

Volume 5, No. 7

November 28, 2007 - Building a Presence for Science: Ohio eBlast

Contents:

- 1. From the Ohio Resource Center: a Trio of Opportunities**
- 2. PK-16: Now is a great time to help SECO move science education forward in Ohio**
- 3. PK-16: the SECO conference Early Bird deadline approaches: December 6 is next week**
- 4. PK-12: The 2008 Wildlife Diversity Conference: Back in Black**
- 5. K-16: Ohio Amphibian research and Conservation Conference:
Frogs & Toads -- Salamanders & Newts**
- 6. PK-12: Hello from Earth Expeditions! Get geared up for the 2008 opportunity!**
- 7. K-12: ARMADA Project- Research and Mentoring Experiences for Teachers**
- 8. K-12: Change your hat: Become a summer science researcher through an NSF grant**
- 9. K-12: Here is a way to look at the antipodal phenomena**
- 10. K-12: Coming to a computer near you! EXPLO.TV from the Exploratorium**
- 11. K-12: Research Connections from Kathie Nunley (author of the Layered Curriculum)**
- 12. Gr K-8: Register Today for Upcoming NASA/NSTA and IPY/NSTA Web Seminars**
- 13. Gr 4-8: Fresh Catch: New Fisheries Content Enhances Online Curriculum**
- 14. Gr 4-12: Help for Science Fair projects: Science Buddies**
- 15. Gr 6-12: 21st Century Explorer Podcast Competition**
- 16. Gr 9-16: Aeronautics Competitions for High School and College Students**

List: Upcoming Events and Opportunities

- 1. From the Ohio Resource Center: a Trio of Opportunities**
- 1a. Register for the December 12 Webcast "Using OGT Items In Learning Cycle Lessons"**
<http://ohiorc.org/for/science/ogt/default.aspx>

ORC cordially invites you to join us for a thought provoking and engaging conversation about using released OGT test items in learning cycle lessons, the link between the learning cycle and inquiry, and the importance of assessment throughout the learning cycle. Webcast participants will have an opportunity to "chat with the experts" by submitting questions during the webcast.

Date: Tuesday, December 12, 2007

Time: 3:30-4:00 PM, EST

Cost: There is no cost for participating in this webcast. Please RSVP by submitting your email address above. This allows us to send you advance information you will need to participate.

Audience: Middle and high school science teachers, curriculum directors, and other leaders in science education.

Why participate? Panelists for this webcast will discuss strategies for using released OGT items in learning cycle lessons.

Benefits of participating include:

- * Learning about using released OGT items in learning cycle lessons
- * Recognizing how the learning cycle supports inquiry instruction
- * Learning why assessment is an important and ongoing part of the learning cycle

* Receiving supplemental materials, including a related article, mini-collections of ORC resources, and video tutorials

Panelists:

* Danielle Dani, Assistant Professor, Ohio University

* Cathy Holmes, Science Consultant, Ohio Department of Education

1b. Previous Webcasts and Companion Materials Now Archived:

The first 2 webcasts in the “Science Instructional Strategies: A Look at the OGT” and all companion materials are now available at ORC. Check them out at

“What Do Wrong Answers tell Us?”

<http://ohiorc.org/for/science/ogt/archive.aspx?id=1> and

“So Your Students Are Not Where They Are Supposed to Be. . .”

<http://ohiorc.org/for/science/ogt/archive.aspx?id=2>

1c. New Mini-Collection Added to ORC’s OAT Feature

ORC continues to expand the Ohio Achievement Tests feature with the addition of another new mini-collection. Grade 8: Science and Technology: Benchmark B, http://ohiorc.org/bookmark/view_a_folder.aspx?folderID=12226, includes resources for designing a solution or product. Check out all of the OAT mini-collections for grade bands 3-5 and 6-8 at <http://ohiorc.org/for/science/oat.aspx>.

2. PK-16: Now is a great time to help SECO move science education forward in Ohio

<http://www.secoonline.org>

The goals (listed below) summarize the five strategic success categories formed at the biannual retreat at Mohican State Park Lodge in April and adopted by the SECO Board of Directors at the September 15, 2007 Board Meeting. The goals will provide a framework for the work and mission of SECO for the next five years.

Internal operations:

Strategic Goal 1: To review and revise the various operational policies and procedures SECO in order to provide an effective organizational structure to accomplish the mission of SECO.

