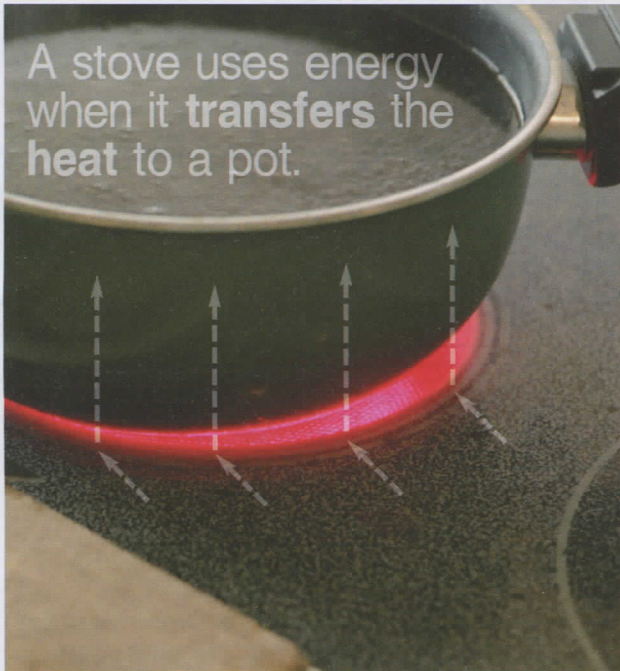


# 14 Energy

## Get ready!

1 Before you read the passage, talk about these questions.

- 1 What are two forms of energy?
- 2 What kind of energy does the sun produce?



**Energy** is the source of all action and movement. It includes **electromagnetic radiation** that the sun uses to produce light. It also includes your ability to move your body. A stove uses energy when it **transfers heat** to a pot.

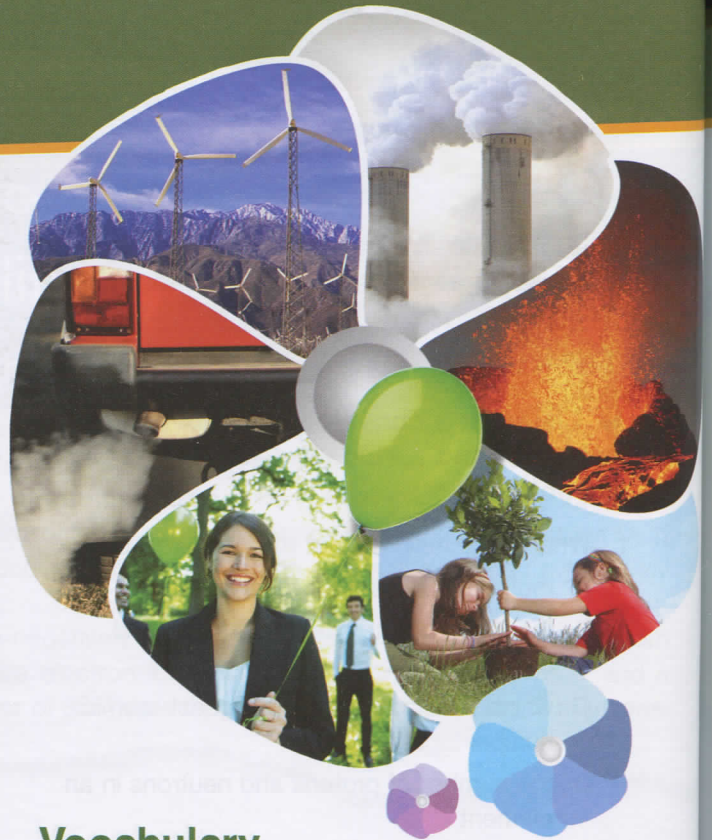
**Potential energy** is energy that is not yet in use. An example is gasoline in a parked car. The gasoline then becomes **kinetic energy** when it burns.

Energy can be used or stored. The gasoline is available later if you **conserve** it now. However, **energy quality** is reduced when the fuel burns. Therefore, sources with greater **energy efficiency** are desirable. They do more **work** with less energy.

