

GC³: Global Climate Change in the K-12 Classroom

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Science & Mathematics Teaching Center (SMTC)

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Urgent Needs for Wyoming Teachers

- Refresh scientific background knowledge
- Update results from cutting edge science
- Training in contemporary science education
- Connect scientific research to Wyoming-specific issues
- Nurture relationships among Wyoming teachers and active research scientists
 - Build awareness of STEM careers
 - Create pathways into STEM for talented students
 - Engage Wyoming teachers and students in the scientific enterprise

GOALS of GC3

Global Climate Change in the K-12 Classroom

1. provide K-12 teachers with on-campus summer face-to-face seminars that integrate science and teaching
2. provide integrated year-long virtual Internet courses
3. establish internships for some K-12 teachers to work side-by-side with scientists on data gathering field campaigns and/or data analysis
4. develop and nurture an ongoing virtual learning community for K-12 teachers engaged in teaching global climate change
 - Share innovative curriculum materials
 - Obtain effective teaching strategies
 - Have a rapid-response e-mail system to access climate experts
5. build capacity to extend teacher education by including senior-level science and mathematics education Ph.D. students in all aspects of the project so that they are fully prepared to provide ongoing professional development to an even larger cadre of K-12 teachers nationally

Timeline for GC3

Global Climate Change in the K-12 Classroom

PHASES

1. Aggressively recruit teachers and design workshop (virtual and face-to-face) sequences
2. Focus on Earth and Atmospheric Science
3. Focus on Ecology and Environmental Science
4. Focus on Mathematics and Modeling
5. Evaluate efforts by visiting classrooms

Budget Issues for GC3

Global Climate Change in the K-12 Classroom

- Some partial summer salaries for SMTC faculty and supporting scientists
- Graduate Research Assistantships for Ph.D. students
- Teacher-participant stipends
- IT and external evaluation contracted services
- Only limited equipment, consumable, or travel resources needed