

# USING AN INTERDISCIPLINARY APPROACH TO ENHANCE CLIMATE LITERACY AMONG K-12 TEACHERS

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## STEM Education at Westfield State

In the academic year 2014-2015, there are 359 STEM majors including biology (n=189), chemistry (n=30), mathematics (n=114), and general science (n=15), with 17%, 13%, 55%, and 93% of STEM majors in the licensure track, respectively. The Division of Graduate and Continuing Education offers bachelor degrees, post-baccalaureate certification (licensure), and master's degrees in education (M.Ed.) in several areas, including biology, chemistry, and general science. There are 53 active STEM licensure students in DGCE, with 53% in a M.Ed. program, 26% in a post-baccalaureate program, and 21% in an undergraduate licensure program.

Licensure courses focus on understanding school culture and lesson plan development and implementation. STEM majors take a Methods course that connects the science and pedagogy using the Next Generation Science Standards (NGSS).

## Climate Literacy

A climate literate person:

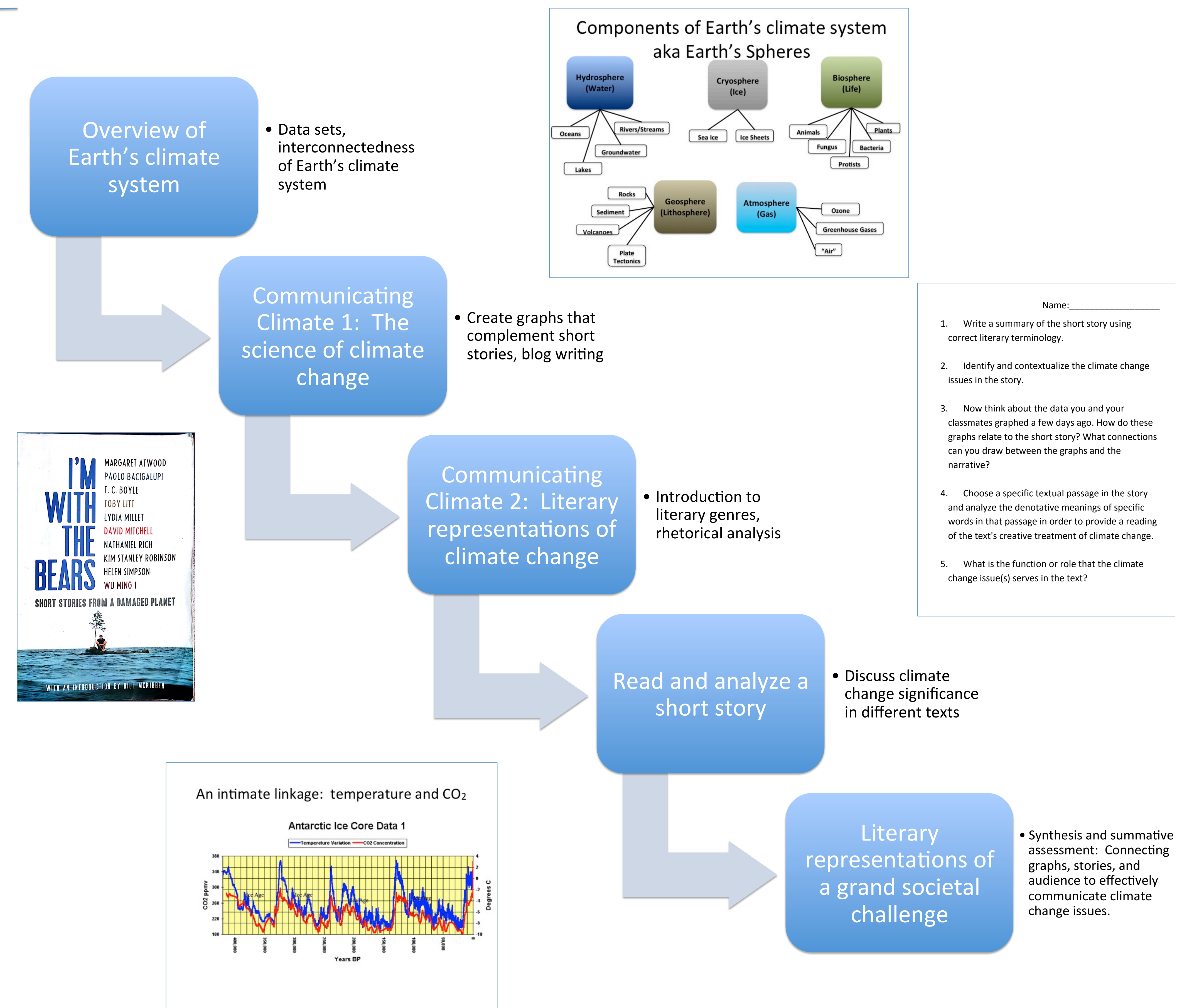
- Understands principles of Earth's climate system,
- Knows how to assess scientifically credible information about climate,
- Communicates about climate and climate change in a meaningful way,
- Is able to make informed and responsible decisions with regard to actions that may affect climate.

NOAA 2009

## Cli-Fi Module Development

The InTeGrate program (SERC, Carleton College, MN) provides resources, funding, and templates for the module. Our interdisciplinary author team has been involved in module development since 2013. The module was piloted in undergraduate and graduate level science and humanities courses.

## Cli-Fi Module Organization



## Next steps

We finished piloting the module and we are analyzing student data. We will continue to revise and use the module in science and humanities courses. In addition, the module organization is being used to develop a series of lessons with an ocean science theme for Grades 5-8. The format facilitates the connection of the NGSS and the Common Core.

