

The IPY GLOBE Seasons and Biomes Project
(formerly known as Monitoring Seasons through Global Learning Communities)

Primary and secondary school students across Alaska will have an opportunity to broaden their knowledge of scientific methods and of seasonal changes around the world through the Seasons and Biomes Project, a far-reaching program partially sponsored by Alaska EPSCoR. The project engages K-12 students in scientific investigations of the seasons with the participation of educators and scientists from major Earth science organizations, including the International Arctic Research Center (IARC) and NASA. The program is run under the auspices of the worldwide GLOBE (Global Learning and Observations to Benefit the Environment) program and is a collaborative effort with the International Polar Year (IPY.)



The study of seasonal change will give Alaskan students – who will participate along with students worldwide – a better understanding of the environment and of the changes, both seasonal and long-term, that take place

within it. The seasons connect all five spheres of the Earth system - atmosphere, biosphere, cryosphere, hydrosphere and lithosphere – and the interactions between these five spheres affect the timing and duration of seasonal events. By monitoring the seasons, students will increase their understanding of how interactions within the Earth system affect their local seasons and how variations in seasons in turn affect their communities, as well as regional and global environments.

Alaska EPSCoR will contribute expertise and funding to the project, which will encompass teacher training, learning module design, and the facilitation of partnerships between educators and researchers. Using NASA satellite data as a guide, students will learn what biomes are, how they are classified, and how to identify their region's biome. Teachers will then engineer "field campaigns," during which students will take daily measurements of weather data like cloud cover, air and soil temperature, precipitation and ice extent. Students and teachers will eventually participate in earth science symposia, where the information will be shared with scientists. Coming full circle, the field measurements can then be used to help validate satellite data. All the while, students gain valuable knowledge of the process of science and inquiry through investigations, collecting and interpreting data, sharing their results, and asking questions that could lead to future investigation.



The Seasons and Biomes program is organized on a global basis by GLOBE, a worldwide primary and secondary school science and education program. GLOBE promotes and supports student inquiry as well as collaboration among students, teachers and scientists on environmental and Earth system science investigations.



The program is also operating in conjunction with the International Polar Year. The Polar Year, which runs from 2007-2009, is a coordinated, international effort to improve our knowledge and understanding of polar processes and the role of the Polar Regions in the global environmental system. IPY combines scientific research as well as educational efforts such as the Seasons and Biomes program. The Seasons and Biomes project kicked off the 4th International Polar Year with an international professional development for

educators, including Alaska teachers, in March 2007 focusing on tundra and boreal forest biomes.

For more information about the IPY GLOBE Seasons and Biomes program, visit www.globe.gov/fsl/html/templ.cgi?seasons&lang=en or contact Dr. Elena Sparrow at ffebs@uaf.edu or Martha Robus Kopplin at fnmrk@uaf.edu. For more information about International Polar Year, visit <http://www.ipy.org>.