

M S S E

Montana State University

2015



*17th Annual Symposium
in
Science Education*

Bozeman, MT

July 6th - July 10, 2015

Reid Hall 101 & 102

Master of Science in Science Education

Intercollege Programs for Science Education/ MSSE Program

Director
Associate Director
Lead Program Faculty
Program Officer

Peggy Taylor
Diana Paterson
John Graves
Holly Thompson

MSSE Faculty Steering Committee

John Graves
Steve Holmgren
Todd Kaiser
Dave Lageson
Karlene Hoo
Jennifer Luebeck
Nicholas Lux
Kim Obblink
Amy Washtak
Angela Weikert
Walt Woolbaugh

Science Education
Chemistry/Biochemistry
Electrical & Computer Engineering
Earth Sciences
Graduate School
Mathematics
Education
Extended University
Bozeman HS, MSSE Graduate
Museum of the Rockies, MSSE Graduate
Science Education

Supporting Colleges & Divisions

College of Agriculture
College of Engineering
College of Health & Human Development
College of Letters & Science
Extended University
The Graduate School

Charles Boyer
Brett Gunnink
Alison Harmon
Nicol Rae
Kim Obblink
Karlene Hoo

Collaboration Departments

Burns Technology Center
Cell Biology & Neuroscience
Chemistry/Biochemistry
Civil Engineering
Earth Science
Ecology
Education
Electrical Engineering
Health & Human Development
Intercollege Programs for Science Education
Land Resources & Environmental Sciences
Microbiology
Physics
Plant Science & Plant Pathology
Political Science

Kim Obblink
Frances Lefcort
Mary Cloninger
Jerry Stephens
David Varricchio
David Roberts
Jayne Downey
Robert Maher
Deborah Haynes
Peggy Taylor
Tracy Sterling
Mark Jutila
Yves Idzerda
John Sherwood
Jerry Johnson

History

Master of Science in Science Education Program

In May, 1996, the Montana Board of Regents of Higher Education approved a new degree, the Master of Science Education (MSSE), designed for science educators interested in graduate study while remaining employed. It is unusual in two important ways. First, it is an intercollege, interdisciplinary effort. Four colleges, The Graduate School, and fifteen departments collaborate to offer this innovative degree. Second, about 80% of the courses and credits needed to complete the degree are offered by distance learning in structured interactive courses using asynchronous, computer mediated instruction. The National Teacher Enhancement Network (NTEN) project, a National Science Foundation grant project, funded since 1992, developed and offers many of the distance learning courses for this degree program. The Burns Telecommunication Center, Extended University, provides technical and logistical support. In addition to completing core courses in education, those seeking the degree develop interdisciplinary combinations of science courses from offerings in biology, chemistry, earth science, ecology, engineering, microbiology, physics, plant science, and other science content areas. All graduates complete a science education capstone project in their final year.

Norm Reed, Coordinator 1996 to 1998, artfully handled admissions for the first two cohorts, oversaw design and development of core classes, and overall implementation of the program. In 1997, 30 teachers enrolled in six classes offered in the first campus summer session. In comparison, this summer, close to 400 teachers are enrolled in approximately 45 campus and distance courses.

Carol Thoresen, Coordinator 1999 to 2007, grew the program from 25 to about 60 students per year. Larger enrollment allowed for a wider variety of science course offerings. Carol worked with leading instructors and researchers to develop over 25 new program courses, some with very innovative modes of delivery.

Peggy Taylor is the current Director of MSSE. She assumed her position in December of 2007. As a graduate of the program's first cohort, she brings a unique perspective to its administration. Her contributions include expansion of the program's targeted populations, strengthening the programs framework through continuous evaluation process, and growing program admissions to close to 100 per year.

Diana Paterson, Associate Director, joined the program in 2002. She provides critical recruiting and advising support to off-campus graduate students. Diana skillfully manages the MSSE office and staff. Students lovingly refer to her as the "glue" that holds them together through challenging times.

John Graves, Lead Program Faculty, has been a core MSSE instructor since 2003. He assumed his duties as Lead Program Faculty in 2009. In addition to his instructional responsibilities, John provides guidance and mentoring for MSSE faculty, participates in various outreach activities, and serves as liaison between MSSE office and MSSE instructors.



MSSE Capstone Project

Each Master of Science in Science Education (MSSE) student, with the cooperation of her or his graduate committee, identifies and completes a science education capstone project. Each project is designed to provide experience and information that aids our understanding of science teaching-learning or science curriculum. The capstone project topic is generally identified during the first year of the student's graduate program. A student begins the project, which generally relates to science education in the MSSE student's educational setting, in the fall of the final year by submitting a proposal to his/her advisor. The results of each student's project are summarized in a written professional paper completed and presented in the student's final summer session. The MSSE Steering Committee, faculty, and staff congratulate these deserving graduate students for their persistence to pursue a graduate degree, while continuing full-time employment as science educators.

2015 Capstone Project Advisors

Chris Bahn, Chemistry/Biochemistry

Joseph Bradshaw, Biology

Lisa Brown, Extended University

Eric Brunsell, Science Education

Greg Francis, Physics

John Graves, Science Education

Irene Grimberg, Physics, Cell Biology & Neuroscience

Steve Holmgren, Chemistry/Biochemistry

Todd Kaiser, Electrical Engineering

Amber Kirkpatrick, LRES

Robyn Klein, Plant Sciences & Plant Pathology

Daniel Lawver, Earth Sciences

Nicholas Lux, Education

Stephanie McGinnis, LRES

Bill McLaughlin, Chemistry/Biochemistry

Tom McMahon, Ecology

Terrill Paterson, Ecology

Elinor Pulcini, Microbiology & Immunology

Peggy Taylor, Science Education

Amy Washtak, Chemistry & Biochemistry

Angie Weikert, Museum of the Rockies

Dave Willey, Ecology

John Winnie, Ecology

Walt Woolbaugh, Science Education

Off-Campus Advisors

Ken Bergwerf, Calvin College, Grand Rapids, MI

Ritchie Boyd, Principal Strategist, Enterprise Consulting, Blackboard Inc.

