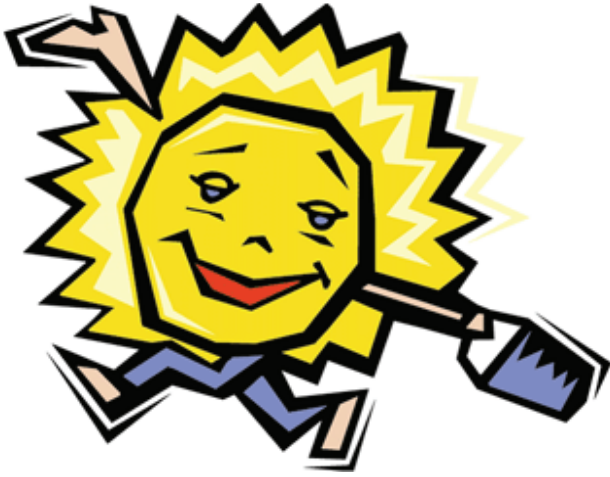


## What is the sun? Will it ever run out of gas?



The sun is the source of light and heat for our planet, as well as other planets in our solar system. The sun is a large star and can be defined as "any star around which a planetary system revolves." The sun has a diameter of about 1,392,000 kilometers. About  $\frac{3}{4}$  of the sun's mass is hydrogen, and the rest is made up of other elements, including helium, iron, oxygen and neon. The sun has a surface temperature of about 5,510 °C. There are three types of matter: solids, liquids, and gas. The sun is a gas.

The sun orbits in the center of the Milky Way galaxy. It is the largest mass in our Solar System. The sun is about 149.6 million kilometers from the earth. Light travels from the Sun to the earth in about 8 minutes and 19 seconds.

The sun supports nearly all life on earth. The energy from sunlight allows plants to derive energy from the sun through photosynthesis. The sun helps give Earth a climate, which can support life.

According to scientists, the sun will keep shining for at least another five billion years. To be specific, it will continue to burn hydrogen for the next five billion years, and then it will burn helium. Just like the earth, the sun has several layers. The surface of the sun is called the photosphere. The center of the sun is called the core.

The sun does not rise or set. In actuality, the Earth is moving around the sun, making the sun only appear to rise and set. Earth is not the only planet moving around the sun. Other planets that orbit the Sun include Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto.

The sun rotates on its axis once every 25.38 earth days. Every eleven years, the sun reverses its overall magnetic polarity. The north magnetic pole becomes the South Pole, and vice versa!

Throughout history, many different cultures have worshipped the sun. Egyptians, Aztecs, and the Japanese are just a few examples of cultures who have sun Gods and Goddesses.

Never look directly at the sun, as it can cause blindness.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Multiple Choice Questions

Circle the correct answer.

1. The sun is best described as being a source of:
  - a. Nutrition & Wind
  - b. Radio Power
  - c. Light and heat
  - d. Astrology
2. The sun has a diameter of about:
  - a. 1,392,000 km
  - b. 1,492,000 km
  - c. 1.6 km
  - d. 4000 meters
3. What makes up most of the sun's mass?
  - a. Oxygen
  - b. Helium
  - c. Hydrogen
  - d. Iron
4. The sun orbits in the center of:
  - a. The world
  - b. The Milky Wax Galaxy
  - c. The Inter-Galactic Continuum
  - d. The Earth
5. How long does it take light to travel from the Sun to Earth?
  - a. Just over eight minutes
  - b. Just under eight minutes
  - c. Precisely eight minutes
  - d. One year
6. What is the surface of the sun called?
  - a. Photosphere
  - b. Platosphere
  - c. Phylosphere
  - d. Surfasun

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Short Answer Questions

1. Explain what happens to the magnetic poles of the sun every eleven years.
2. List two cultures that have Sun gods or goddesses.
3. Does the sun really rise and set? Explain.
4. What type of matter is the sun made up of?
5. Based on your reading, do you think that mankind could ever land on the sun?
6. What do scientists predict will happen to the sun in five billion years?
7. What do we call the center of the sun?
8. Through what process do plants derive energy from the sun?
9. Imagine a world with no sun. Do you think we could live? Could plants grow? Explain why or why not.

ANSWER KEY:

Multiple Choice:

1. C
2. A
3. C
4. B
5. A
6. A

Short Answer:

1. The North and South poles are reverses.
2. Any two of the following: Aztecs, Egyptians, Japanese.
3. No, but because the earth circles around the sun, it makes it appear that the sun is really rising and setting.
4. The sun is made up of gases.
5. Individual response, but the answer is no: It is made up of a gas and therefore has no surface on which to land; plus it is far too hot for us to get close to!
6. Scientists predict that in five billion years, the sun will stop burning hydrogen and begin burning helium.
7. The center of the sun is called its core.
8. Plants derive energy from the sun through a process called photosynthesis.
9. Individual response.