Voice of Science:

Strategic Goal 2: To promote SECO as a voice for science educators and advocate the importance of science to those inside and outside the scientific community

Membership Services:

Strategic Goal 3: To provide meaningful and useful services to our members and promote a sense of connection to the organization

Communications and Public Relations:

Strategic Goal 4: To disseminate timely information to our members and the science education community

Professional Development:

Strategic Goal 5: To engage teachers through a variety of professional development opportunities to develop and enhance their individual and collective scientific expertise.

If these sound interesting to you, and you would like to be more involved with SECO, please contact current SECO President Cindy Roepcke at Cindy_Roepcke@fc.pickerington.k12.oh.us or the current President-elect Mike Hickey at mshickey@ameritech.net

3. PK-16: the SECO conference Early Bird deadline approaches: December 6 is next week
<http://www.secoonline.org/>

Quality professional development is a key component to make sure that you maintain your status as a “highly qualified” teacher of science under the requirements of No Child Left Behind legislation. SECO has designed the 2008 Science Professional Development Conference to be an essential part of your science professional plan.

For the past 31 years, SECO has offered a quality, cost effective professional development opportunity for science educators in all disciplines and grade levels. This year is no exception!

We are presenting more than 100 session plus 8 short courses. The Ohio Department of Education will present “The Fundamentals of Science Education.” This seminar will enable you to prepare your students for success on the Grade 5 and 8 OAT and the Grade 10 OGT. Concurrent sessions will help you fill any content knowledge gaps you may have, pick up the latest scientific developments, and find new ways to teach your students concepts that may be hard to teach or difficult for students to learn. The Exhibit Hall features the latest curriculum materials, resources, and professional organizations.

This is a unique opportunity to collaborate with your peers and Ohio Science Education Leaders. The Early Bird Deadline is December 6, so don’t delay any longer!

4. PK-12: The 2008 Wildlife Diversity Conference: Back in Black

Date: March 12, 2008

Location: Aladdin Shrine Complex, Columbus, Ohio

Colors can influence our emotions, our actions and how we respond to various people, things and ideas. Of all the colors on the spectrum, black is thought to be the most misunderstood—in fact some philosophies contend that black is not even a color, rather the absence of color.

Regardless, this year’s Wildlife Diversity Conference hopes to expose the negative, controversial and the under appreciated of many things black—or shades of thereof. Beginning with “black ideas” our keynote speaker, Dr. Brian Armitage of the Ohio Biological Survey, will discuss “Black Swan Logic.” Switching to “black things,” other topics of the day will include the why’s and how’s of controlling double-crested cormorants in the Lake Erie Islands. Throughout the program, discover more about Ohio’s bruin—the black bear—as well as the rare Blanding’s turtle. Explore the predatory world of the black vulture and the mystery of some black

dragonflies. Fading to lighter shades, enjoy an update on the Lake Erie water snake and the unbelievable invader-the Asian carp.

Please join us as we attempt to lighten up the dark and dreary, the controversial and the mysterious! The conference will also provide opportunities to ask questions, share ideas and network with others interested in natural resource conservation and management.

Direct mailings to past participants will be mailed after January 10, 2008

For information after January 10, please call 1.800.WILDLIFE, or watch for information on <http://www.ohiodnr.com/wildlife>

**5. K-16: Ohio Amphibian Research and Conservation Conference:
Frogs & Toads -- Salamanders & Newts**

<http://www.ohioamphibians.com/meeting/>

Sponsored by the Ohio Division of Wildlife & the Ohio Biological Survey and the former Ohio Working Group of the Declining Amphibian Populations Taskforce (DAPTF), this 4th meeting will take place on March 15, 2008 at the Ohio Historical Society in Columbus.

Invited speakers from the Midwest will present findings of recent research and conservation projects involving Ohio's frogs, toads, and salamanders. In addition, the keynote speaker, Dr. Jim Bogart, Professor Emeritus at the University of Guelph, Ontario, Canada, will present "Unisexual Ambystomid Salamanders in Ohio."

If you are interested in learning more about Ohio's amphibians and networking with other herpetologists and naturalists, then be sure to reserve this date and register for this meeting. A limited number of spaces are available for those wishing to present posters relevant to the conference topic.

