# Lab Experiences and Students' Ideas About the Nature of Science

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# What is IMPRESS?



- **I**ntegrating **M**etacognitive **P**ractices and **R**esearch to **E**nsure **S**tudent **S**uccess
- Two week summer workshop
- 20 first generation and deaf/hard of hearing students
- Ends up being a fantastic source of data for research
  - Last year collected by REU students Ed Schenk and Alison Gomez

# Research Goals & Guiding Thoughts



Find something interesting about the videos

Existence proof

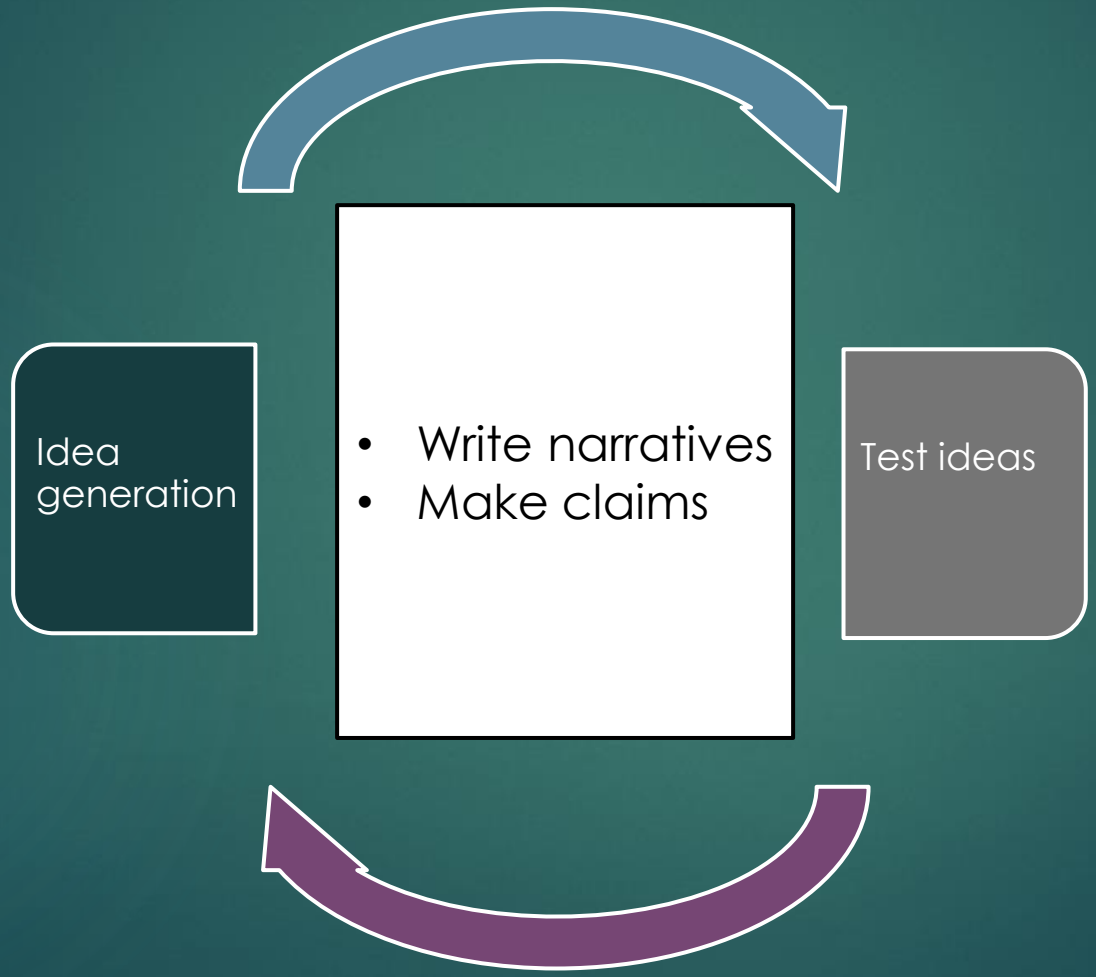
- Students' actions and words
- Students' implicit ideas on the nature of science

