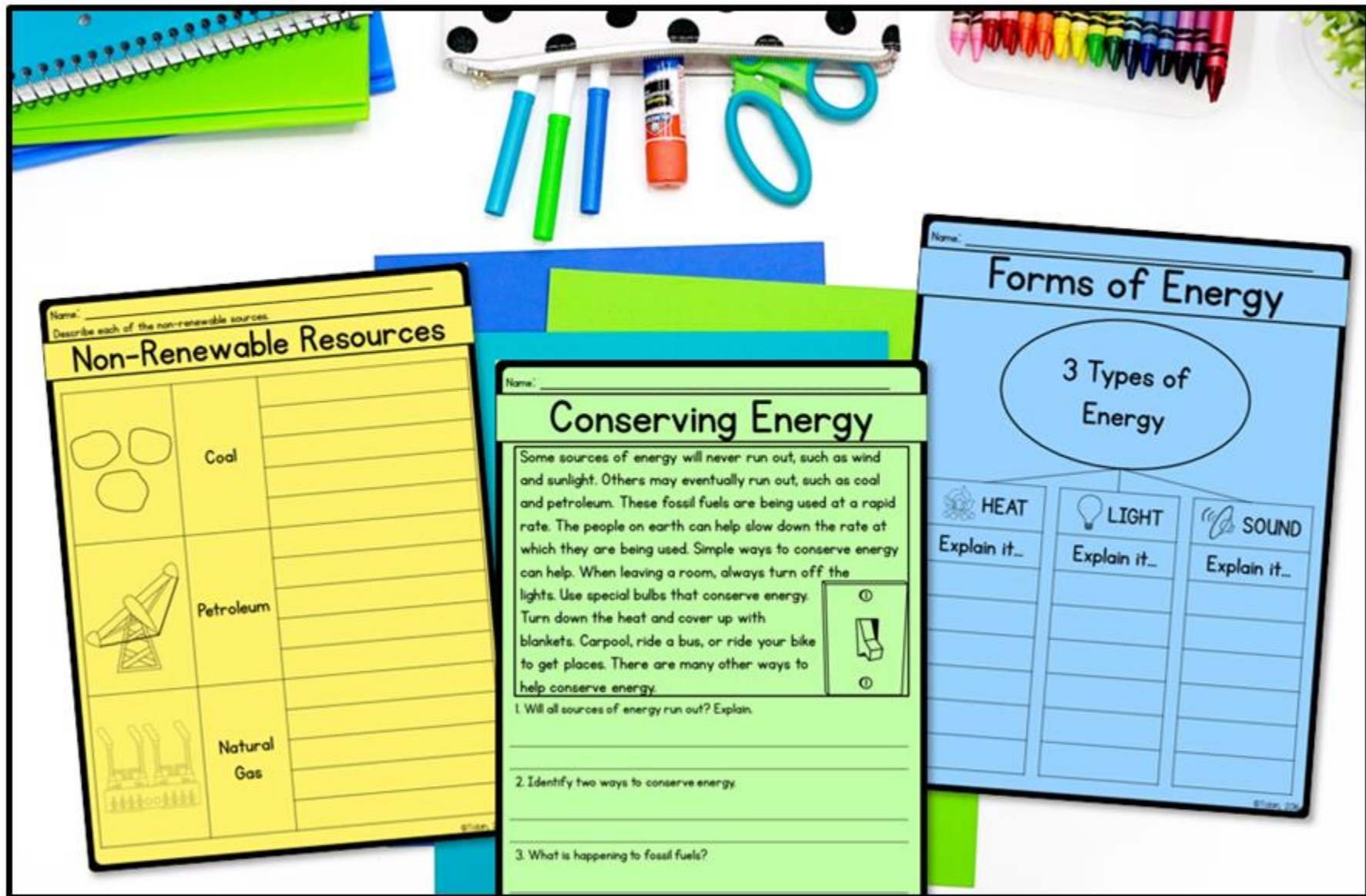
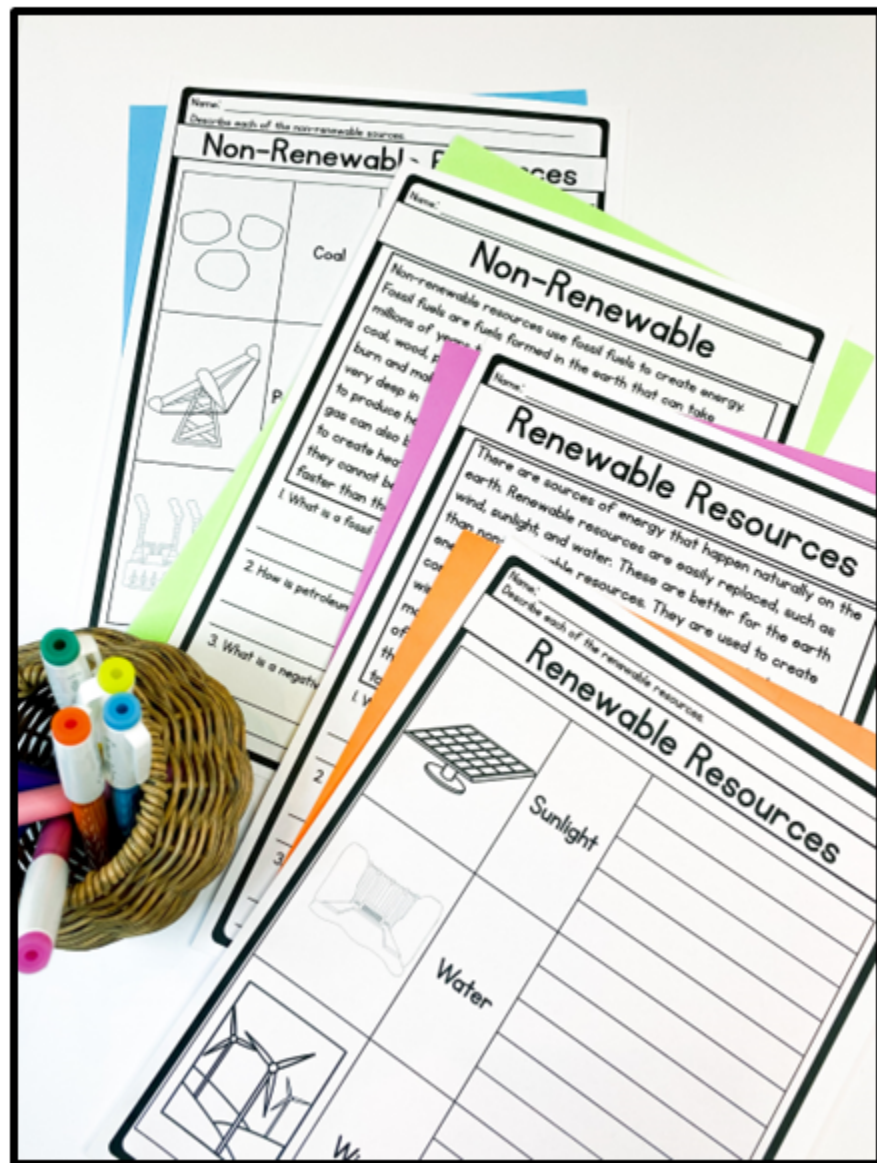