The Conference will start with setup and registration from 8:30-9:00 AM. Paper presentations will commence at 9:00 AM. The auditorium and a display area will be available for oral and poster presentations, respectively. A box lunch will be provided as part of the regular registration fee of \$20 (\$10 for students). On-site registration fees are the same, but with no lunch. The conference concludes at 5 PM. For more information visit the URL above or call 614-457-8787 or email Ohiobiosurvey@rroho.com

6. PK-12: Hello from Earth Expeditions! Get geared up for the 2008 opportunity!

<http://www.EarthExpeditions.org>.

Earth Expeditions is accepting applications now for its 2008 tuition-free graduate field courses offered by Miami University's Project Dragonfly and the Cincinnati Zoo & Botanical Garden.

Their Field Expeditions take educators to signature conservation sites in Mongolia, Thailand, Trinidad, Costa Rica, Belize, and Namibia. The new location for 2008 is Kenya, the original safari destination and one of the most spectacular landscapes on the planet--home of elephants,

lions, giraffe, and other wildlife. In past years, Earth Expeditions students have explored Buddhism and conservation in Thailand, joined cheetah conservation efforts in Namibia, monitored blue-and-gold macaws in Trinidad, and radio-tracked Pallas cats in Mongolia. Students exchange teaching experiences with peers in other countries, and make connections with local people, while collaborating on educational approaches that make a difference.

Miami waives all tuition for these extraordinary experiences, which are open to educators from all disciplines and settings, from pre-K-12 teachers, school administrators, and university faculty, to educators and naturalists from non-school settings, such as zoos, environmental centers, businesses, youth programs, parks, and museums.

The application due date is January 28, 2008.

“[This Earth Expeditions course] was personally the single greatest experience of my life and will have far-reaching effects. We came for an intense learning experience in the field, and we got it!” --Paula H., Teacher, 2005 Earth Expeditions Participant

7. K-12: ARMADA Project- Research and Mentoring Experiences for Teachers

<http://www.armadaproject.org>

The University of Rhode Island's Office of Marine Programs is now accepting applications for the ARMADA Project- Research and Mentoring Experiences for Teachers. The ARMADA Project, funded by the National Science Foundation, provides K-12 teachers an opportunity to actively participate in ocean, polar, and environmental science research and peer mentoring.

Selected Master Teachers (with five or more years teaching experience) are paired with leading scientists and participate in shipboard, field, or laboratory research with all expenses paid. Research experiences will take place during the summer, although there may be opportunities during the school year. Upon completion of their research experience, Master Teachers develop ways to bring the fruits of their research experiences, including scientific data, methodologies, and technology into their classrooms. They share their experiences by mentoring new teachers in their school district and by presenting their results at the National Science Teachers Association National Conventions.

The ARMADA Project has placed teachers in research experiences all over the world. Past experiences include taking part in the largest North Pacific humpback whale study in the waters off the coast of Alaska, investigating the impacts of global change in the Arctic Ocean and the Antarctic, monitoring and assessing tidal creeks in South Carolina, studying the impact of human activity on dusky dolphins in New Zealand, identifying foraging behaviors of Antarctic Crabeater Seals, water circulation studies in the Norwegian Sea, and a variety of ecosystem monitoring projects in the Bay of Fundy, Narragansett Bay, Gulf of Maine, Stellwagen Bank, Western Shelf of Florida, Sargasso Sea, Bahamas, Alaska, and Block Island Sound

Application deadline is February 4, 2008

For more information about teacher qualifications, responsibilities, and to download an application see the ARMADA Project website www.armadaproject.org or contact Andrea Kecskes at 401-874-6211 or armada@gso.uri.edu.

8. K-12: Change your hat: Become a summer science researcher through an NSF grant

<http://www.ret.magnet.fsu.edu/education/ret/> (Magnet Lab)

OR

<http://bio.fsu.edu/osta/RET> (Coastal Marine Lab)

Florida State University is now offering two Research Experiences for Teachers (RET) programs in/near Tallahassee, FL. Both programs are funded by the National Science Foundation (NSF). These RETs are 6 week summer research experiences that match highly qualified Elementary, Middle and High School teachers with scientists at either the National High Magnetic Field Lab (NHMFL) or the FSU Coastal Marine Lab. The programs offer teachers a \$3600 stipend, travel and housing support to non-local teachers.

