

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

COLLABORATE



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.

Cause	→	Effect
Long ago, people had only their eyes to see the skies.	→	They thought the sun orbited Earth.
The telescope was invented.	→	People could see the stars and planets more clearly.
People could see the stars and planets more clearly.	→	They found out that Earth orbits the sun.

Your Turn

COLLABORATE



Reread the rest of “Changing Views of Earth.” Show important connections between certain events by recording causes and effects in your own graphic organizer.

Go Digital!

Use the interactive graphic organizer

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

COLLABORATE



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



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



Editing Marks

- ^ Add
- ^ Add a comma.
- ✂ Take out.
- sp Check spelling.
- ≡ Make a capital letter.

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

Student Model

Through a Magnifying Glass

A magnifying glass is the ^{simplest} ~~most~~

~~simple~~ way to open up a hidden world.

Use it to look at your fingertips,

and you'll see the ^{swirls} ~~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 ^{sp} ~~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 ^{bare} ~~bea~~ eyes.

Grammar Handbook

Adjectives that Compare

See page 467.

Your Turn

COLLABORATE



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

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