Energy Unit



What Teachers Have Said...



"This resource was a great resource for my class. My students love using different types of resources in addition to our textbooks. This adds some ownership to my students for their learning. Students love to be able to create during their learning."

"This resource has a lot of good activities and information. It really helped me in a time pinch, too. My students were able to move through it pretty independently too."

"All of these activities went so well with our Energy Unit for Science. The activities were varied and I was able to gauge my students understanding. Thank You!"

Topics Covered

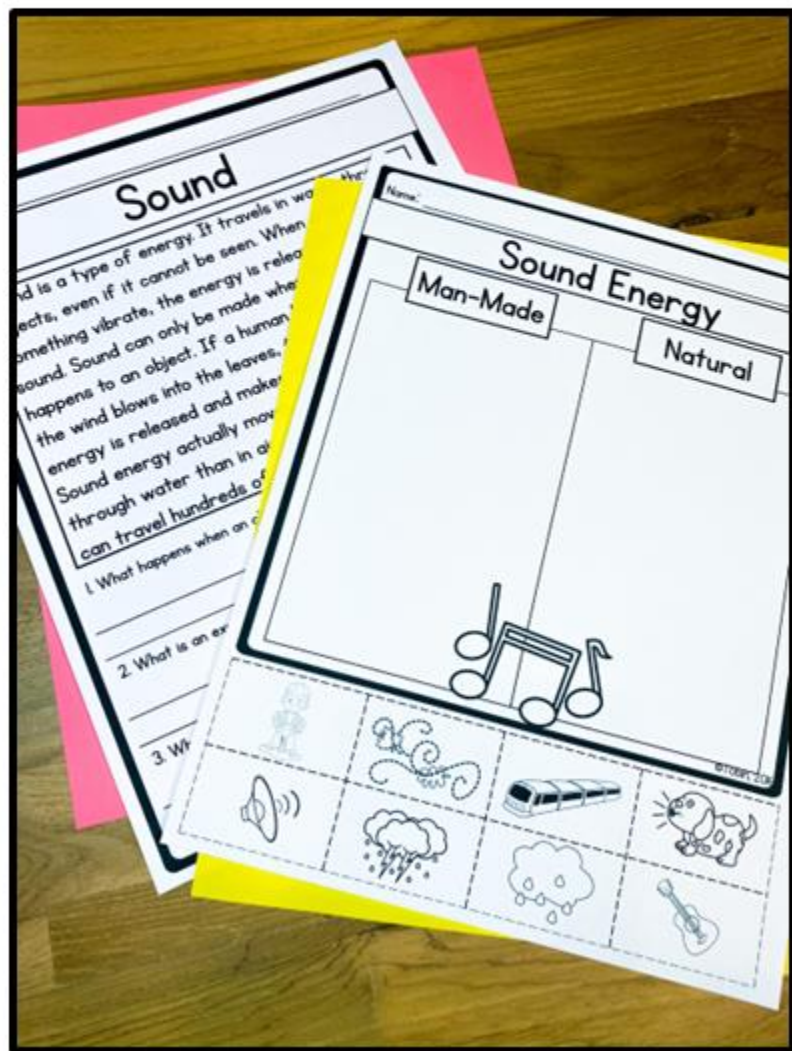
This Energy unit is intended to be used as supplemental resources for your science unit.

