

# UCAR Education Group

(Office of Education and Outreach)

Partnering with NCAR and the  
University Community

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# Mission

- **Educate about our science**, and how it works, so that people can include science in making choices
- **Engage all communities** in setting a research agenda that serves their priorities and advances our sciences

# Our central (and shared) challenge

How do we leverage being a national lab and university consortium so that more people and communities experience science?

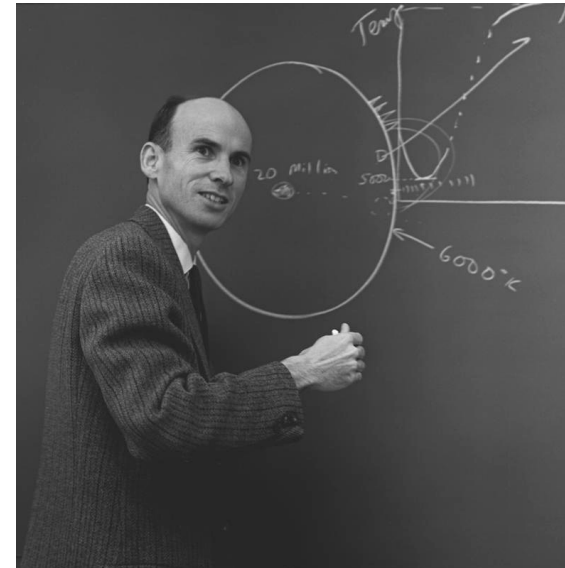
# Strategic Plan on a T-shirt

Build it • Test it • Give it away

For *all* kinds of kids,  
the people who teach them,  
and proto-scientists

# UCAR Education Group's Strategic Plan

- Understand how people learn atmospheric, solar, and computational sciences
  - A **Community Learning Lab** that leverages our local programs



# UCAR Education Group's Strategic Plan

- Use new understanding to **build & test** state-of-the-art educational **experiences**
  - Experiences → Learning science by doing science





# UCAR Education Group's Strategic Plan

- **Give it away** to partners that reach a diverse or sometimes skeptical audience
  - From regional and local outreach to a national audience
  - Includes web technologies



# UCAR Education Group's Strategic Plan

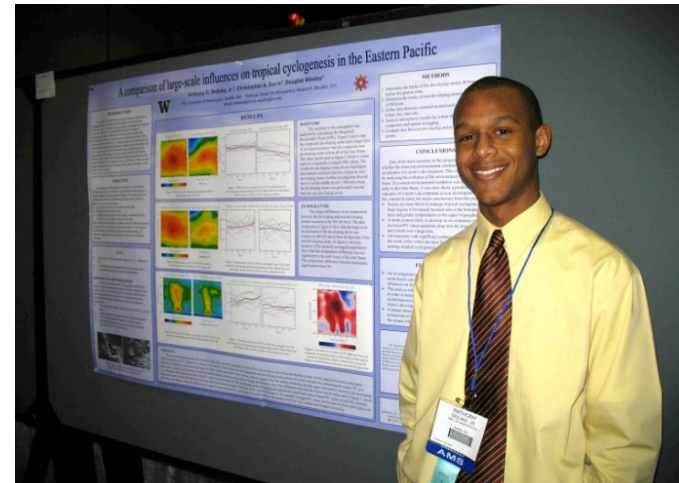
- **Include** all communities in the conduct of our science, from design to dissemination





# Example 0: SOARS

Its been built, evaluated, and now we are working with CMMAP to “give it away”



