

Space Weather

We think of space as a vast void. However, the space within our solar system is not as empty as it seems. An atmosphere created by the Sun surrounds and fills the solar system. As a result, our solar system experiences cosmic weather, complete with phenomena similar to wind, clouds, storms and hurricanes. Collectively, these phenomena are commonly referred to as space weather. Complete the webquest by going to www.thesuntoday.org and click on The Sun link. In your notebook or on a lined sheet of paper draw a diagram of the Sun. Include the following: Core, Radiative Zone, Convection Zone, Photosphere, Chromosphere, Corona, Sunspot, Flare, and Prominence.

Make this table in your notebook and fill it in using Solar Structure, Surface of the Sun and Solar Activity links. Watch the videos and read.

Layers and Features of the Sun

Layer/Feature	Location	Description
Core		
Radiative Zone		
Convection Zone		
Photosphere		
Chromosphere		
Corona		
Sunspot		
Flare		
Prominence		

Answer the following questions from the previous links and the Space Weather link:

1. What types of radiation does Earth receive from the sun?
2. How does the radiation energy reach Earth?
3. How do solar flares affect the amount of radiation emitted from the Sun?
4. What is the solar cycle?
5. What is the effect of the variations in the number of sunspots?
6. What is Solar Wind and how can it affect the Earth?
7. What are Solar Flares and how can they affect the Earth?
8. What are Coronal Mass Ejections (CMEs) and how can they affect the Earth?
9. Watch the video on the Solar Activity link near the bottom. What is the difference between a Solar Flare and a CME?
10. What is a geomagnetic storm on Earth?