Sanlyn Buxner, University of Arizona, Tuscon, AZ

Suzanna Soileau, Outreach Coordinator, USGS Northern Rocky Mtn. Science Ctr., Bozeman, MT

Eric Cole, US Fish & Wildlife Services, National Elk Refuge, Jackson, WY

Louise Mead, Michigan State University, East Lansing, MI

Felix Navarro, University of Wisconsin-Madison

Gerald Nelson, Casper College, Casper, WY

Stanley Rogers, UCSF Medical Center, San Francisco, CA

Jeff Warren, US Fish & Wildlife Service, Red Rocks Lakes National Wildlife Refuge, Lima, MT

Michael Zehfus, Black Hills State University, Spearfish, SD

Capstone Presentation Schedule

Presenter	Room	Date	Time	Presenter	Room	Date	Time
Alger, Kellen T.	Reid 101	July 8	11 AM	Klavon, Tim	Reid 102	July 9	7 AM
Barcus, Jeremy R.	Reid 101	July 9	11 AM	Koo, Joshua J.	Reid 102	July 8	2 PM
Barnes, Carli Ruth	Reid 101	July 9	7 AM	Laundon, Brooke K.	Reid 102	July 10	1 PM
Betts, Daniel	Reid 102	July 6	10 AM	Lindemann, Martha	Reid 101	July 10	11 AM
Brandenburger, Patricia	Library*	July 9	4 PM	Luna, Shannon	Reid 101	July 7	9 AM
Brunt, Jerry	Reid 102	July 9	9 AM	Markham, Jennifer N.	Reid 101	July 7	11 AM
Casper, Kyle Mark	Reid 101	July 10	1 PM	McGillen, Liane	Reid 102	July 7	11 AM
Christianson, Pamela	Reid 101	July 7	7 AM	Melillo, Janine	Reid 101	July 10	9 AM
Clinger, Kellie	Reid 102	July 10	8 AM	Mowchan, Stacey L.	Reid 101	July 9	3 PM
Combs, Kristin L.	Reid 101	July 8	1 PM	Muise, Joe	Reid 102	July 7	4 PM
Davis, Michelle	Reid 101	July 8	12 PM	Mwapea, Chrispus M.	Reid 102	July 7	1 PM
Delain, Kisha M.	Reid 102	July 6	2 PM	Myers, Carol Payne	Reid 102	July 7	12 PM
Demers, Alyx Andrea	Reid 102	July 6	1 PM	Nedved, Spencer V.	Reid 102	July 8	10 AM
Diaz-Chard, Emily	Reid 101	July 9	5 PM	O'Leary, Thomas	Reid 102	July 9	1 PM
Dyk, Gregory M.	Reid 102	July 6	3 PM	O'Malley, Maryellen	Reid 102	July 8	8 AM
Edwards, Jennifer L.	Library*	July 6	12 PM	Otto, Jake	Reid 102	July 9	11 AM
Gandhi, Ritu	Reid 102	July 6	4 PM	Peterson, Dawn Marecek	Reid 102	July 6	11 AM
Gassner, Suzanne	Reid 102	July 6	12 PM	Pfeifer, Ronald Mark	Reid 101	July 7	3 PM
Gillispie, Tassay S.	Library*	July 9	1 PM	Purcell, Caryn	Reid 102	July 10	10 AM
Goodpaster, Kelly	Reid 101	July 10	7 PM	Reichelt, Annie	Library*	July 10	3 PM
Guilmet, Stephanie L.	Reid 102	July 9	12 PM	Renyck, Heather J.	Reid 102	July 7	7 AM
Haiderer, Michael John	Reid 101	July 6	3 PM	Staggs, Brian M.	Library*	July 8	1 PM
Hall, Lindsay Paterson	Reid 101	July 7	10 AM	Stattel, Andrew	Reid 101	July 8	7 AM
Heller, Andrew	Library*	July 7	9 AM	Stender-Penrose, Stephanie	Library*	July 7	2 PM
Heyer, Sharon	Reid 101	July 9	9 AM	Temple, Jennifer	Library*	July 10	12 PM
Hood, Jodie Brown	Reid 101	July 6	1 PM	Thum, Johannes	Reid 102	July 6	9 AM
Howell, Carrie Shaw	Reid 101	July 6	11 AM	Touchstone, Jerald Q.	Reid 101	July 6	9 AM
Hults, Jason Otto	Reid 101	July 7	1 PM	Vandehey, Amelia M.	Reid 102	July 9	10 AM
Jurczak, Thomas E.	Reid 102	July 7	10 AM	Van Zee, Adam	Reid 101	July 8	9 AM
Kanduch, Kendra	Reid 102	July 8	11 AM	White, D. Matthew	Reid 102	July 8	4 PM
Kayser, Jolene A.	Library*	July 8	9 AM	Williams, Lisa D.	Reid 102	July 10	11 AM
Key, Leah Anne	Reid 101	July 8	3 PM	Zaback, Stacey	Reid 102	July 8	7 AM

* Library Room 1151 – Innovative Learning Studio

Monday, July 6, 2015

11 am Carrie Howell Shaw Reid 101
Chattanooga, TN
Tennessee Aquarium

Facilitator: Kyle Casper

An Evaluation of Activity Sheets Created to Enhance Science Learning During the Self-Guided Tour at the Tennessee Aquarium

This project evaluated an activity sheet created for the Tennessee Aquarium based on state science standards and free-choice learning. Two teachers agreed to participate in different capacities. Based on my collected data, I determined the activity sheet was not effective at fostering learning or interest when used by students. Additional research should be done to specifically evaluate using chaperones to lead activities during museum visits.