9. K-12: Here is a way to look at the antipodal phenomena

<http://www.ubasics.com/dighole/>

Countless children (and adults) have wondered where they would end up if they started digging straight down (ignoring the material and temperatures and methods) and right through the center of the earth.

Q: What happens if you dig straight down?

A: You'll pop out the other side of the world.

Q: What's on the other side of the world?

A: Ummm... China!

Now we have the answer! Most of the planet is covered in water, so most diggers will dig into some ocean or another. What little land there is generally is not opposite other land. Some of South America and Asia, for instance, are opposite each other, but most Americans will swim in the Indian Ocean.

BTW: If you dig straight down through the earth, the spot diametrically opposite is called the antipode.

10. K-12: Coming to a computer near you! EXPLOR.TV from the Exploratorium

<http://www.exploratorium.edu/webcasts/index.php>

The Exploratorium has archived Webcasts from 1996 to the present. They provide video in multiple formats, including RealVideo, Windows Media, Flash, Quicktime, and streaming MPEG video of Webcasts into Second Life (though you need to have the Second Life client to view these). They do about 20 live events per year and offer streaming video in bitrates from 56 to 1.2 Mbit.

Some recent Webcasts have included The Science of Yo-Yo, Making Your Own Kind of Music, The Science of Humor, and Making Hyperbolic Crochet with Margaret Werthelm. Upcoming Webcasts include Ice Stories in November and December in celebration of the International Polar Year (2007-2009).

They also offer podcasts for download for different Exploratorium projects.

RSS feeds of upcoming and recent Webcasts are available from our Webcasting portal http://www.exploratorium.edu/webcasts/webcasts_recent.xml

11. K-12: Research Connections from Kathie Nunley (author of the Layered Curriculum) <http://help4teachers.com>

Research report #1: Children entering kindergarten with a knowledge of numbers, order of numbers, knowledge of letters and basic phonics, are most likely to be doing well in school by the middle grades. A paper presented in this month's Developmental Psychology pooled research from a variety of sources and studies to find that basic math and reading skills at school entry do predict later school success. Surprisingly, there was no correlation with social and emotional skills and later school success. The paper emphasized skills for this age group should be taught through "play" tasks and other events perceived as fun for the preschooler rather than direct instruction. [Duncan, G. et al (2007) Developmental Psychology, Vol 43(6)].

Research report #2: Students show a gradual, but significant decline in both intrinsic and extrinsic motivation between grades 8 and grades 10. Researchers looked particularly at the transitional year between junior and senior high school. Students who showed the greatest decrease in external regulation during the transition year, were most at-risk for later educational problems such as absenteeism, intentions of dropping out, and homework frequency problems. [Otis, N. et al (2005). Journal of Educational Psychology, Vol 97, (2), 170 – 183].

Connection #3: Here is a link to a new Layered Curriculum unit: Dan Hodges new unit on "The Chemical Nature of Matter" has been posted at <http://help4teachers.com/samples2.htm>. (Scroll to the bottom of the list.)

12. Gr K-8: Register Today for Upcoming NASA/NSTA and IPY/NSTA Web Seminars **12a. Gr K-6: NASA/NSTA Web Seminars -- Inquiry in Science and Mathematics Education: Parents as Partners**

Join NASA and NSTA for a free Web seminar featuring scientists and education specialists from NASA. Designed for educators of grades K-6, the seminar will focus on how educators can better engage parents and enlist their support for inquiry-based science and mathematics education. The presenters will share their expertise, answer questions from the participants and provide information regarding Web sites that students can use in the classroom.

Each Web seminar is a 90-minute, live professional development session that uses online learning technologies to allow participants to interact with nationally acclaimed experts, scientists, engineers and education specialists from NASA. Each Web seminar is a unique, stand-

alone program. Archives of the Web seminars and the presenters' PowerPoint presentations will be available online.

The next Web seminar in this series is scheduled for Dec. 12, 2007. Each seminar will begin at 6:30 p.m. EDT.

