

A Journey from the Center of the Sun

"The peach is a miracle of nature given to us for only a short time. It's like the *Aurora Borealis*" Cosmo Kramer

Let's imagine you are in class one day, and for some strange reason you doze off and are quickly sound asleep. Dreaming of a ride on the Nimbus 2000, you are suddenly rudely awoken. However, instead of being face down on a desk sound asleep, you find yourself at the center of the Sun! That's a long way to travel in one dream. In fact, it's _____ miles, on average. Or you could say it's ___ AU or even 8 light-_____.

Before long, you notice the strange collision of _____ nuclei with each other, eventually forming He nuclei. This process is called nuclear _____ and can only happen in the Sun's _____. At least now you know where you are. You also notice that it is ridiculously hot. By checking your pocket thermometer, you realize it is a toasty _____ K.

You feel yourself being lifted upward and eventually you notice things have changed. The nuclear colliding has subsided and now you simply feel the momentum of energy flowing outward. You are now in the _____ zone. Here the temperature has dropped a bit. You also observe the matter whizzing along with you, and see that it is in the form of _____, not quite solid, liquid, or gas. You also realize that it's taking a long time to get anywhere. It is believed that it can take thousands of _____ for energy generated in the core to reach the surface.

But you're not at the surface yet. You find yourself caught up in a rising bubble of liquidy material that seems to be rising while material on either side is sinking. You are now in the _____ zone. You feel the temperature dropping quickly, and then finally you are on the _____ or visible surface. As you look around, you see that all around you are little cells, just like yours, which give the surface a texture known as _____. However, your area seems cooler than surrounding cells. Your magnetometer also tells you that the nearby magnetic field is relatively strong, meaning you have landed smack-dab in the middle of a _____. While the sun's surface is huge, your "Spidey-sense"TM tells you that there are many others, letting you know that the sun is nearing solar _____. This condition occurs roughly every _____ years, and also leads to _____ flares and coronal _____ (CME's). In other words, the sun is in a highly active period.

Scientists have observed the sun's magnetic _____ reversing at the peak of this cycle. CME's are dramatic eruptions, sending massive amounts of _____ and _____ away from the sun. If they happen to erupt in the direction of Earth, our _____ will be pelted and we would see _____ down on the surface. These "storms" can also disrupt _____ transmissions and cause _____ failures.

Meanwhile, as you gaze across the sun's surface, you see giant arcs of gas, known as _____. These monstrous eruptions arch over sunspot groups, supported by the _____ field. They may last for days or even _____.

The sun's _____ or crown, is ridiculously hot, and astronomers aren't sure why. This is the part that can only be seen from Earth during a solar _____. Using your "Proton Glasses", you just barely observe a stream of particles flying past at high speed. It is hard to see since the solar _____ has such a _____ density. Since you are only the size of an atom, you notice that it is slowly but surely pushing you away from the sun and toward Earth.

As you finally approach Earth, you are excited to be home. Then you realize that without protection, you may burn up in the _____ like a _____. Just as the friction is starting to toast you.....

"WAKE UP _____ !!!! What are you doing sleeping in my class?!?"

OPTIONAL WORD and NUMBER BANK

prominences
H
energy
auroras
low
mass
radiative
granulation
satellite
meteor
corona
15,000,000

magnetic
years
power
sunspot
weeks
maximum
plasma
solar
matter
photosphere
1
93,000,000

minutes
convective
atmosphere
ejections
eclipse
field
fusion
wind
ionosphere
core
11