11 am Dawn Marecek Peterson Reid 102
Gricignano di Aversa, CE, Italy
Naples Middle High School

Facilitator: Kristin Combs

The Impact of Project-Based Learning and the Engineering Design Cycle on High School Physics Students

Case studies indicate embedding learning in meaningful context can attract and retain a broader range of students to STEM careers. This action research project assessed the impact of project-based-learning and engineering design on 22 high school physics students. Female students showed strongest growth. The biggest impact for all students was an increase in the belief that students are successful in science due to their effort.

12 pm Jennifer Edwards Library - Room 1151 (Innovative Learning Studio)
Casper, WY
Natrona County High School

Facilitator: Maryellen O'Malley

Influences of Elk Browse on Aspen Stand Structure and Landbirds at the National Elk Refuge in Jackson Hole, Wyoming

Aspen stands, located throughout the Rocky Mountains, are hot spots of biodiversity. High densities of ungulates can alter aspen stands via browsing. This investigation sought to understand how elk wintering in the National Elk Refuge impact aspen stands and bird species diversity. I assessed stand structure, likelihood of trees maturing, and avian species diversity. I predicted stands closer to feedgrounds would experience more negative impacts of elk.

Monday, July 6, 2015

12 pm Suzanne Shifra Gassner Reid 102
Bettendorf, IA
Scott Community College

Facilitator: Tassay Gillespi

Integrating Laboratory Experience with Lecture Content Through the Use of Cognitive and Cooperative Learning Strategies in a Community College Introduction to Chemistry Course

The laboratory section of the traditional chemistry class is meant to demonstrate the abstract chemistry concepts taught in the lecture section. Despite enjoying the lab, students often miss learning the chemistry concepts the lab is meant to clarify. This study focused on using cognitive and cooperative learning strategies in order to scaffold students to integrate their experiences in the lab with chemistry concepts discussed in the lecture.

1 pm Jodie Brown Hood Reid 101
Columbus, GA
Georgia Council for the Hearing Impaired, Inc.

Facilitator: Thomas O'Leary

The Effects of Accommodations on the Achievements of Students with Hearing Loss in Online Courses in Science and Various Subjects

The purpose of this study was to determine if the accommodations of various online courses benefitted students from eight different universities nationwide. Interviews with students, professors, and service providers were conducted and the surveys were administered. The results of this study were generally positive, but suggest that some universities need to continue improving their technologies to make learning more accessible for the future students with hearing loss.

1 pm Alyx Andrea Demers Reid 102
St. Anthony, Idaho
Juniper Hills High School

Facilitator: Kellen Alger

Positive Peer Culture Program and Its Impact on Academic Performance and Scientific Method

Juniper Hills High School uses a classroom management system called Positive Peer Culture (PPC). My students live at the facility and use PPC as their treatment program. I began to wonder if using Positive Peer Culture program in the classroom would somehow change or impact the academic performance of our students. I specifically wanted to know if PPC's use of problem solving would help students better comprehend the scientific method.

Monday, July 6, 2015

4 pm Ritu Gandhi Reid 102
Pasadena, TX
Morales Elementary

Facilitator: Timothy Klavon

The Effects of Cooperative Learning Strategies on Understanding Elementary Science Concepts

Cooperative learning is an educational approach which organizes classroom activities into academic and social experiences. The strategies include: Jigsaw II (individual mastery of a certain topic), Three-Step Interview (writing and feedback), and the Round Robin technique (expression of the topic). The focus of this study was to evaluate the effectiveness of these strategies versus traditional teaching. Assessments on student understanding of elementary science concepts, motivation to learn, and interpersonal relationships between students were completed.

Tuesday, July 7, 2015

7 am Pamela Christianson Reid 101
Great Falls, MT
Great Falls College MSU

Facilitator: Spencer Nedved

Teaching Reverse Classroom to Health Science Students

Flipped classroom teaching has been shown to be successful in college courses in disciplines such as medicine, business, and more. This study examined the use of a flipped classroom using podcasts for medical assistant students to determine the effects of using interactive online assignments prior to class or clinic experience. Evaluations of appropriate online interactive assignments for medical assisting, analysis of quizzes, and survey of the benefits were performed.

7 am Heather J. Renyck Reid 102
Bolivar, NY
Bolivar-Richburg Central School District

Facilitator: Carrie Howell Shaw

Does “Flipping” a Freshmen Earth and Space Science Classroom Yield Student Success with Difficult Topics?

The Flipped Classroom Instructional Model was designed to deliver the traditional classroom lecture through a video homework assignment so that more time could be dedicated in class to practice concepts. Research shows that this model is worth trying. Could it work for a ninth grade Earth and space science class in rural, western New York? This study includes a comparison of two challenging units: Absolute Age and Relative Age.

Tuesday, July 7, 2015

9 am Shannon Luna Reid 101
Lajes Air Force Base Azores Portugal
Lajes Elementary High School

Facilitator: Caryn Purcell

The Effects of Clicker Use on Student Engagement and Performance in the Elementary Science Classroom

Grasping and keeping students' attention during class is always a struggle; With the increase of technology comes the ability to offer new alternatives to assessing student achievement. This study looked at the effects of using clickers during lessons and assessments in science and other subjects, as well as monitoring student engagement. The main focus of the study was to look for a correlation between engagement and performance.

9 am Andrew Heller Library - Room 1151 (Innovative Learning Studio)
Wautoma, WI
Parkside School

Facilitator: Emily Diaz-Chard

The Impact of Inquiry Learning on Students' Ability to Analyze Data and Draw Conclusions

Past research suggests that involving students in real world inquiry projects improves their understanding of science content. The primary focus of this study was to determine the impact of inquiry learning on sixth grade students' ability to analyze science data and draw conclusions. Activities that were appropriate for Earth Science were selected. Each successive activity utilized a gradual release of inquiry components. Student growth was evaluated.