Online registration is now open.

http://learningcenter.nsta.org/products/symposia_seminars/fall07/NASA_Denver/webseminar.aspx

12b. Gr 5-8: IPY/NSTA Web Seminars -- The Role of Polar Regions in Earth's Changing Climate System

Join NASA, the National Oceanic and Atmospheric Administration, the National Science Foundation and the National Science Teachers Association for another free Web seminar on the topic of the International Polar Year. The session will focus on the interaction of polar regions with Earth's climate system, atmospheric gas changes over Earth's history, what ice cores tell about past climate, and the implications of climate change in the polar regions. The presenters will share their expertise, answer questions from the participants and provide information regarding Web sites that students can use in the classroom.

This Web seminar is also a 90-minute, live professional development session that uses online learning technologies to allow participants to interact with nationally acclaimed experts, scientists, engineers and education specialists from NASA, NOAA, and NSF. Each Web seminar is a unique, stand-alone program. Archives of the Web seminars and the presenters' presentations will be available online.

The next Web seminar in this series is scheduled for Dec. 13, 2007 at 6:30 p.m. EDT.

Online registration is now open.

http://learningcenter.nsta.org/products/symposia_seminars/fall07/IPY_Denver/webseminar.aspx

13. Gr 4-8: Fresh Catch: New Fisheries Content Enhances Online Curriculum

<http://www.projectflow.us>

New curriculum content highlighting Great Lakes fisheries is now available online via Michigan Sea Grant's web site, Fisheries Learning on the Web (FLOW).

Four new and revised classroom lessons and hands-on activities help educators and students observe and identify Great Lakes fish, understand the fundamentals of fish habitat and life cycles, and learn how scientists monitor the movement of fish populations.

The new FLOW lessons were developed in collaboration with fisheries experts at the University of Michigan and reviewed by seven Michigan science teachers. All lessons meet state and national science education standards and benchmarks and are designed for educators and students in grades 4 through 8.

See complete news announcement about FLOW: <http://www.miseagrant.umich.edu/news>

14. Gr 4-12: Help for Science Fair projects: Science Buddies

<http://www.sciencebuddies.org/>

Science Buddies provides free science fair project ideas, answers, and tools to teachers, parents, and students. The Science Fair Project Guide is an online encyclopedia for how to do science research and science fair projects. It includes step-by-step guidance, actual sample assignments, photos of science fair projects, tips for success, and self-grading checklists for students. There is also an interactive Topic Selection Wizard; Ask an Expert which helps students with their project questions using an online forum staffed by volunteer scientists and talented science students; and the Teacher Resources section includes information to help teachers guide their students to do research projects or conduct a science fair.

15. Gr 6-12: 21st Century Explorer Podcast Competition

<http://www.explorationpodcast.com/>

What do you think is NASA's greatest exploration achievement in the past 50 years, and why? That is the question NASA is asking students for the Second Annual 21st Century Explorer Podcast Competition. Students will create an audio recording or video -- running one minute or less -- with their answer to the question.

The contest is open to U.S. citizens, ages 11 to 18. Entries will be judged on content, creativity, execution, clarity and overall impression. The 15 finalists in each format (audio and video) and each age category (ages 11-14 and ages 15-18) will be displayed on the contest Web site, where the public will vote for and select a "People's Choice" winner. Prizes will also be awarded for first, second and third place. Winners will be announced on the Web site Feb. 28, 2008.

Entries are being accepted now through Jan. 4, 2008, or when the first 1,000 entries in each category are received.

For more information, including tips for creating audio and video podcasts, visit the URL above.

16. Gr 9-16: Aeronautics Competitions for High School and College Students

<http://aero.larc.nasa.gov/competitions.htm>

The Fundamental Aeronautics Program of the Aeronautics Research Mission Directorate at NASA Headquarters announces a new aeronautics competition for high school and college students for the 2007-2008 academic year.

High school students are challenged to write a research paper to explain ideas for a future aircraft that could become the "DC-3" for cargo and passengers in the year 2058. Descriptions should be well-informed and include sections on fuel, environmental effects, noise levels, runway length and condition, operating costs, passenger and cargo loads, and service operations. Notice of intent for high school entries is due on Dec. 15, 2007.

College students are invited to design the next generation, 21st-century, "DC-3"-type aircraft. Some of the design considerations include reduced environmental impact, reduced noise, daily operations on short runways, cost analysis for production and operation, passenger and cargo limits, structure and materials, and engines. Students should also briefly describe three valid scenarios for potential use of this vehicle in the year 2058. Notice of intent for college entries is due on Jan. 19, 2008.

