



Solar System

Lesson I

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The Solar System

Lesson 1

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What Is the Sun? 2

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What Is the Sun?

VOCABULARY

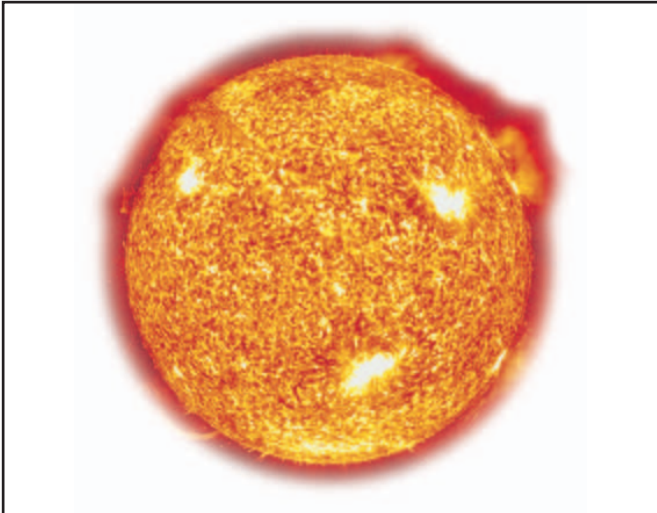
- star
- sun
- fusion



A **star** looks like a point of light in the night sky.



▶ The **sun** is the large star. We can see it during the day.



▶ Most of the sun's energy comes from **fusion**. Two hydrogen atoms fuse and make a helium atom.



READING FOCUS SKILL

MAIN IDEA AND DETAILS

The **main idea** is what the text is mostly about.

Details are pieces of information about the **main idea**.

Look for **details** about the sun and how it produces energy.



Stars

A **star** is a huge ball of very hot gases. The **sun** is the star at the center of our solar system. From Earth, the sun looks like a large ball of light.

The sun is the source of most energy on Earth. Without the sun, life on Earth could not exist.



Scientists classify stars by size, temperature, and color. The sun is an average size star. It is the largest body in the solar system. The sun has a medium temperature.



Tell one detail about the sun.



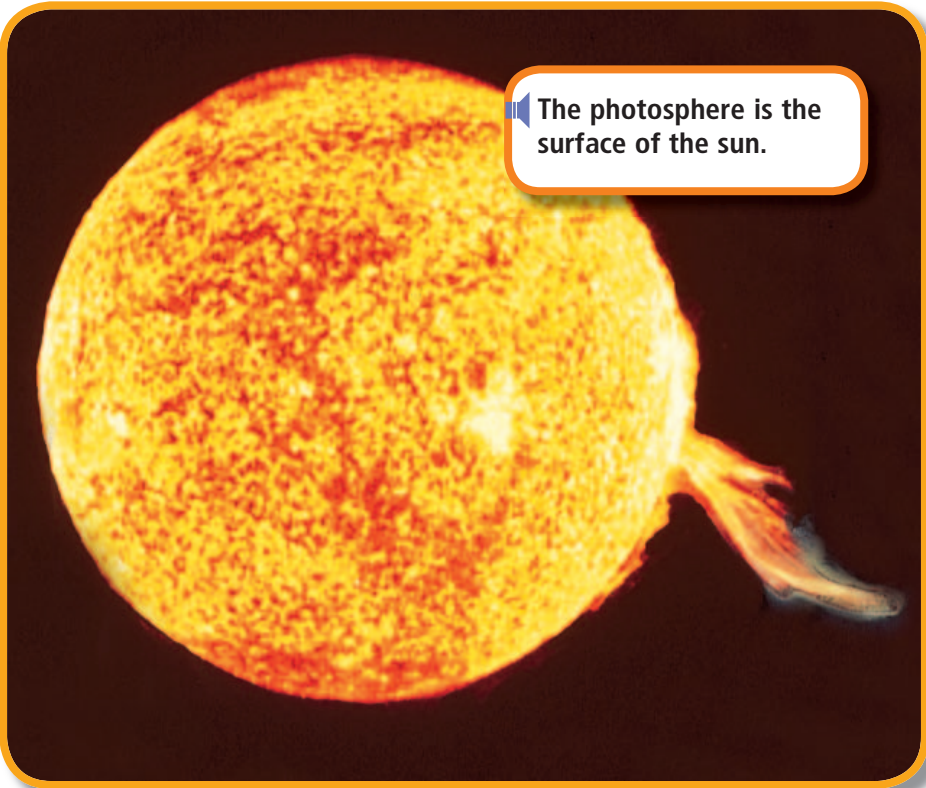
The sun is a huge ball of gases.

