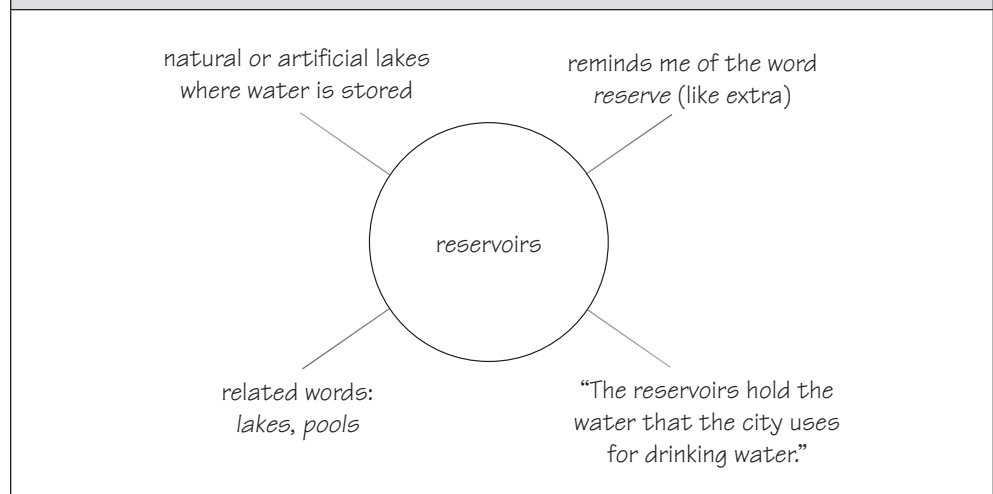
(Model verifying the meaning of the word *reservoirs* in the dictionary.)

I see that there are several meanings for *reservoirs*. One of the meanings is a natural or artificial lake where water is collected. This meaning seems to fit here.

Some related words are *pools* and *lakes*.

My sentence for this word is “The reservoirs hold the water that the city uses for drinking water.”

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.

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.

Teams review their cycle goal.

Post and present the reading objective.

Refer students to pages 7–9 in the text.



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

Build background about the topic.

4. Have students preview today's text. Use **Think-Pair-Share** to ask:

Is this literature or informational text? How do you know?

This text is informational. The photos of newspapers and title of the sidebar, "Blackout of 2003," table of contents, chapter titles and headings, and diagrams are evidence that the text is informational.

5. Refer students to the TIGRRS process. Use **Think-Pair-Share** to have students predict the topic and identify clues. Randomly select a few students to share.
6. Prompt students to identify the next step of TIGRRS. Use **Think-Pair-Share** to have them predict the author's intent. Randomly select a few students to share.
7. Use **Think-Pair-Share** to ask:

Which graphic organizer(s) will work best with this text? Why?

A web will work best because there is a lot of information presented about the topic.

T: Blackouts

I: To inform me about blackouts and how they happen

G: A web

To build background about electricity, show the following video:

(Optional) PBS Learning Media, "Electricity" (1:53); www.pbslearningmedia.org/content/idptv11.sci.phys.energy.d4kele

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

Where can you find electricity other than in wires?

Lightning, static electricity from rubbing two surfaces together, batteries, inside our bodies.

What is an example of a conductor?

Metal wires.

What are two examples of insulators?

Rubber, plastic.

Teacher: Read aloud.

Students: Practice the skill or strategy.



Interactive Read Aloud

1. Have students look at the text features on pages 7–9 to make predictions. Students should record their predictions on their graphic organizers and revisit them after reading the section of text to determine whether their predictions were confirmed by the text. Remind students to refer to their Predicting Strategy cards.
2. Read page 7 aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

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

What predictions did you make about the information on page 7? Why?

I predicted that the information on page 7 would be about a blackout that happened in New York City because of the photograph of the newspapers that show headlines about the blackout.

After I read this page, were your predictions confirmed? How do you know?

One of my predictions was confirmed because I predicted that the text would describe the blackout that happened in New York City, but my prediction that I would learn what caused the blackout was not confirmed.

Could my predictions that were not confirmed on this page be confirmed later in the reading? Explain.

Yes, because the text could include the information related to the prediction later in the reading, maybe on another page.

Explain to students that it is important that they revisit the predictions that were not confirmed after they have read further along in the text to see whether they can confirm those predictions with new information from the text.

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. Students should read page 8, stopping at the end of the second paragraph after the words “...to backup power generators.” Have students revisit their predictions to see whether they can confirm their predictions based on information from the text.

Use **Random Reporter** to debrief.

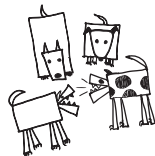
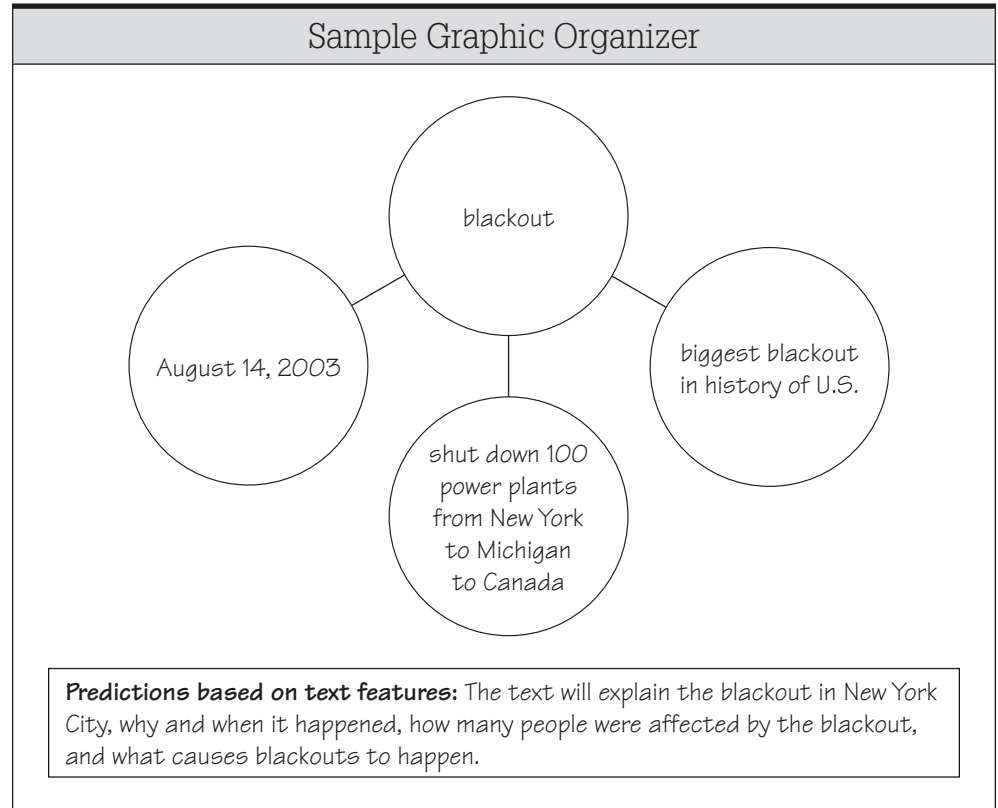
4. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

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.

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, 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 8 (starting at the last sentence on the page) and 9 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 was a prediction you made about the text on page 9? What clues did you use to make this prediction? How did the prediction help you better understand the text? **(Write) [DC, RE, SA]** (strategy-use rubric)

100 = I predicted that the text on page 9 would be about the effects of the blackout. The clues I used to make the prediction were some of the facts in the box "Staggering Stats." For example, 9 people died, 300 people were arrested for looting. My prediction helped me think about the different effects of the blackout as I was reading and to understand how many people were effected.

90 = I predicted that the text on page 9 would be about the effects of the blackout. The clues I used to make the prediction were some of the facts in the box "Staggering Stats." For example, 9 people died, 300 people were arrested for looting.

80 = I predicted that the text on page 9 would be about the effects of the blackout.

2. What were the leading causes of the blackout? **[RE, MI]** (Team Talk rubric)
 - A. humidity and thunderstorms
 - B. transportation and communication
 - C. hot weather and human error
 - D. electric alarms and power generators

Support your answer with information from the text. **[SA]**

100 = I know that the answer is hot weather and human error because the text states that things began to break down, and that hot weather and human error were the leading causes of the gigantic blackout. For this reason, I know that my answer is correct.

90 = I know that my answer is correct because the text says that things were breaking down, and that hot weather and human error caused the blackout.

80 = Hot weather and human error caused the blackout.

continued

Team Talk Questions *continued*

3. Why do you think the author included the section titled “Think About It...”? What is the purpose of this section? Use information from the text to support your answer. **[AC, AP, DC, SA]** (Team Talk rubric)
- 100 = *I think the author included this section so the reader will think about what he or she would do if he or she were in a **similar situation** and had no electricity. **For example**, on page 7 the text says that people struggled to live without electric power, and they realized just how much we rely on having electricity. So I think the author wants us to think about what we would do in an emergency and how we could live without electricity so we can prepare ourselves.*
- 90 = *The author included this section because we rely so much on electricity. The author wants us to think about how we would survive in a blackout.*
- 80 = *The author wants us to imagine what life would be like if we lost power.*
4. “Power outages show us just how much we rely on electricity in our daily lives.” What problems are created when we lose power? Support your answer. **[DC, SA]** (Team Talk rubric)
- 100 = *There are a lot of problems when we lose electricity because most of the things that we rely on run on electricity. **For example, the article states** that without electricity, people have to live without refrigerators, stoves, microwaves, air conditioners, traffic lights, fresh food, and television. **Additionally**, telephone service is unreliable, and people can’t buy gasoline because there is no electricity to power the gas pumps. **In these ways, our reliance on electricity creates problems when we lose it.***
- 90 = *There are a lot of problems when we lose electricity because most of the things that we rely on run on electricity. Without electricity, people have to live without refrigerators, stoves, microwaves, air conditioners, traffic lights, fresh food, and television. Telephone service is unreliable, and people can’t buy gasoline because there is no electricity to power the gas pumps.*
- 80 = *There are a lot of problems when we lose electricity because most of the things that we rely on run on electricity.*
5. Write a meaningful sentence using the word *matter*. **[CV]**
- Matter can be examined under a microscope and has properties.*

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.

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)

Randomly select team representatives who will share:

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



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.

Celebrate team successes!

The top team chooses a cheer.

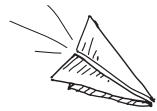
Remind students of the Read and Respond homework assignment.

Lesson 4

Reading Objective: Use clues to make predictions.

Teacher Background

In today’s reading, students will learn about various strategies for energy conservation.



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.



Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the reading objective.

Refer students to pages 10–14 in the text.



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 students preview today’s text. Use **Think-Pair-Share** to ask:

Is this literature or informational text? How do you know?

This text is informational. The title “Ten Tips” and the numbered list of tips are evidence that the text is informational.

Students predict the topic and author's intent and choose a 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.

5. Refer students to the next steps in the TIGRRS process. Use **Think-Pair-Share** to have students predict the topic and identify clues and predict the author's intent. Randomly select a few students to share.

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

Which graphic organizer(s) will work best with this text? Why?

A web to record all the information related to ways to conserve energy.

T: Ways to conserve energy

I: To inform me about how I can save energy and use it more wisely

G: A web

Interactive Read Aloud

1. Have students look at the text features on pages 10–14 and make predictions about the text. Students should record their predictions on their graphic organizers and revisit them after reading to determine whether their predictions were confirmed by the text. Remind students to refer to their Predicting Strategy cards as needed.

2. Read page 10 aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

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

What predictions did you make about the information on page 10 based on the text features?

I predicted that the information would be about how to save energy because of the title and caption that says, "Beware of Energy Hogs!"

Were your predictions about this page confirmed? Why or why not?

My predictions were confirmed because the information on the page was about ways to save energy, including a website that people can visit for more information.

