

How do I use scientific methods to study the world?

– Scientific Method Stick

Mr. M. Gonzalez

Do Now

- Take out your clip boards and use them for placing today's work.
- Clip boards will be graded.

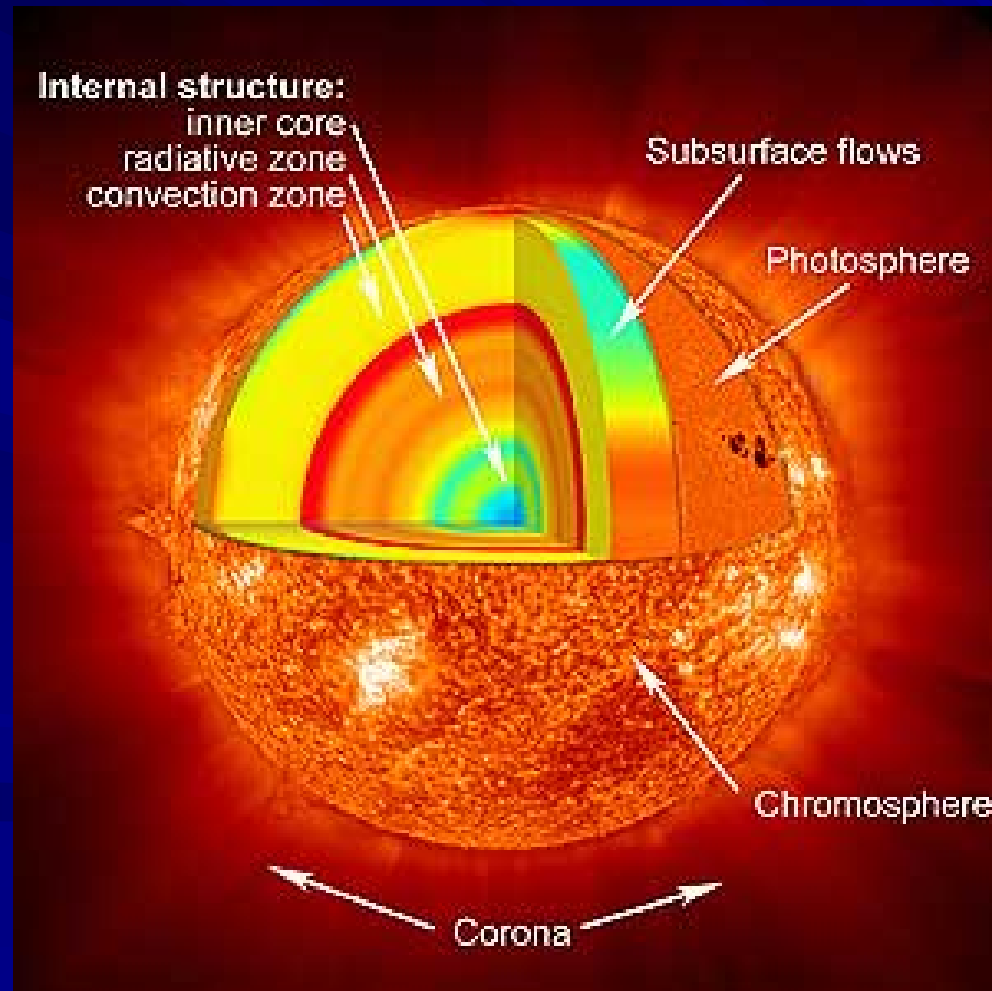
Objectives

- I can formulate a scientific problem.
- I can use my senses to gather data.
- I can model a hypothesis and modify it based on information I gather.
- I can write a lab report of my findings.

