

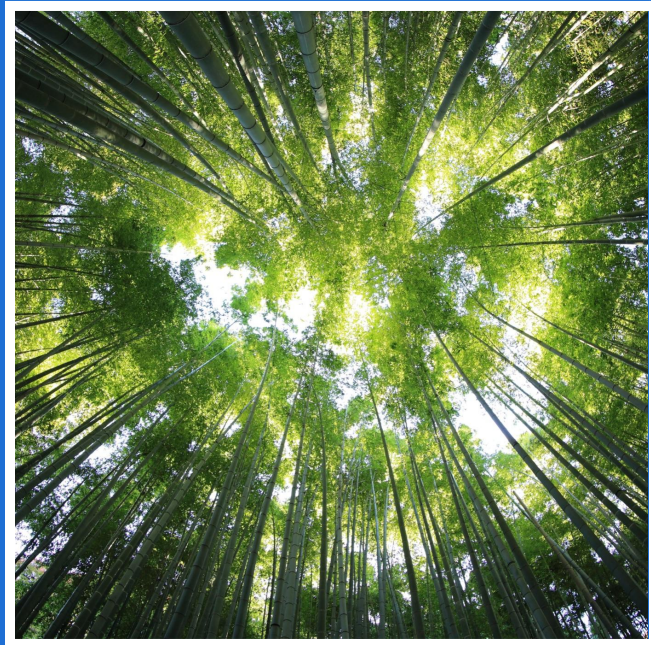


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STUDENT GUIDE

Close Reading and Writing Lesson:
How does carbon move in the carbon cycle?



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Vocabulary Pre-Work

Frayer Model

Steps

1. Read the "Overview" of your assigned lesson. Then, click on the "Vocabulary" link at left to find a list of key terms.
2. Read through the terms and definitions. Choose *one* term from the list and write it in the center circle of the graphic organizer (below).
3. Start with the examples box, and list examples of the vocabulary term (for example, if the term is "atmosphere," you could write "air" in examples).
4. Then, move to the non-examples box. Add words that are *not* examples of the term (in keeping with the "atmosphere" example, you could list "solids").
5. Next, add facts or characteristics about the term (for example, "invisible, made of gases," etc.).
6. Finally, write your own definition of the term (Example: "Atmosphere is...").



Frayer Model

Definition	Facts and/or Characteristics
Vocabulary Word	
Examples	Non-examples



Direct Instruction Skills Focus

Cornell Notes: Text Features

Questions

- Think of questions that need thoughtful answers or can be answered in more than one way (more than just one word)
- Write questions directly across from the answers in your notes

Record for Review

- Write headings and keywords
- Take enough notes on important points
- Write the ideas in your own words
- List information in the correct order
- Include your own examples, drawings, or tables if they help you clarify your notes

According to this lesson on [Learn.Thinkcerca.com](https://www.learn.thinkcerca.com)...

Why do authors use text features?	Text features are used to...
What text features can help readers find information?	Text features that can help readers find information include...
What are some examples of visual text features, and why would an author include them in a piece of writing?	Visual text features include...



Cornell Notes

Text Features *(continued)*

Summarize and Reflect

In your own words and in complete sentences, write a 3–4 sentence summary of this skills lesson. Your summary should cover the central ideas of the content you just worked on, be accurate, and have enough details to support the central ideas you took away from your learning.

According to this lesson...



Step 1: Overview

Finding *Your* Purpose for Learning

Did you know that all living things are made out of carbon? This element is key to life on our planet. Keeping a balance of carbon is important for humans, animals, and plants.

Read the “Overview” provided at thinkcerca.com to learn more about the life cycle of carbon.

What more would you like to learn about the carbon cycle? What would you like to find out about greenhouse gasses? What do you want to know about how you can help reduce carbon dioxide levels in our atmosphere?



Step 1: Connect

Think-Pair-Share

Now that you have thought a little more about your personal experience, you have an opportunity to share with at least one other person.

1. With a partner, group, or a trusted listener, share the parts of your **Connect** quick-write that you feel comfortable sharing. This is called a Think-Pair-Share.

2. If time permits, reflect with others on what you need to be healthy and to grow. Also, list some of the actions that you can take to stay healthy.



Step 2: Read (Text to Self, Text to Text, Text to World)

Asking Questions of the Texts (Example)

As you approach texts in any subject, you can actively ask questions about the author's purpose, intended audience, and occasion to understand the message.

Approaches	Example
Questions about the author	Who wrote this article, and why?
Questions about the audience, purpose, and occasion of the text	Who is the audience for this article?
Questions about civics, economics, geography, and history	How and when did scientists first "discover" carbon?
Questions about concepts and ideas	Why is balance important?
Self and Community Reflections	How can I keep myself and my environment healthy?



Step 2: Read (Text to Self, Text to Text, Text to World)

Pause and Reflect

Use your highlighting and annotation tools in ThinkCERCA to jot down your answers to questions marked Pause and Reflect within the reading. Choose 1-2 that you'd like to discuss with peers.

Which questions did you highlight and annotate as you read?

Think-Pair-Share Reflections



Step 2: Test Prep Strategy (Optional)

Rephrasing Multiple Choice Questions

Multiple choice questions can be tricky! Use this tip to avoid test-maker traps.

Take your time and carefully read each question *and* each response. Ask yourself, “What is the question *really* asking?” Then, rephrase the question and responses in your own words.