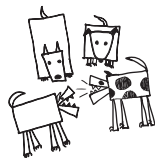
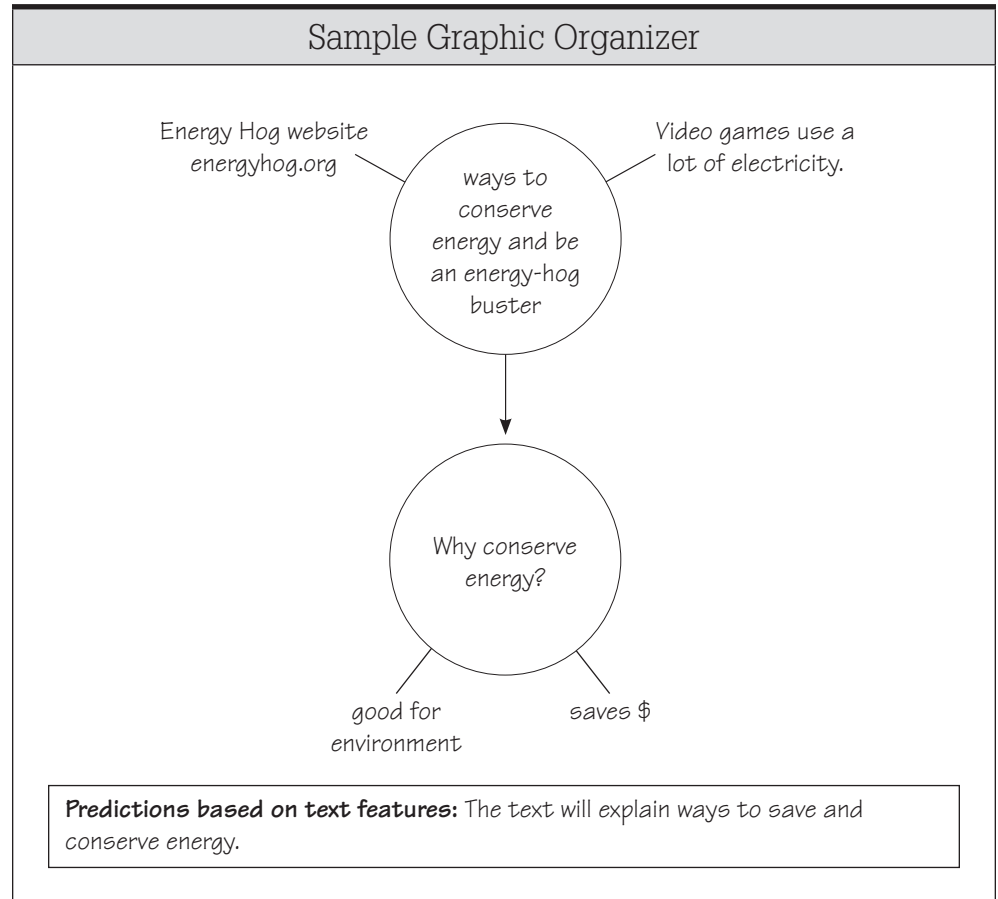
3. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read page 11 and revisit their predictions to check whether they were confirmed by the text.

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.

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 12–14 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

1. What was your prediction about the text on page 14? What clues did you use to make this prediction? How did the prediction help you better understand the text? **(Write) [DC, RE, SA]** (strategy-use rubric)

100 = I predicted that the text on page 14 would be about how to use less gasoline. The clues I used to make the prediction were the heading "Gasoline" and how the other pages of the article present ways to reduce the use of energy, such as electricity and heating and cooling. My prediction helped me start thinking about what could be done to save gasoline. That helped me understand the main points the author was making on this page.

90 = I predicted that the text on page 14 would be about how to use less gasoline. The clues I used to make the prediction were the heading "Gasoline" and how the other pages of the article present ways to reduce the use of energy such as electricity and heating and cooling.

80 = I predicted that the text on page 14 would be about how to use less gasoline.

2. Were your predictions confirmed in the text? Why or why not? Use information from the text to support your answer. **[RE, DC, SA]** (Team Talk rubric)

*100 = Yes, the predictions that I made were confirmed in the text. **For example,** I predicted that on page 13, I would learn how taking a shorter shower can help to conserve energy, and the information on the page confirmed that prediction. **In addition,** I predicted that page 12 would give information about how to save energy by turning off appliances, and that was confirmed in the text. I learned that it is important to unplug appliances because they use power even when they are turned off.*

90 = The predictions that I made were confirmed in the text because I predicted that I would learn how taking a cooler shower can help to conserve energy, and the information on the page confirmed that prediction. I predicted that page 12 would tell how to save energy by turning off appliances, and that was in the text.

80 = Yes, my predictions about saving energy were confirmed in the text.

continued

Team Talk Questions *continued*

3. Analyze this statement from the article: “Your family should combine errands into one trip.” Does the evidence presented in the magazine support this statement? Why or why not? **[AA, DC, SA]** (Team Talk rubric)

100 = *Yes, the information from the article supports this statement. The text states that gasoline is made from fossil fuels, and fossil fuels are a nonrenewable resource, which means there are limited supplies of it and the supply will eventually run out. Therefore, gasoline should be conserved, and one way to do that is to combine errands into one trip.*

90 = *Yes, the information from the article supports this statement. The text says that gasoline is made from fossil fuels, and fossil fuels are a nonrenewable resource, which means the supplies will not last forever and will eventually run out.*

80 = *The information in the magazine supports this statement because we should save gas.*

4. Write a summary of today’s reading. **[MI]** (summary rubric)

100 = *This article tells how energy is used in the United States and challenges readers to lower the amount of energy that their families use. By turning off lights that aren’t being used and watching less TV, you can save electricity. Covering windows in plastic and taking shorter, cooler showers will also save energy. To save gas, people can shop at farmers’ markets, take fewer car trips, and find other ways to get around besides using a car.*

90 = *By turning off lights that aren’t being used and watching less TV, you can save electricity. Covering windows in plastic and taking shorter, cooler showers saves energy. People can shop at farmers’ markets, take fewer car trips, and find other ways to get around besides using a car.*

80 = *Ways to save energy are to watch less TV and turn off lights. Other ways are to take shorter showers and take fewer car trips.*

5. Which of the following is NOT an example of organic material? **[CV]**

- A. paper
- B. syrup
- C. cotton
- D. steel

How do you know? **[SA]**

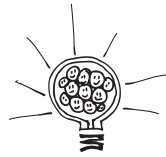
I know because the word organic means related to or obtained from living things, and steel doesn’t come from living things.

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.

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

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)

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.

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.

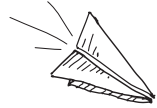
- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

Lesson 5

Writing Objective: State an opinion, and support it with reasons.

Teacher Background

In this writing task, students will be asked to form opinions about scheduled blackouts as a way to conserve energy. Students will need to support their positions with evidence gathered from the text.



Active Instruction

(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. 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. Explain to students that in this cycle, they have been using text features to make predictions about the text and revisiting those predictions to try to confirm them with information from the text. Tell students that today they will state an opinion and support it with reasons from the text.

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.

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

Read the prompt aloud.

Writing Prompt
<p>Analyze this opinion statement:</p> <p>Electric companies should have weekly four-hour scheduled blackouts in which power is cut off to homes. This would conserve energy and allow people to learn to live without electricity to prepare for emergencies.</p> <p>Do you agree or disagree with this statement? Support your opinion with reasons from the text.</p>



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 is asking us to state our opinions and support them with reasons from the text.

Students identify the purpose for writing.

6. Refer students to the following writer’s guide in their student editions. Point out that writing to support a claim 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	
Ideas	<ul style="list-style-type: none"> Clearly state a position (claim) and include good reasons that support that position.
Organization	<ul style="list-style-type: none"> Begin by stating a position (claim). In the middle, tell supporting reasons. End with a closing statement.
Style	<ul style="list-style-type: none"> Use words and phrases that help the audience see how the reasons are related to the claim.
Mechanics	<ul style="list-style-type: none"> Use correct punctuation, capitalization, spelling, and grammar.

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:

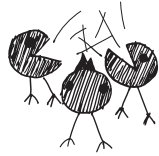
Which guideline relates to our writing objective, stating an opinion and supporting it with reasons?

Under Ideas: Clearly state a position or claim and include good reasons that support it. Under Organization: Begin by stating a position or claim.

7. 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.

Students revise and edit their writing projects.

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)

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—to state an opinion and support it with reasons.

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

For example, ask:

- **Does the writer begin by stating his or her opinion?**
- **Does the writer provide strong supporting reasons for his or her opinion?**
- **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 give supporting reasons for your opinion?

Answers will vary.

Make Predictions

Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

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.

Writing Prompt

Analyze this opinion statement:

Electric companies should have weekly four-hour scheduled blackouts in which power is cut off to homes. This would conserve energy and allow people to learn to live without electricity to prepare for emergencies.

Do you agree or disagree with this statement? Support your opinion with reasons from the text.

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

Lesson 6

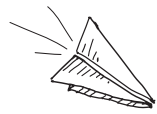
Reading Objective: Use clues to make predictions.

Writing Objective: State an opinion, and support it with reasons.

Teacher Background

Today's cycle test challenges students to use clues from the text to make predictions.

In today's lesson, students will read about solar race cars and the World Solar Challenge, a solar-car race that takes place every year in Australia.



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)

Partner Review

1. Remind students that they have been practicing using clues from the text to make predictions and stating and supporting an opinion with reasons.

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



What have you used in the text to help you make predictions?

We have used the text features, such as the titles, headings, captions, and diagrams, to help us make predictions.

Why is it important to confirm your predictions after you have read the text?

So we can see whether the text features were helpful and whether the clues were relevant to the actual information that was covered.

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, #3, and #5 ask about making predictions.
4. Ask students to identify key words or phrases in question #2.

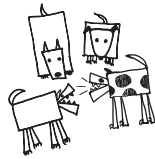
2. What was a prediction you made about the text on page 15? What clues did you use to make this prediction? How did the prediction help you better understand the text? **[DC, RE, SA]**

5. Introduce the text that students will read. Tell what it is about, but do not give additional information or details. Explain to students that they will be reading about how certain race cars use solar-energy for power.
6. Prior to reading the text selection for the test, have students scan the text features and make predictions about today's reading. Have students record their predictions and use the information from the text to confirm their predictions.

**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)

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.

Teams discuss the answers to the test questions.



Class Discussion tp

(10 minutes)

Lightning Round

1. Use **Random Reporter** to have teams share team discussions of the test questions and explain their thinking.

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

What sources of energy have we learned about in this unit?

Renewable and nonrenewable energy sources such as fossil fuels, wind power, and electricity.

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.

Random Reporters share team discussion of a test question.



Celebrate team successes!

The top team chooses a cheer.

Remind students of the Read and Respond homework assignment.

Cycle 1 Test

Make Predictions

Directions: Survey the article “Solar Speed Racers” on pages 15–17, and record a prediction. Then read “Solar Speed Racers.” 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 = The topic is solar-powered race cars and a race that they compete in each year.

What is the author’s intent?

5 points = To inform me about how solar-powered race cars work and how they compete in the race.

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 describes solar-powered race cars, including how they use solar energy for power, and it provides information on the World Solar Challenge, a solar-car race held in Australia. The article also explains the benefits of solar energy as a power source, what the solar race cars use for energy on cloudy days, how the cars are designed, and how much fun the solar-car race teams have.

2. What was a prediction you made about the text on page 15? What clues did you use to make this prediction? How did the prediction help you better understand the text? **[DC, RE, SA]**

20 points = I predicted that the article was about a solar car race in Australia. The clues I used to make the prediction were the map of Australia and the title “Solar Speed Racers.” Also, the photograph on page 15 has the caption about solar panels on a race car. My prediction helped me think about why solar cars would be a good idea because they use a renewable energy source.

15 points = I predicted that the article was about a solar car race in Australia. The clues I used to make the prediction were the map of Australia and the title “Solar Speed Racers.” Also, the photograph on page 15 has the caption about solar panels on a race car.

10 points = I predicted that the article was about a solar car race in Australia.

3. What prediction did you make about the main ideas of the section titled “Why Solar Cars?” Was your prediction confirmed in the reading? Support your answer. **[DC, MI, SA]**

20 points = *Based on the heading of this section, I predicted that this part of the text would be about the **benefits** of solar cars and why they exist. The heading “Why Solar Cars?” made me think that this section would **provide information** on solar cars and why they are useful. My prediction was confirmed because the section does explain why there are solar cars and why they are useful.*

15 points = *I predicted that this section would be about why there are solar cars because the heading is “Why Solar Cars?” That made it seem like the section would explain why solar cars are made. My prediction was confirmed.*

10 points = *I thought this section would tell why there are solar cars.*

4. Which of the following is the biggest challenge with solar-powered vehicles? **[MI, RE]**
- A. building solar panels that can efficiently capture the sun’s rays on the car
 - B. *There is not enough sunlight on cloudy days or at night to power the car.*
 - C. Solar cars have to carry batteries, which weigh them down.
 - D. Solar-powered vehicles confuse other drivers and cause accidents on highways.

How do you know? **[SA]**

20 points = *The article says that the one big problem with solar power is what to do when the sun is not shining. **Additionally**, it says that at night and on cloudy days, there is not enough sunlight to power the cars. So I know that this is the biggest challenge with solar-powered vehicles.*

15 points = *The article says the biggest challenge with solar vehicles is no sun and what to do when the sun isn’t shining. Also, it says that on cloudy days and at night, the sun can’t power the car.*

10 points = *Solar cars don’t work when there is no sun to power them.*

5. Identify the predictions you made about pages 16 and 17. What were your predictions based on, and were your predictions confirmed? Explain using information from the text. **[DC, RE, MI]**

*20 points = I predicted that I would read more information about the solar race, such as the race cars and the teams that compete there, because two of the photos show teams from Germany and Canada, and the **caption** explains that teams come from all over the world. Another photo shows a solar race car driving on a road with other cars, and the **caption** says that the solar car is on its way to the race. My prediction that I would learn about the race was confirmed but there was no information in the article about the teams that compete, so not all of my predictions were confirmed.*

15 points = The photos helped me predict that the pages would tell me about the race cars because one photo shows a solar race car. My prediction was confirmed.

10 points = I predicted that the information would be about the cars that come to the race, and that was confirmed.

Part II. Writing (100 points)

Write at least one paragraph to answer the following question:

Analyze this opinion statement: All cars should be solar powered. Do you agree or disagree with this opinion? Support your opinion with reasons from the text. **[DC, AA, SA]**

I agree that all cars should be solar powered. There are a few reasons that all cars should be powered with solar energy.