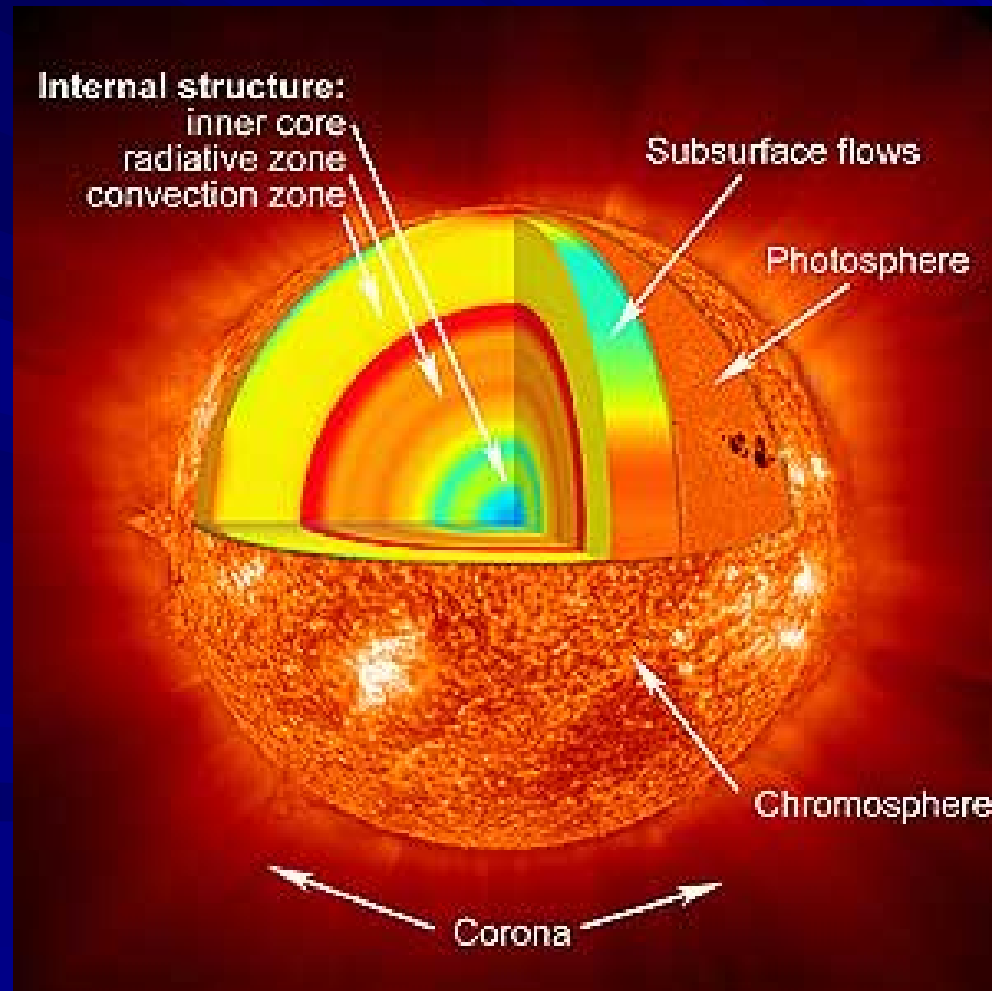
Introduction

- What do you do when you want to observe something?
- You can't always open things up or get close to everything to get to know how they are or what they do.

What's in the center of the Sun?



Has anyone ever opened up the sun? How do we know then?



Introduction

- In order for people to understand the world they need to use skills such as:
 - observation,
 - questioning,
 - hypothesizing, and
 - analyzing.
- These skills put together are what is known as a **scientific method**.

Who applies the scientific method?



<http://www.csus.edu/housing/images/question-mark.jpg>

How do I use scientific methods to
study the world?

Who applies Scientific Methods?

- We all do!
- Every career does!
- Scientific methods are simply an organized system of
 - thought
 - trial
 - error
 - repetition

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Rules

1. No hitting anyone with the stick.
2. DO NOT PULL TWO strings at the same time *until the instructions ask you to.*
3. DO NOT OPEN THE STICK under any circumstances *until you've filled out the whole worksheet.*

Activity

- Observe the SMS
 - Use all your senses.
- Read through the worksheet.
- Neatly complete the worksheet as you observe.

FOLLOW DIRECTIONS

- Once the cooking bell rings you must stop and listen to my instructions.
- I will ask you to often pause during the activity so be prepared to STOP.

H.W.

- Finish filling out pages 01 and 02 in the worksheet.

Do Now

- Take out your clip boards and use them for placing today's work.
- Clip boards will be graded.

How do we use scientific methods to study the world?

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Objectives

- I can formulate inquiry questions.
- I can model a hypothesis and modify it based on information I gather.
- I can write a lab report of my findings.

Inquiry Questions

- What actions did you take in order to try to understand how the SMS works?
- These actions can be translated into questions.

Inquiry Questions

- What actions did you take in order to try to understand how the SMS works?
- These actions can be translated into questions.
 - Pull two strings
 - Pull slowly
 - Listen to the clattering closely
 - Mark a rope with tape or marker

Activity

- Continue completing the worksheet.
- Once the cooking bell rings you must stop and listen to my instructions.
- I will ask you to often pause during the activity so be prepared to STOP.
- Once you're finished with the worksheet you may ASK to open the SMS.

Analysis?

- List the steps that you took to try and figure out how the SMS works?
- Share.
- Was your scientific problem clear and succinct?
- Were your hypothesis testable?
- Did you have an Eureka! moment? If yes, describe.

H.W.

- Finish filling out the worksheet.
- Due tomorrow if not completed by today.
- If completed, put in tray on your way out.
- A lab report will be due in one week after Rosh Hoshana.