Topics Covered:

- Potential and Kinetic energy
- Forms of Energy
- Renewable Resources
- Non-Renewable Resources

Types of Resources Included:

- KWL Charts
- Passages
- Comprehension worksheets
- Fact writing worksheets
- Vocabulary worksheets
- Mini books & questions



Digital Conversion

The passages and worksheets have been digitally converted to Google Slides.



All About Energy

Name: _____

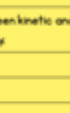
Complete the schema and misconceptions chart for energy

Energy

My Schema 	Name: _____
My New Learning 	Energy is the ability to do work. It is stored in objects and can be transferred from one object to another. Energy can be converted from one form to another, but it cannot be created or destroyed. 1. What is energy? 2. What is the difference between kinetic and potential energy?
My Misconceptions 	Name: _____ Compare and contrast kinetic and potential energy Energy

© 2000-2001

Name:	
Energy	
Energy is everywhere. It is all around us. It is in your house, your school, your car, and even in the breeze. The definition of energy is the ability to do work. Energy makes things happen. Potential energy is stored inside of something when it is not being used. Once the object is in motion, it becomes kinetic. Some forms of energy are light, sound, and heat. These can occur naturally by wind and sun or through electricity. Energy sources can be renewable, which is a form of energy that is better for the earth, non-renewable energy is from fossil fuels that come from the earth. Non-renewable resources cannot be replaced, but renewable resources can.	
	
1. What are three forms of energy?	
2. What is energy?	
_____ic energy _____ic and potential energy	

Name: _____	
Energy	
	Identify three forms of energy.
Explain the difference between kinetic and potential energy.	
	Explain the difference between renewable and non-renewable resources.
Name: _____	
Energy	

Name: _____

Potential Energy

Objects that are still in motion may not appear to have energy. However, they are full of energy. The energy that is in these still objects is just sitting there. This is called potential energy. Objects need something to happen in order to use the energy, such as force or heat. A swing-set has potential energy. It does not move unless wind or human force pushes the swings.



1. What is potential energy?

2. How does a swing-set have potential energy?

energy? Explain.

about energy.

Name: _____

Kinetic Energy

All objects have energy. When objects are in motion, this is called kinetic energy. When objects are still, they have potential energy. When a force is applied to it, it has kinetic energy in motion. A ball that was at rest and is flying through the air is an example of kinetic energy. The faster an object is moving, the faster it moves, the more kinetic energy it has.

1. What is kinetic energy?
2. What is one example of kinetic energy?
3. How is kinetic energy different from potential energy?

Name: _____

Compare and contrast kinetic and potential energy

Energy

The diagram shows two overlapping circles. The top circle is labeled 'Kinetic Energy' and contains a drawing of a lightning bolt. The bottom circle is labeled 'Potential Energy' and contains a drawing of a ball on a ramp. The overlapping area in the center is labeled 'Both'.

Name: _____

Explain kinetic energy

Explain potential energy

Name: _____

Energy

Explain kinetic and potential energy.

The diagram shows a swing set with two swings. Eight lines radiate from the central swing set to eight rectangular boxes, four on each side, intended for explaining kinetic and potential energy.

©2009 T3

Name: _____

Energy

Write an informational magazine article about energy.