First, the article says that solar-powered cars do not pollute the air like gas-powered cars do. Burning gasoline can cause global warming, so if all cars were solar powered, it would help the environment and improve air quality. Also, another reason that all cars should be solar powered is that the article states that when the world's supply of oil is gone, another energy source will have to be found. If cars are all solar powered, then people won't have to worry about not having fuel when the oil runs out. Cars will be powered by the energy from the sun, not from gasoline.

For these reasons, I believe that all cars should be solar powered.

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

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

Part III. Vocabulary (100 points)

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

Answers will vary. Accept responses that show that the student understands the meaning of the word and can use it correctly. For example: The electricity in our house went out, and we had a total blackout.

2. In which of the following sentences is the word *hydropower* used incorrectly? **[CV]**

- A. The teacher explained that hydropower requires water to make electricity.
- B. Hydropower is a renewable energy source and is used on several rivers.
- C. The scientists were using hydropower at the dam to power the equipment.
- D. *The football player used hydropower to charge into the end zone and score a touchdown.*

3. Use the words *hydroelectric* and *blackout* in a question. **[CV]**

Can hydroelectric energy be used during a blackout?

4. Write a meaningful sentence using the word *nuclear*. **[CV]**

Answers will vary. Accept responses that show that the student understands the meaning of the word and can use it correctly. For example: The nuclear reactor was using atomic energy for power.

5. The blades of a _____ spin in the water and collect energy to be turned into electricity.

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

- A. trampoline
- B. *turbine*
- C. torrent
- D. toggle

6. In which of the following sentences is the word *conserve* used incorrectly? **[CV]**
- A. To conserve energy, you should evaluate where you use it the most.
 - B. My brother does not conserve water because he takes long showers.
 - C. Our teacher told us to conserve paper and not print all of our documents.
 - D. *When we were playing tennis, I tried to conserve the tennis ball to my friend.*

7. Write a meaningful sentence using the word *hydroelectric*. **[CV]**

Answers will vary. Accept responses that show that the student understands the meaning of the word and can use it correctly. For example: Hydroelectric energy is very efficient because it is pollution free and low cost.

8. Use the words *organic* and *matter* in a question. **[CV]**

Does organic matter have to come from nature?

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]**

The word that we explored was atomic. Atomic means of, relating to, or using the energy that is produced when atoms are split apart, as in "The atomic bomb uses nuclear energy to cause mass destruction."

10. As used in the sentence "Food spoiled as temperatures climbed," *spoiled* most nearly means— **[CV]**
- A. shriveled.
 - B. disappeared.
 - C. soaked.
 - D. rotted.

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

Students will explain their thinking. For example: I used the context. The passage talks about temperatures climbing, so I know that it was getting warm, which would cause food to become spoiled, or rotted.

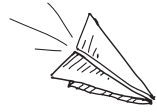
Question Codes			
[DC]	Make inferences; interpret data; draw conclusions.	[AA]	Analyze an argument.
[SA]	Support an answer; cite supporting evidence.	[AP]	Identify author's intent or purpose.
[MI]	Identify the main idea that is stated or implied.	[RE]	Analyze relationships (ideas, story elements, text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

Lesson 7

Reading Objective: Use clues to make predictions.

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.

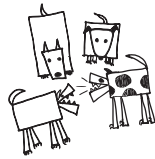
Two-Minute Edit



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.

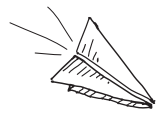
Lesson 8

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

Teacher Background

In 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

(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 then 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?

Cycle 2:

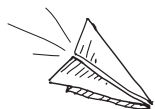
Make Predictions

Lesson 1

Reading Objective: Use clues to make predictions.

Teacher Background

In today's reading, students will read about wind and how it is used as a power source.



Active Instruction tp

(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: When you grow up and move into your first home, what energy sources do you think you might use in your house?

Set the Stage tp

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

When you grow up and move into your first home, what energy sources do you think you might use in your house?

Solar energy because all homes in the future might have solar panels.

Maybe our houses will be powered by windmills, and we will get our energy that way.

What types of energy are used now in homes that were not available hundreds of years ago?

Electricity, solar energy, wind power.

Explain to students that as technology and information increase and evolve, scientists continue to find new sources of energy and ways to better utilize available sources.

2. Ask students to review their cycle goal. Remind students how to earn team celebration points. Remind them that team celebration points help them become super teams. Tell them that they can earn team celebration points during the Lightning Round.
3. Introduce the texts, authors, and reading objective.

Students write responses to the Big Question.

Discuss the Big Question.



Teams review their cycle goal.

Post and present the reading objective.

Make Predictions

Refer students to pages 18–20 in the text.

Begin the TIGRRS process; review the steps as needed.

Students predict the topic and author’s intent and choose a graphic organizer.

Build background about wind power.

4. Have students preview today’s text. Use **Think-Pair-Share** to ask:

Is this literature or informational text? How do you know?

This text is informational. The title, photos, and map are evidence that the text is informational.

5. Refer students to the next steps in the TIGRRS process. Use **Think-Pair-Share** to have students predict the topic and identify clues and predict the author’s intent. Randomly select a few students to share.

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

Which graphic organizer(s) will work best with this text? Why?

A web will work best because we can record all the information presented about the topic.

T: Wind power

I: To inform me about the power of wind and how it can be used for energy

G: Web

7. Show the following video to build background about using wind power at wind farms:

(Optional) PBS Learning Media, “Working at a Wind Farm” (2:42);
www.pbslearningmedia.org/content/e3bfa345-1281-4bcd-94f7-b53800c4d96f

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

What is a wind farm, and what would you expect to see there?

A wind farm is a group of interconnected wind turbines. A large wind farm may have about thirty-six to one hundred individual wind turbines.

How large are wind farms typically, and where are they located?

Wind farms can cover hundreds of square miles, and wind farms may be on open land or offshore.

Interactive Read Aloud

1. Refer to the reading objective, and review the skill if necessary. Remind students to refer to their Predicting Strategy cards as needed.
2. Have students use the text features on pages 18 and 19 to make predictions. Students should record their predictions.

Use **Think-Pair-Share** to prompt use of the skill or strategy.

What do the text features on pages 18 and 19 show?

The pictures show things that move or are moved by wind such as windmills, fans, kites, sailboats, a pinwheel, and an eagle. Also, the map of the United States shows the states that provide two thirds of America’s wind energy, which are California, Texas, Wyoming, Minnesota, and Iowa.



Based on these text features, what do you predict this article will be about?

The bottom of the page shows what look like weird windmills, so we will probably learn about what those white objects are. There is a light bulb with a windmill inside, so maybe we will learn that lights can also be powered by wind.

Teacher: Read aloud.

Students: Practice the skill or strategy.

3. Read page 18, paragraph 1 aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

What information does the first paragraph give us about wind power?

It tells us that electricity can come from wind and that wind power is the world's fastest-growing source of energy.

Does the information that we read in the first paragraph confirm the predictions we made?

Yes, because based on the text features, such as the photos, the map, and the caption, we predicted that we would learn how wind makes energy and what kinds of power wind can make. The first paragraph told us that wind can make electricity, so my prediction about the light bulb powered by the wind was confirmed.

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

4. 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 pages 18 and 19, stopping at the end of the paragraph that carries over from page 18, after the words "...that supply electricity to homes and businesses."

Students should record information from the article on their graphic organizers. Tell students to use the information from the text to try to confirm their predictions.

Explain to students that as they read, they should think about the predictions that they made using the text features on these pages and look for information that might help to confirm their predictions.

Use **Random Reporter** to debrief.

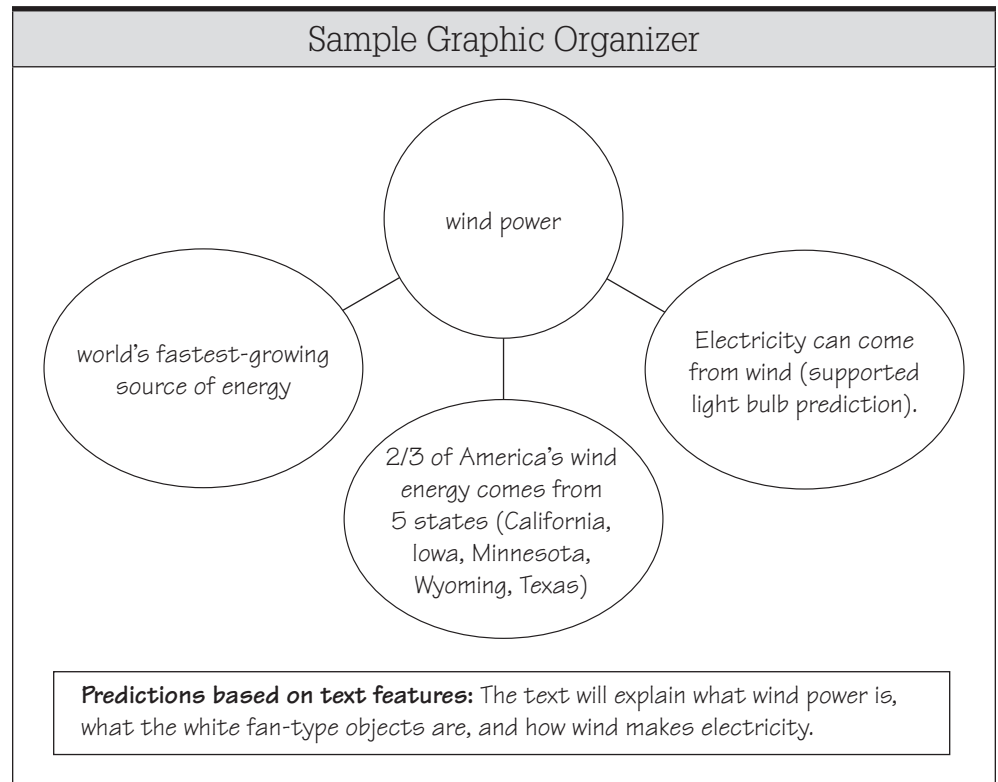
5. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

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

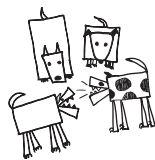


Partner pairs: Review, reread to clarify, and add to the graphic organizer.

A sample graphic organizer follows.



6. Explain to students that they should use the text features on pages 19 and 20 to make predictions. Tell students to record their predictions and, after reading, to use the information from the text to try to confirm their predictions.



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 19 (starting at first full paragraph) and 20 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

1. How does the information in the article support our predictions about the objects at the bottom of pages 18 and 19? What are these objects called, and how do they work? Use information from the text in your answer. **(Write)**
[DC, RE, SA] (Team Talk rubric)

*100 = The information supports our predictions because we **predicted** that we would learn about the objects and their **functions**. The text says that the objects are tall machines called wind turbines. Also, the text says the turbines have blades on them, called rotors, that spin because of the wind, and power a generator that **converts** the wind power into electricity. The electricity then goes through cables to power stations where it is sent to homes and businesses. The information supported our predictions by telling us about wind turbines and how they work.*

90 = The information supports our predictions because we thought we would learn about the objects and how they work. The objects are tall machines called wind turbines, that have blades on them, called rotors. The rotors spin because of the wind, and power a generator that changes the wind power into electricity that then goes to power stations to be sent to homes and businesses.

80 = The information supports our predictions because we thought we would learn about the objects and how they work, and we did. The turbines help to make electricity.

continued

Team Talk Questions *continued*

2. Which of the following leads the world in the use of wind energy? **[MI, RE]**
(Team Talk rubric)

- A. United States
- B. Canada
- C. Europe
- D. Denmark

How do you know? **[SA]**

100 = I know that Europe leads the world in the use of wind energy. The article states that Denmark gets twenty percent of its electricity from the wind and that the United States only gets one-tenth of one percent of its electricity from wind power. Canada is not mentioned in the article, and the text says that Europe leads the world in the use of wind energy. So I know that my answer is correct based on the text.

90 = I know that Europe leads the world in the use of wind energy because Denmark gets twenty percent of its electricity from the wind, and the U.S. gets one-tenth of one percent of its electricity from wind power. The text says that Europe leads the world in the use of wind energy.

80 = I know that Europe leads the world in the use of wind energy because the article says so.

3. Based on the information presented in the text, do you think wind power is an efficient way to get energy? Why or why not? Use information from the text to support your answer. **[MI, AA, SA]** (Team Talk rubric)

100 = Yes, wind power is an efficient way to get energy because it has many benefits. For example, the text says that wind energy burns no fuel, doesn't cause pollution, is a renewable resource, and is very inexpensive. For these reasons, I think wind power is an efficient way to get energy.

90 = Yes, wind power is a good way to get energy because it costs very little, causes no pollution, is renewable, and uses no fuel.

80 = Wind power is a good way to get energy because it has many advantages.

4. Why do some people disagree with the use of wind power, and what are their concerns? Use information from the text to support your answer. **[MI, RE, SA]**
(Team Talk rubric)

100 = Some people disagree with the use of wind power and have concerns about it. For example, the text says that many people are concerned that huge wind turbines and wind farms make the landscape less beautiful, and that the rotors could injure or kill birds. Also, the text says some people are concerned that wind power is unreliable because you never know whether the wind will blow. So reliability and danger to wildlife are concerns with wind power.