Practice rewording the questions that go with your reading below:

QUESTION ON THINKCERCA	WHAT IS THE QUESTION ASKING YOU TO DO?
<i>EXAMPLE: Typically, there is a balance between the amount of carbon dioxide produced by nature versus the amount absorbed by life. What does Illustration 2 explain about this process in our world?</i>	<i>Inference: How does Illustration 2 explain the carbon cycle?</i>



Step 3: Engage with the Text

Highlight and Annotate

Highlight and annotate the text. As you highlight and annotate, follow the prompts that are aligned to the final writing task. You will find evidence to support your own argument. The evidence will gather as you go, and will be available for outlining in the next step [learn.thinkcerca.com](https://www.learn.thinkcerca.com).

Step 4: Summarize

Write a Summary

Summarize what you have read in [learn.thinkcerca.com](https://www.learn.thinkcerca.com). Use the sentence stems. Remember that your summary can sometimes serve as a hook for your own argument piece. It will appear in the “Your Work” space, and be available when you write Create Your CERCA.



Step 5: Pre-writing Discussion

Collaborate: Share your argument builder

Share: How does carbon move in the carbon cycle?	Listen: How does carbon move in the carbon cycle?
1.	
2.	
3.	



Peer Editing

Writer's Checklist

1. Review the [Rubric](#) section of the lesson on learn.thinkcerca.com. Give yourself a “check” when you have completed the task.
2. Next, share with a classmate to be sure at least one other reader agrees! Give each other suggestions for making your pieces stronger.
3. Revise your piece. Then, use the space below to describe an area of strength and one in which you have room to grow.

The strongest area of my writing is...

An area of growth for me is...

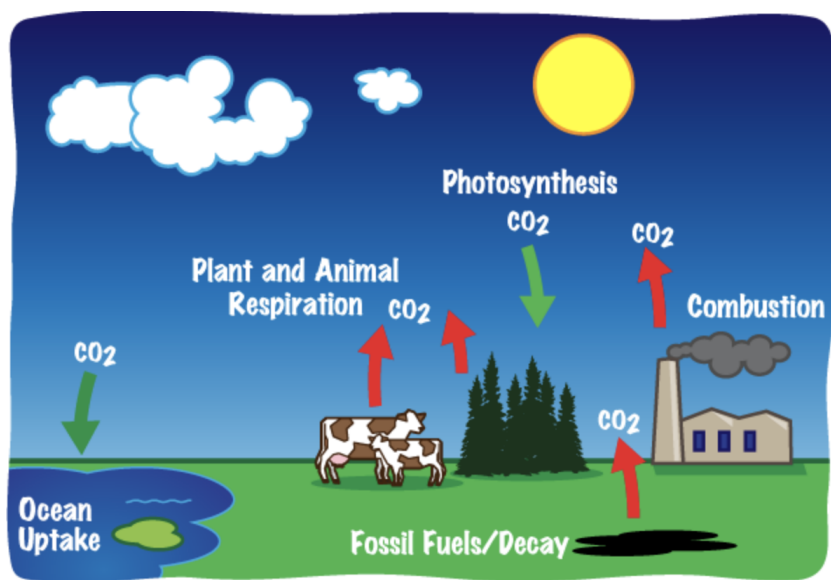


Extension: Research

The Carbon Cycle and You!

Background

Every time you breathe out, carbon dioxide (CO_2) exits your body and enters the air around you.



Where does that carbon dioxide go? And how does it re-enter your body?

With this group research project, you will learn more about the carbon cycle and how it moves in and out of your body.

Illustration: This infographic from NASA.gov shows how carbon dioxide (CO_2) enters the atmosphere and gets absorbed by oceans and plant life.

Research

Use sources from your school library to understand the carbon cycle.

Questions to research:

1. What is carbon dioxide?
 - Why is it important to know what carbon dioxide is?
2. What is photosynthesis?
 - Why is photosynthesis important for trees and plants?
3. What is the carbon cycle?
 - Why is the carbon cycle important for our planet?
4. How does carbon dioxide exit a person's body? How does it get back into a person's body?

Get together with your team (2-4 people) and think-pair-share your findings.



Extension: Inquiry to Research

Asking Questions of the Texts

As you approach texts in any subject, you can actively ask questions about the author's purpose, intended audience, and occasion to understand the message.

Approaches	Example
Questions about the author	
Questions about the audience, purpose, and occasion of the text	
Questions about civics, economics, geography, and history	
Questions about concepts and ideas	
Self and Community Reflections	



Extension: Roundtable Discussion

Sharing Additional Research Findings, Learnings, and Experiences

1. Plan to have everyone come prepared to share their research. Choose a group leader who will help lead the roundtable discussions.
2. Select a member of the group to go first.
3. If you are the group leader, ask participants to ask at least one question or summarize what someone else presented at least once during discussion.
4. Allow participants to share a quick review of what interested them about the topic in the first place, their most striking findings, and the questions that were raised by the experience.
5. Participants take notes, summarizing key findings.
6. When complete, have the presenter “pass the mic” to the next presenter.
7. Monitor participants for engagement. Ask participants to snap silently to show gratitude, appreciation, or interest to the speaker.
8. Encourage participants to value dialogue and appreciate different perspectives, recognizing that learning from and understanding people who think differently or have different experiences is part of the process of dialogue.



Extension: Roundtable Discussion

Sharing Additional Research Findings, Learnings, and Experiences (Cont.)

Findings to Share with Peers	Questions and Learnings from Peers