

Chemical Energy

Have you ever used a hot pack before? They can be used to keep warm during cold temperatures or for athletes to put on injuries swelling. These large pouches contain a section of water and dry. When the seal is broken, these two ingredients combine. Just shake, and feel as the chemical reaction occurs. If the reaction your hands or feet should feel warm thanks to the hot pack. The same process that a cold pack follows.

Why is Chemical Energy Important?

Chemical energy is used worldwide in several of the products humans' existence. Without chemical energy, we would not have food, batteries, and other important necessities. We also would not be able to metabolize our food. It is quite literal.

Chemical Energy

Name: _____

6. What does the word dormant mean?
- ten
 - awake
 - roll
 - move

7. Each of the following is a fossil fuel except:
- firewood
 - oil
 - coal
 - gas

8. Which of the following is a chemical reaction?
- stirring
 - grinding
 - slicing
 - digesting

Annotate the Text

1 Number the paragraphs

— Underline important statements

○ Circle unknown words

Chemical Energy

Chemical energy exists in many objects surrounding you without you even realizing it. For example, consider the batteries inside your remote or your favorite toy. Did you know that these batteries contain chemical energy? What about oil such as petroleum? Did you know that it possesses chemical energy as well? It may sound unlikely, but it's true.

Chemical energy is the energy stored within a chemical. It lies dormant and is released when atoms and molecules interact, experiencing a reaction.

Chemical Energy

Name: _____

- Select the word or phrase from the paragraph that helps the reader understand the meaning of the word released:
 - get our bodies moving
 - moves out of our bodies
 - give us energy
 - when we digest this food
- What evidence does the author use to support the idea that hot packs contain chemical energy?
 - Just shake, shake, shake, and feel as the chemical reaction occurs
 - They can be used to keep your hands warm during cold temperatures
 - When the seal is broken, these two ingredients combine.
 - This is also the same process that a cold pack follows
- Where in the text does the author show evidence to support the claim that firewood can contain chemical energy?
 - Paragraph 2
 - Paragraph 3
 - Paragraph 4
 - Paragraph 5
- What is the main idea of paragraph 3?
 - fossil fuels are resources naturally found on Earth
 - fossil fuels experience chemical energy
 - fossil fuels can create power
 - natural gas is a fossil fuel

This resource includes:

- Teacher Tips
- Questions to Ask Students
- Student Bookmarks:
 - Close Reading Steps
 - Annotate/Mark the Text
- Informational Text: Chemical Energy
- 10 Multiple Choice Questions
- 7 Graphic Organizers
- Answer Key

Chemical Energy

Have you ever used a hot pack before? They can be used to keep warm during cold temperatures or for athletes to put on injuries swelling. These large pouches contain a section of water and dry. When the seal is broken, these two ingredients combine. Just shake, and feel as the chemical reaction occurs. If the reaction warms your hands or feet should feel warm thanks to the hot pack. The same process that a cold pack follows.

Why is Chemical Energy Important?

several of the products of chemical energy, we would not have the necessities. We also would not have the things we use every day. We quite literally

Close Reading Steps

1 Read the text

2 Annotate the text

3 Read the text again

4 Define unknown words

5 Read the text again

6 Respond to reading

Chemical Energy

Chemical energy exists in many objects surrounding you without you even realizing it. For example, consider the batteries inside your remote or your favorite toy. Did you know that these batteries contain chemical energy? What about oil such as petroleum? Did you know that it possesses chemical energy as well? It may sound unlikely, but it's true.

Chemical energy is the energy stored within a chemical. It lies dormant and can only be seen when atoms and molecules interact, experiencing a reaction. When the reaction occurs, chemical energy is then released.

What Products Experience Chemical Energy?

Substances that are considered a fuel experience chemical energy. You may be wondering what fuel is. A fuel, also known as a fossil fuel, is a resource found naturally on the Earth's surface that can be extracted and burned to create power. Examples of fossil fuels include coal, natural gas, and petroleum.

Possibly one of the most fascinating ways that chemical energy is used is to get our bodies moving and give us energy! The food that we eat contains chemical energy. When we digest this food, chemical energy is released. The chemical energy moves out of our bodies to help us do a range of things, including grow, get moving, and give us energy! You can thank chemical energy for everything you have today. You have your energy, you have your family, you have your home, you have your car, you have your life. A pile of wood is a source of chemical energy. When it's time for the wood to be used and it's ignited, that energy is released in the form of warmth and light. The wood also

Non-Fiction Passage

Chemical Energy

Name: _____

6. What does the word dormant mean?
 - a. temporarily inactive
 - b. awake
 - c. rolling around
 - d. moving quickly
7. Each of the following has chemical energy except:
 - a. firewood
 - b. a cold pack
 - c. coal
 - d. a phone
8. Which of the following are examples of how chemical energy is used?
 - a. stay warm, get moving, and grow
 - b. grow, rest, and get moving
 - c. sit, run, and eat
 - d. eat, relax, and walk
9. What is the logical connection between chemical energy and the other three?
 - a. Chemical energy appears before a reaction.
 - b. Chemical energy is passed to other objects.
 - c. Chemical energy is released when a reaction occurs.
 - d. Chemical energy disappears when a reaction occurs.