Features of the Sun

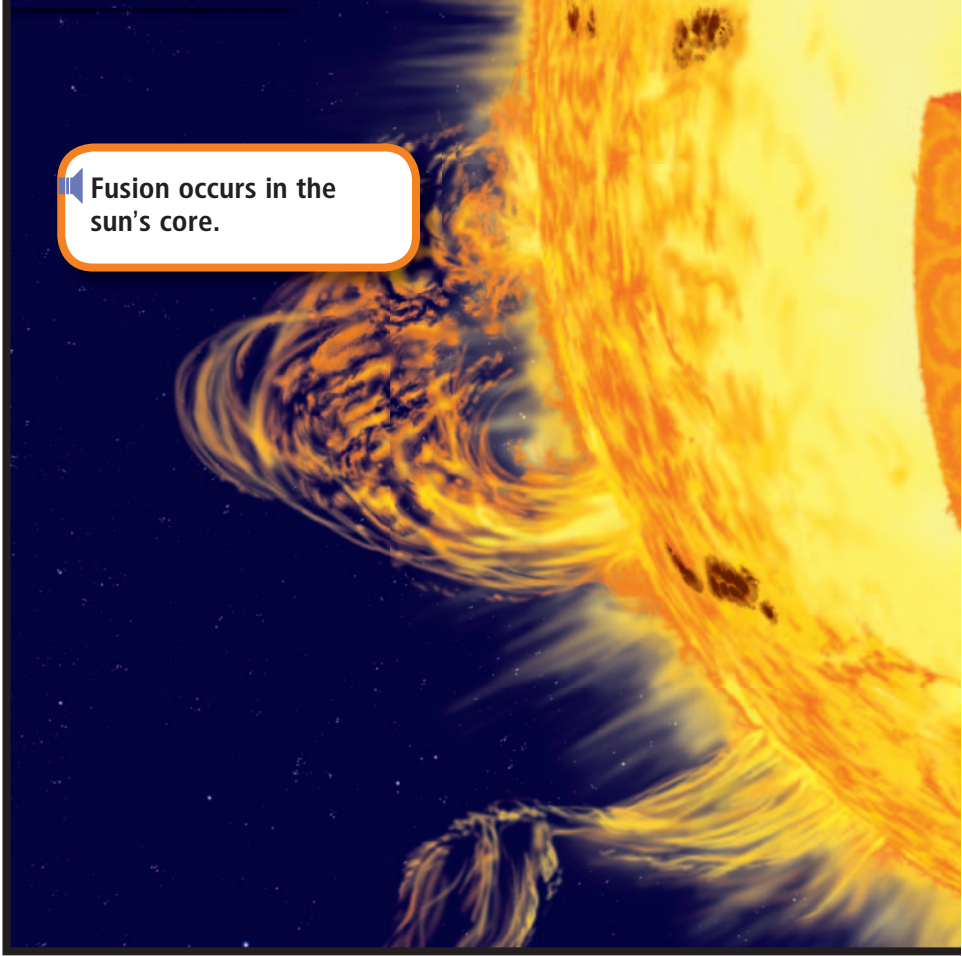
The sun has several layers. At the center of the sun is the core. Most of the sun's mass is in the core. The other layers are the *radiation zone*, the *convection zone*, and the *photosphere*. The photosphere is the surface of the sun. Above the photosphere is the sun's atmosphere.



 Name one layer of the sun.



 The photosphere is the surface of the sun.



