

## Strategy 5: Visualizing Information Implementation Guide

### Overview

Social studies textbooks are full of charts, diagrams, pictures, illustrations, political cartoons, and maps. These visual aids are placed in textbooks to enhance the learning of the content. In their rush to complete an assignment, students often skip over the visual information that may actually assist them in the comprehension process.

Struggling readers often have difficulty “visualizing” ideas presented in text. Visual information displayed in a social studies textbook can be flipped over and ignored or studied and incorporated. What students *do* with the visual information is the important ingredient to comprehending text.

The more that students are involved in creating the visual image, the more engaged they will be with the ideas in the text. In this activity students will gain practice in using and interpreting visual information.

### The Strategy in Action

Students should complete the following steps to practice the strategy. Be sure to pass out copies of Activity Guide 5 before students begin their work.

- Step 1: Preview the Text Noting the Visual Information Presented.** This information may be in the form of charts, diagrams, pictures, or illustrations. In this case, have students view the diagram of the seasons. You may either print out the diagram or have students view it online.
- Step 2: Ask How the Visual Information Relates to the Text or Why the Author(s) Included This Information.** It is important that students create a link between the text and the visual. Have students note parts of the diagram that they think will be described in the passage.
- Step 3: Generate Questions Raised by the Visual Aid.** For question 2 on the activity guide, students should list two to three questions that arise from the diagram.
- Step 4: Read the Text.** Have students read the passage on solar energy and the seasons.
- Step 5: Go back and Review Visual Aids in the Text.** In part B of the activity guide, students should evaluate whether the visual accurately displays the most important ideas in the text.

### Discussion

Once students have finished the activity, you may want to have a brief discussion with them about the assignment. Encourage students to probe how the visual information in the text aids the reader in comprehension.

## **Answers to the Student Activity Guide**

### **Part A:**

1. It is a diagram of the seasons. Answers will vary, but students will notice that the diagram illustrates the information presented in the text on latitude and the seasons.
2. After studying the diagram, students may ask the following questions:
  - a. What is an equinox?
  - b. What are the Tropics of Cancer and Capricorn?
  - c. How do the direct rays of the Sun affect Earth?
  - d. What is a solstice?

### **Part B:**

Students may be able to explain the answers to their questions.

Name: \_\_\_\_\_ DATE: \_\_\_\_\_ Class: \_\_\_\_\_

## Strategy 5: Visualizing Information Activity Guide

**Part A:** Answer the following questions BEFORE you read the text.

**1.** Preview the text. List below the visual information accompanying the text. Next, state how this information aids the reader in understanding the text.

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**2.** After studying the visual information with the text, list the questions below that you would like answered.

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**Part B:** Read the text, view the accompanying visual information, and complete the activity that follows.

### Solar Energy, Latitude, and the Seasons

The angle at which the Sun's rays reach Earth affects temperature. In the tropics—areas in the low latitudes near the equator—the Sun's rays are nearly vertical throughout the year. In the polar regions—the areas near the North and South Poles—the Sun's rays are always at a low angle. As a result, the poles are generally the coldest places on Earth. The **Arctic Circle** is the line of latitude located  $66.5^\circ$  north of the equator. It circles the North Pole. The **Antarctic Circle** is the line of latitude located  $66.5^\circ$  south of the equator. It circles the South Pole.

Each year is divided into periods of time called seasons. Each season is known for a certain type of weather, based on temperature and amount of precipitation. Winter, spring, summer, and fall are examples of seasons that

are described by their average temperature. “Wet” and “dry” seasons are described by their precipitation. The seasons change as Earth orbits the Sun. As this happens, the amount of solar energy received in any given location changes.

The day when the Sun’s vertical rays are farthest from the equator is called **solstice**. Solstices occur twice a year—about June 21 and about December 21. In the Northern Hemisphere the June solstice is known as the summer solstice. This is the longest day of the year and the beginning of summer. On this date the Sun’s vertical rays strike Earth at the **Tropic of Cancer**. This is the line of latitude that is 23.5° north of the equator. Six months later, about December 21, another solstice takes place. This is the winter solstice for the Northern Hemisphere. On this date the North Pole is pointed away from the Sun. The Northern Hemisphere experiences the shortest day of the year. On this date the Sun’s rays strike Earth most directly at the **Tropic of Capricorn**. This line of latitude is 23.5° south of the equator. In the Southern Hemisphere the seasons are reversed. June 21 is the winter solstice and December 21 is the summer solstice. The middle latitude regions lie between the Tropic of Cancer and the Arctic Circle and between the Tropic of Capricorn and the Antarctic Circle.

Twice a year, halfway between summer and winter, Earth’s poles are at right angles to the Sun. The Sun’s rays strike the equator directly. On these days, called **equinoxes**, every place on Earth has 12 hours of day and 12 hours of night. Equinoxes mark the beginning of spring and fall. In the Northern Hemisphere the spring equinox occurs about March 21. The fall equinox occurs there about September 22. In the Southern Hemisphere the March equinox signals the beginning of fall, and the September equinox marks the beginning of spring.

List the type of visual information with the text again, and state in what ways it was helpful (or not) in understanding the text.

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[add chart on seasons here]