90 = Some people disagree about wind power and think that it shouldn't be used because they are concerned that it looks ugly, that the spinning turbines could be dangerous to birds, and that it is unreliable.

80 = Some people don't think wind power should be used since you never know whether the wind will blow.

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.

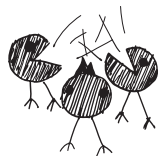


Celebrate team successes!

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 “Fluency.”

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.

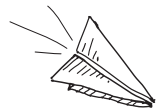
- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

Lesson 2

Reading Objective: Use clues to make predictions.

Teacher Background

In today’s reading, students will learn how animal waste is converted into energy.



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, and model chunking as needed. Then read the meaning of the word.

Word	Pronunciation	Definition	Sample Sentence
atmosphere (noun) page 18	at-mos-phe (AT-muhs-feer)	the whole mass of gases and air that surrounds Earth	We watched the rocket take off from the launch pad and shoot into the <i>atmosphere</i> until it disappeared.
generator (noun) page 19	gen-er-a-tor (JEN-uh-rey-ter)	a machine that changes mechanical energy into electrical energy	My grandmother bought a <i>generator</i> so she will still have power if the electricity goes out.

continued

Word	Pronunciation	Definition	Sample Sentence
methane (noun) page 21	meth-ane (METH-eyn)	a colorless, odorless flammable gas that consists of carbon and hydrogen, and is produced by the decay of organic matter	The workers at the sewage treatment plant had to be treated for chemical exposure when a large tank began emitting <i>methane</i> vapors.
bovine (adjective) page 21	bo-vine (BOH-vahyn)	relating to cows	Our health teacher said that farmers often use <i>bovine</i> growth hormones to increase their cows' milk production.
uninhabitable (adjective) page 22	un-in-hab-it-a-ble (uhn-in-HAB-it-uhbl)	not safe or suitable to live in	Antarctica is <i>uninhabitable</i> for humans because the frigid temperatures and severe weather make it impossible to live there.
petroleum (noun) page 26	pet-ro-le-um (puh-TROH-lee-uhm)	a type of oil that comes from below the ground and is the source of gasoline and other products	The oil rigs off the coast were digging to find <i>petroleum</i> beneath the ocean floor.
decomposing (verb) page 27	de-com-pos-ing (dee-kuhm-POHZ-eng)	slowly breaking down or being destroyed by natural processes, chemicals, etc.	Many types of bacteria and fungi aid in the process of <i>decomposing</i> dead organisms.
byproducts (noun) page 27	by-pro-ducts (BY-prod-uhktz)	something that is produced during the production or destruction of something else	Gases such as carbon monoxide are <i>byproducts</i> of burning gas or other fuels.

- Use **Random Reporter** to have teams share a new sentence that uses one of their vocabulary words. Award team celebration points.
- 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.

Review Vocabulary Vault.

Make Predictions

Teams review their cycle goal.

Post and present the reading objective.

Refer students to pages 21–23 in the text.



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

Show the video “Bacteria Energy.”



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 students preview today's text. Use **Think-Pair-Share** to ask:

Is this literature or informational text? How do you know?

This text is informational. The table of contents, chapter titles and headings, and diagrams are evidence that the text is informational.

5. Prompt students to identify the next steps in the TIGRRS process. Use **Think-Pair-Share** to have students predict the topic and identify clues and predict the author's intent. Randomly select a few students to share.
6. Use **Think-Pair-Share** to ask:

Which graphic organizer(s) will work best with this text? Why?

A web will work best because all the information is about a central topic.

T: Converting cow manure into an energy source

I: To inform the reader about energy that can be made using cow manure

G: Web

7. Show the video “Science Nation: Bacteria Energy.” Use **Think-Pair-Share** to debrief the video.

What source of energy is the video featuring? What did you learn about it?

The source of energy is bacteria. The bacteria breaks down waste in waste water and turns it into electricity. The scientists are capturing the energy in fuel cells to help power the waste water treatment plant.

Interactive Read Aloud

1. Have students use the text features on pages 21–23, make predictions based on the text features, and record their predictions on their graphic organizers. Remind students to go back to their predictions after reading to try to confirm them.
2. Read page 21, stopping after the sentence that ends “...concrete tank called a digester” aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

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

Did the information on this page confirm the predictions that you made? Why or why not?

Yes, the information confirmed our predictions because we predicted that the text would tell us how cow manure can be used to make energy.

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.

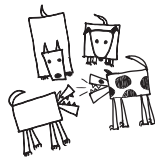
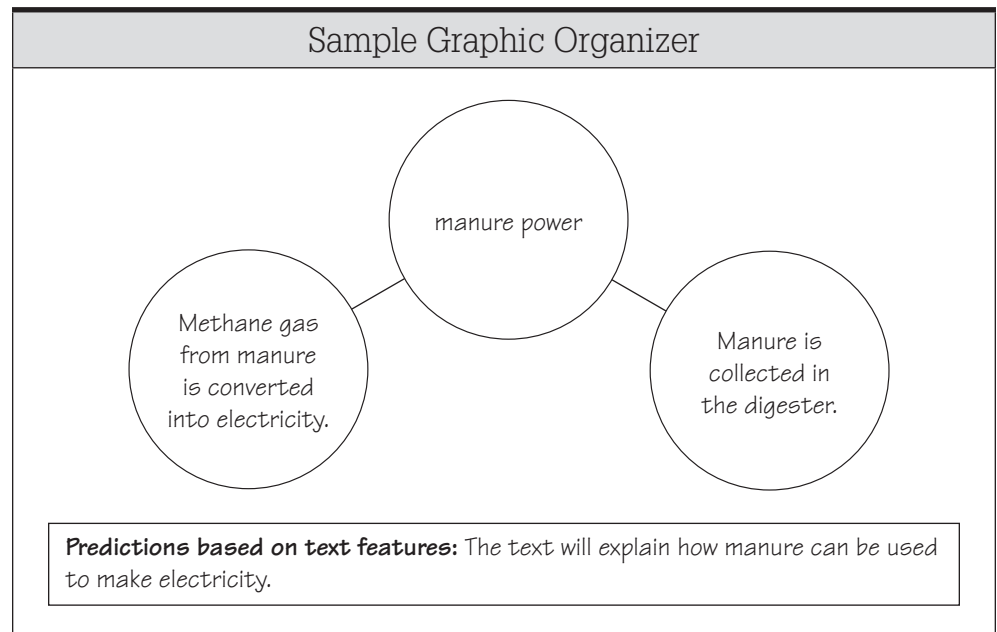
3. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students begin reading on page 21, starting at the last sentence on the page, which begins “As its name implies, this tank...,” and continuing on to page 22, stopping at the end of the first paragraph. Tell students to revisit their predictions to try to find confirmation from the text.

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.

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 22 (starting at paragraph 2) and 23 aloud with partners.

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.

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. **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. Are the text features in this article helpful to the reader in making predictions about the information? Why or why not? Support your answer with information from the text. (Write) [RE, DC, SA] (Team Talk rubric)</p> <p>100 = <i>The text features in this article are not very helpful to the reader in making predictions about the information. For example, the illustration on page 22 just shows kids singing the “Beans, Beans...” song, which doesn’t reflect anything in the text. Also, the illustrations on page 21 are just silly, with a cow as a hot air balloon and a farmer asking the cows which one of them passed gas. So in these ways, the text features are not helpful to the reader.</i></p> <p>90 = <i>The text features in this article are not very helpful to the reader in making predictions about the information. The illustration on page 22 just shows kids singing the “Beans, Beans...” song, which doesn’t go with anything in the text. The illustrations on page 21 are just silly, with a cow as a hot air balloon and a farmer asking the cows which one of them passed gas.</i></p> <p>80 = <i>The text features are not very helpful to the reader in making predictions because they don’t go along with the text.</i></p>

continued

Team Talk Questions *continued*

2. What text features could the author have used instead to assist the reader in making predictions about the information in the article? Support your answer with information from the text. **[AC, RE, SA]** (Team Talk rubric)

100 = To assist the reader in making predictions about the information in the article, the author could have used diagrams and photographs with detailed captions. For example, the information in the article is related to the process of converting manure into an energy source. The author could have used a diagram that showed the process of capturing the manure and how it goes into a digester. The diagram could be labeled with arrows and details to help the reader get an idea of what information would be in the article. Also, photographs of cows at a farm could have been used, with captions of information related to using manure as an energy source. These text features would be more useful in helping a reader predict the information in the article.

90 = To help the reader make predictions about the article, the author could have used diagrams and photographs. The author could have used a diagram that showed how people get the manure and how it goes into a digester. The diagram could be labeled with arrows and details to help the reader get an idea of what information would be in the article. Photographs of cows at a farm could have been used, with information about using manure for energy.

80 = The author could have used diagrams and photographs to help the reader make predictions about the article.

3. Analyze the following statement from the article: "In the race to find renewable forms of energy, this idea is a winner." Does the information presented in the article support this statement? Why or why not? Use support from the text in your answer. **[AA, DC, SA]** (Team Talk rubric)

100 = Yes, the information from the article supports this statement. The text states that cows can produce thirty gallons of waste each day, so there is an abundance of manure to use, and it is a renewable energy source. Also, the text says that if the manure is not put into digesters to be converted into energy, then farmers usually collect it on the farm, and rainwater washes it into streams, which pollutes them. So using manure as a power source helps the environment as well.

90 = Yes, the information from the article supports this statement because cows can produce thirty gallons of waste each day, so there is a lot of manure to use, and it is a renewable energy source. Plus, if the manure is not put into digesters to be used for energy, then farmers usually collect it on the farm, and rainwater washes it into streams, which pollutes them.

80 = Yes, the information from the article supports this statement because using manure as a power source is a great idea.

continued

Team Talk Questions *continued*

4. "In our country, early pioneers burned buffalo chips." In this sentence, the word *chips* refers to which of the following? **[CV]**
- A. buffalo hides
 - B. buffalo horns
 - C. *buffalo dung*
 - D. buffalo food

How do you know? Use information from the text. **[SA]**

100 = I know that buffalo chips means buffalo dung because the article states that throughout history, people around the world have learned to burn dried animal dung for heating and cooking fires. So I know that buffalo chips refers to buffalo dung.

90 = I know that buffalo chips means buffalo dung because the article talks about how throughout history, people around the world have learned to burn dried animal dung for heating and cooking fires.

80 = I know that buffalo chips means buffalo dung.

5. Which word from the vocabulary list belongs in the blank? **[CV]**
- Over seventy percent of Earth is ocean, and, therefore, _____ for humans.

How do you know? **[SA]**

Uninhabitable because uninhabitable means not safe or suitable to live in, and humans can't live in the ocean.

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

- 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)

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.

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.

Make Predictions

Word	Pronunciation	Definition	Sample Sentence
atmosphere (noun) page 18	at-mos-phere (AT-muhs-feer)	the whole mass of gases and air that surrounds Earth	We watched the rocket take off from the launch pad and shoot into the <i>atmosphere</i> until it disappeared.
generator (noun) page 19	gen-er-a-tor (JEN-uh-rey-ter)	a machine that changes mechanical energy into electrical energy	My grandmother bought a <i>generator</i> so she will still have power if the electricity goes out.
methane (noun) page 21	meth-ane (METH-eyn)	a colorless, odorless flammable gas that consists of carbon and hydrogen, and is produced by the decay of organic matter	The workers at the sewage treatment plant had to be treated for chemical exposure when a large tank began emitting <i>methane</i> vapors.
bovine (adjective) page 21	bo-vine (BOH-vahyn)	relating to cows	Our health teacher said that farmers often use <i>bovine</i> growth hormones to increase their cows' milk production.
uninhabitable (adjective) page 22	un-in-hab-it-a-ble (uhn-in-HAB-it-uhbl)	not safe or suitable to live in	Antarctica is <i>uninhabitable</i> for humans because the frigid temperatures and severe weather make it impossible to live there.
petroleum (noun) page 26	pet-ro-le-um (puh-TROH-lee-uhm)	a type of oil that comes from below the ground and is the source of gasoline and other products	The oil rigs off the coast were digging to find <i>petroleum</i> beneath the ocean floor.
decomposing (verb) page 27	de-com-pos-ing (dee-kuhm-POHZ-eng)	slowly breaking down or being destroyed by natural processes, chemicals, etc.	Many types of bacteria and fungi aid in the process of <i>decomposing</i> dead organisms.
byproducts (noun) page 27	by-pro-ducts (BY-prod-uhktz)	something that is produced during the production or destruction of something else	Gases such as carbon monoxide are <i>byproducts</i> of burning gas or other fuels.

Lesson 3

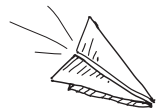
Reading Objective: Use clues to make predictions.

Teacher Background

Today students will read about sources of clean green energy that are lesser known, including generators that convert human energy into electric energy, alcohol as a power source for vehicles, bugs that produce oil, and how methane is converted into electricity.

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.



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.

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 want to explore the word *renewable* in more depth. It is a word that has come up several times in this issue, and I would like to learn more about it. It is important to this text because the magazine is informing us about renewable and nonrenewable energy sources. I will verify the meaning of the word *renewable* in the dictionary.