## Reading

2 Read the textbook chapter. Then, mark the following statements as true (T) or false (F).

- 1  The sun produces light through electromagnetic radiation.
- 2  Gasoline can be either potential or kinetic energy.
- 3  Burning fuel improves its energy quality.



## Vocabulary

3 Write a word that is similar in meaning to the underlined part.

- 1 An uneaten meal is an example of energy that has not yet been used.  
\_ o t \_ \_ \_ i a \_ \_ n \_ \_ \_
- 2 The stove changes the location of heat to the frying pan. t \_ \_ n s \_ \_ \_ s
- 3 The city encourages people to use little energy during the summer months.  
c o \_ \_ \_ \_ v \_
- 4 A ball flying in the air is an example of energy in action. \_ \_ n \_ t \_ c \_ \_ e r \_ \_
- 5 The company is looking for new sources of the ability to cause movement or action.  
\_ \_ \_ \_ \_ g \_

4 Place the words and phrases from the word bank under the correct heading.

### Word BANK

heat    energy quality    energy efficiency  
work    electromagnetic radiation

Types of energy	_____
Measurements of energy	_____
Products of energy	_____



- 5 Listen and read the textbook chapter again. Why are energy sources with good energy efficiency desirable?

## Listening

- 6 Listen to a conversation between a student and an instructor. Choose the correct answers.
- What is the main idea of the conversation?
    - A different sources of energy
    - B a comparison of energy types
    - C ways to improve energy quality
    - D reasons to conserve energy
  - What concept confuses the woman?
    - A potential energy      C energy efficiency
    - B conserving fuel      D transferring heat

- 7 Listen again and complete the conversation.

**Student:** Mr. Harris, I'm confused about energy.

**Instructor:** Sure, Gloria. What's the problem?

**Student:** You said that gasoline has 1 \_\_\_\_\_ and kinetic energy. How can it be both?

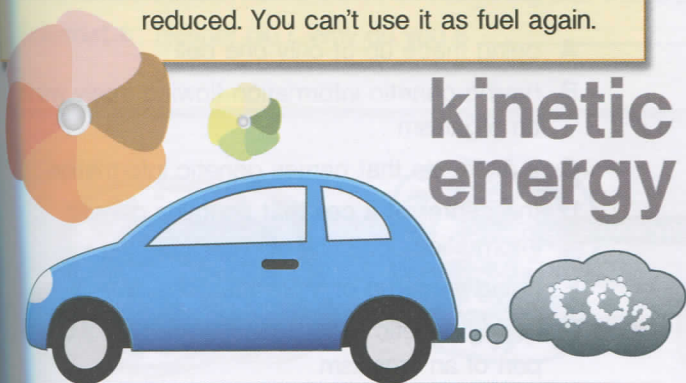
**Instructor:** Well, it can't be both types at 2 \_\_\_\_\_.

**Student:** So it 3 \_\_\_\_\_ kinetic, and then becomes potential?

**Instructor:** Actually, it's 4 \_\_\_\_\_. It has potential energy in the gas tank. Then it becomes kinetic energy when you burn it.

**Student:** I see. But 5 \_\_\_\_\_ potential again after it's used?

**Instructor:** No, because the 6 \_\_\_\_\_ is reduced. You can't use it as fuel again.



## Speaking

- 8 With a partner, act out the roles below based on Task 7. Then switch roles.

### USE LANGUAGE SUCH AS:

*You said that ...*  
*It's just the opposite ...*  
*You can't use ...*

**Student A:** You are a student. Talk to Student B about:

- an energy concept
- what confuses you
- how energy is used

**Student B:** You are an instructor. Talk to Student A about how energy is used.

## Writing

- 9 Use the textbook chapter and the conversation from Task 8 to fill out the quick guide on energy.

### Quick Guide

## Energy Concepts

\_\_\_\_\_ is energy that has

Qualities of useful energy: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

