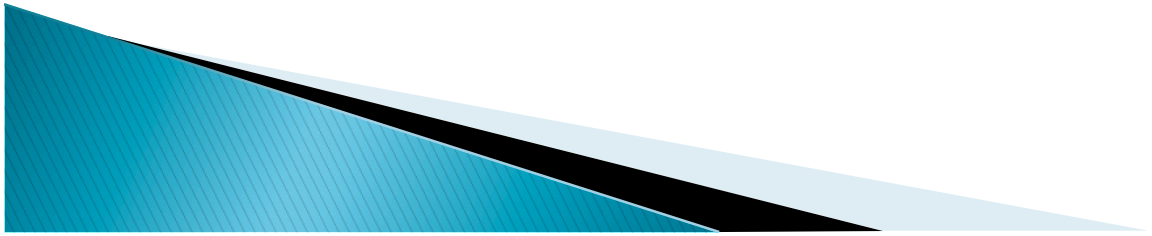
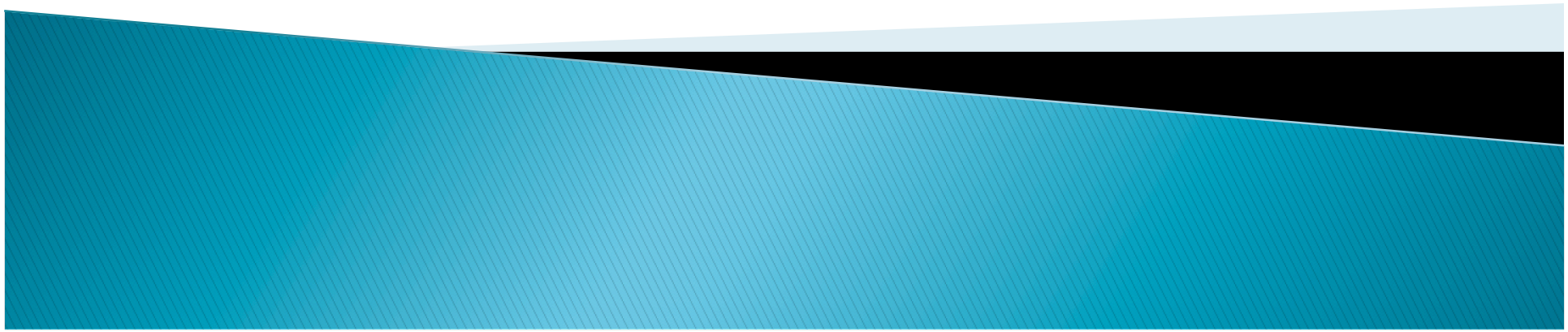
Do Now (5 min)
11-29-10

- Write down anything you know about the Scientific Method.
  - (Guesses are acceptable too!)



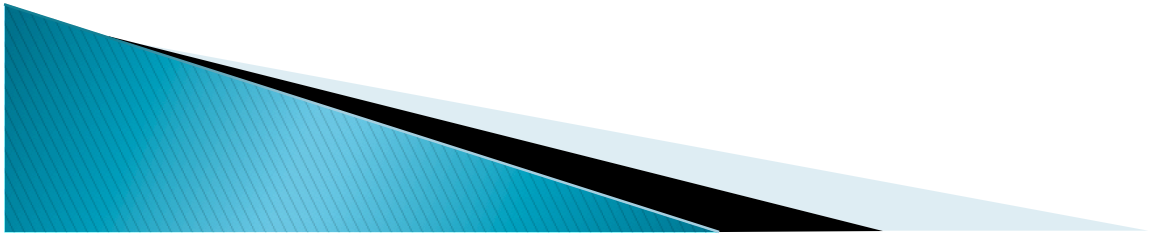
The Scientific Method:

11-15-10



Agenda

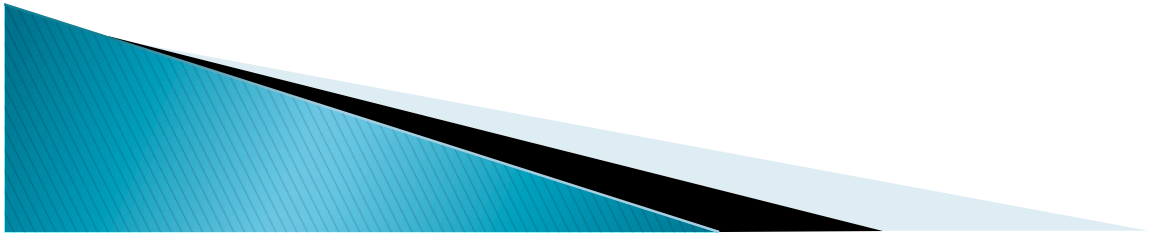
1. Do Now (5 min)
2. Objectives (3 min)
3. What is the Scientific Method? (5 min)
4. Why is it important to have the Scientific Method? (20 min)
5. The 5-Steps: Definitions and Examples (20 min)
6. Closing (5 min)
7. Exit Slip (5 min)
8. Participation Grades (5 min)



Objectives (3 min)

- Content (What you will learn today)
- **SWBAT**:
  1. **Define the scientific method**
  2. Explain why the is important to have one investigation process (the Scientific Method) that all scientists must use
  3. List and define and provide an example of each of the 5-steps in the Scientific Method

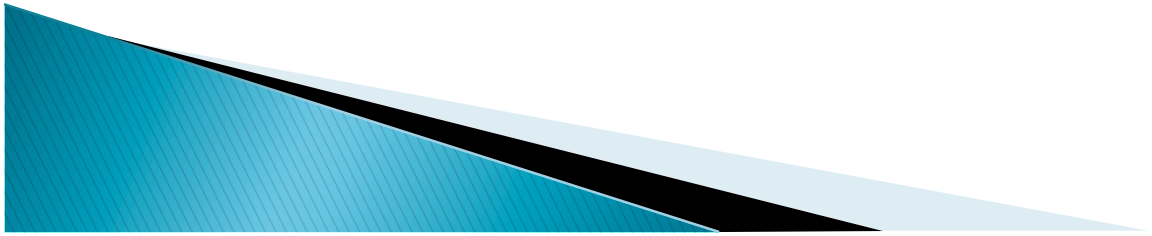
- Language (How you learn it today)
- **By:**
  1. **Writing notes based on the PowerPoint**
  2. **Discussing an analogy with a neighbor**
  3. **Writing notes based on the PowerPoint**



What is the Scientific Method? (5 min)

Objective: SWBAT: *Define the scientific method by writing notes based on the PowerPoint.*

The Scientific Method: (The 5-step process all scientists use to investigate all topics)



Why is it important to have the Scientific Method? (10 min)

Objective: SWBAT: *Explain why the is important to have one investigation process (the Scientific Method) that all scientists must use by discussing an analogy with a neighbor.*

The Scientific Method: (The 5-step process all scientists use to investigate all topics)

Think about this analogy* between the Scientific Method and car factories.

1. Why is it important for a car company to have one process for the creation of each model of its cars? (ex: all Monte Carlos are made in the same way)

2. What might be some of the consequences if a car company did not have a one process? (ex: one Monte Carlo is made in one way, another is made in a different way…)

* Analogy: (a comparison between two similar things)

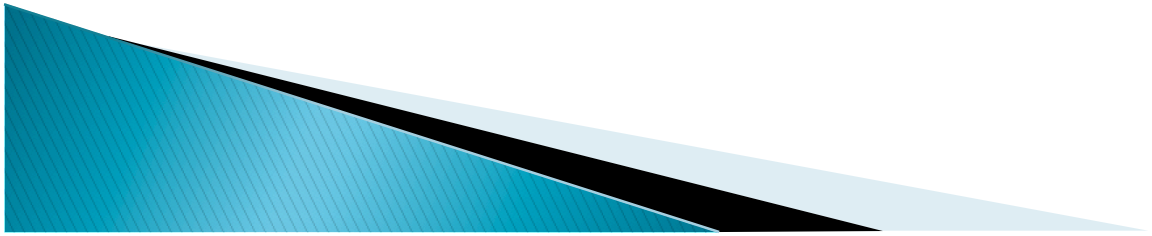
Why is it important to have the Scientific Method? (10 min)

Objective: SWBAT: *Explain why the is important to have one investigation process (the Scientific Method) that all scientists must use by discussing an analogy with a neighbor.*

The Scientific Method: (The 5-step process all scientists use to investigate all topics)

Think/Turn/Talk

Why is it important to have one investigation process that all scientists must use?