10 am Lindsay Paterson Hall Reid 101
Bozeman, MT
Montana State University

Facilitator: Annie Reichelt

Influences of Habitat Characteristics on Pika Occupancy in Select Regions of the Gallatin National Forest, Montana

Pikas inhabit talus fields within alpine and subalpine ecosystems. Their thermal sensitivity makes them particularly sensitive to climate change. Site-specific abiotic and biotic factors influence how well pika can manage heat and consequently affect occupancy probabilities. By comparing these factors between and within drainages, this study investigates which habitat characteristics most influence pika occupancy of talus slopes.

10 am Thomas Jurczak Reid 102
Martinez, GA
Augusta Preparatory Day School

Facilitator: Janine Melillo

Group Problem Solving in High School Physics

First year physics students struggle during problem solving exercises as they exhibit characteristics of novice problem solvers. This action research project examined the use of peer grouping during in-class problem solving exercises to see the impact on first-year high school physics students. The impact was monitored using in-class problem solving assessments, observations, a survey and interviews.

Tuesday, July 7, 2015

11 am Jennifer N. Markham Reid 101
Franklin, MA
Tri-County Regional Vocational Technical High School

Facilitator: Stacey Zaback

Science for Real Life: The Use of Case Studies and Online Discussions in High School Anatomy and Physiology

The impact of case studies on content acquisition, student interest and engagement on high school A&P Honors students was analyzed. The use of online discussions in addition to case studies was also analyzed. Results indicated case studies are an effective means of acquiring content and using online discussions in conjunction had a positive impact on content acquisition, student interest and engagement.

11 am Liane McGillen Reid 102
Washington, DC
Capital City Public Charter School

Facilitator: Carli Barnes

The impact of practical applications on students' mastery and motivation in chemistry

This study looks at the impact of using a practical application (elements in local tap water) in order to teach traditional chemistry concepts. In the treatment students "adopted" an element that is found in water, researched information about the element including how it is found in tap water, and created an infographic to present their findings. Student and teacher motivation and content retention were measured and analyzed.

12 pm Carol Payne Myers Reid 102
Pensacola, FL
Escambia High School

Facilitator: Kelly Goodpaster

The Effect of Argument Driven Inquiry on Student Understanding of High School Biology Concepts

Argument Driven Inquiry (ADI) has been shown to be effective in promoting learning of science. The NRC in *Framework for K-12 Science Education* has established practices for high school students that involve evidence to support or refute scientific phenomenon. This study investigated the use of ADI on high school biology concepts. The focus of this study was to determine if ADI increased student engagement, argumentation skills, and biology knowledge.

1 pm Jason Hults Reid 101
Villisca, IA
Southwest Valley Middle School

Facilitator: Stephanie Guilmet

The Effects of a Paperless Classroom on Student Achievement in the Middle School Science Classroom

The purpose of the study was to determine the effects of a paperless classroom on student achievement. Two sections of eighth grade students were used, with each section exposed to a paperless, online format of instruction and assessment. Student achievement was measured by pre and posttest assessments. Results indicate that the paperless classroom treatment had a positive effect on student achievement.

Tuesday, July 7, 2015

1 pm Chrispus M. Mwapea Reid 102
Houston, TX
E-STEM High School

Facilitator: Patricia Brandenburger

Effect of Daily Quizzes on Student Performance in Science Exams

With the introduction of high stakes end of course (EOC) exams, teachers are always looking for ways to improve student performance. This study examined the effect that daily quizzes have on student performance in science exams, with emphasis on biology EOC's. The study found a significant increase in student test performance when daily quizzes were utilized than when no quizzing was involved.

2 pm Stephanie Stender-Penrose Library - Room 1151 (Innovative Learning Studio)
San Francisco, CA & Sheridan, WY
University of California San Francisco & Sheridan High School

Facilitator: Jeremy Barcus

How Can the Experiences of Medical Professionals and High School Students Inform Improvements to High School Anatomy and Physiology Courses?

This project aimed to identify some of the most effective ways that students learn the human anatomical and physiological concepts in high school through medical school. This project looked at the effectiveness of learning human anatomy through a variety of different approaches. This study considered different modes of instruction through the perceptions of medical professionals at University of California San Francisco and Sheridan High School Human Anatomy students.

3 pm Ronald Mark Pfeifer Reid 101
North Battleford, Saskatchewan, Canada
North Battleford Comprehensive High School

Facilitator: Jake Otto

Teaching the Nature of Science through History and Pseudoscience

The Nature of Science (NOS) is a major focus in recent curriculum initiatives, but it is difficult to teach. The main focus of this study was to determine the effectiveness of teaching the NOS with brief lessons on topics from history and pseudoscience inserted into the regular curriculum of high school chemistry classes. Twelve lessons were developed and presented and impact on students' understanding and engagement was evaluated.

4 pm Joe Muise Reid 102
Burnaby, BC, Canada
St. Thomas More Collegiate

Facilitator: Jerry Brunt

Using Peer Instruction to Promote Conceptual Understanding in High School Physics Classes

Students in many physics courses come away with a much stronger ability to solve problems than explain things conceptually. Peer Instruction has been developed as a way to help bridge this gap. This study introduced Peer Instruction to senior high school physics classes. The use of Peer Instruction showed significant improvement in the conceptual performance of students, without affecting their problem-solving ability. Student engagement was also improved by Peer Instruction.

Wednesday, July 8, 2015

7 am Andrew Stattel Reid 101
Chestnut Hill, MA
Brimmer and May School

Facilitator: Dawn Marecek Peterson

IPads in the Elementary Math Classroom: What is Their Effect on Student Learning?

This study investigated iPads' effects on second grade students' understanding of math concepts and the students' attitudes toward using iPads. Students alternated between iPad and non-iPad activities to practice math skills. Data consisted of unit test scores, monitoring of on-task behavior, surveys, and interviews. Results show the iPad did not significantly affect test scores, but it did increase student engagement. Students reported positive attitudes toward using the iPad for math.

