



Keystone
Science
School



The Keystone Center for Public Policy and the Keystone Science School are bringing two of their signature education programs together under the same roof in Kalamazoo, Michigan!

Keystone and Western Michigan University's Michigan Geological Repository for Research and Education (MGRRE) are pleased to announce the

- **2009 Youth Policy Summit on Greenhouse Gas Reductions in Michigan**

The week long Summit, open to highly motivated 11th and 12th grade students from across the state, will be held at the John E. Fetzer Center on the WMU campus in Kalamazoo, Michigan from July 11 to the 16th, 2009. For more information please see the Application or contact Annemarie Fussell at Keystone (afussell@keystone.org; 970-455-4231) or Susan Grammer at WMU (susan.grammer@wmich.edu; 269-387-8642).

- **Keystone's Climate Status Investigations Teacher Training Program**

The teacher workshop will be held during the same week as the Summit on the WMU campus and will be open to teachers involved in the Summit as well as other teachers from around the region. For more information see the CSI website at http://www.keystone.org/pel/csi_2007.html or contact Wendi Liles at Keystone (wliiles@keystone.org) or Susan Grammer at WMU (susan.grammer@wmich.edu).

"Keystone was an amazing opportunity! Not only did I get interested in energy efficiency as a result of the Keystone conference, but I also realized how much of an impact energy efficiency has on my everyday life. Because of the Youth Policy Summit, I know that I want to be involved in a career that deals with energy efficiency.

When we finished our policy recommendations, there was an awesome sense of accomplishment that everyone in the group noticed, even the adults. I am extremely proud of the recommendations we created and look forward to seeing what happens to our policy in the future."

Caroline Morel, Battle Creek Area Mathematics & Science Center
-student participant from 2007 Energy Efficiency Summit



Keystone Science School 2009 Youth Policy Summit on Greenhouse Gas Reductions in Michigan And CSI: Climate Status Investigations Teacher Training Program

Overview

Since 2004, Keystone Science School (KSS) and The Keystone Center for Science and Public Policy (SPP) have conducted seven successful Youth Policy Summits (YPS). These Summits addressed the topics of *Sustainable Energy in Transportation, Energy Efficiency, Sustainable Fuels, Childhood and Adolescent Nutrition, and Obesity in America* and involved approximately 250 students from high schools throughout the nation. Gaining momentum from 2008, Keystone Science School will again host National Summits in Keystone and, in addition, will bring the YPS program on the road to regions across the nation in 2009.

In partnership with Western Michigan University's Michigan Geological Repository for Research and Education (WMU/MGRRE), Keystone Science School will conduct a Youth Policy Summit in 2009 focused on Greenhouse Gas Reductions in Michigan. Keystone will work with WMU/MGRRE to select 40 students from 10 different schools around the state to participate in this program. Participating students will come together in a college campus atmosphere where they will be asked to negotiate consensus-based recommendations for the Governor, the state legislature, and Michigan's business and NGO sectors.

While the Summit is in progress, teachers who accompany the students as well as other teachers from the region will be able to attend Keystone's *CSI: Climate Status Investigations* teacher training program, which provides educators with the training and tools to introduce the topic of global climate change to students with a non-biased, inquiry-based, interdisciplinary curriculum. In 2008, The Keystone Center conducted CSI teacher training workshops in different regions of the country, including Georgia, Illinois, Ohio, New Mexico and Colorado.

The Keystone Center and Keystone Science School

Keystone Science School (KSS) is a field science school located in Summit County, Colorado, about 75 miles west of Denver. As a division of The Keystone Center, the development of KSS grew out of the belief that decision-makers need to truly understand the natural and environmental sciences. KSS was founded on the premise that by providing hands-on science education to students of all ages, future leaders will have awareness and better understanding of the natural world and thus be better prepared to address complex issues. Working with the expert facilitation team from The Keystone Center for Science and Public Policy (SPP), KSS can provide unsurpassed guidance through the consensus building process, engage students in issues affecting their lives and develop critical thinking skills essential to their future. The Center for Science and Public Policy was founded to ensure that present and future generations approach environmental and scientific dilemmas and disagreements creatively and proactively.

