

# Climate In My Backyard (CLiMB) modules for teachers

## Connecting K-12 teachers with climate science-related research in Montana and the Rocky Mountain West

Montana NSF EPSCoR has developed a K-12 outreach program called CLiMB (CLimate In My Backyard), which engages and inspires students by connecting them with climate science research conducted in Montana. Via CLiMB's dynamic educational modules, university researchers and students lead classrooms through inquiry-based science coupled with personal interactions. CLiMB modules use a broad combination of interactive videoconferences, face-to-face interaction, social networking, and educational tool kits in order to connect students to research that is relevant to their lives and their regions.

By giving classrooms the actual tools used by researchers, students can mimic their work by collecting and sharing data; developing models and making predictions; and communicating and collaborating with other classrooms. CLiMB also stresses the personal connections between researchers and young people, using social media technologies like Facebook or Google+ to help classrooms follow research expeditions or fieldwork assignments in real-time and to interact directly with the scientists.

CLiMB offers long-term, sustained and documentable contact with youth and has demonstrated success in reaching traditionally underserved populations such as very rural schools, Native Americans, and children with disabilities. The project also has the capacity to inspire girls and minorities to consider STEM fields and careers by featuring women and minority students and researchers who are directly involved in the research projects.

Lastly, CLiMB offers both sustainability and flexibility, because all module materials are offered both in real-time and as an online archive. Teachers are encouraged to modify CLiMB materials for the needs of their classrooms, and to share their ideas with other participating teachers.

CLiMB modules feature online and physical components such as:



Physical gear. Teachers receive a classroom kit including one or more of the tools used by researchers in their work



Lesson plans and classroom activities (connect students directly to the research. All are free for download.



Short videos featuring researchers and students in the field help classrooms make a personal connection



Interactive videoconferences with researchers allow students and teachers to ask questions about the project and share the results of their own data-gathering. This interaction can be conducted from remote field locations via a BGAN inmarsat satellite system or from an MSU campus



Social media presence (Facebook, Twitter, Google+ etc.) enables the general public to follow along, as well



A password-protected interactive site allows teachers to exchange ideas about the project