(Model verifying the meaning of the word *renewable* in the dictionary.)

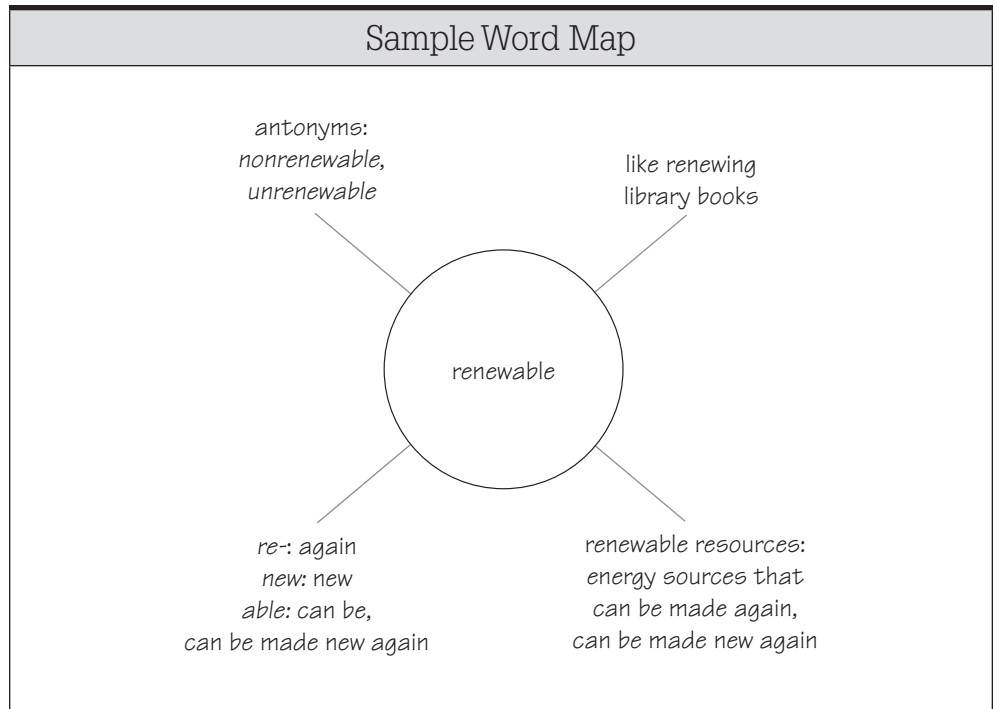
The dictionary tells me that *renewable* means able to be made new again. That makes sense because this word can be broken down into segments, or smaller parts. What is the first part of the word? *Re-*. I know that the prefix *re-* means again, as in *redo*, which means to do again. The next part of the word is *new*. So *renew* means to make new again. The last part of the word is *able*, which means can be or can do. If I put these parts back together, I see that the word literally means to make new again. So that makes me think that renewable energy sources are able to be made again—that they can be renewed, or made new.

This word reminds me of when I renew my library books at the library, and I can keep my library books longer. In the same way, energy sources that are renewable are able to be used again.

An antonym for this word is *nonrenewable*, which means cannot be made new again. When a library book is nonrenewable, it means that it can't be renewed, so I have to return it to the library; I can't keep it again. In the same way, nonrenewable energy sources can't be used again.

My meaningful sentence for this word is "Trees are a renewable resource because more trees can be planted, and products from trees, such as paper, can be recycled and used again."

Sample Word Map



Review Vocabulary Vault.

Teams review their cycle goal.

Post and present the reading objective.

Refer students to pages 26 and 27 in the text.



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

Show the video.

Build background about green energy.



Teacher: Read aloud.

Students: Practice the skill or strategy.

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 reading objective.
4. Have students preview today's text. Have teams discuss the strategies that they use when they first pick up a text. Use **Random Reporter** to share team responses.

I scan the text to see if it is informational or literature; 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.

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

T: Surprising sources of green energy

I: To inform the reader about unusual forms of green energy

G: Web

Show the following video to build background about different types of green energy: "Renewable Energy Scientist, Sandra Begay-Campbell"

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

What renewable sources of energy did Sandra Begay-Campbell talk about?

She talked about solar energy and storing energy in batteries. She also talked about wind energy from turbines.

Interactive Read Aloud

1. Have students use the text features on pages 26 and 27 to make predictions. Students should record their predictions and revisit them after reading to check for confirmation from the text.

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

What predictions were you able to make about the information in the text?

From the photograph and the heading of this section, I predicted that the information in the text would be related to how people can produce energy and how the energy from people might be converted into another form of power that can be used.



2. Read the first section of page 26, “People Power,” aloud.

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

Were your predictions confirmed by the text? Why or why not?

Yes, my predictions were confirmed by the text because the information explained how energy from people can be harnessed by a device that will convert the energy into electricity.

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 “Alcohol Power” section on page 26. Students should revisit their predictions to check for confirmation from the text.

Use **Random Reporter** to debrief.

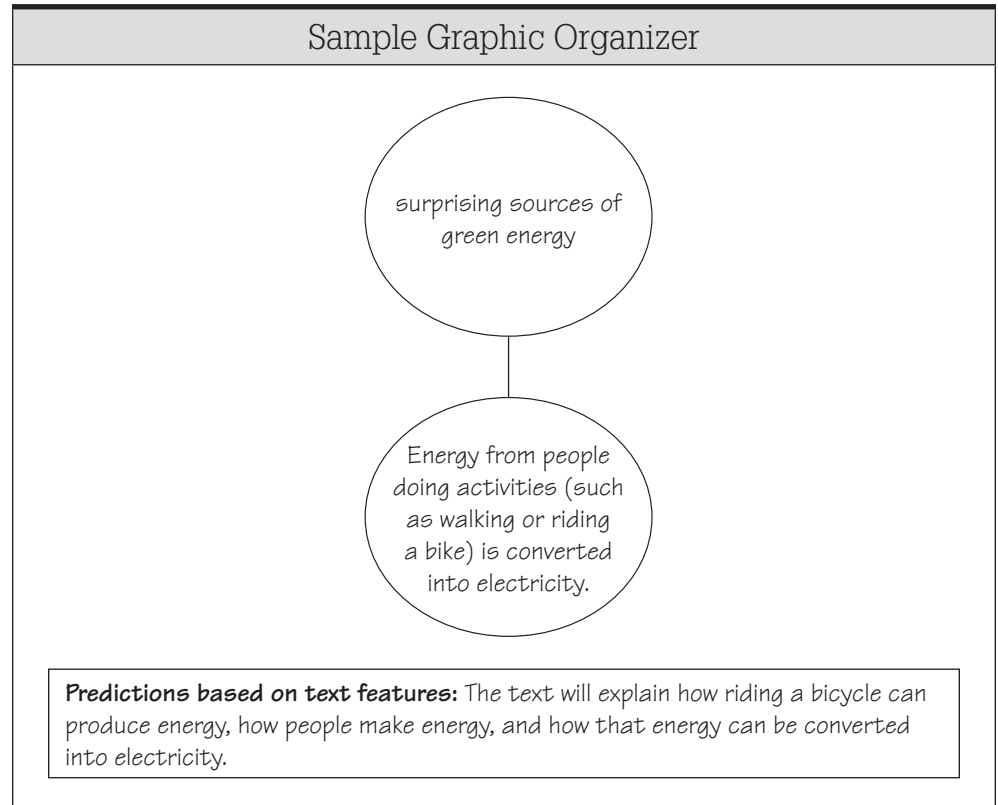
4. Ask partners to review this section of text, check their understanding with each other, reread what they need to clarify, and add notes to their graphic organizers.

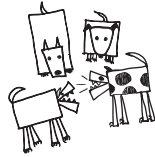
Use **Random Reporter** to debrief. Add student responses to the graphic organizer.

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**
page 27 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. Do the text features on this page help you make predictions about the information that may be included? Why or why not? Use support from the text in your answer. **(Write) [DC, SA]** (Team Talk rubric)

100 = *The text features on this page helped me make predictions about the information on the page. For example, the headings of the two sections helped me predict that the information would be related to using bugs for power and converting garbage into an energy source. The photo of the landfill helped me predict that the information would be about using garbage in landfills as a source of energy. The text features were useful in making predictions.*

90 = *The text features on this page helped me make predictions about the information on the page. The headings of the two sections helped me predict that the information would be about using bugs for power and turning garbage into an energy source. The photo of the landfill helped me predict that the information would be about using garbage in landfills as a source of energy.*

80 = *The text features on this page helped me make predictions about the information on the page.*

2. Were your predictions for this page confirmed? Why or why not? Explain. **[MI, SA]** (Team Talk rubric)

100 = *The predictions that I made for this page were confirmed. For example, I predicted that the information would relate to using bugs for power and converting garbage into an energy source. The text included the information that I predicted, so my predictions were confirmed.*

90 = *The predictions that I made for this page were confirmed. I predicted that the information would be about using bugs for power and turning garbage into an energy source.*

80 = *The predictions that I made for this page were confirmed because it had the information that I predicted.*

3. Besides garbage, what other source of methane gas have we read about in this unit? **[MI, DC]** (Team Talk rubric)

- A. bovine waste
- B. the Veggie Bus
- C. solar racers
- D. turbine clusters

How do you know? Use support from the text in your answer. **[SA]**

100 = *I know that we read about bovine waste as a source of methane gas. In the article "Poop Power," the text explained that methane gas from cow waste can be captured and converted into energy. So I know that the correct answer is bovine waste.*

90 = *I know that we read about bovine waste as a source of methane gas. In the article "Poop Power," it said that methane gas from cow waste can be used as energy.*

80 = *I know that we read about bovine waste as a source of methane gas.*

continued

Team Talk Questions *continued*

4. Does the title of the article, “Surprising Sources of Green Energy,” accurately reflect the information that is included in this section of the text? Why or why not? Use information from the text to support your answer. **[MI, DC, SA]** (Team Talk rubric)

100 = The title of the article, “Surprising Sources of Green Energy,” accurately reflects the information that is included in this section of text. The article explains sources of clean green energy that are unusual and surprising such as using alcohol to fuel vehicles, changing bugs to make oil, harnessing electric energy generated by humans, and using methane gas from garbage in landfills to make electricity. In these ways, the title of the article accurately reflects the information that is included.

90 = The article does tell about surprising sources of green energy. The article talks about unusual green energy sources such as using alcohol to fuel vehicles, changing bugs to make oil, and using methane gas from garbage in landfills to make electricity.

80 = The article does tell about surprising sources of green energy like bugs.

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

Accept a sentence that shows that the student knows the meaning of the word and can use it correctly. For example: The decomposing skunk created a horrible odor that could be smelled for miles.

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

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.

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

(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

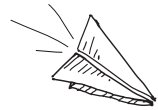
Reading Objective: Use clues to make predictions.

Teacher Background

In today's reading, students will learn about a bus that runs on recycled vegetable oil and how vegetable oil can be used as an energy source.

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.



Active Instruction tp

(15–25 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.

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.

Make Predictions

Teams review their cycle goal.

Post and present the reading objective. Refer students to pages 28 and 29 in the text.



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

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 Veggie Bus

I: To inform the reader about the Veggie Bus

G: Web

Interactive Read Aloud

1. Have students use the text features on pages 28 and 29, make predictions based on the text features, and record their predictions on their graphic organizers. Remind students to go back to their predictions after reading to try to confirm them.
2. Read page 28, paragraph 1 (stopping after the sentence that ends "...their used oil.") aloud. Use **Think-Pair-Share** to prompt use of the skill or strategy.

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

Were the predictions that you made confirmed in the text? Why or why not?

One of the predictions that I made was confirmed because I predicted that the text would tell us what the Veggie Bus uses for fuel, and the text confirmed that.

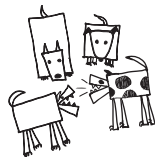
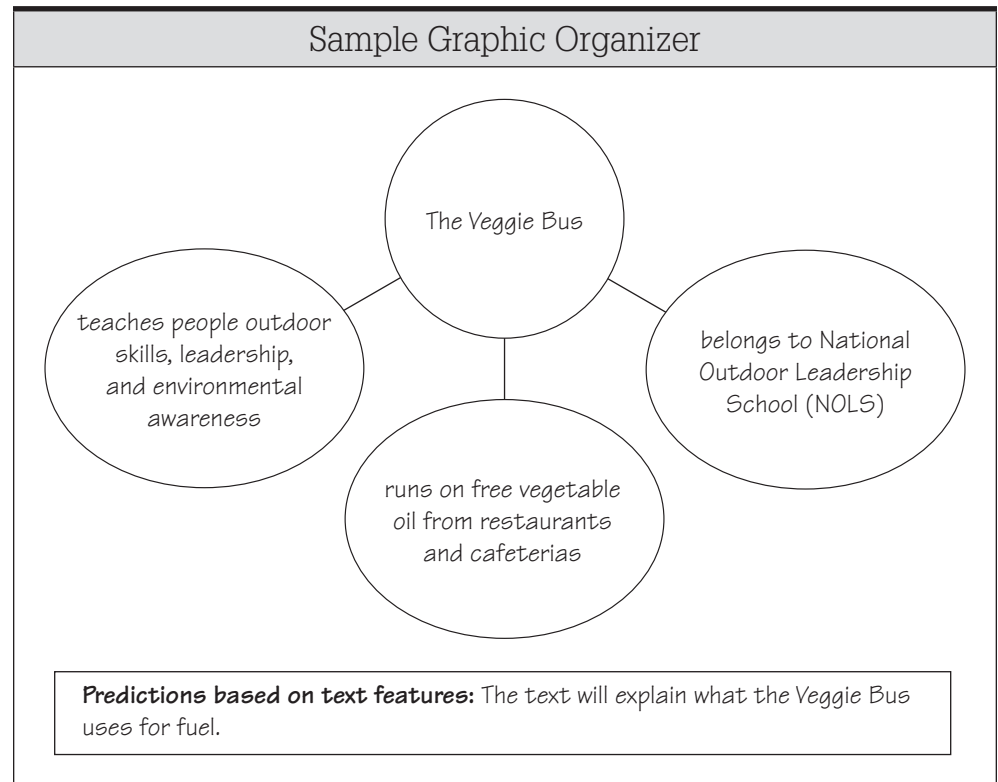
3. Partner Practice: Student partner pairs use the read-aloud/think-aloud process to practice the skill or strategy with the next passage in the text. Have students read page 28 (starting at the sentence that begins "Otherwise, they would have..."), including the "Did You Know?" box, to page 29 (stopping after the sentence that ends "...doesn't pollute the air as much.>").