Western Michigan University's Michigan Geological Repository for Research and Education and Core Kids K-12 Outreach Program

Keystone's partner for the 2009 Michigan Youth Policy Summit on Greenhouse Gas Reductions is the Michigan Geological Repository for Research and Education (MGRRE), part of the Geosciences Department at Western Michigan University. The mission of MGRRE's K-12 Outreach Program, Core Kids (www.wmich.edu/corekids), is to increase awareness and understanding of the earth, its processes and its natural resources, a mission consistent with Keystone's 2009 Michigan Youth Policy Summit.

KSS Youth Policy Summits

The development of the YPS program was possible through a partnership between Keystone Science School and the National Consortium for Specialized Secondary Schools of Math Science and Technology or

NCSSSMST. Initial pilot programs included only member high schools from NCSSSMST. Students for the Michigan regional summit will come from Consortium member schools as well as non-member schools from across the state of Michigan in order to reach an even broader array of talented youth in our nation.

Keystone's Youth Policy Summits provide opportunities for students to experience a process designed to build the skills they will need to successfully navigate the turbid world of public policy issues. The result of these Summits is not only a thoughtful set of policy recommendations but a prolonged impact on students' lives. For example, students from the *Energy Fuels* Youth Policy Summits of 2007 and 2008 had the opportunity to present their findings to The Keystone Center's National Energy Board at an annual meeting in Washington D.C. and in February 2009, KSS and SPP will bring selected students from these Summits to the first annual meeting of the Junior Energy Board (JEB) in Keystone. The JEB meeting will be held in conjunction with the National Energy Board meeting, in order to provide interaction between both Boards on pressing topics surrounding energy in America.

During the Summits, Keystone Science School, along with the staff of The Keystone Center for Science and Public Policy, provide students with training on technical issues, negotiations, and problem solving focused on current public policy issues. In addition, a diverse expert panel representing stakeholders convenes during each Summit, giving students the opportunity to interact with the stakeholder groups they are representing. In the role of stakeholders on the issue, students participate in simulated negotiations between representatives and then create innovative policies that are compiled into a set of recommendations and shared with members of Congress, state departments of education, government agencies and thought leaders in the industrial and non-profit sectors. The recommendations from the 2007 Youth Policy Summits can be reviewed by visiting the Youth Policy Summit section of Keystone Science School's website at www.keystonescienceschool.org.

CSI: Climate Status Investigations Teacher Training Program

The CSI curriculum was developed by The Keystone Center, in partnership with the Department of Energy (DOE), and The National Energy Technology Laboratory (NETL). The resulting interdisciplinary curriculum modules for middle and high school level students are presented to teachers at the Keystone Science School's national teacher training institute where educators learn the content, skills and confidence to introduce the topic of global climate change in their classrooms using The Keystone Center's non-biased framework. In 2008 Keystone expanded the program to different regions of the country in order to reach a broader array of students. More information on the training and the curriculum can be found at: http://www.keystone.org/pel/csi_2007.html and www.keystonecurriculum.org.

- **Non-biased Approach:** Teachers are introduced to a new way of thinking about their approach to contentious issues. They learn strategies to identify and remove their own bias in order to facilitate student inquiry.
- **Program Staff:** The Keystone Center staff members are former classroom teachers who have been trained in the non-biased pedagogy. The staff is supported by facilitators, past participants, who actively use the framework to investigate global climate change with their students.
- **Resources:** All participants receive a curriculum notebook, lab materials, CD, and an online support mechanism.
- **Evaluation:** Each of the CSI: Climate Status Investigations participants will implement the curriculum in their classrooms and provide feedback through a detailed evaluation. Based upon these suggestions, The Keystone Center staff will continue to enhance the curriculum.
- **Course Credit:** Educators who successfully complete the CSI: Climate Status Investigations training have the option of receiving graduate level credits from Colorado School of Mines at minimal cost.
- **Networking:** Teachers from across the country have the opportunity to share best practices and form lasting professional connections.

