### WHAT IS SCIENCE?

"Science is the knowledge gained from using observations and experiments to describe and explain the world around us."

# WHAT IS SCIENCE?

# Scientific method.

Make an

observation

A way to solve a problem.

Develop an

idea about

why it

happens

### **OBSERVATION**

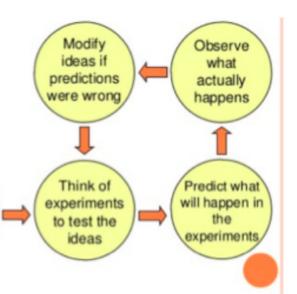
 Observation is one of the most important tools for a scientist.

### WHAT IS NOT SCIENCE?

Studies that are not based on the scientific method (yet are claimed to be scientific) are called pseudoscience.

. i.e. they make claims that are not testable.

Pseudoscience is often seen in advertising.



- · science is dynamic,
- it is hands-on, and
- it changes as our knowledge of the world increases.
- Ask a question notice something weird or interesting, natural curiosity

  Form a hypothesis a testable, possible answer to your question
  - Record and Analyze Results 2 types Data
- Step 2 Qualitative data- observations that are descriptive
  - Quantitative data- observations that include numbers

# Controlled Experimentation has 3 main parts

# Step 3

- Manipulated (independent) variabledeliberately changed by researcher
- Responding (dependent) variable- what is measured
- Controlled variables- remain constant

# Draw Conclusions, Share, Repeat

## Step 4

- Was your hypothesis supported of refuted?
- Multiple trials improve reliability

# Step 5

# New Information

Evolving technology teaches us constantly

How are you going to change your thought to account for this new information?

# FOCUS ON QUESTIONS 1, 3, 4, 6, 7, 8

# Answer these questions as you watch the video. 1. What was the job of the Lorax? 2. What did the Once-ler build? 3. What did the Once-ler make? What are three ways they can be used? 4. What does the Once-ler think is important? 5. What happened to the Bar-ba-loots after most of the Truffula Trees were gone? 6. Did the Once-ler stop making Thneeds after the Swomee-Swans and Humming-Fish had left? 7. After the last Truffula Tree was gone and The Lorax left, what did the town look like? 8. Can the land return to the way it used to be? Why or why not? Thirk About It. What would you have done if you were the Lorax? The Lorax story is often called a "cautionary" tale. Explain why.

| ee          |  |  |
|-------------|--|--|
| Diane Kelty |  |  |
| L           | In what year was the Leone written?  |  |
| 2           | What is Dr. Seuss's real name?   |  |
| 3.          | What has the story taught generations of school children?  |  |
| 4           | What does the article argue that inspired the eponymous character of the Leave                                       |  |
| 5.          | When Geisel was suffering writer's block, what did his wife suggest?   |  |
| 6.          | Now long did it take Geisel to write the Louis?  |  |
| 7.          | Who led the study that found the monkey that inspired the Love? (What was his name, his job, and where did he work)? |  |
| 8.          | What type of monkey is the Lanes based on?   |  |
| 2           | Where and in what habitats does it live?   |  |
| 10          | List three things this mankey has in common with the Look.   |  |
|             | Α  |  |
|             | ь  |  |
|             | c  |  |
| 11          | Who is James Highous? What does he do and where does he work?  |  |
|             |  |  |

|           | another similarity between The Leve, and these monkeys?                             |
|-----------|---|
| 4. Name,  | and describe the polar' tree:   |
| 5. What d | to the pales like to eat?   |
|           | happening to their trees? And why?  |
| 7. Who is | the ecologist studying suries macrisey conservation? And where do they work?        |
|           | edly has the pales. rsockey range declined? What is happening because of this?      |
| 9. What d | id Dooisy mean when he quoted "Life may be imitating art which was imitating life"? |



FOCUS ON QUESTIONS: 1, 2, 3, 5, 6, 8, 9, 10, 13, 14, 15, 16, 18, 19