Name: _____

		W K
--	--	--------

Name: _____

Energy

What I Know	What I Want to Know	What I Learned
		

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Types of Energy

The image displays a collection of educational cards for children, organized into three main color-coded sections: pink for Light Energy, orange for Heat Energy, and yellow for Sound Energy. Each section includes a title card, a definition card, a 'Man-Made' vs 'Natural' source comparison card, and a 'Draw four sources' card. There are also cards for 'Forms of Energy' and a central '3 Types of Energy' diagram. The cards feature various illustrations like a light bulb, a hand, a flame, musical notes, and an ear.

Light Energy Cards (Pink):

- Title Card:** "Light Energy" with a space for the student's name.
- Description Card:** "Light is a form of energy. It travels quickly. Light is what makes the world visible. Think of a plant. Without light, it would die. Light is the most common natural form of energy so that we can see properly. Light is a source that can help people. Light is a man-made source of energy, such as electricity to work, such as screens, and lights on a car. Light is a natural, such as the sun and moon."
 - 1. How does light travel?
- Man-Made vs Natural Card:** A card with a "Man-Made" label and a drawing of a light bulb.
- Draw Four Sources Card:** A card with a drawing of a person covering their eyes and the text "Draw four sources of light energy." followed by a large empty box for drawing.

Heat Energy Cards (Orange):

- Title Card:** "Heat Energy" with a space for the student's name.
- Description Card:** "Heat is a form of energy. Heat cannot always be seen, but it can always be felt. The sun is the earth's main source of heat. It gives the earth its light and heat, and plants grow warmer temperatures to grow. Fire is another man-made source of heat. When wood is burned, the energy is released as heat. An example of a man-made source of heat is a stove. Stoves can use gas, which transfers energy to the item on the top of the stove. Friction causes heat, too. If you rub your hands together very rapidly, it will warm them up."
 - 1. What is a man-made source of heat? How does it work?
 - 2. What is the earth's main source of heat? Explain.
- Man-Made vs Natural Card:** A card with "Man-Made" and "Natural" labels and drawings of a flame and a hand.
- Draw Four Sources Card:** A card with a drawing of a hand and the text "Draw four sources of heat energy." followed by a large empty box for drawing.

Sound Energy Cards (Yellow):

- Title Card:** "Sound Energy" with a space for the student's name.
- Description Card:** "Sound is a type of energy. It travels through objects, even if it cannot be seen. When something vibrates, the energy is released as sound. Sound can only be made when something happens to an object. If a human hits a drum, the sound energy is released and makes noise. Sound energy actually moves faster through water than in air. A whale's sound can travel hundreds of miles underwater."
 - 1. What happens when an object moves or vibrates?
 - 2. What is an example of sound energy being used?
 - 3. What is unique about sound underwater?
- Man-Made vs Natural Card:** A card with "Man-Made" and "Natural" labels and drawings of musical notes and a hand.
- Draw Four Sources Card:** A card with a drawing of an ear and the text "Draw four sources of sound energy." followed by a large empty box for drawing.

Forms of Energy Cards (Blue):

- Title Card:** "Forms of Energy" with a space for the student's name.
- Write an informational magazine article about energy.**

3 Types of Energy Card (Blue):

- Diagram:** A central oval labeled "3 Types of Energy" with three branches leading to "HEAT", "LIGHT", and "SOUND".
- HEAT:** "Explain it..." followed by a large empty box for writing.
- LIGHT:** "Explain it..." followed by a large empty box for writing.
- SOUND:** "Explain it..." followed by a large empty box for writing.

Renewable & Non-Renewable

Name: _____

Sources of Energy

There are different sources of energy categorized into non-renewable and renewable resources. Non-renewable resources are fossil fuels found in the earth. These are made very slowly over millions of years to create. Examples are coal, oil, and natural gas. These are used to make electricity. Renewable resources are better for the environment because they can be replaced. Examples are wind, water, and solar panels and wind turbines that create electricity by capturing some of these renewable resources.

1. What are non-renewable resources?
2. What are renewable resources?
3. How are they different?

Name: _____

Sources of Energy

Earth's Resources

RENEWABLE	NON-RENEWABLE
Explain them...	Explain them...

Name: _____

Renewable Resources

There are sources of energy that happen naturally on earth. Renewable resources are easily replaced. They are wind, sunlight, and water. These are better for the environment than non-renewable resources. They are used to create energy. Wind can be used to generate electricity in communities. The electricity can be created by windmills and wind turbines. Water can also be used to make electricity. Dams use the movement of water to make electricity. Heat from the sun can be used by a solar panel to generate electricity.