Avoid overfitting the data

- Theoretical framework & hypothesis refinement
- IRR & clear evidence from data

# Methodology





# Theoretical Framework



- Developed by Dr. Paul Irving, Dr. Sayre, and past REU student Lauren Harris

**B** • Brief: short comments or questions

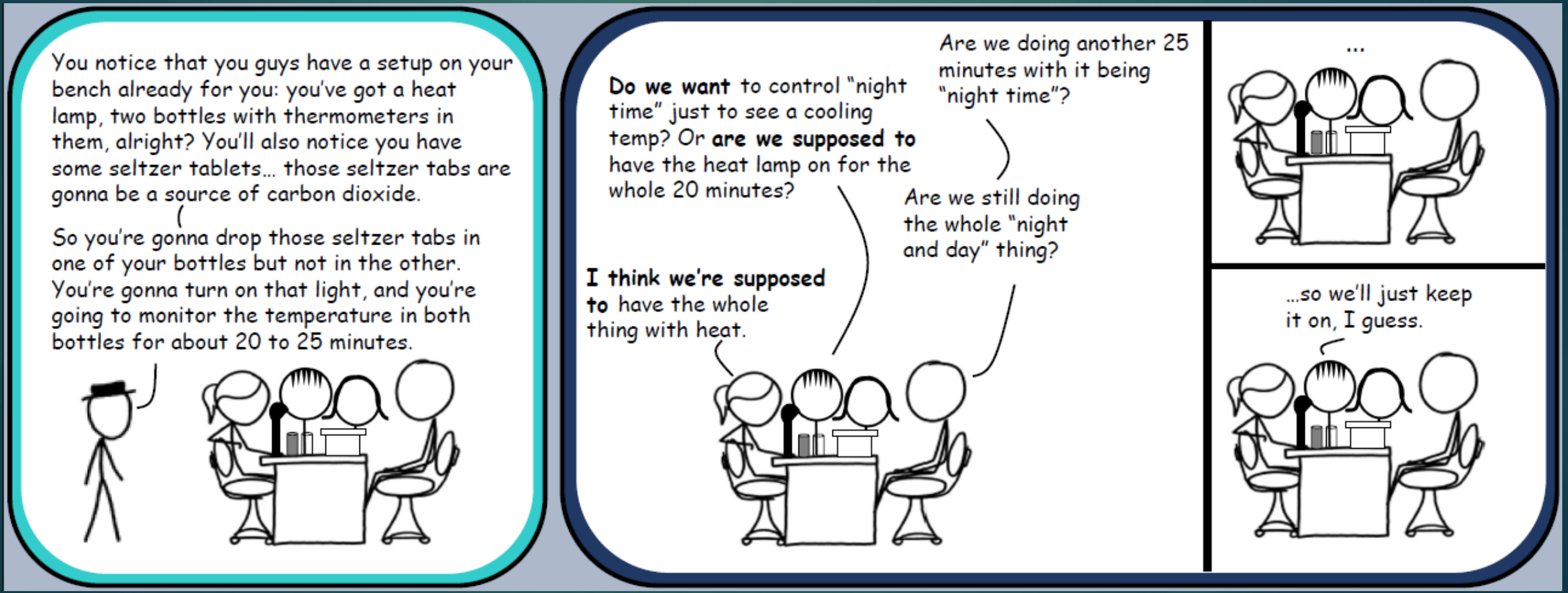
**E** • Embedded: part of larger project

**S** • Spontaneous: unprompted

**M** • Metacognitive: reflective

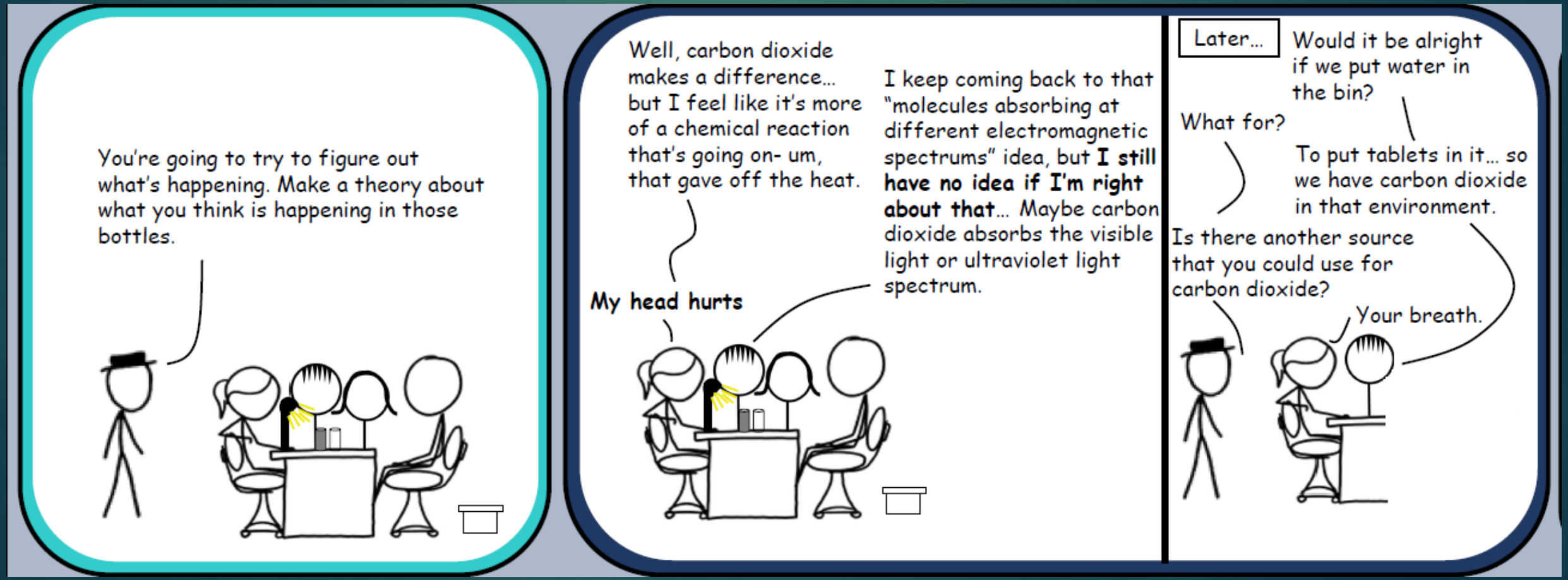
# Claim: students have a resistance to side quests