# Example 1: HIRO

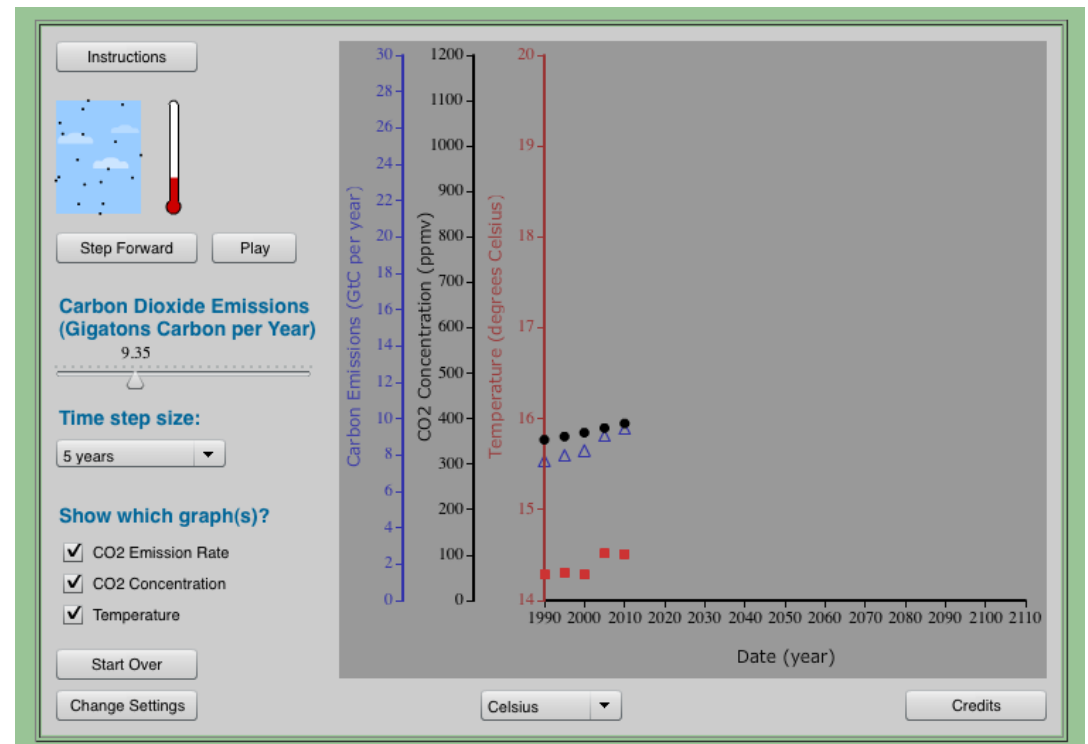


- Built after conversations with with leaders of the local Latino Community
- Based on the SOARS model
- An opportunity to study impact of internships on students' understanding of science processes and career aspirations

For more info, see Rebecca Haacker-Santos

# Example 2: Very Simple Climate Model

- Most people don't know what a "model" is or how it is used
- The CMMP version lets teachers calibrate against past climate before doing future scenarios
- Used and tested in CMMAP summer workshop

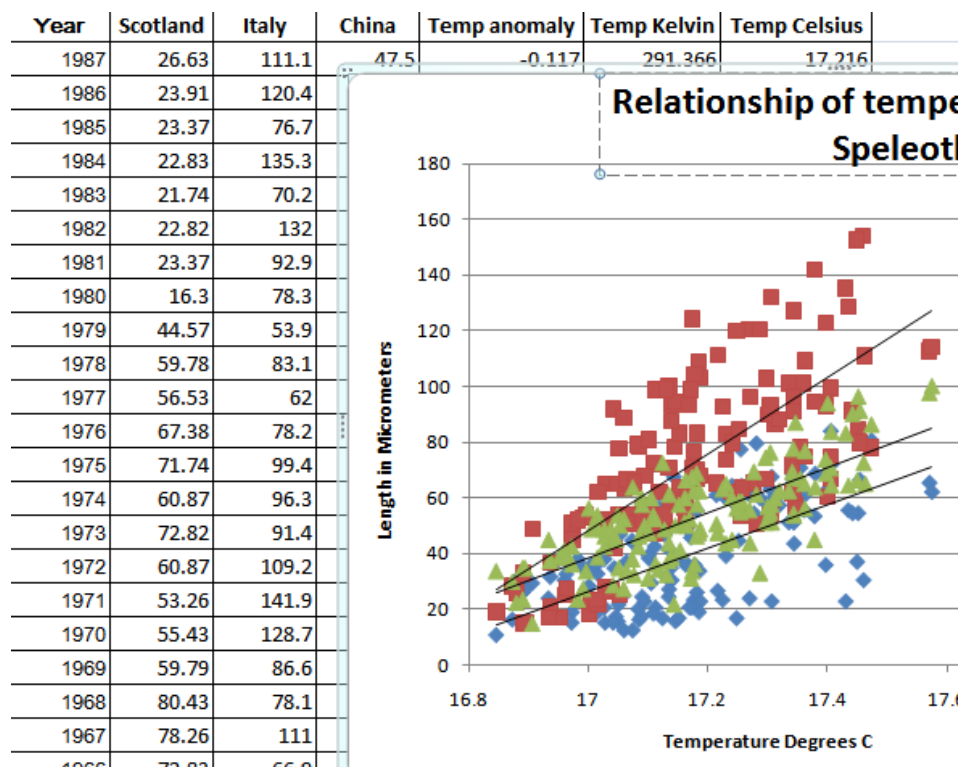


For more info, see Randy Russell



# Example 3: RETI

- Teachers spent a month at NCAR developing resources with NCAR scientists and each other
- Opportunity to do research about development of science teachers and teacher communities (led by U. of Northern Colorado)
- IP agreements with teachers to allow broad dissemination



For more info, see Becca Hatheway





Thank You

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# Proposed Short-term Priorities

- Website (as as stepping stone)
  - Organizationally agnostic, externally focused, shopper-friendly
- Make inclusivity a core-value
  - Ensuring we reach all audiences
- **Define an atmospheric science education research agenda**
- Augment “build it”
- Develop a strategy for decision making with respect to opportunities
  - How does it align to the strategic plan?
  - Does it set the stage for future activities, by us or others?
  - Does it leverage local engagement for National Impact

# Proposed Long-term Priorities

Driven by the themes of inclusion and education

- Partnering relationships to place our “experiences” in the path of national audiences
- A UCAR-level vision for education
- Place broader impacts at the front end of science
  - How can we invite diverse communities and educators to participate in the design of research?

# Effective and Recommended Strategies

## Informal

Engage

Relate

Extend

Partner

Hands-on

## Formal

Alternate Conceptions

Concepts and Facts

Reflection

Standards