Chemical Energy

Name: _____

1. Select the word or phrase from the paragraph that helps the reader understand the meaning of the word released:
 - a. get our bodies moving
 - b. moves out of our bodies
 - c. give us energy
 - d. when we digest this food
2. What evidence does the author use to support the idea that hot packs contain chemical energy?
 - a. Just shake, shake, shake, and feel as the chemical reaction occurs
 - b. They can be used to keep your hands warm during cold temperatures
 - c. When the seal is broken, these two ingredients combine.
 - d. This is also the same process that a cold pack follows
3. Where in the text does the author show evidence to support the claim that firewood can contain chemical energy?
 - a. Paragraph 2
 - b. Paragraph 3
 - c. Paragraph 4
 - d. Paragraph 5
4. What is the main idea of paragraph 3?
 - a. fossil fuels are resources naturally found on Earth
 - b. fossil fuels experience chemical energy
 - c. fossil fuels can create power
 - d. natural gas is a fossil fuel
5. Which of the following details is most important to the topic of why chemical energy is crucial for humans?
 - a. Chemical energy exists in many objects surrounding you without you even realizing it.
 - b. Chemical energy moves out of our bodies to help us do many things.
 - c. We wouldn't be able to metabolize our food and use it for energy.
 - d. We quite literally could not survive if chemical energy did not exist.

10 Multiple Choice Questions

Close Reading

Close Reading: A reading strategy that is used to comprehend and analyze a text closely. Students will typically read the text at least twice for comprehension, details, analysis, and deep questioning of the text's purpose and meaning.

Steps for Close Reading:

1. Read the Text
2. Mark Up the Text or Annotate the Text
3. Read the Text Again
4. Define Unknown Words
5. Read the Text Again
6. Respond to Reading

Includes:

- Teacher Tips
- Questions to Ask Students
- Close Reading Steps - Bookmark
 - Version with "Mark the text"
 - Version with "Annotate the text"
- Steps to "Mark the Text" Bookmark
- Steps to "Annotate the Text" Bookmark
- Informational Text: The
- 10 Multiple Choice Questions
- 7 Graphic Organizers

Teacher Tips & Suggestions

Questions to Ask Students

- What is the text mostly about?
- Who is the audience for this text?
- What's is the writer's purpose of this text?
- What's your favorite part of the passage?
- What words are new to you? What do you think the words mean?
- What detail stands out to you?
- What questions do you now have about the topic?
- If you can ask the author 2 questions, what would you ask them?
- In this paragraph, what is the author saying?
- What is the structure of the text? How does it help

Teacher Tips

Close reading: A reading strategy that is used to comprehend and analyze a text closely. Students will typically read the text at least twice for comprehension, details, analysis, and deep questioning of the text's purpose and meaning.

1. Read the Text: When students read the text for the first time, they are reading just to identify what the passage is mostly about. The first read is surface level and allows the students to understand the gist of the text.
2. Mark Up the Text or Annotate the Text: Encourage students to use their annotation bookmarks (provided below) to make notes directly on the text. Students can write in the margins, use sticky notes to make notes, use color coding. You can even slip the text inside a dry-erase pocket and encourage students to use dry-erase markers to mark up the text.
3. Read the Text Again: If the teacher is working with the students for this, the teacher can read the text aloud this time. Model think-alouds and use expression while you read. If students are working with partners in a station, encourage them to each read a paragraph then switch readers.
4. Define Unknown Words: During this step, invite students to circle any unknown or unfamiliar words. Use the provided graphic organizer to select 4-5 unknown words and work to identify the meaning of each word.
5. Read the Text Again: With this third time reading the text, encourage the students to read the passage independently.
6. Respond to Reading: Students will now use the text to answer the 10

Graphic Organizers

- Main Ideas with Text Evidence
- Central Ideas with Text Evidence
- Central Ideas with Details
- Main Idea, Details, Conclusion
- KWL: What I Know, What I Want to Know, What I Learned
- Overview: Topic, Author's Purpose, Key Vocabulary, Most Important Thing, I Wonder, Important Facts, Illustration
- Context Clues (3 Versions: 3 words, 4 words, 5 words)
- Arthropods

Name: _____

Unknown Word

Context Clue

Word Meaning

Name: _____

What I Know

What I Want to Know

What I Learned

Name: _____

Topic

Author's Purpose

Key Vocabulary

Most Important Thing

I Wonder...

Important Facts

Illustration

Graphic
Organizers

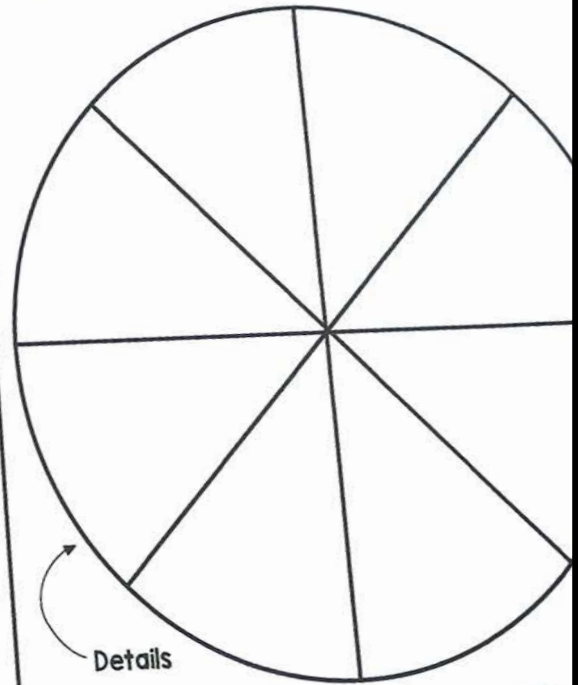
Ideas for Use

- Science or ELA Stations
- Whole Group Instruction
- Partner Practice
- Guided Reading Groups
- Substitute Plans
- Send home to practice
- ELA Work Stations or Centers
- Assessment

Unknown Word	Context Clue

Name: _____

Central Idea



Details

Name: _____

Main Ideas

- 1
- 2
- 3

Text Evidence #1

Text Evidence #2

Text Evidence #3

Name: _____

Main Idea

Detail

Detail

Graphic Organizers

Purchase now to
connect science
and literacy
in your
classroom!