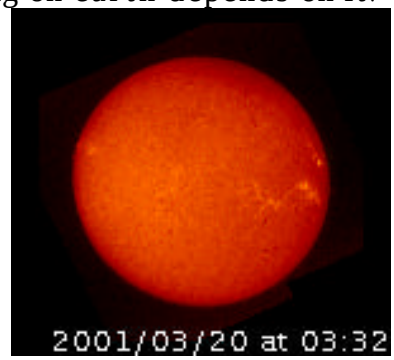
Lesson on The Math of the Sun Name _____

Even though we don't see the sun much in Ithaca, NY, during the winter, the sun is a fascinating star. Everything on earth depends on it!



(latest picture of the sun from http://www.sec.noaa.gov/today.html)

GO TO http://seds.lpl.arizona.edu/nineplanets/nineplanets/sol.html

Look at the beautiful picture of the sun, then **scroll down**.

1) The sun is called a G2 star. Click on G2 and read what that means. What stars are the hottest? _____What stars are the coolest? _____ Based on what you read, what does the G2 category mean about our sun? _____
_____

Click **BACK** at the top left of your browser and again **scroll down. Scroll down** as you read each of these questions.

2) The sun is one of 100 billion stars in the universe. Can you write 100 billion here: _____.
3) What is the sun's temperature on its surface? _____

4) What is the sun's temperature on its core? _____

5) Click on the "K" and read about the Kelvin scale. Kelvin is a scale that scientists use. Water boils at _____K.
WOW! Can you see how much hotter the sun is when compared to boiling water?
_____
6) How much is the sun's mass? To write it out, move the decimal point to the right 30 times! Click on 1.989e30 and it will explain more:
_____

7) A **kg** (kilogram) is about 2.2 pounds. Can you change the sun's mass to pounds:

_____

Keep scrolling down.

8) What is the sun made up of? _____ and _____

9) What are sunspots? _____
_____

10) A sunspot can be as large as 50,000 km (kilometers) in diameter. If a mile is 1.6 kilometers, can you change 50,000 km to miles? Remember a mile is bigger than a kilometer. Do your work here:

11) Besides heat and light, the sun gives out particles which are called the "**solar wind,**" what effects does the solar wind have on earth? _____
_____

12) What is the "aurora borealis"? _____
_____

13) There is some controversy as to which objects that orbit around the sun are planets and which are not. Click on **controversy** to find out why. Scroll down:
If you classify the planets by composition (what they are made of), which are the rocky planets? _____

14) Which are the gas planets? _____

Notice PLUTO stands in a category by itself.

15) If you classify them by size, which are the "small" planets? _____
_____

16) Which are the "giant" planets? _____

17) Which are the "lesser" planets? _____
Don't confuse these with "minor" planets which is the name given to "asteroids."

18) If you classify the planets according to their relative distance to the sun, which are the "inner" planets and which are the "outer" planets?
Inner planets _____

Outer planets _____
19) What separates the Inner planets from the Outer planets? _____
_____
Now **scroll down** and click on the pictures! Enjoy! Don't forget to wear sunblock!