Ask and Answer Questions

Asking and answering questions as you read helps you stay focused. Try it with "Changing Views of Earth." Think about each question the author asks, and form your own questions, too. Then read on for the answers.



Find Text Evidence

In the first paragraph on page 353, the author asks a question: Where does all that information about the weather come from? This may lead you to another question.

page 353

No matter where on Earth you go, people like to talk about the weather. This weekend's forecast may provide the main criteria for planning outdoor activities. Where does all that information about the weather come from?

I think about what I already know—that weather forecasters use scientific instruments. So I ask myself, "What kinds of instruments do scientists use to make forecasts?" I will read on to find the answer.

Your Turn



Reread "Out in Space, Looking Back Home" on page 355. Ask a question and then read to find the answer. Use the strategy Ask and Answer Questions as you read.

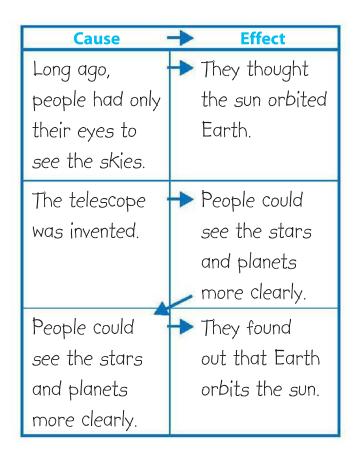
Cause and Effect

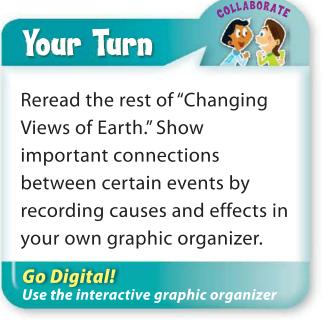
Science and history authors want you to know not just what happens but why it happens. They show that one event is the **cause** of another event, called the **effect**. Cause-and-effect relationships often form a chain, with the effect of one event becoming the cause of another event.



Find Text Evidence

In the section "On the Ground, Looking Around" on page 353, I read that people once believed the sun orbits Earth. I learn the cause of this mistake: people had only their eyes for viewing the skies. The invention of the telescope had an important effect—the discovery that Earth actually orbits the sun.





Expository Text

The selection "Changing Views of Earth" is an expository text.

Expository text:

- Presents information and facts about a topic in a logical order
- Supports specific points with reasons and evidence
- May include text features, such as subheadings, photos, and diagrams



Find Text Evidence

"Changing Views of Earth" is an expository text. The facts about inventions are given in a logical order. The author backs up her points with evidence, including a diagram.

page 354



In the mid-1700s, some scientists sent measurement devices higher and higher. At first they used kites. Before long, hot-air balloons offered new ways to transport the tools—and sometimes scientists themselves—into the sky.

However, scientists were not satisfied studying the lower layers of Earth's atmosphere. The more they learned, the higher they wanted to go. They also wanted to obtain information more quitary and accurately. Kitched balloons were hard to control. As a result, they continually vectod off course or got

The development of aircraft in the early 1900s promised safer ways to observe Earth's surface and the atmosphere above it. Kites and balloons could reach altitudes of approximately three kilometers. By comparison, airplanes lifted scientists to a height of five kilometers and more. Radio technology allowed scientists to transmit data from the air to the ground, where other scientists madyzed and compared information. Breakthroughs came fast and ferriously. Still, scientists dreamed of reaching ever higher.

Diagrams A diagram is a drawing that shows the different parts of something and how they relate to each other. A title tells what the diagram illustrates, and labels identify each main part.

Your Turn



List three other examples of things in "Changing Views of Earth" that show that this is expository text.

Greek Roots

Many English words contain Greek roots. For example, the Greek root *meter* means "measure," so any English word containing *meter* (*thermometer*, *barometer*, *kilometer*) usually has to do with measuring something.



Find Text Evidence

On page 354 of "Changing Views of Earth," I come across the word thermometer. The Greek root therm has to do with heat. Since I know that meter means "measure," I can figure out that a thermometer is something that records or measures temperature.

Measuring devices such as the thermometer and barometer offered new insights into weather patterns.

Your Turn



Use the Greek roots below to figure out the meanings of two words from "Changing Views of Earth":

Greek Roots: geo = earth helio = sun centr = center **geocentric,** page 353 **heliocentric,** page 353



Organization



Readers to...

Writers should not change the subject in the middle of a paragraph. In expository writing, a **strong paragraph** is one in which every sentence supports the *same* main idea. Writers may state the main idea in one of the sentences, called the topic sentence, and the other sentences support it. Read these strong paragraphs from "Changing Views of Earth."

Strong Paragraphs

Identify the topic sentence in each paragraph.

In what way does another sentence in each paragraph support its main idea?

Expert Model

In the mid-1700s, some scientists sent measurement devices higher and higher. At first, they used kites. Before long, hot-air balloons offered new ways to transport the tools—and sometimes scientists themselves—into the sky.

However, scientists were not satisfied studying the lower layers of Earth's atmosphere. The more they learned, the higher they wanted to go. They also wanted to obtain information more quickly and accurately. Kites and balloons were hard to control. As a result, they occasionally veered

off course or got lost, taking their data with them.

Writers



Gillian wrote an expository paragraph about using a magnifying glass. Read her revision of this section.

Student Model

Througha Magnifying Glass

simplest

A magnifying glass is the most

simple way to open up a hidden world.

Use it to look at your fingertips,

and you'll see the lines that leave

fingerprints. Footprints are also great

Have you ever looked at salt close up? clues for detectives. Salt grains are

shaped like tiny cubes. Insects are

great to see magnafied, too. But

They look like robots with lots of interesting parts tarantulas are huge no magnifying

glass needed! You'd be amazed at

what you miss with your bear eyes.

Editing Marks

- ∧ Add
- 🔨 Add a comma.
- **Y** Take out.
- Sp Check spelling.
- Make a capital letter.

Grammar Handbook

Adjectives that Compare

See page 467.

Your Turn



- Identify Gillian's topic sentence for her paragraph.
- Find adjectives that compare in Gillian's writing.
- Tell how her revisions improve her writing.

Go Digital!

Write online in Writer's Workspace