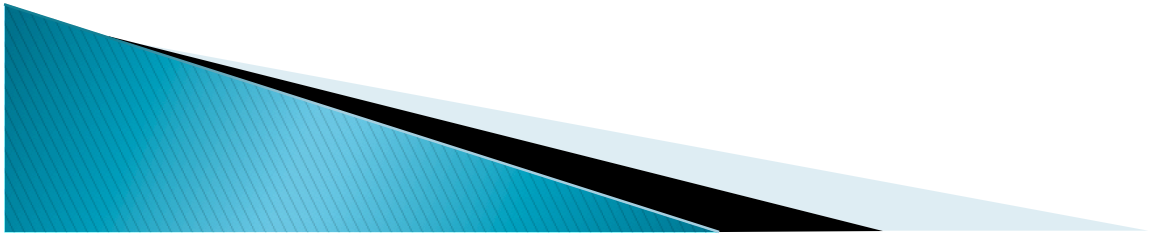
The 5-Steps (10 min)

Objective: SWBAT: *List and define and provide an example of each of the 5-steps in the Scientific Method by taking notes based on the PowerPoint presentation.*

The Scientific Method: (The 5-step process all scientists use to investigate all topics)

There are 5 steps in the process:

1. Question
2. Hypothesis
3. Experiment
4. Data Collection
5. Data Analysis



The 5-Steps (10 min)

Objective: SWBAT: *List and define and provide an example of each of the 5-steps in the Scientific Method by taking notes based on the PowerPoint presentation.*

The Scientific Method: (The 5-step process all scientists use to investigate all topics)

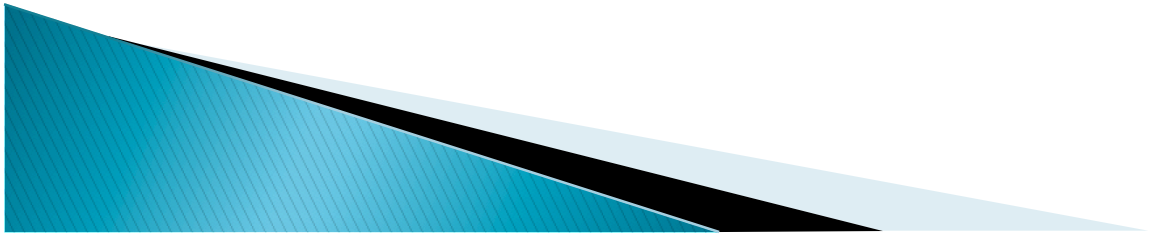
There are 5 steps in the process:

Step Number/Name	Explanation
#1: Question:	Scientists have a curiosity, so they form a question ex: Does air or water absorb heat more quickly?

The 5-Steps (10 min)

Objective: SWBAT: *List and define and provide an example of each of the 5-steps in the Scientific Method by taking notes based on the PowerPoint presentation.*

Step Number/Name	Explanation
#1: Question:	Scientists have a curiosity, so they form a question ex: Does heat escape more quickly into air or into water?
#2: Hypothesis:	An educated guess ex: Heat will escape five times more quickly into air and water that are both at the same temperature



The 5-Steps (10 min)

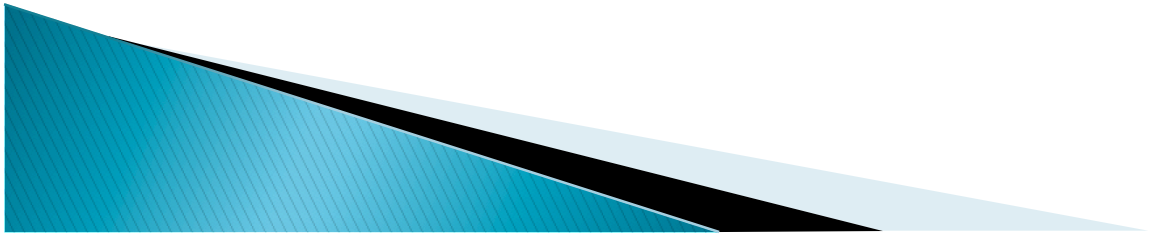
Objective: SWBAT: *List and define and provide an example of each of the 5-steps in the Scientific Method by taking notes based on the PowerPoint presentation.*

Step Number/Name	Explanation
#1: Question:	Scientists have a curiosity, so they form a question ex: Does heat escape more quickly into air or into water?
#2: Hypothesis:	An educated guess ex: Heat will escape five times more quickly into air and water that are both at the same temperature
#3: Experiment:	Scientists come up with a way to test their hypothesis. ex: Boil eggs for 10 minutes. Remove eggs from boiling water. Place half on the counter, place half in room temperature water. Wait 5 minutes. Feel two groups of eggs.