7 am Stacey Zaback Reid 102
Philomath, OR
Kings Valley Charter School

Facilitator: Carol Meyers

Student Collaboration on Assessment of Writing in Preparation for Next Generation Science Standards

Elementary students are often assessed by standards that they do not understand or have no vested interest. Conversely, student involvement in the assessment process has shown to increase metacognition and critical thinking skills. The main focus of this research project was to investigate if there is a connection between student involvement in creating an assessment rubric for writing and increased writing proficiency.

8 am Maryellen O'Malley Reid 102
Walpole, MA
Walpole High School

Facilitator: Amelia Vandehay

Constructivism: The Effects of the Flipped Classroom Instructional Model on High School Senior AP Biology Students

The flipped classroom is a method of instruction in which the traditional lecture is moved from the classroom and completed by students at home via videos. The desired effect is to increase student understanding by spending class time applying and investigating the concepts in more depth. An entire Evolution unit was taught using the flipped classroom. Student understanding was assessed and compared to the more traditional lecture format.

Wednesday, July 8, 2015

9 am Adam Van Zee Reid 101
Bozeman, MT
Chief Joseph Middle School

Facilitator: Thomas Jurczak

What are the Effects of Multiple Intelligence Theory on Middle School Students' Understanding of Health Enhancement and Science Concepts?

The theory of multiple intelligences has been used to drive instruction to meet the needs of students. Two nontreatment units were taught in a teacher-centered style of teaching while three treatment units were taught using a variety of strategies driven by the theory of multiple intelligences. Multiple Intelligence Survey data was compared to the results from content assessment data and categorized by how each topic was taught.

9 am Jolene A. Kayser Library - Room 1151 (Innovative Learning Studio)
Sturgis, SD
Sturgis Brown High School

Facilitator: Jerald Touchstone

Teaching with Daily Formative Assessments in AP Chemistry

Keeping students engaged and motivated through daily formative assessments has been shown to help with student success across the curriculum. Results for students involved the improvement in material retention, increased mastery, and success rates. Individuals performing at lower levels raised their overall grades and skill levels. In addition, immediate feedback provided students with opportunities to realize errors and refocus study habits in order to improve ongoing assessments.

10 am Spencer V. Nedved Reid 102
Vancouver, WA
Frontier Middle School

Facilitator: Lisa Williams

Integrating Argumentation within Guided-Inquiry Activities in Middle School Physics

Argumentative discourse has shown through several studies as a component of instruction to enhance students' conceptual understanding. This study examined the use argumentative writing integrated within guided-inquiry activities in middle school physics classes. The main focus of the study was to determine if positive growth of students' conceptual understanding applies when argumentative writing is integrated within guided-inquiry activities.

11 am Kellen T. Alger Reid 101
Cut Bank, MT
Cut Bank Middle School

Facilitator: Daniel Betts

The Impact of the 5E Learning Cycle on Student Achievement and Engagement in a Middle School Science Class

The 5E Learning Cycle Model follows a constructivist approach to instruction where knowledge is constructed through experience. The focus of this study was to explore the impact of 5E instruction on middle school students. During the study 8th grade physical science students received instruction utilizing the 5E format of *Engage, Explore, Explain, Elaborate, and Evaluate*. Students' progress in content knowledge was examined and shifts in student engagement were observed.

Wednesday, July 8, 2015

11 am Kendra Kanduch Reid 102
Philipsburg, MT
Philipsburg Elementary School

Facilitator: Martha Lindeman

Teaching Using the 5E Inquiry Compared to Traditional Teaching in a Sixth Grade Science Class

Inquiry has been proven to be a successful way of teaching to get students to interest students in science. This study looked at the 5E inquiry compared to traditional teaching to see if students would be more interested in science. Through interviews, tests, journals, surveys, and observations, the conclusion is that students perform better, as well as increase their interest in science, when taught with inquiry.

12 pm Michelle Davis Reid 101
Springfield, OR
Thurston Middle School

Facilitator: Liane McGillen

The Effects of Implementing Strategic Vocabulary Activities and Writing Activities with Reasoning Strategies on Student Understanding of Eighth Grade Earth Science Concepts.

Research has shown there is a connection between vocabulary knowledge and student comprehension. However, using vocabulary in constructed response questions often reveals a lack of understanding. This study examined the effect of implementing strategic vocabulary and writing activities with reasoning strategies based on the universal intellectual standards to improve student comprehension of eighth grade earth science concepts. While resistance was encountered with implementation, valuable lessons were learned regarding future work in this area.

1 pm Kristin L. Combs Reid 101
South Fremont Junior High
St. Anthony, ID

Facilitator: Gregory Dyk

The Effects of Scientific Argumentation on Student Attitudes and Understanding of a Controversial Topic

Students often have opinions about scientific subjects without knowing how to support their opinions with facts. The focus of this study was to see if middle school students' attitudes would change after being involved in scientific argumentation. The issue of wolf management was chosen as an argumentative topic due to its relevance to students in eastern Idaho. Students' learning and opinions indicated growth in scientific argumentation.

Wednesday, July 8, 2015

1 pm Brian M. Staggs
Grandville, MI
East Elementary School

Library - Room 1151 (Innovative Learning Studio)

Facilitator: Jennifer Edwards

Using the Van Andel Education Institute's Model of Scientific Inquiry in the Fourth-Grade Classroom

Teaching science through inquiry is a goal of science standards. Research documents the positive academic impact scaffolded inquiry practices have on student achievement within the classroom. Many barriers impede teachers from utilizing inquiry within the science classroom. This study examined the effects of using a model of inquiry developed for third through eighth grade students on academic achievement, scientific argumentation, and students' attitude and motivation within the fourth-grade classroom.

2 pm Joshua J. Koo
Glenview, IL
Glenbrook South High School

Reid 102

Facilitator: Kisha Delain

Presenting Science Classroom Laboratory Findings through a Creative Medium

Research has shown traditional lab report formats create an impersonal and unrelatable medium for students who use the format for science classes. This study examined alternative approaches to presenting lab findings through a more real world applicable medium. The main focus of this study was to test alternatives and analyze student feedback on the effectiveness of the new model.