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.

A sample graphic organizer follows.



Teamwork tp

(20–30 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**
page 29 (starting at the sentence that begins “The oil has to be filtered...”) aloud with partners.
(if skipping Interactive Read Aloud, pages 28 and 29)
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. Which text feature on pages 28 and 29 helped you the most in making a prediction about the information in the text? Why? Support your answer with information from the text. (Write) [RE, DC, SA] (Team Talk rubric)</p> <p>100 = <i>The text feature that helped me the most on pages 28 and 29 was the photo of the man putting the vegetable oil into the gas tank of the bus. Based on this photo, I predicted that the article would include information on what fuels the Veggie Bus. The text confirmed this prediction.</i></p> <p>90 = <i>The text feature that helped me the most on pages 28 and 29 was the photo of the man putting the vegetable oil into the gas tank of the bus. I predicted that the article would include information about what fuel the Veggie Bus uses.</i></p> <p>80 = <i>The text feature that helped me the most on pages 28 and 29 was the photo of the man putting the vegetable oil into the gas tank of the bus.</i></p>

continued

Team Talk Questions *continued*

2. Write a summary of today's reading. **[MI]** (summary rubric)

100 = This article describes the Veggie Bus, a bus that is fueled by recycled vegetable oil. The National Outdoor Leadership School (NOLS) uses the Veggie Bus to travel around the country and teach people about the environment, leadership, and the outdoors. The vegetable oil that the bus runs on is free and is donated by restaurants and cafeterias. After the oil is filtered, it is poured into the diesel engine, providing almost the same gas mileage as regular diesel, but with less air pollution. Solar panels on the roof of the bus provide power for the refrigerator, computers, minitheater, and lights on board. Thousands of other vehicles use vegetable oil as power also.

90 = This article tells about the Veggie Bus, a bus that runs on recycled vegetable oil. The National Outdoor Leadership School (NOLS) travels around in the bus and teaches people about the earth and leadership. The free vegetable oil from restaurants and cafeterias is filtered first and gets about the same gas mileage as regular fuel, but without polluting the air as much. Solar panels on the roof of the bus run the refrigerator, computers, minitheater, and lights on board. Thousands of other vehicles use vegetable oil as power too.

80 = The National Outdoor Leadership School (NOLS) has a Veggie Bus that runs on free filtered vegetable oil. It doesn't pollute the air as much as regular fuel, and gets almost the same gas mileage. The bus uses power from the sun to power lights and other things inside. Other vehicles run on vegetable oil too.

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

A synonym for the word decomposing is decaying. An antonym for the word decomposing is renewing.

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

(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.

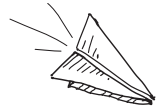
- Something to cheer about: Choose a behavior or learning outcome that you would like to reinforce, and reward that behavior by asking students to lead a cheer of their choice.
2. As a reminder, refer students to the Read and Respond homework assignment described in their student editions.

Lesson 5

Writing Objective: State an opinion, and support it with reasons.

Teacher Background

For this writing project, students will form opinions related to renewable energy sources and will support their opinions with reasons from the text.



Active Instruction

(10 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 writing objective. Introduce the writing project

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. In this cycle, students have used text features to make predictions about the information that would be presented in the various articles. Students will now state their opinions and support them with reasons 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

Analyze this opinion statement: Renewable energy sources are the only types of energy that should be used. Do you agree or disagree with this statement? Support your opinion with information from the text.

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 is asking us to state an opinion and support it with reasons from the text.

Students identify the purpose for writing.

- Refer students to the following writer’s guide in their student editions. Point out that writing to support a claim with reasons 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	
Ideas	<ul style="list-style-type: none"> Clearly state a position (claim) and include good reasons that support that position.
Organization	<ul style="list-style-type: none"> Begin by stating a position (claim). In the middle, tell supporting reasons. End with a closing statement.
Style	<ul style="list-style-type: none"> Use words and phrases that help the audience see how the reasons are related to the claim.
Mechanics	<ul style="list-style-type: none"> Use correct punctuation, capitalization, spelling, and grammar.

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, stating an opinion and supporting it with reasons?

Under Ideas: Clearly state a position or claim and include good reasons that support it. Under Organization: Begin by stating a position or 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 a Skill

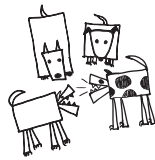
Model identifying reasons that support an opinion.

Remind students that the first step in the writing process is planning, or prewriting. Explain to students that to support their opinion statements, they need to use reasons from the text. Tell students that they will practice identifying supporting reasons in a paragraph.

Use the following paragraph to model identifying supporting reasons in a paragraph. Have students point out or underline the reasons that support the opinion statement in the opening sentence. (Supporting reasons are underlined below.)

Sample Paragraph

People should conserve nonrenewable resources. First, nonrenewable resources can never be replenished, and once they run out, they are gone forever. Additionally, nonrenewable resources create more pollution than renewable resources. Lastly, nonrenewable resources are more expensive than renewable resources. For these reasons, people should conserve nonrenewable resources.



Teamwork tp

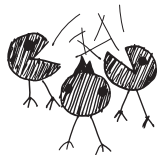
(20 minutes)

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.

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)

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.

Students write for 10 minutes.

Monitor discussions as partners and teams give feedback.

Students revise and edit their writing projects.

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

Refer students to the writer’s guide for writing to support a claim with reasons and the writing objective—to state an opinion and support it with reasons.

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

For example, ask:

- **Does the writer state his or her opinion clearly?**
- **Does the writer include good reasons that support his or her opinion?**
- **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 good reasons that support your opinion?

Answers will vary.

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.

Writing Prompt

Analyze this opinion statement: Renewable energy sources are the only types of energy that should be used. Do you agree or disagree with this statement? Support your opinion with information from the text.

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

Lesson 6

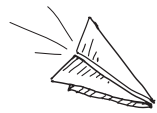
Reading Objective: Use clues to make predictions.

Writing Objective: State an opinion, and support it with reasons.

Teacher Background

Today's cycle test challenges students to use clues from text features to make predictions about the information in the text, to state an opinion related to the information presented in the text, and to support that opinion with reasons.

Students will read about solar ovens that are being utilized around the world to improve people's lives.



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)

Partner Review

1. Remind students that they have been practicing using clues to make predictions and stating an opinion and supporting it with reasons. Use **Think-Pair-Share** to ask:

When making our predictions about the text in this unit, what have we been using?



The text features such as maps, captions, headings, and photographs.

Why is it important to think about what you will read before you actually read?

Because it helps you form connections with the text and prepares you for what you will be learning about.

After reading, what should you do with your predictions?

Go back, and check them to see whether the information included in the text confirms the predictions.

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 making predictions.
4. Ask students to identify key words or phrases in question #2.

2. Were the text features on page 30 helpful in making a prediction about the text, and were your predictions confirmed? Explain using support from the text in your answer. **[DC, RE, SA]**

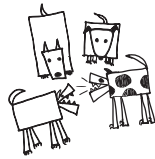
5. Introduce the text that students will read. Tell what it is about, but do not give additional information or details. Explain to students that today they will be reading about another way that solar energy is used—to cook food.



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.

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

In the reading we have done so far, what have we learned about solar power?

The sun is a nuclear reactor and provides free energy called solar power. Solar energy can be collected and converted into electricity.

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

Make Predictions

Directions: Survey the article “Your Turn: S'More Energy Please,” on pages 30 and 31, and record your predictions. Use the TIGRRS process, and answer the following questions on a separate piece of paper.

Part I. Comprehension (100 points)

1. What is the topic?

5 points = The topic is solar ovens, including what they are and how they work.

What is the author's intent?

5 points = To inform me about ovens that are solar powered and how they operate.

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 = Solar ovens are small, inexpensive, and efficient and are being used to improve people's lives around the world. The ovens are made from reflectors, a black cooking surface, and a clear cover. They use solar power to cook food and are also used to sterilize drinking water and medical supplies.

2. Were the text features on page 30 helpful in making a prediction about the text, and were your predictions confirmed? Explain using support from the text in your answer. **[DC, RE, SA]**

*20 points = The text features were not very helpful in making a prediction about what the text would include. For example, the picture shows a donkey, a man tying something around the donkey's leg, and another person standing next to the donkey, smiling and holding something. At the bottom of the picture, there is a bag with an arrow that says “supper!” It is hard to tell from the picture what the article will be about—a donkey, the people, or the bag of supper. There are no **diagrams** or labeled pictures of the oven itself, which is what the text is about. My prediction was not confirmed because I predicted that the article would be about donkey power. So the text features were not helpful for predicting what the text would be about.*

15 points = The text features did not help me predict what the text would be about because the picture has nothing to do with the information in the text. The article is about solar ovens, but the picture has a donkey, two people, and a box with a plastic bag in it with a label that says “supper!” My predictions were not confirmed because I predicted that the article would be about men using a donkey to fuel an oven.

10 points = *The text features didn't help me make a prediction because the photo doesn't show anything about a solar oven, and my prediction was not confirmed.*

3. If you were the author, what text features would you have used on page 30 to help the reader make a prediction about what would be included in the article? **[DC, AC, RE]**

20 points = *If I were the author, I would have used different text features, such as a labeled diagram, that **explained** the parts that make up the solar oven. I would also have had an **illustration** of the sun, with lines to show the rays, and a **description** showing how the sun reflects off the reflectors and creates heat. **Additionally**, I would have **included** captions and arrows to show and explain how the solar oven works. **With these text features, the reader of my article would be able to make a good prediction about what he or she would be reading.***

15 points = *If I were the author, I would have used better text features such as labeled diagrams to show how the oven works and the parts that make up the oven. Also, I would have had a picture of an actual solar oven.*

10 points = *If I were the author, I would have used a different picture.*

4. Does the information in the text support the statement that solar ovens can improve people's lives? Why or why not? Use information from the text to support your answer. **[AA, MI, RE]**

20 points = *Yes, the information in the text **supports** the statement that solar ovens can improve people's lives. **For example**, the article says that solar ovens are small and inexpensive, so people who are poor can use them if they can't afford a real oven. Also, the text says that the ovens are not just used for cooking, but they can also be used to sterilize drinking water and medical supplies. **In this way, solar ovens can improve health conditions in poor countries.***

15 points = *Yes, the information in the text supports the statement that solar ovens can improve people's lives because it says solar ovens are small and inexpensive, so people who are poor can use them if they can't afford a real oven. Also, the ovens are not just used for cooking, but they can also be used to sterilize drinking water and medical supplies.*

10 points = *Solar ovens improve people's lives because they help them cook.*

5. How does the information on page 31 help you better understand how solar ovens work? Support your answer. **[RE, DC, SA]**

20 points = *The information on page 31 helps me better understand how solar ovens work because it has illustrations and directions. For example, the illustrations on the page show what is used to make an oven, and they show a girl making a solar oven. This helps me see how the sun reflects off the shiny reflectors and how the oven cooks the food. Also, the page includes specific directions on how to use the oven, such as where to put it and how to position the reflectors. Using this information, I could build a working solar oven.*

15 points = *The information on page 31 helps me better understand solar ovens because the illustrations on the page show what is used to make an oven, and they show a girl making a solar oven. Also, the page tells how to use the oven, and where to put it.*

10 points = *The information on page 31 helps me understand how to build and use a solar oven.*

Part II. Writing (100 points)

Write at least one paragraph to answer the following question:

Which type of energy source that you have read about in the text is the best and most useful? Support your opinion with information from the text.

The energy source that is the best and most useful is wind power. There are several reasons I think that wind power is the best and most useful energy source.

For example, the text says that wind power doesn't burn fuel, causes no pollution, is renewable, and is very inexpensive. In addition, the text says that wind farms that have many hundreds of turbines can produce enough energy for an entire town.

For these reasons, I believe that wind power is the best and most useful type of energy source presented in the text.

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

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

Part III. Vocabulary (100 points)

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

Accept responses that show that the student understands the meaning of the word and can use it correctly. For example: The Earth's atmosphere is made up of oxygen, carbon dioxide, and other gases that surround the Earth.

