

Energy

Sources of Energy

With numerous types of energy occurring all around us in the activities we do, the power that we use, and the warmth we feel, it is important to understand how energy can be used and, in some cases, reused.

Renewable energy is energy that comes from resources that are constantly replenished. Sources that give off renewable energy are environmental such as wind, solar, and hydro.

Nonrenewable energy is energy that cannot be renewed. These resources are finite and need to be created over and over again. Sources of nonrenewable energy include fossil fuels, natural gas, and nuclear energy.

Energy

Have you ever wondered what gives your body the ability to run, jump, climb or swing? The ability to do these things is called movement. Movement is made possible because of energy.

What is energy? Energy is the ability to make something move or cause change. Animals use energy, plants use energy, and even bicycles and books have energy. Humans use energy too. Our bodies use energy to put on a jacket, turn on the TV, and brush our teeth. We gain the energy for these things from the food that nourishes our bodies.

Everything in the universe is made of energy.

Energy

Name: _____

6. What does the word ability mean?
 - a. to move
 - b. being able to do something
 - c. to sleep
 - d. liking to exercise
7. What is the main idea of paragraph 2?
 - a. completing different activities
 - b. food gives humans energy
 - c. many things use energy
 - d. humans use energy
8. Which of the following is NOT a type of energy?
 - a. light
 - b. motion
 - c. heat
 - d. electricity
9. What is the logical connection between renewable and nonrenewable energy?
 - a. renewable energy is new, while nonrenewable energy is old
 - b. renewable energy naturally occurs, while nonrenewable energy does not
 - c. renewable energy can power things, while nonrenewable energy cannot
 - d. renewable energy can power things, while nonrenewable energy cannot

Annotate the Text

1 Number the paragraphs

— Underline important statements

○ Circle unknown words

Ⓢ Question? Confusing?

Energy

Name: _____

1. Select the word or phrase from the paragraph that helps the reader understand the meaning of the word improve.
 - a. no power needed
 - b. keep it running
 - c. utilize renewable resources
 - d. create electricity
2. What evidence does the author use to support the idea that we should focus on using renewable resources?
 - a. wind turbines consist of blades that spin
 - b. another way is to use the wind to generate power
 - c. by using electricity generated by the wind, we can reduce the amount of air pollution
 - d. this is a way to use renewable resources to improve the environment
3. Where in the text does the author show evidence to support the claim that energy is in everything?
 - a. Paragraph 2
 - b. Paragraph 3
 - c. Paragraph 4
 - d. Paragraph 5
4. What is the main idea of paragraph 9?
 - a. all things are made up of molecules or atoms
 - b. nonrenewable resources can damage the environment
 - c. wind turbines create electricity
 - d. there are many ways to reuse resources and help the environment
5. Which of the following details is most important to the topic of how humans use energy?

This resource includes:

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

Energy

Sources of Energy

With numerous types of energy occurring all around us in the actions power that we use, and the warmth we feel, it is important to understand how energy can be used and, in some cases, reused.

Renewable energy is energy that comes from resources that are constantly replenished. Sources that give off renewable energy are environmental such as wind, solar, and hydro.

Nonrenewable energy sources need to be replaced. Natural gas, oil, and coal are examples of nonrenewable energy sources.

We need to find ways to solve the problem with energy that are not easily replaced.

Have you ever wondered what gives your body the ability to run, jump, climb or swing? The ability to do these things is called movement. Movement is made possible because of energy. What is energy? Energy is the ability to make something move or cause change. Animals use energy, plants use energy, and even bicycles and books have energy. Humans use energy too. Our bodies use energy to put on a jacket, turn on the TV, and brush our teeth. We gain the energy for these things from the food that nourishes our bodies.

Everything in the universe is made up of molecules or atoms that are bonded together. Within these molecules, energy exists. All things contain energy, but all types of energy don't look the same. By understanding the different types of energy, we can understand how it works to power our world.

Fun Facts

- The sun is a giant ball of gas.
- Did you know that the sun is made of hydrogen and helium?
- Energy is the ability to do work.

Annotate the Text



Number the paragraphs



Underline important statements



Circle unknown words



Question? Confusing?



Interesting!

Energy

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Types of Energy

There are eight main types of energy. These types of energy make up existence as we know it. By creating change and movement, they keep things going.

1. Chemical energy is created when atoms and molecules interact. Gasoline and batteries are made from chemical energy.

2. Electrical energy is made from tiny particles called electrons that move through a wire. Lightning occurs because of electrical energy.

3. Gravitational energy relates to gravity. Things that are higher up have more gravitational energy. When things fall, the gravitational energy is converted into other forms of energy.

4. Thermal energy is the energy of heat. It is the energy that causes molecules to move and vibrate. An example of this is the energy from a fire.

5. Kinetic energy, also known as motion energy, is the energy of movement. The sun gives off light energy, which is a form of kinetic energy.

6. Nuclear energy is the energy stored in the nucleus of an atom. It is the energy that powers the sun and nuclear power plants.

7. Sound energy is the energy of vibrations. It is the energy that travels through the air and is heard by our ears.

8. Light energy is the energy of light. It is the energy that travels through space and is seen by our eyes.

Non-Fiction Passage

Energy

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Energy

Name:

1. Select the word or phrase from the paragraph that helps the reader understand the meaning of the word improve.

- no power needed
- keep it running
- utilize renewable resources
- create electricity

2. What evidence does the author use to support the idea that we should focus on using renewable resources?

- wind turbines consist of blades that spin
- another way is to use the wind to generate power
- by using electricity generated by the wind, we can reduce the amount of air pollution
- this is a way to use renewable resources to improve the environment

Where in the text does the author show evidence to support the claim that energy is in everything?

- Paragraph 2
- Paragraph 3
- Paragraph 4
- Paragraph 5

4. What is the main idea of paragraph 9?

- all things are made up of molecules or atoms
- nonrenewable resources can damage the environment
- wind turbines create electricity
- there are many ways to reuse resources and help the environment

5. Which of the following details is most important to the topic of how humans use energy?
- our bodies use energy to put on a jacket, turn on the TV, and brush our

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

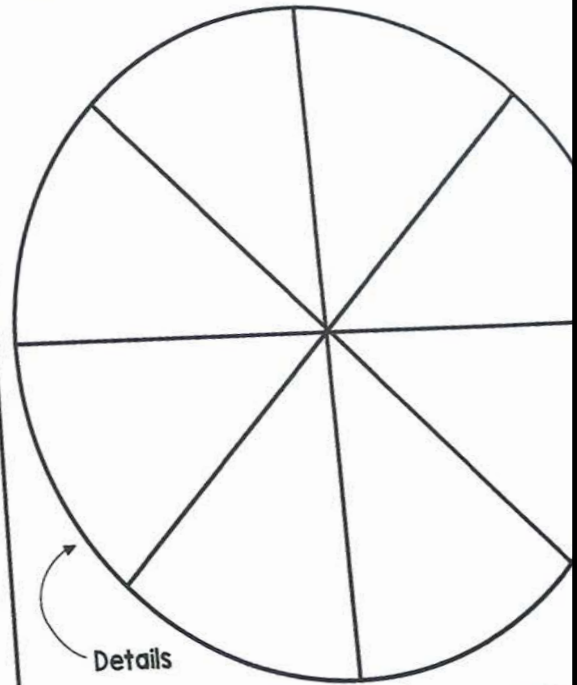
Ideas for Use

- 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!