3 pm Leah Anne Key
Huntersville, NC
Barnette Elementary School

Reid 101

Facilitator: Johannes Thum

The Connection between Argumentation and Scientific Explanations

Argumentation is a scientific practice that develops a deeper conceptual understanding of science content. Students who engage in argument will focus on evidence to clarify their own ideas and explanations. This study analyzed the impact of scaffolded argumentation activities on fourth grade students' explanations of scientific phenomena, conceptual understandings and engagement.

4 pm D. Matthew White
Cookeville, TN
Algood Christian Elementary

Reid 102

Facilitator: Joshua Koo

Differentiated Instruction in the Science Classroom: Student Perception, Engagement, and Learning

Students have varying backgrounds and learning abilities. One philosophy of education, differentiated instruction, seeks to meet this diversity of student needs by offering a variety of learning tasks. In this study, the author examined what differentiated instruction is, how it may be incorporated, and reflected on the data gathered from an elementary school classroom – primarily looking for impacts on student perceptions, engagement, and learning.

Thursday, July 9, 2015

7 am Carli Ruth Barnes Reid 101
Battle Ground, WA
Tukes Valley Middle School

Facilitator: Joe Muise

Comparing Student Performance and Perception of Competence on Summative Science Performance Tasks versus Written Science Summative Tests at the Sixth Grade Level

This study examined designing Next Generation Science Standards-based performance tasks and assessed eighty-four sixth graders' accuracy in determining test scores on written tests and performance tasks. Students alternated taking written tests and performance tasks. Results were inconclusive. Teachers felt less confident preparing for performance tasks. Students preferred and did moderately better on them. This study found that testing parameters may affect test scores.

7 am Tim Klavon Reid 102
Pennsburg, PA
Perkiomen School

Facilitator: Jason Hults

Iterate and Fail: How Does an Inquiry-Based Design Lab Course Impact the Resilience Learning of Middle School Students?

Resilience is defined as non-cognitive characteristic influencing a student's ability to recover from adversity, particularly when faced with academic challenges. In order to foster this ability, the Perkiomen School implemented an inquiry-based design lab course. This study used the 8-question Grit Scale to determine student scores before and after the board game design portion of course. Student interviews were conducted to learn of the students' impressions of their experience.

9 am Sharon Heyer Reid 101
Forest Lake, MN
Southwest Junior High,

Facilitator: Lindsay Paterson Hall

The Effects of Incorporating Student-Made Visuals in the Junior High Science Classroom

The daily use of visual aids like animations and graphics in the life science classroom has been shown to improve student retention and attitude. This project implemented student-made visuals in the seventh grade life science classroom. Students used Play-Doh, white boards, and/or concept maps to create visuals that reinforced science concepts. This project evaluated the effects of these visuals on student understanding, retention, and attitude in conjunction with teacher attitude.

Thursday, July 9, 2015

9 am Jerry Brunt Reid 102
Bozeman, MT
LaMotte School

Facilitator: Pamela Christianson

The Effects of Teaching Perseverance on Student Independence in Mathematical Problem Solving

Perseverance has become an important predictor of student success. This classroom research project was conducted to see if elementary students could learn to understand and appreciate the importance of perseverance while also becoming more independent workers. Elementary students completed journals and surveys and were observed while working through complex problems and regular classroom assessments. Evidence from this study suggests that students can learn to better recognize and value personal perseverance.

10 am Amelia M. Vandehey Reid 102
Hillsboro, Oregon
Evergreen Middle School 7th grade

Facilitator: Andrew Heller

How Formative Assessment Supports Student Centered Learning in a Flipped Science Classroom

This project focused on how students in a flipped classroom would incorporate formative assessments at their convenience, to help identify areas in science they needed to master, or as an enrichment for students who wanted access to new skills that have not been introduced at their grade level, to promote the environment of a student centered classroom. The research found students eager to improve their learning independently.

11 am Jeremy R. Barcus Reid 101
Hamilton, MT
Hamilton Middle School

Facilitator: Stephanie Stender-Penrose

How Incorporating Outdoor Educational Experiences Impact and Benefit 7th Grade Students in Science Education

During this investigation, students participated in seven outdoor experiences—two field days and five outdoor class sessions. Students were interviewed and surveyed, their behavior and attitudes were observed, and they were asked to recall information. Additional data was collected on student use of electronics and how it impacted their time outdoors. Results revealed outdoor experiences have a positive impact on students' time on task, attitudes, and motivation toward learning science.

Thursday, July 9, 2015

11 am Jake Otto Reid 102
Aarhus, Denmark
Aarhus Academy for Global Education

Facilitator: Jodi Hood

The Impact of Teaching with Content-Based Math Videos

It has been well documented that most students enjoy watching videos, but little research investigates student learning during a content-based lesson. The focus of this study was to determine if students are gathering information from the video and incorporating it into their knowledge. Student knowledge before and after a video lesson was evaluated to measure the impact of teaching with content-based videos.

12 pm Stephanie L. Guilmet Reid 102
Blairstown, NJ
Blair Academy

Facilitator: Jennifer Temple

The Effect of a Scientific Reading Curriculum on Overall Performance and Attitude in High School Students

In the science classroom, a primary challenge is being able to read required material effectively. A well-developed skill in the humanities, it is not a primary focus of instruction in a high school science classroom. This intervention demonstrated the effects of implementing a reading strategy curriculum on high school students over an eight week period. Results showed that there was an increase in class participation, unit test grades, and overall course average.

1 pm Tassay S. Gillispie Library - Room 1151 (Innovative Learning Studio)
Albany, Oregon
Albany Options High School

Facilitator: Suzanne Gassner

Using Models with Rubrics as a Form of Assessment in Science

Using art in the classroom has shown to increase student interest and aids in higher levels of understanding. By combining art and scientific models, students in Alternative High School astronomy and biology classes demonstrated higher level thinking skills in the standards being addressed. The focus of this study was on whether or not having students provide visual aids with the guide of a rubric improved performance.

