

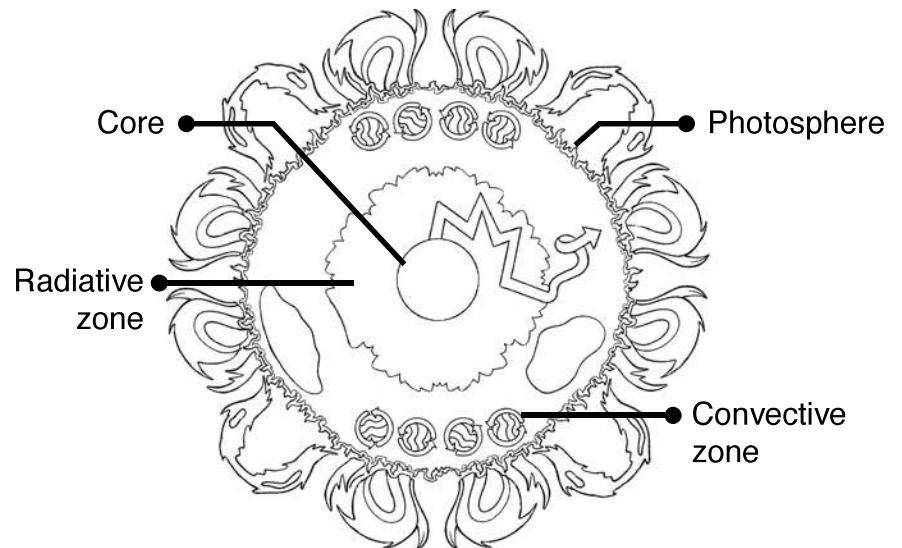
# The Sun

The Sun is a giant ball of hot, glowing gas consisting of electrically charged particles called plasma that gives Earth light and energy. At its center is the **core**, where extreme pressure and temperature cause hydrogen atoms to fuse and release energy through a process called nuclear fusion. This energy moves outward through the **radiative zone**, where it slowly travels as radiation, bouncing around for thousands of years.

Next, it reaches the **convective zone**, where hot gases rise and cooler gases sink in a churning motion that helps move energy toward the surface.

The part of the Sun we can actually see is the **photosphere**, a glowing surface that sends sunlight to Earth. Beyond that is the outermost layer of the Sun's atmosphere, called the corona. It is usually hidden by the brightness of the photosphere, but is visible during a total solar eclipse.

The Sun becomes more and then less active over a repeating, roughly 11-year period called the solar cycle. When the Sun reaches solar maximum, there are many sunspots caused by its agitated magnetic field. This time is also when space weather is most common, with events like solar flares and Coronal Mass Ejections (CMEs) leading to the auroras here on Earth.



## Speaking of the Heliosphere...

People have observed the Sun for millennia. The Sun influences all other objects in our solar system, and is the primary source of energy on Earth. The Sun is also integral to how Arctic peoples live their lives. What activities are dependent on the Sun where you live?



In the Alaska Upper Kobuk dialect of Iñupiaq, the word for *Sun* is **siqĩñiq**. Scan the QR code to learn how to say siqĩñiq in Iñupiaq.