The 5-Steps (10 min)

Objective: SWBAT: *List and define and provide an example of each of the 5-steps in the Scientific Method by taking notes based on the PowerPoint presentation*

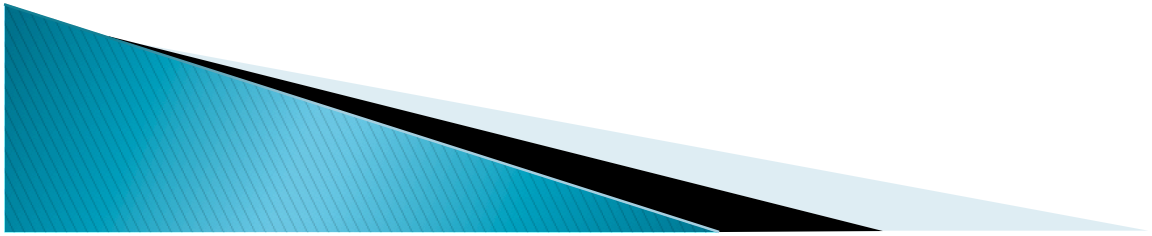
Step Number/Name	Explanation
#4: Data Collection:	Scientists take measurements from their experiment ex: Each minute for 5 minutes the scientists touches each egg and records which is hotter/ cooler
#5: Data Analysis:	Scientists draw conclusions based on their measurements ex: After reviewing the data that was collected, the eggs in the water were cooler, therefore the heat escaped more quickly through the water.



Closing (5 min)

- Content (What you will learn today)
- **SWBAT**:
  1. **Define the scientific method**
  2. Explain why the is important to have one investigation process (the Scientific Method) that all scientists must use
  3. List and define and provide an example of each of the 5-steps in the Scientific Method

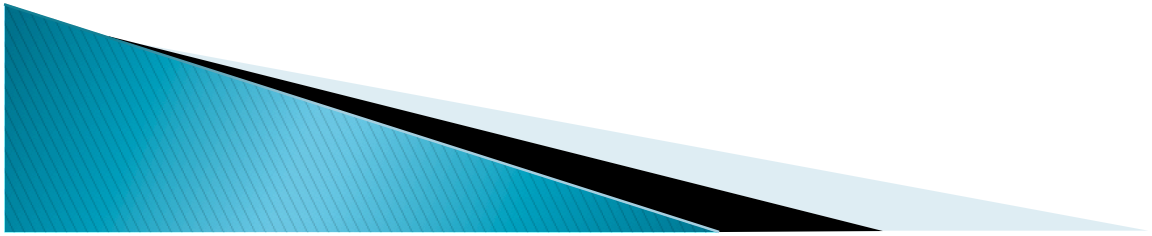
- Language (How you learn it today)
- **By:**
  1. **Writing notes based on the PowerPoint**
  2. **Discussing an analogy with a neighbor**
  3. **Writing notes based on the PowerPoint**



Exit Slip (5 min)

Write your NAME, DATE, and BLOCK on a scrap paper, and answer the questions below.

1. Define the scientific method
2. Explain two reasons it is important to have one investigation process (the Scientific Method) that all scientists must use
3. List, define, and provide and example of the second step in the scientific method.



Participation Grades (5 min)

- Each day **YOU** will decide the grade you deserve…Though, I reserve the right to change these.
- Your 5-point daily participation grade is based on CLA's core-values:
  - CLA Students are S.M.A.R.T.
- S = Self-Controlled
- M = Motivated
- A = Accountable
- R = Respectful
- T = Timely
  - One point for each core-value
    - (5 points possible each day)
  - What do you deserve today?