1 pm Tom O'Leary Reid 102
Valley Park, MO
Sacred Heart School

Facilitator: Ritu Gandhi

The Effects of Graphing Software on Students Ability to Analyze Data

In this project, I looked at the effect graphing software had on students' ability to analyze data, students' attitudes when analyzing data, and teachers' attitudes when analyzing data. This project was done with 7th grade students, using TinkerPlots software. Evidence indicated students' ability and both students' and teachers' attitudes improved. Students were excited to use TinkerPlots and they used it in multiple subjects.

Thursday, July 9, 2015

3 pm Stacey L. Mowchan
Newington, Ct
Montana State University

Reid 101

Facilitator: Andrew Stattel

Is motivation and engagement increased for teachers as graduate students conducting project-based science inquiry?

This study investigated the outcome of graduate students as they progressed through self-selected inquiry projects. Data was collected on prior knowledge and understanding of inquiry as well as comfort levels in choosing their own topics. The results showed that student motivation and engagement increased as project autonomy increased. Findings also revealed that metacognition increased when students were allowed greater control over project outcomes, leading to conceptual changes in understanding.

4 pm Patricia Brandenburger
Littleton, Colorado
Deer Creek Middle School

Library - Room 1151 (Innovative Learning Studio)

Facilitator: Shannon Luna

The Effect of Language Frames on Communication Skills in a Sixth Grade STEM Classroom

Teaching 6th grade students in a collaborative environment can be challenging. This action research project focused on using language frames to guide students in positive communication interactions. Written surveys, collaboration rubrics, and videos of students working were analyzed indicating a small increase in communication among collaborative groups. Although there is not strong data to support the use of language frames, the overall classroom environment improved from the teacher point of view.

5 pm Emily Diaz-Chard
Vineland, NJ
Veterans Memorial Intermediate School

Reid 101

Facilitator: Kendra Kanduch

The Effects of Guided Writing Strategies on Science Journaling Skills of Middle School Students

This study investigated the effects of guided writing strategies with the use of student illustrations on the retention of ecology concepts, long-term memory, journaling skills, student attitude and motivation with 7th grade science students. Data collection techniques included pre and posttreatment assessments, survey, interviews, observations, journal assessments, and student work samples. An increase in students' achievement and long-term memory was found, but students' motivation and attitude improved during treatment only.

Friday, July 10, 2015

7 am Kelly Goodpaster Reid 101
Bozeman, Montana
Gallatin Christian Homeschool Cooperative

Facilitator: Brian Staggs

The Effect of Student Participation in Scientific Argumentation Activities on Evidence-Based Reasoning Skills and Attitudes towards Science

For a scientifically literate society, students need more practice with scientific argumentation so they learn the language of the scientific community, value scientific consensus and develop confidence in their ability to articulate and recognize a valid scientific explanation. The main focus of this study was to determine if participation in scientific argumentation helped students develop evidence-based reasoning skills and its effect on students' attitudes towards science.

8 am Kellie Clinger Reid 102
Afton, Wyoming
Star Valley High School

Facilitator: Michelle Davis

The Effects of Peer Collaboration in Creating a Student Centered Biology Classroom

Students who actively engage in the learning process learn at higher rates and better retain knowledge than other students. One strategy used to engage students is "peer collaboration." The goal of this project was to compare a teacher-led classroom with a peer collaboration classroom. The questions addressed in this research centered on increases in student learning, as well as student and teacher motivation when comparing the two types of classrooms.

9 am Janine Melillo Reid 101
Hastings-on-Hudson, New York
Hastings High School

Facilitator: Jennifer Markham

Impact of Outdoor Science Education on Students with Learning Differences

This classroom research project investigated the impact of outdoor education on the science content understanding and engagement level of students with learning differences. Students were exposed to Environment as Integrating Concept methodology. Cross sectional and longitudinal data was collected from exams, labs and behavior charting for engagement. The results indicated dramatically improved engagement levels and limited improvement in content understanding.

10 am Caryn Purcell Reid 102
New Canaan, CT
New Canaan Country School

Facilitator: Chrispus Mwapea

Outdoor Science with Mobile Devices

Mobile devices can be powerful tools for learning in the hands of students. The focus of this study was to determine if the use of mobile devices in outdoor science instruction would have an impact on students' mastery of content. Additionally, the study aimed to discover if students' use of mobile devices changed their attitudes towards outdoor science or facilitated self-guided learning.

Friday, July 10, 2015

11 am Martha Lindemann Reid 101
Woodbridge, Virginia
Woodbridge Senior High School

Facilitator: Heather Renyck

The Effects of Introducing High School Students to STEM Careers

This research project introduced high school students to the STEM (Science, Technology, Engineering & Mathematics) fields and a wide variety of careers related to STEM. The main goal of this study was to determine if STEM knowledge would increase the number of students considering a career in a STEM field, and if that would change their engagement in the classroom and their choice of future classes.

11 am Lisa D. Williams Reid 102
Annandale, Virginia
Northern Virginia Community College

Facilitator: Alyx Demers

The Effects of Participating in Plant-People Activities on General Biology College Students

Lecture and lab materials focusing on people-plant relationships were developed. The lecture method, two short assessments and out-of-class assignments, a drawing exercise, and a plant portfolio were used to capture student interest. No change was found in student interest in plant-related topics over the course of this project. However, student ability to identify common woody plants and vines significantly improved after developing the plant portfolio. Instructor motivation increased.