1. What is a renewable resource?
2. Why do you think they are better for the earth than non-renewable resources?
3. List three renewable resources.

Name: _____

Renewable Resources

Describe each of the renewable resources.

	Sunlight
	Water
	Wind

Name: _____

Non-Renewable

Non-renewable resources use fossil fuels to create energy. Fossil fuels are fuels formed in the earth that can take millions of years to form. Some examples of fossil fuels are coal, oil, and natural gas. Factories use coal to burn and make electricity. Petroleum is an oil that is found very deep in the earth. It can be used to make gas for cars, to produce heat, and to make plastic. Natural gas can also be collected from the earth to create heat. Once these resources are used, they cannot be replaced. People are using them faster than they can be replaced naturally.

1. What is a fossil fuel?
2. How is petroleum used as a source of energy?
3. What is a negative aspect to using non-renewable sources?

Name: _____

Non-Renewable Resources

Describe each of the non-renewable sources.

	Coal
	Petroleum
	Natural Gas

Name: _____

Non-Renewable Resources

Explain the positive and negative effects of using non-renewable resources.

Pros	Cons

Name: _____

Sources of Energy

Compare and contrast renewable and non-renewable resources.

Renewable	Both	Non-Renewable

Name: _____

Conserving Energy

Some sources of energy will never run out, such as wind and sunlight. Others may eventually run out, such as coal and petroleum. These fossil fuels are being used at a rapid rate. The people on earth can help slow down the rate at which they are being used. Simple ways to conserve energy can help. When leaving a room, always turn off the lights. Use special bulbs that conserve energy. Turn down the heat and cover up with blankets. Carpool, ride a bus, or ride your bike to get places. There are many other ways to help conserve energy.

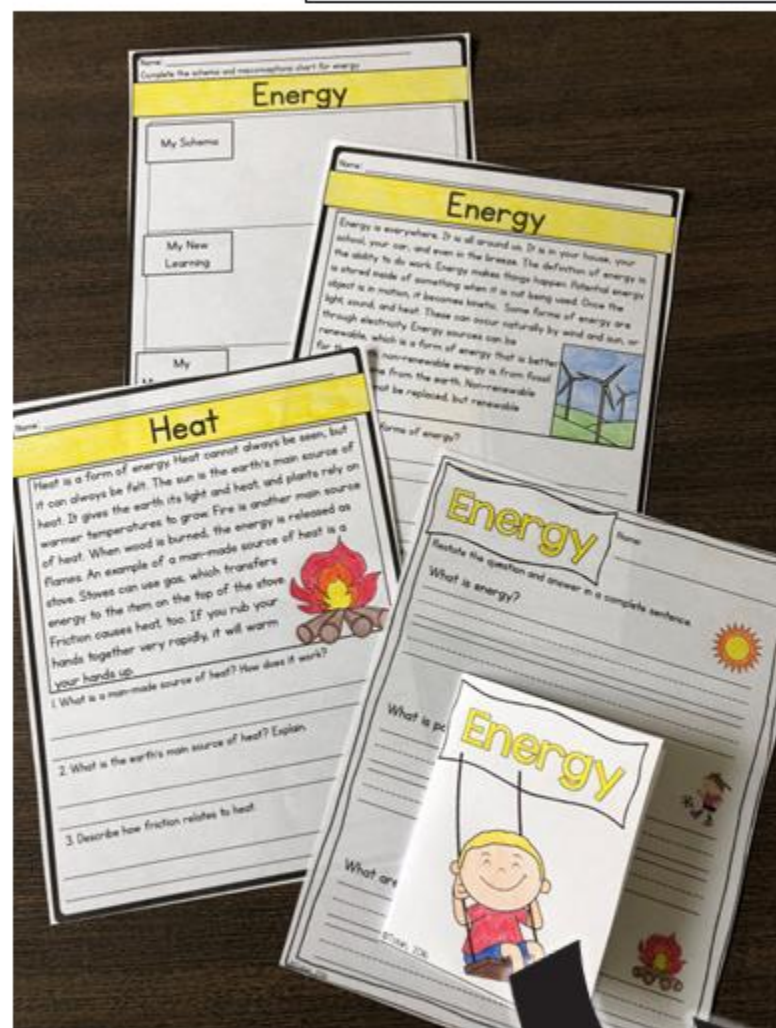
1. Will all sources of energy run out? Explain.
2. Identify two ways to conserve energy.
3. What is happening to fossil fuels?

Name: _____

Conserving Energy

List ways to conserve energy.

Mini Books



These fold-and-go mini books contain three pages of nonfiction material, followed up with three comprehension questions.