All About the Sun

Earth Science Mr. Traeger

Name: _____ Period: _____ Date: _____

Part 1: Drawing the Sun

1. ***Draw*** the sun with its component layers as seen in the diagram on page 758 in your textbook. Label all of the temperatures for each layer. Do this in the space below.

Part 2: Describing Each Layer of the Sun

Write a description of each layer of the sun below. Consult your packet and the textbook page 758-760.

1. The Core:

2. The Radiative Zone:

3. The Convective Zone:

4. The Photosphere:

5. The Chromosphere:

6. The Corona

Part 3: Additional Questions

1. How was the sun and the solar system formed? See page 685 in your book for details about the Nebular Hypothesis.

2. How big is the sun in terms of diameter and volume? In other words, how many Earths could you fit across the face of the sun? How many Earths could you fit inside of the sun?

How Many Earths would fit across Sun?	How many Earths would fit inside Sun?

3. How far away (average) from Earth is the sun in kilometers?

4. What is an astronomical unit? How does it compare to the value found in number 3?

5. What gases is the sun made from?

6. How old is the sun?

7. How does the sun generate its energy? Describe the process of nuclear fusion.

8. What is the constant balance being maintained in the sun? In other words, why doesn't the sun grow larger or become smaller over time?

9. What is plasma? How does it compare to the other states of matter (solid, liquid, gas)?

10. What are sunspots and how do they occur?

11. How hot are sunspots compared to the surrounding photosphere? Why do they appear dark?

12. How big are sunspots?

13. Does the sun rotate? If so, how long does it take to rotate once?

14. What is the sunspot cycle? How much time is there between peaks in sunspot activity?

15. What layer of the sun do sunspots belong to?

16. How dense is the core of the sun? In other words, how much would a bucket full of core material weigh?

17. What is the solar wind? How fast does it travel?

18. What are the aurora borealis (Northern Lights)? How are they formed?

19. What kinds of radiation are given off by the sun? Why is it important for you to wear sunscreen?