2009 Michigan Youth Policy Summit on Greenhouse Gas Reductions

Student Preparation

The 2009 Youth Policy Summit will require students to conduct research during the spring semester of 2009 and to complete two papers, one on a research question and another on a stakeholder chosen by Keystone Science School. Students will be required to participate in online forums and discussions with other students and experts on the topic. Each group of students will report on their findings online prior to the Summit as well as during the Summit. It is expected that teachers from the participating schools will manage students in order to ensure that projects are received in a timely manner.

The entire group of 40 students will then meet on the Western Michigan University campus during the summer of 2009, work with the KSS and SPP staff on consensus building skills, and then take the knowledge gained through these programs and their stakeholder analyses and develop a set of guidelines and recommendations. Working closely with Keystone Science School staff, a group of select students will complete any final modifications needed for the report during the month following each Summit.

Program Logistics

1. *Dates/Location/Topic*

July 11-16, 2009 at Western Michigan University in Kalamazoo, Michigan.

Topic: *Greenhouse Gas Reductions in Michigan*

2. *Program Costs*

3. The cost for each student participant is \$200 and teacher participants are \$100 each. This fee covers lodging, meals, conference services, transportation during the program, all program materials and website development. Additional costs are covered by sponsoring corporations and foundations. Limited scholarships are available based on financial need. Please inquire as soon as possible with Susan Grammer (susan.grammer@wmich.edu)

4. *Expectations for Teacher or Administrator Participation*

- A supervising teacher or administrator from each school is expected to manage and provide support to the students prior to the Summit while they conduct research on the chosen topic. Supervision must also be provided throughout all travel to the Summit and during the Summit. Within one month of being accepted into the program a list of participating students from each school must be submitted to Susan Grammer. Students chosen must be rising Juniors or Seniors. Exceptions may be made for a student who a teacher feels is particularly mature or invested in the topic of the Summit. Please contact Susan Grammer at susan.grammer@wmich.edu if you would like to request an exception.
- You will be asked to participate in many activities with the students. We request that all teachers model participatory behavior by attending all sessions within your ability. Free time will be made available for all chaperoning teachers during the Summit. During the Summit you will be asked to prepare a press release for your local newspapers and media outlets.
- Teachers will also have the opportunity to participate in Keystone's CSI: Climate Status Investigations teacher training workshop. More information about this opportunity is available to applicants as well as to other teachers in the region by contacting Wendi Liles at wiles@keystone.org. Please indicate your interest on the application.

5. *Expectations for Student Participation*

Students should show a willingness to participate in all aspects of the Summit in a timely manner including: research and stakeholder projects, website forums and discussion groups. In addition, the students will be asked to participate in all activities and mediation sessions within their abilities while at WMU.

Keystone Science School staff will work closely with students to provide resources and support for all projects leading up to the Summit. Students can contact Keystone Science School at any time for assistance or clarification when working on projects. Students are asked to bring energy and a positive attitude to the Summit. The Youth Policy Summit provides a unique opportunity to explore college campus living, meet students from around the state, learn useful mediation and consensus building techniques, interact with a panel of professional experts and generally have a great time in a college campus atmosphere!

Application Guidelines: Due by November 1st, 2008.

If your school is interested in applying to participate in the 2009 Keystone/WMU Youth Policy Summit on Greenhouse Gas Reduction, please review the following material closely.

