Structure of the Sun

the uppermost part of the atmosphere, millions of miles thick

an orange red layer of atmosphere thousands of miles thick

the lower atmosphere and what we see

where nuclear fusion occurs

LABEL AND COLOR
Things I Should Know About the Sun – Answers found in book p. 684-690.

1. The diameter of the sun is equal to 109 Earth diameters, or ____________________.
2. The sun’s mass is ____________ times the mass of Earth and its density is only _________________ that of solid Earth.
3. Most of the sunlight we can see comes from the ______________________ of the sun.
4. What causes the photosphere to have a grainy appearance and is also responsible for transferring energy within the sun? ______________________________________
5. How does the temperature of the sun change as you move from the photosphere to the corona?

6. The sun’s equator rotates once in _____ days, while a location _____ degrees from the solar equator, whether north or south, requires _____ days for one rotation.

8. Prominences are ionized gases trapped by __________________________ extending from regions of intense solar activity.
9. List the main forms of radiation in which solar flares release energy. ______________

10. If the ejected particles from a solar flare where to reach Earth, what would they affect?

11. Solar flares can cause spectacular ________________, or northern and southern lights, in Earth’s atmosphere.
12. The number of sunspots increases and decreases in a cycle of _____ years.
13. During nuclear fusion, _______________________ is converted into energy.
14. In what form is most of the energy from hydrogen fusion released?

15. The sun became hot enough to start nuclear fusion because the temperature of gases rises when they are ________________________.
16. Energy is transmitted inside the sun through the processes of __________________ and __________________________.
17. When the sun produces energy, it consumes hydrogen and produces _________________.
18. About how long can the sun continue to exist in its present stable state?