

## Reading Strategy: Take Notes

### Being Brief

Because you can write in your science book every day, you will be taking lots of notes, and you will be able to mark the text for things you want to remember. When you are doing research with library books, however, you must remember not to write in the books. Just staring hard at the pages or reading passages over and over will not help you much. That's why taking notes comes in handy.

There are many ways to take notes, but all good methods have two things in common. First, the notes are brief. Second, they are organized. This lesson shows three popular methods. Whichever method you use, always write your notes in a notebook.

### Being Brief

Concentrate on what is important. Here is how that strategy works.

Passage in the Library Book	Words to Write in Notes
<p><b>Wind-Chill Factor</b> A cool breeze can feel refreshing on a warm day. However, during the winter the same breeze can make you feel cold. That's because the air blowing over your skin removes the body heat. So it's not just the temperature but also the wind that can make you feel cold. The stronger the wind, the colder you will feel. The increased cooling that a wind can cause is called the wind-chill factor.</p>	<p>Wind-Chill Factor</p> <ul style="list-style-type: none"> <li>• Air blowing over skin removes body heat</li> <li>• The stronger the wind, the cooler you feel</li> <li>• Wind-chill factor = increased cooling caused by wind</li> </ul>

### TRY THIS

1. Read the passage and take *brief notes*.

Passage in the Library Book	Words to Write in Notes
<p><b>Star Systems and Planets</b> The solar system that includes Earth has one star, the sun. However, more than half of all stars are members of groups of two or more stars, called star systems. If you were on a planet in one of these star systems, you would probably see two or more suns in the sky.</p>	

## Reading Strategy: Take Notes, Cont.

### Take Notes *(continued)*

2. A science passage appears below. Read the passage and take notes in the space that follows.

## Chapter 2: Finding New Energy Sources

### Lesson 1 Renewable Sources of Energy

Every morning a renewable source of energy begins to pour over the horizon. That energy source is solar energy, energy from the sun. Other renewable sources of energy include water and wind.

#### Solar Technologies

In one day, Earth receives more solar energy than the world's population needs for a whole year. Researchers have developed different solar technologies to help meet future energy needs.

First, in solar plants, rows of giant mirrors capture the sun's energy by reflecting it. The reflected energy is used to heat water, and the steam that is produced is used to generate electricity. Second, solar cells change solar energy directly into electricity. Solar cells are used to power calculators and all sorts of small devices. Third, solar energy can be used in heating systems. A solar collector captures the sun's energy, which is then changed into thermal energy. The thermal energy heats water that is pumped throughout a building.

#### Water Technologies

Moving water can be used to turn turbines that produce electrical energy. Engineers construct dams to use the energy in the flowing water of rivers. They construct tidal power plants to convert the energy of tidal ocean water into electricity.

Your Notes

## Reading Strategy: Take Notes, Cont.



### Take Notes *(continued)*

#### Being Organized

As you write notes, it is important to organize them in a clear way. Two methods are described below. Choose the method that works for you.

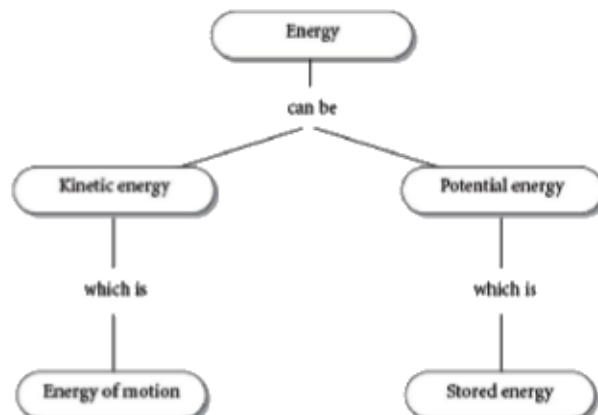
#### Method 1: Use a Two-Column Plan

A two-column chart helps you organize important topics with essential details. The overall topic starts at the top of the page. The main subtopics are in Column 1. You can include a simple drawing if you want. The supporting details and examples go in Column 2.

Topic: Animal Symmetry	
Subtopics, Questions, Drawings	Supporting Details and Examples
Radial Symmetry 	1. The animals have <u>external body parts that are equally spaced around a central point</u> , like spokes on a bicycle wheel. 2. Examples: sand dollar, jellyfish
Bilateral Symmetry 	1. Animals have bilateral symmetry if you can <u>draw an imaginary line through the animal that divides its body into two halves that are mirror images</u> . 2. Examples: butterfly, human

#### Method 2: Use a Concept Map

A concept map helps you visualize relationships. The concepts are in ovals, starting with the overall topic. The concepts are connected by lines containing linking words that explain how the concepts are related.



## Reading Strategy: Take Notes, Cont.

### Take Notes *(continued)*

#### TRY THIS

3. Read the following passage. Use a separate sheet of paper to take notes. Use one of the notetaking methods described on the previous page.

#### Friction: Friend or Foe?

When you push a box across a flat surface, it will stop moving if you stop pushing it. A rolling ball will eventually stop on its own. Why?

When one object moves against another object, the surfaces of the two objects rub against each other. As the surfaces rub together, the irregularities of one surface get caught on the irregularities of the other. As a result, each surface produces a force that acts against the other object. That force is called friction.

**The Nature of Friction** Friction acts in a direction that's opposite to the object's motion. That means that if a ball is rolling away from you, the force of friction acts in the direction pointing toward you.

The strength of the force of friction depends on two factors. First, rougher surfaces produce more friction than smoother surfaces. Second, surfaces that are pushed together with greater force produce more friction than surfaces pushed together with less force.

**Is Friction Useful or Harmful?** Life without friction would be impossible. You would be unable to walk because you would keep sliding. Revolving tires could not make cars move. Friction is often useful because it helps to control certain kinds of motion.

Friction can also be a problem. In many machines, the parts must slide past each other for the machine to work. Friction can act against those moving parts. To reduce unwanted friction, people may add oils or ball bearings, which make the machine work more easily.