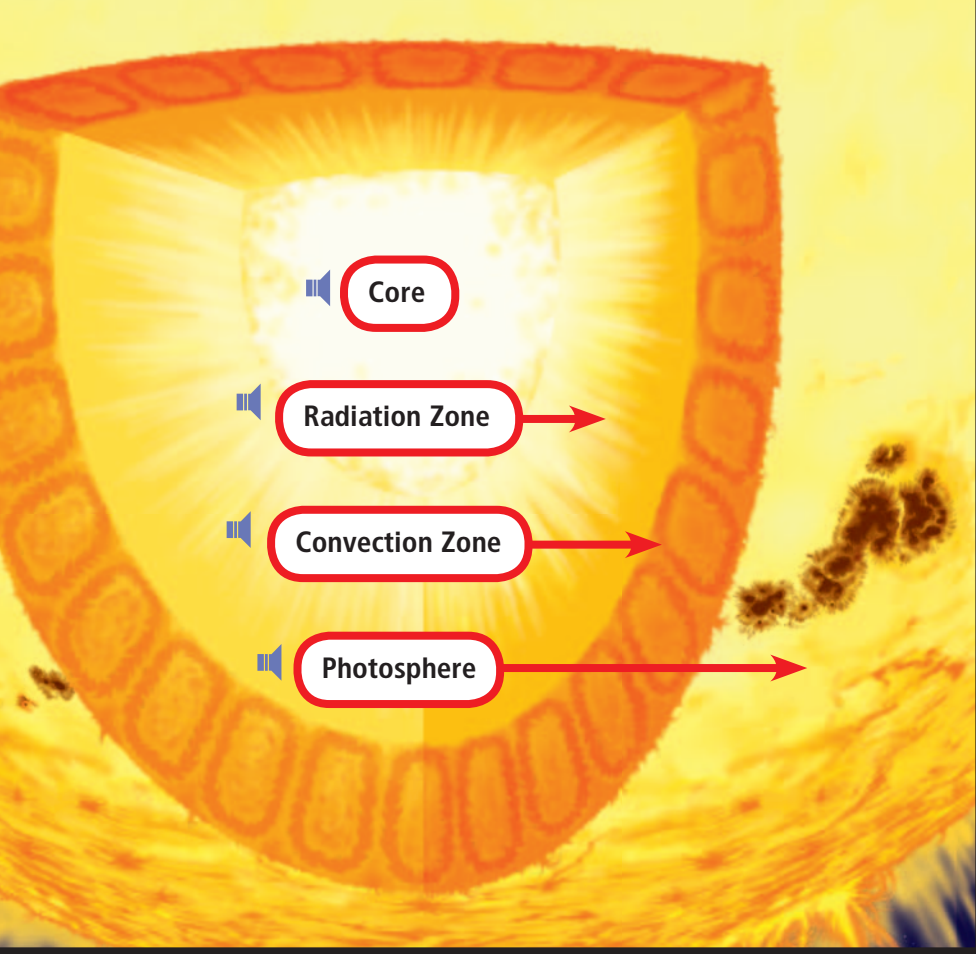
Fusion occurs in the sun's core.

How the Sun Produces Energy

Like other stars, the sun is made up of gases. These gases are mostly hydrogen and helium. The sun's energy comes from **fusion**. Fusion is the joining of small particles into larger ones.

 The temperature at the center of the sun is about 15 million °C (27 million °F). Under pressure, hydrogen atoms smash into each other. This produces helium and energy. The sun releases the energy as light and heat.

  What is the temperature at the center of the sun?



Review



Complete this **main idea** statement.

- 1. The _____ is the star at the center of our solar system.

Complete these **detail** statements.

- 2. The sun is made up of gases, mostly _____ and _____.
- 3. The sun releases _____ as light and heat.
- 4. The sun's energy comes from _____. That is the combining of small particles into larger ones.

GLOSSARY

-  **fusion** [FYOO•zhuhn] The energy-producing reaction that occurs inside stars.
-  **star** [STAR] A huge ball of very hot gases in space.
-  **sun** [SUHN] The star at the center of the solar system.

Think About the Reading

-  **1.** What can you do to help you remember what you have learned about the sun?
-  **2.** What questions do you have after reading this book? How can you find the answers to your questions?

Hands-On Activity

Make a work of art showing the sun and stars. You can show the color range of stars. Show that many stars are visible in the night sky.

School-Home Connection

Explain to a family member what you have read about the sun. Ask a family member to describe the size of the sun in the sky at noon and of stars at sunset.