Any U.S. student enrolled in an accredited high school, secondary school, or home school in the United States or its territories is eligible to enter the competition for cash prizes. Non-U.S. citizens and students in international locations can enter as well, but they are not eligible for cash prizes. Trophies and certificates will be awarded to each winner, regardless of citizenship.

Upcoming Events and Opportunities

November 30, 2007: Deadline for the Verizon Foundation Grants Program

<http://foundation.verizon.com/02006.shtml>

December 6, 2007: Deadline for Early Bird registrations for the SECO Conference 2/7-9/2008

<http://www.secoonline.org>

December 10, 2007: Deadline to submit your name for an NSTA Standing Committee or Advisory Board or Panel: <http://www.nsta.org/standingcommittees>

December 12, 2007: Using OGT Items In Learning Cycle Lessons

<http://ohiorc.org/for/science/ogt/default.aspx>

December 12, 2007: NASA/NSTA Web Seminars – Inquiry

http://learningcenter.nsta.org/products/symposia_seminars/fall07/NASA_Denver/webseminar.aspx

December 13, 2007: IPY/NSTA Web Seminars – The Polar Regions

http://learningcenter.nsta.org/products/symposia_seminars/fall07/IPY_Denver/webseminar.aspx

December 15, 2007: Books for Children grant applications due

<http://www.librifoundation.org>

December 15, 2007: Deadline for The Astronomical Society of the Pacific awards

<http://www.astrosociety.org/membership/awards/awards.html>

December 15, 2007: Notice of intent due for the High School Aeronautics Competition

<http://aero.larc.nasa.gov/competitions.htm>

December 30, 2007: Deadline to apply for the Tool Factory Podcasting Grants.

http://www.toolfactory.com/olympus_contest/olympus_podcasting.htm

January 2, 2008: Deadline for nominations for the National Teacher Hall of Fame
<http://www.nthf.org/nominate.htm>

January 4, 2008: Deadline to enter the 21st Century Explorer Podcast Competition
<http://www.explorationpodcast.com/>

January 10, 2008: Deadline for 2008 Frontiers in Physiology applications
<http://www.the-aps.org/education/frontiers/app.html>

January 10, 2008: Deadline to register for The 2008 Wildlife Diversity Conference: Back in Black in Columbus) <http://www.ohiodnr.com/wildlife>

January 19, 2008: Notice of intent due for the College Aeronautics Competition
<http://aero.larc.nasa.gov/competitions.htm>

January 29, 2008: Deadline for The Earth Expeditions summer program
<http://www.EarthExpeditions.org>

January 31, 2008: Deadline to apply to become a NASA Explorer School.
<http://explorerschools.nasa.gov/portal/site/nes/menuitem.d601ef1f9fdc2c2d7010ea1051008a0c/>

January 31, 2008: Deadline for the Amgen Award for Science Teaching Excellence
<http://www.amgen.com/citizenship/aaste.html>

February 4, 2008: Deadline to apply for the ARMADA Project- Research and Mentoring Experiences for Teachers: <http://www.armadaproject.org>

February 7-9, 2008: SECO Annual Conference in Akron, Ohio
<http://www.secoonline.org/conference>

February 12, 2008: Darwin Day Celebration
<http://www.darwinday.org>

March 12, 2008: The 2008 Wildlife Diversity Conference: Back in Black
<http://www.ohiodnr.com/wildlife>

March 14, 2008: Deadline for entries to the new Earth Heroes contest
<http://www.earth-heroes.org>

March 14, 2008: Deadline to apply for the Florida State summer research programs
<http://www.ret.magnet.fsu.edu/education/ret/> (Magnet Lab)
<http://bio.fsu.edu/osta/RET> (Coastal Marine Lab)

March 15, 2008: Ohio Amphibian Research and Conservation Conference

<http://www.ohioamphibians.com/meeting/>

March 26, 2008: NSELA Professional Development Institute in Boston, MA

<http://www.nsela.org>

March 27-30, 2008: NSTA National Conference in Boston, MA

<http://www.nsta.org/conferences/>

April 24 - 27, 2008: EECO Conference at Mohican State Park

<http://www.eeco-online.org>

July 1, 2008: Applications for the next group of Astronauts are due

<http://www.nasa.gov/astronauts/recruit.html>

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Follow the directions in the lower right hand corner of the page to become a Point of Contact.

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