1. *Application deadline*

Included with this information packet is an application form that must be completed if your school desires to participate in a 2009 Youth Policy Summit. Please review the attached form, complete it and send it by either email or fax to Susan Grammer, Outreach Coordinator, WMU/MGRRE, 1903 W. Michigan Ave., Kalamazoo, MI 49008-5241, susan.grammer@wmich.edu. Contact Susan Grammer at WMU, 269-387-8679, fax no. 269-387-8669 or Annemarie Fussell at Keystone, 970-468-2098 with any questions. **Applications will be accepted until the Summit is full.**

2. *Space and availability*

You will be notified within 1 week if your school was selected to participate. If the number of schools desiring to attend exceeds the number of spaces available, KSS/WMU will select schools based upon selection criteria listed below. When the final schools are selected and confirmed, teachers will be encouraged to select a diverse group of students to participate. **Students should be identified for the Summit as soon as possible since Keystone staff will begin communicating with students about their research projects in early spring.** This will allow ample time for the students to complete projects.

3. *Selection Criteria*

- ✓ Michigan schools will be given priority over neighboring states if space is limited.
- ✓ Schools will be chosen to represent all geographic regions within Michigan.
- ✓ Schools with advanced and accelerated academic programs or honors and advanced placement classes will also be given priority.
- ✓ Schools from underserved communities are encouraged to apply.

4. *Program Details*

A conference call will be scheduled with all teachers from participating schools to provide necessary details about the curriculum, website and student assignments.

5. *Required forms*

Once a list of participating students and teachers is provided to KSS staff, all necessary forms will be sent to you. We anticipate this will occur by **March 1, 2009**. You will need to copy these and distribute to your students. This packet will include:

- ✓ Information about Keystone Science School and WMU/MGRRE
- ✓ Medical forms and liability waivers required for participation.
- ✓ Detailed schedule of events for the week
- ✓ Maps and logistics for traveling to the WMU campus
- ✓ Lodging and meal information during the Summit
- ✓ Contact information for staff working on the program

We look forward to hearing from you.

Sincerely,



Annemarie Fussell
Program Manager, School Groups and Youth
Policy Summit
Keystone Science School
970-455-4231 (office), afussell@keystone.org



Susan Grammer
K-12 Outreach Coordinator
WMU Department of Geosciences
Michigan Geological Repository for Research and Education
269-387-8642 (office), susan.grammer@wmich.edu



Application Form
The 2009 Keystone Science School Michigan Policy Summit



Please complete this form and return it to Keystone Science School/WMU-MGRRE as soon as possible in one of the following ways:

- Email to susan.grammer@wmich.edu
- Fax to 269-387-8669
- Mail to Susan Grammer, Outreach Coordinator, WMU-MGRRE, 1903 W. Michigan Ave., Kalamazoo, MI 49008-5241.

School Name: _____

School Address

Street: _____

City: _____ State: _____ Zip: _____

Phone: _____

School Contact Person

Name: _____

Title: _____

Email: _____

Phone: _____

Sponsoring Teacher *Please indicate the sponsoring teacher/ administrator attending the 2008 Youth Policy Summit and working with students, if other than you.*

Name: _____

Title: _____

Email: _____

Phone: _____

1. **On an additional page**, please describe why you, or your students, are interested in the 2009 Youth Policy Summit on Greenhouse Gas Reductions in Michigan.
2. Please indicate your interest in the CSI: Climate Status Investigations teacher training program.
 - a. no interest
 - b. I would like to participate
 - c. I know other teachers who would like to participate

Thank you for your interest. We will contact you by November 15th to confirm your participation in the program. NOTE: Please understand that if your school is selected, the program will cost \$200 per student and \$100 per teacher. KSS will bill you or your school after confirmation. This fee will cover group transportation in Kalamazoo, lodging, meals, instruction, website development and program materials. A supervising adult from each school is also expected to manage the students prior to the Summit, and supervise them during travel to and from the Summit.

Submitted by _____ Signature _____
Print School Administrator Name Administrator

Date _____