2. In which of the following sentences is the word *generator* used incorrectly? **[CV]**

- A. The generator created electricity for the restaurant during the power failure.
- B. A generator was used at the wind farm to convert wind power to electricity.
- C. *My father used a generator to fertilize the lawn after he mowed it.*
- D. The school has a large generator that can produce electricity.

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

A synonym for uninhabitable is unlivable. An antonym for uninhabitable is livable.

4. One renewable energy source is _____, which can be converted to electricity by using digesters.

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

- A. byproducts
- B. *methane*
- C. petroleum
- D. hydropower

5. Write a meaningful sentence using the word *bovine*. **[CV]**

Accept responses that show that the student knows the meaning of the word and can use it correctly. For example: Manure from bovine farms can be converted and used as an energy source.

6. Use the words *methane* and *atmosphere* in a question. **[CV]**

Does methane exist in the atmosphere?

7. Oil riggers dig for _____ below the surface of the Earth and use it to produce gasoline.

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

- A. *petroleum*
- B. methane
- C. carbon
- D. hydrogen

8. Write a meaningful sentence using the word *decomposing*. **[CV]**

Accept responses that show that the student knows the meaning of the word and can use it correctly. For example: When an animal dies, it immediately begins decomposing.

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]**

A word that we explored was flatulence, which means to have too much air or gas in the intestines or stomach. Scientists use flatulence from cows as a source of energy that can be converted into electricity.

10. As used in the sentence “Wherever NOLS goes, they teach people outdoor skills, leadership, and environmental awareness,” *awareness* most nearly means— **[CV]**

- A. destruction.
- B. customs.
- C. disregard.
- D. mindfulness.

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

Students will explain their thinking. For example: I used the context. The passage talks about teaching outdoor skills, leadership, and environmental awareness, so I knew that awareness means mindfulness, which means being mindful of the environment.

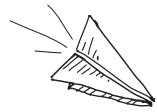
Question Codes			
[DC]	Make inferences; interpret data; draw conclusions.	[AA]	Analyze an argument.
[SA]	Support an answer; cite supporting evidence.	[AP]	Identify author’s intent or purpose.
[MI]	Identify the main idea that is stated or implied.	[RE]	Analyze relationships (ideas, story elements, text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

Lesson 7

Reading Objective: Use clues to make predictions.

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.

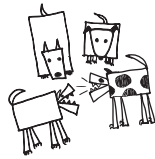
Two-Minute Edit



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.

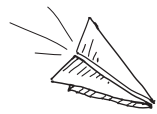
Lesson 8

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

Teacher Background

In 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 goals for further improvement.

In the second part of the lesson, students participate in Class Council.

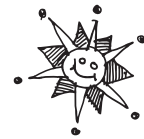


Active Instruction

(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.

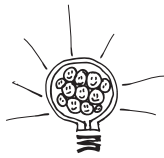


Use **Random Reporter** to ask:

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 then 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)

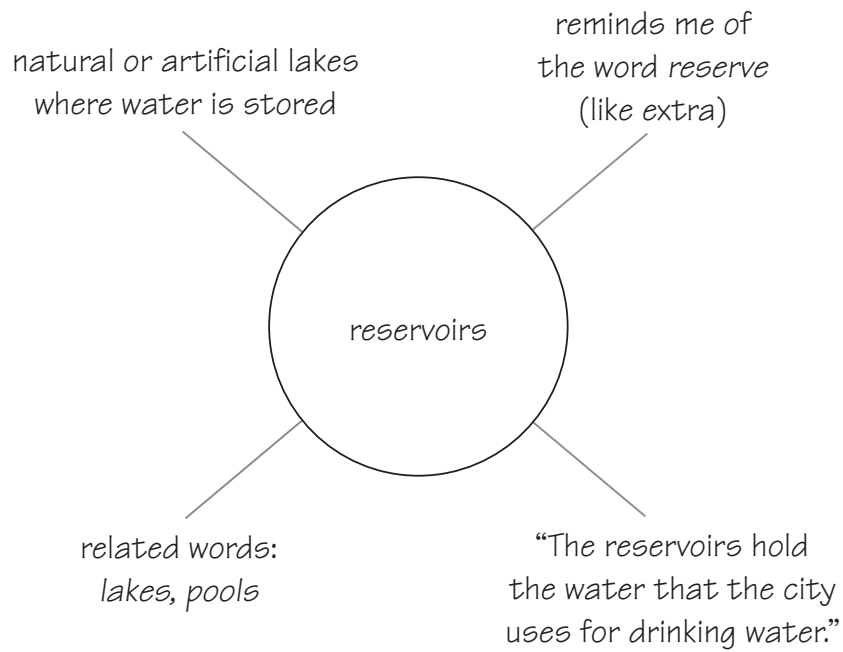
1. Choose a brain game from the card set, and then play the game.
2. Use the following questions to debrief and remind students of self-regulatory strategies:

What did this game require your brain to do?

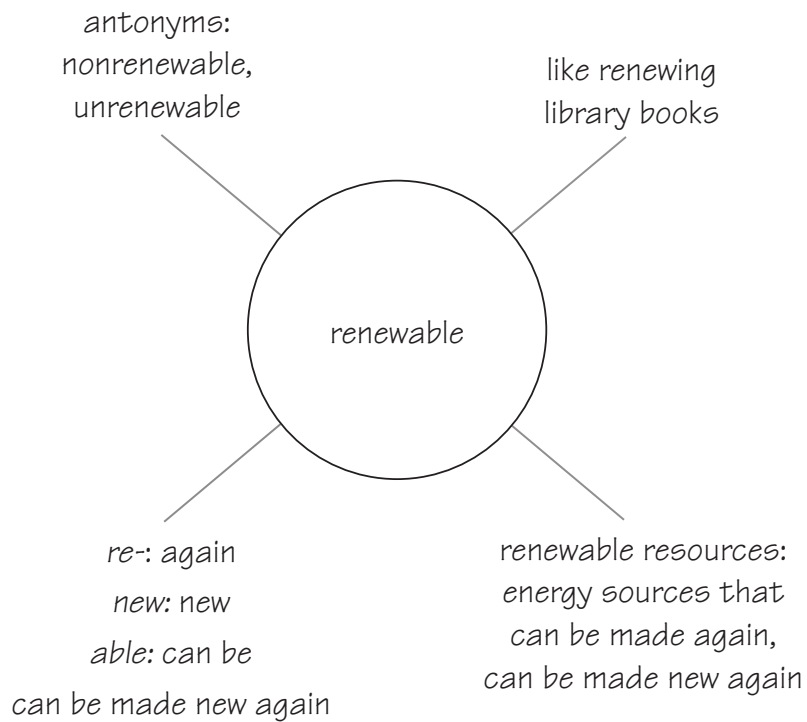
How will use of this skill improve your success in other classes?

Word Power Journal Sample Entries

**Sample Word Map
Cycle 1**



**Sample Word Map
Cycle 2**



Step Up to Research

1. Team score sheets for this unit should be distributed during lesson 1. Students will use this modified version of the team score sheet to review their goals, track their progress through the six-step research process, and tally team celebration points throughout each lesson.
2. All teams will have the same team goal for this unit—to earn as many team celebration points as possible.
3. The teacher cycle record form has also been modified for the research unit.
 - Track student completion of the research steps, using check marks to indicate done or not done.
 - Note the writing purpose that each student selects to evaluate the individual research presentations.
 - Record the writing/presentation score for each student based on the scoring guide for writing that each student chose. This is the only score from the research unit that will roll up into the averages on the classroom assessment summary for the grading period.
 - Record tallies for completion of Read and Respond homework.
4. This is a short, focused research opportunity. While a one-page written product and a three-minute presentation are recommended at this level, please consider your available time and research materials and your students' Internet access and needs to choose a product that is appropriate for your class.

Unit Overview

This research unit follows the level 4 unit 4 Make Predictions: *Power Up!*

The focus for this unit is: the pros and cons of renewable energy. This focus provides the motivation for students to generate questions and stimulates new thinking about the book that they read in the previous unit.

Optional video: www.smithsonianmag.com/video/Afghan-Energy.html (3 min. 50 sec.)
This video shows the value of renewable energy in remote villages in Afghanistan.

You will teach a mini-lesson on presentation skills.

Lesson 1

Teacher Background

A speech or presentation has two parts: the content and the delivery. Being comfortable speaking in front of others takes practice. In this lesson, students learn the same rules that expert presenters use to create memorable events.

Preview the information in the Guide to Great Presentations provided below and in the student edition.

Optional Media: These two videos are great examples of expert presenters putting these student guidelines to good use. In the first example, a narrator points out the elements that Steve Jobs used to engage an audience.

The second video has no narrator. Students will recognize that the speaker in this TED Talk knows and loves her topic. They will see that she chose her words and analogies carefully to make her ideas stick with an audience that may not be expert in her field.

www.youtube.com/watch?v=RHX-xnP_G5s

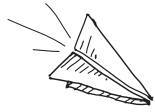
www.huffingtonpost.com/2012/02/28/best-ted-talks_n_1307131.html

If you are unable to show the videos, a sample presentation is provided for you to model and students to evaluate.

Sample Presentation

We love to hate sharks. Many people are afraid of them, but should we be? I would like to tell you why I am afraid for sharks, not afraid of them. There are 200 kinds of sharks in the world. The whale shark is the largest living fish and can grow up to sixty feet long, but it eats only small fish and plankton. All types of sharks have excellent eyesight, a good sense of smell, and a streamlined shape, making them efficient predators. Although sharks are often shown attacking people in the movies, not all sharks are dangerous to humans. Most eat fish, plankton, and other marine life. Some are shy. Most sharks live so deep in the ocean they are not a threat to people. Between 2004 and 2008 there were four shark attack fatalities in the United States. It is much more likely to be injured at the beach by a coconut falling on your head or a lightning strike than by a shark.

Sharks have been living in the oceans of the world for more than 400 million years, but now sharks are in trouble. I am afraid for them because according to the International Union for Conservation on International Trade in Endangered Species, fifty different species of sharks are listed as endangered. This means that sharks represent the greatest percentage of threatened marine species in the world. One reason that sharks are in trouble is the terrible practice of shark finning. Fishermen cut off the fins and leave the animals in the water to die. The fins are sold to make an Asian delicacy called shark fin soup, which can sell for up to \$100 per bowl. As more people in developing countries can afford this soup, more sharks are brutally killed to produce the soup. It is estimated that up to 73 million sharks are killed this way every year. But you can help. Many conservation organizations are working to outlaw this practice. Educate yourself and your friends about this issue. Support the work of people who are trying to save the sharks, or the scariest thing of all may happen—no more sharks swimming in our oceans.



Active Instruction

Generate Questions (15 minutes)

1. Post the research purpose and focus. Have students write their focus-related questions as they enter the classroom.

Research Purpose: In this unit, you will ask questions, find and organize information, and present your findings to others.

Research Focus: Pros and cons of renewable energy

2. Have teams use the Questioning Formulation Technique (QFT: Rothstein, 2012) to write as many questions about the research focus as they can in ten minutes.
 - Ask as many questions as you can.
 - Do not stop to answer, discuss, or judge the questions.
 - Write down every question just as you hear it.
 - If a teammate makes a statement, turn it into a question.
3. Use **Random Reporter** to select a student from each team to share a question or two.



Prioritize and Improve Your Questions (10 minutes)

1. Present the research product:

Research Product: You will write at least one page that answers your research question and include at least one text feature that helps to inform the audience. You will prepare and deliver a three-minute presentation of your written information.

2. Present the materials that students will use to research their questions.
3. Have each student use the team list to choose up to three questions that he or she finds important or interesting.
4. Have students share their questions with their teams and discuss how realistic it is to research each question, given the time and materials available. Teammates help one another narrow down questions to make them more researchable. Each student chooses one question to research.
5. Have students choose the scoring guide that they will use based on the research project (Writing to Support a Claim with Reasons or Writing to Inform or Explain).
6. Use **Random Reporter**, and award team celebration points to teams whose representatives can share the research question and scoring guide that they chose and explain why.



7. Have students review their research purpose, team goal, and team cooperation goal for this cycle. Tell teams to discuss how they are going to earn more team celebration points during this unit, and have them write that goal in the allotted space.
8. Explain to students that they will earn super, great, or good team status based only on the team celebration points that they earn in this unit.
9. Tell students that the only score they will earn this cycle is a writing score that will be based on the scoring guide that they select for evaluation of their research presentation.
10. Tell students to initial each step of the writing process as it is completed during the unit.



Interactive Skill Instruction (25 minutes)

1. Present the mini-lesson on presentation skills. Use **Think-Pair-Share** to ask:

What comes to mind when you hear that you have to speak in front of a group of people?

(Record student responses on the board.) Answers will vary. Summarize by polling how many students imagine a positive experience and how many imagine a negative experience.

2. Explain that the very best way to make presenting to a group fun and rewarding is to be prepared. Direct students to the Guide to Great Presentations in their student editions, and review each point.

Blackline master provided.

