

## NOVA Sun Lab

Geology

Mr. Traeger

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Date: \_\_\_\_\_

**Purpose:** The purpose of this assignment is to see how solar scientists study the Sun and make predictions about its activity.

**Materials:**

- NOVA Sun Lab Website: <http://www.pbs.org/wgbh/nova/labs/lab/sun/>
- Pencil or Pen

**Procedure**

1. Navigate to the NOVA Sun Lab Website by directing your browser to <http://www.pbs.org/wgbh/nova/labs/lab/sun/> or by clicking the link in the Internet Investigations part of the class website.
2. Click on %Research Challenge.+
3. Go through the following parts of the investigation.

**Part 1: Solar Cycle**

1. Follow the instructions on the Sun Lab website.
2. Fill in the following data chart for sunspot numbers as seen on screen.

Date	Your Estimate	Scientific Estimate
December, 2010		
March, 2011		
July, 2011		
October, 2011		
January, 2012		

3. How does your estimate compare to the scientific estimate? If it's different, why do you think this might be?
4. How do your estimates relate to the big picture of the solar cycle? As you can see, sunspot activity in 2011 was increasing, as the Sun marched closer to the next solar maximum.
5. Based on the overall trend, when do you think the next solar maximum after 2011 will occur?

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**Part 2: Storm Prediction**

1. Go through each of the named scenarios and forecast which region is more likely to produce solar flares.

<b>Scenario</b>	<b>Which region is more likely to produce solar flares? Did you get it right?</b>
<b>Huge Spots</b>	
<b>Complicated Spots</b>	
<b>Rapid Growth</b>	
<b>Mixed-Up Magnetic Fields</b>	
<b>Threatening Filaments</b>	

**Part 3: Open Investigation (This is worth half the points of this assignment, so do a good job here!)**

1. Think of a question that interests you about the Sun. What is that question?
  
  
  
  
  
  
  
  
  
  
2. Describe your investigation, how you went about conducting your investigation, and what you learned about the Sun from your investigation. This should be in essay format and should use full sentences!