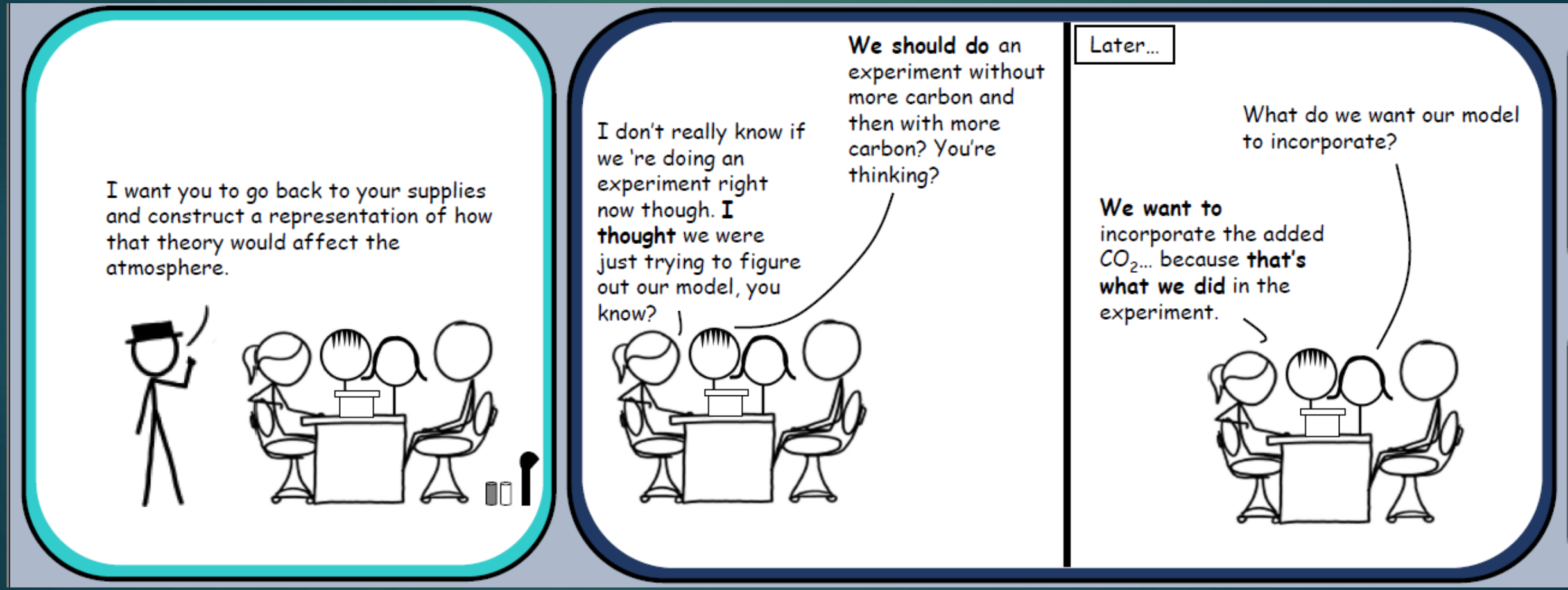
# Claim: students don't feel the need to reach *explicit* consensus





# Example of both claims





# Why This Matters



Next Year's Students

Consensus Building

Improve IMPRESS