Step Up to Research

Guide to Great Presentations

When you give a presentation:

1. **Become an authority.**
 - Get excited about your topic and your research. Know your topic well. When you show enthusiasm, your audience will become enthused as well. The best way to show that you care about your topic is to know your topic and engage the audience. Be prepared.
2. **Rehearse.**
 - Practice the entire presentation. Repeat the hard parts until they are smooth.
 - Practice how you will engage the audience with your body language.
 - Make eye contact with members of the audience as if you were talking with them one to one.
 - Use your hands to gesture.
 - Before the presentation, practice pronouncing words that you don't usually use in conversation. Use an audio button on an online dictionary if you are unsure of the correct pronunciation.
 - If you need to read your presentation, know it well enough that you can look up at the audience every few seconds.
3. **Never apologize.**
 - Focus on your topic, not yourself. If you make a mistake, fix it as you move forward. If it is a little mistake, just keep going. The audience doesn't know your presentation like you do, and they want you to do well.
4. **Visualize success.**
 - Picture yourself speaking slowly in a loud, clear voice. Once you start, take a deep breath when you break between sections to avoid filler words such as *um* and *like*. It is OK to leave a second or two of silence; it allows the audience time to catch up with what you are saying. Many people speak too quickly or too slowly when they are addressing an audience. Aim to keep a natural, conversational pace.

To turn your research into an audience-pleasing presentation:

1. **Write an attention-grabbing introduction.**
 - Use a famous quote.
 - Ask a question.
 - Have the audience make a mind movie.
 - State an interesting fact.
 - Tell an interesting story.
2. **Connect your ideas.**
 - In the middle, give evidence to support each point.
3. **Leave enough time for a memorable ending.**
 - Summarize the important ideas and why they are important to the audience.
 - State a final surprising or interesting story or fact.
 - End with a bonus; tell one more important point.
 - Thank the audience.

3. Refer students to the evaluation form in their folders, and review with students if necessary.

Optional video



Encourage partners to share relevant information.

Blackline master provided.

Remind students of the Read and Respond homework assignment.

- Use the sample presentation or show a video of a speech or presentation to the class (see the optional media list in the Teacher Background section). Use **Think-Pair-Share** to have students evaluate it using the evaluation form and the information in the guide.
- Use **Random Reporter** to share evaluations, and then award team celebration points.
- Tell students that the best way to feel comfortable when speaking to a group is to practice. Explain that they will have time to practice with their teammates and that they may also practice in front of a mirror and in front of family or friends. Explain that being confident comes from knowing your topic well.
- Present the target(s) for scoring from the scoring guides: ideas, organization, style, and mechanics.

Start Digging (10 minutes)

- Have students use the research materials to search for information, and have them use a graphic organizer or notecards to make notes and record source information. Refer them to the sample notecard and web in their student editions.

Step Up to Research

Sample Notes

3,29 million sq. km 1/5 size of U.S.

Geography of India

Himalayas—mountains flat river valleys, deserts in west

(Source: Background Note: India, U.S. Department of State, April 17, 2012, www.state.gov)

Sample Note Cards

Country—Republic of India
Capital—New Delhi
Geography—3,29 million sq. km, about 1/5 U.S.
Mountains (Himalayas), West—flat river valleys and deserts

Source:
Background Note: India, U.S. Department of State,
April 17, 2012, www.state.gov

- Ask students to write the research question in the center of the web or on the first notecard.
- Circulate, check students' progress, and record each completed step on the teacher cycle record form. Spot check the Read and Respond homework.
- Commend students for their progress through the research process during the lesson as recorded in the Research Process section of their team score sheets.
- Add up the team celebration points earned by each team during the lesson, and record them on the Team Celebration Points poster.

Step Up to Research

Guide to Great Presentations

When you give a presentation:

1. Become an authority.

- Get excited about your topic and your research. Know your topic well. When you show enthusiasm, your audience will become enthused as well. The best way to show that you care about your topic is to know your topic and engage the audience. Be prepared.

2. Rehearse.

- Practice the entire presentation. Repeat the hard parts until they are smooth.
- Practice how you will engage the audience with your body language.
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- Use your hands to gesture.
- Before the presentation, practice pronouncing words that you don't usually use in conversation. Use an audio button on an online dictionary if you are unsure of the correct pronunciation.
- If you need to read your presentation, know it well enough that you can look up at the audience every few seconds.

3. Never apologize.

- Focus on your topic, not yourself. If you make a mistake, fix it as you move forward. If it is a little mistake, just keep going. The audience doesn't know your presentation like you do, and they want you to do well.

4. Visualize success.

- Picture yourself speaking slowly in a loud, clear voice. Once you start, take a deep breath when you break between sections to avoid filler words such as *um* and *like*. It is OK to leave a second or two of silence; it allows the audience time to catch up with what you are saying. Many people speak too quickly or too slowly when they are addressing an audience. Aim to keep a natural, conversational pace.

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1. Write an attention-grabbing introduction.

- Use a famous quote.
- Ask a question.
- Have the audience make a mind movie.
- State an interesting fact.
- Tell an interesting story.

2. Connect your ideas.

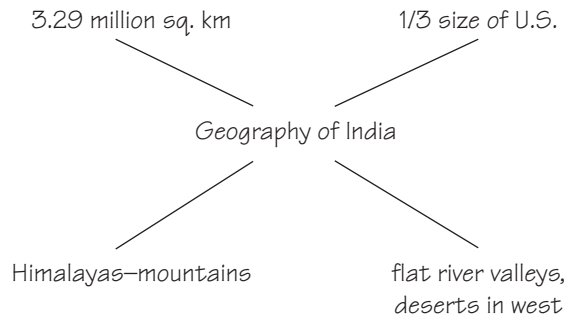
- In the middle, give evidence to support each point.

3. Leave enough time for a memorable ending.

- Summarize the important ideas and why they are important to the audience.
- State a final surprising or interesting story or fact.
- End with a bonus; tell one more important point.
- Thank the audience.

Step Up to Research

Sample Notes



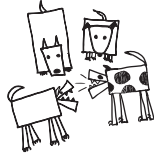
(Source: Background Note: India. U.S. Department of State. April 17, 2012. www.state.gov)

Sample Note Cards

Country – Republic of India
Capital – New Delhi
Geography – 3.29 million sq. km., about 1/3 U.S.
Mountainous (Himalayas), West – flat river valleys and deserts

Source:
Background Note: India. U.S. Department of State.
April 17, 2012. www.state.gov

Lesson 2



Teamwork

Keep Digging: Search and Process (50 minutes)

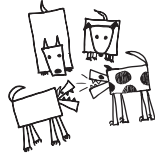
1. Have students review their research purpose, team goal, and team cooperation goal as recorded on their team score sheets. Remind teams that they will earn super, great, or good team status based on how many team celebration points they earn.
2. Have students continue to use the research materials to search for information, and have them use their graphic organizer or notecards to record relevant information.
3. Circulate, check students' progress, and record each completed step on the teacher cycle record form.
4. Spot check the Read and Respond homework.
5. Ask partners to share what they have found with each other and prepare to share an important piece of information and its source with the class prior to class discussion.

Class Discussion (10 minutes)



1. Use **Random Reporter** to have students share an important piece of information, the source, and why they think the information is important with the class. Award team celebration points.
2. Award extra team celebration points to volunteers who answer the following question: "Did your research change your question or your thinking about what you thought you would find?"
3. Commend students for their progress through the research process during the lesson as recorded in the Research Process section of their team score sheets.
4. Add up the team celebration points earned by each team during the lesson, and record them on the Team Celebration Points poster.

Lesson 3



Teamwork

During this class period, students review their research and write an answer to their questions.

Put It All Together: Draw Conclusions, Write, and Practice (30 minutes)

1. Have students review their research purpose, team goal, and team cooperation goal as recorded on their team score sheets. Remind teams that they will earn super, great, or good team status based on how many team celebration points they earn.
2. Have each student make a plan for his or her written product and review it with a teammate.
3. Ask each student to draft his or her research product. Have students record the type of writing (writing to support a claim with reasons or writing to inform or explain) at the top of the page.

Team Feedback (20 minutes)

1. Have each team member share his or her presentation with another member of the team.
2. Ask team members to use the evaluation form to give feedback.
3. Tell students to make improvements and prepare for their presentations.
4. Circulate, check students' progress, and record each completed step on the teacher cycle record form.
5. Spot check the Read and Respond homework.

Class Discussion (10 minutes)

1. Award team celebration points to Random Reporters who can report a strength that teammates shared with them about their presentations.
2. Award extra team celebration points to volunteers who share what they have learned about the research, writing, and presentation process.
3. Commend students for their progress through the research process during the lesson as recorded in the Research Process section of their team score sheets.
4. Add up the team celebration points earned by each team during the lesson, and record them on the Team Celebration Points poster.



Remind students of the Read and Respond homework assignment.

Lesson 4



Present and Evaluate

In this lesson, students will present their research to groups other than their own teams, and students will use the evaluation form to provide a written evaluation of each presentation that they hear. There will be four rounds of presentations, during which each student will have three minutes to present.

Choose group assignments in advance, or use the following process:

- Count the number of teams.
- Have students count off from 1 to the number of teams. There will be four or five students with each number.
- Have the students who counted off as 1s go to table 1, 2s go to table 2, and so on.

Allow a volunteer to give the first presentation, or designate an individual within each group. Presentations then proceed to the right until everyone has presented. As each presentation concludes, the evaluators complete the evaluation sheets and give them to the presenter.

Present (30 minutes)

1. Have students review their research purpose, team goal, and team cooperation goal as recorded on their team score sheets. Remind teams that they will earn super, great, or good team status based on how many team celebration points they earn.
2. Review the criteria for evaluating a presentation, and demonstrate how to complete the evaluation. Remind students that you will collect the evaluation forms.
3. Designate group assignments, and pass out evaluation forms.
4. Have students move to their designated groups. Begin the presentations.
5. Make sure that each student presents and receives evaluations after the presentation.

Research Evaluation	
Name: _____ Evaluator: _____ Date: _____	
Writing Purpose (Circle one) _____ To inform or explain _____ To support a claim with reasons _____	
Writing Quality: Note one area of strength, and give evidence to support your choice.	
Topic	
Organization	
Style	
Mechanics	
Make a suggestion for improvement and a reason for your suggestion.	
Research Skills: (Note one or two strengths)	
Asks a focused question	
Uses multiple sources	
Quotes and paraphrases sources	
Cites trustworthy sources	
Presentation Skills: (Note one or two strengths)	
Good eye contact	
Good volume	
Clear pronunciation	
Enthusiastic presentation	
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Team Discussion (20 minutes)

1. When all presentations are finished, have students return to their teams to review the feedback that they received.
2. Ask team members to share their strengths and suggestions in each category.

Class Discussion (10 minutes)

1. Review each target and ask for a show of hands indicating areas of strength and areas that need improvement.
2. Use **Random Reporter** to hold a discussion during which students reflect on the research process and the products that they produced and draw conclusions about successes and areas in need of improvement. Award team celebration points.
3. Collect the written materials, including the plans, drafts, and evaluations. Plan to score and return the research products by the end of the next unit. Award up to 100 points for evidence that the chosen targets were met.
4. Review the total number of team celebration points earned by each team. Use the poster overlay to determine team status (super, great, or good) for this unit.
5. Enter the writing, Read and Respond, and team celebration points scores into the Member Center.
6. Generate the teacher cycle record results report to review team and class averages for the unit.



Remind students of the Read and Respond homework assignment.

Research Evaluation

Presenter _____ Evaluator _____ Date _____

Writing Purpose (circle one): To inform or explain To support a claim with reasons

Writing Quality: Note one area of strength, and give evidence to support your choice.			
Ideas			
Organization			
Style			
Mechanics			
Make a suggestion for improvement and a reason for your suggestion.			

Research Skills (Note one or two strengths.)	
Answers a focused question	
Uses multiple sources	
Quotes and paraphrases sources	
Cites trustworthy sources	

Presentation Skills (Note one or two strengths.)	
Good eye contact	
Good volume	
Clear pronunciation	
Enthusiastic presentation	

Research Evaluation

Presenter _____ Evaluator _____ Date _____

Writing Purpose (circle one): To inform or explain To support a claim with reasons

Writing Quality: Note one area of strength, and give evidence to support your choice.			
Ideas			
Organization			
Style			
Mechanics			
Make a suggestion for improvement and a reason for your suggestion.			

Research Skills (Note one or two strengths.)	
Answers a focused question	
Uses multiple sources	
Quotes and paraphrases sources	
Cites trustworthy sources	

Presentation Skills (Note one or two strengths.)	
Good eye contact	
Good volume	
Clear pronunciation	
Enthusiastic presentation	

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 4 Make Predictions

English Language Arts Standards: Reading: Informational Text

Key Ideas and Details

RI.6.1. Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Craft and Structure

RI.6.7. Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic.

English Language Arts Standards: Writing

Text Types and Purposes

W.6.1b. Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.

Research to Build and Present Knowledge

W.6.7. Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.

W.6.8. Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

W.6.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

English Language Arts Standards: Speaking and Listening

Presentation of Knowledge and Ideas

SL.6.4. Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.

SL.6.5. Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

SL.6.6. Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.

Media Acknowledgements

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National Oceanic and Atmospheric Administration, National Ocean Service
(Ocean Today video series)

Pardada Pardadi Educational Society and Rohit Ghandi

WNET

Charles R. Smith, Jr.

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of Technology

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