12 pm Jennifer Temple Library - Room 1151 (Innovative Learning Studio)
Glendive, Montana
Dawson Community College

Facilitator: Ronald Pfeifer

Teaching with Multiple Intelligences in College Anatomy and Physiology

This research was based on multiple intelligences and learning styles from Howard Gardner. The goal of this research was to see if there was an impact of incorporating multiple intelligences on student learning. Data was collected from pretests, posttests, delayed tests, surveys, written interviews, journaling, and colleague observations to determine if there was an effect on student understanding, long-term memory, attitude and motivation as well as teacher attitude and motivation.

1 pm Kyle Mark Casper Reid 101
Rochester, MN
Lincoln K-8 School

Facilitator: Jolene Kayser

Increasing Student Achievement in Science Through the Use of the 5 E Instructional Method

Experts consider science inquiry the best practice in science education. The purpose of this study was to determine the effect of 5 E learning cycle inquiry-based units on student attitudes and content acquisition in science. Grade eight students received the treatment, a 5 E unit on matter, following a unit of traditional direct instruction methods. Data was collected through attitude surveys, assessment scores, standardized test scores, interviews, and reflections.

Friday, July 10, 2015

1 pm Brooke K. Laundon

Reid 102

Brooklyn, NY

The Berkeley Carroll School

Facilitator: Adam Van Zee

Creating Authentic and Relevant Science Curriculum through Project-Based Learning

By participating in project-based learning (PBL), students have the opportunity to construct their own understanding through explorations of open-ended questions. This project examines the effects of PBL on relevant and authentic science content. Students explored Newton's Laws of Motion and created exhibits that connected the laws to an urban design feature in New York City. Findings revealed students developed strong connections between their city and the real-world applicability of physics.

3 pm Annie Reichelt

Library - Room 1151 (Innovative Learning Studio)

Ammon, Idaho

Hillcrest High School

Facilitator: Michael Haiderer

Effects of Gamification: Analyzing Student Achievement, Mastery and Motivation in Science Classrooms

Gamification has been shown to increase achievement, mastery and motivation in courses. This study examined the effectiveness of implementing gamification. Test and quiz scores were analyzed as well as survey and interview data were examined to determine effectiveness of the model. The main focus of the study was to determine if gamification increased achievement, mastery and motivation as initial research suggested.

1999 Graduates

Paul Andersen, Bozeman, MT
Edward Barry, Sacramento, CA
Richard Dees, Billings, MT
Maureen Driscoll, Butte, MT
Janet Erickson, Helena, MT
Beth Farrar, Rapid City, SD
Kerry Friend, Cayucos, CA
Jonathan Hanson, Big Fork, MT
Melissa Henthorn, Turah, MT
Kevin Klawonn, Lennox, SD
Nancy Males, Mansfield, TX
Wayne Mangold, Plevna, MT
David McDonald, Sidney, MT
Joy-Lyn McDonald, Sidney, MT
Josey McLean, Great Falls, MT
John Miller, Billings, MT
Randall Morgan, Ketchikan, AK
Kelly Morrow, Kalispell, MT
Marjorie Robbins, Morton, IL
Lisa Rubright, Manhattan, MT
Peggy Taylor, Farmington, NM
Shannon Walden, Fort Benton, MT
Martin Wells, Taylor Mill, KY

2000 Graduates

Randall Carmel, Millersburg, OH
Beverly DeVore, Meeker, CO
Ivanell George, Houston, TX
Jeffery Greenfield, Shepherd, MT
Mark Halvorson, Sidney, MT
Tom Hennard, Stavanger, Norway
Steven Lockyer, Conrad, MT
Ann Lukey, Alberta, Canada
Lisa Mahony, Bozeman, MT
Craig Messerman, Missoula, MT
Kathleen Napp, Scottsdale, AZ
Sandy Shutey, Butte, MT
Lisa Snyder, Chetenne, WY
James Temple, Glendive, MT
Melanie Vinion, Wooster, OH
Chrystal Wells, Taylor Mills, KS

2001 Graduates

Robert Beese, Gardiner, MT
Rodney Benson, East Helena, MT
Jeffrey Berg, Auburn, MA
Lawrence Bice, Cottonwood, AZ
Penny Long Blue, Ellsworth, KS
Kathy Brown, Taft, CA
Daniel Campbell, Big Timber, MT
John Etgen, Belgrade, MT
Sharon Fox, Great Falls, MT
Ashton Griffin, Goldsboro, NC
Taylor Hansen, Bozeman, MT
Deanna Hill, Alberta, Canada
Richard Lahti, Fergus Falls, MN
Sanford MacSparran, Logan, UT

Bradley Piroutek, Belleville, KS
Rebecca Reno, Havre, MT
David Robbins, Nairobi, Kenya
Jack Schoonen, Dillon, MT
Wendy Sink, Burton, MI
Clinton Stephens, Escalante, UT
Kathleen Thorsen, WI

2002 Graduates

Ronald Abarta, Chehalis, WA
Shannon Bowen, Strasburg, VA
Peter Bregand, Fullerton, CA
Pamela Duncan, Woodstock, IL
Leslie Griffen, Rohnert Park, CA
Mary Jane Goebel, Rapid City, SD
Jody Hurd, Helena, MT
Tom Huston, Vale, OR
Kevin Kapanka, Kenton, OH
Lloyd Magnuson, Butte, MT
Deanna Mazanek, Athena, OR
Todd Morstein, Lakeside, MT
Melissa Newman, Dutton, MT
Chris Ottey, Bozeman, MT
Robert Pendzick, Canfield, OH
Mary Slack, Wheaton, IL
Michelle Snyder, Athena, OR
Michele Thomas, Bakersfield, CA
Kerby Winters, Vale, OR

2003 Graduates

Cyndie Beale, Fairbanks, AK
John Scott Beaver, Talpa, TX
Amy Berg, Auburn, MA
Eric Berg, Auburn, MA
Nikki Bethune, Sapulpa, OK
Bruce Bourne, Seeley Lake, MT
Kevin Bowman, Jackson, OH
Corbin Brace, Waterville, ME
Kelly Cameron, Ridgefield, WA
Ralph Carlson, Hilmar, CA
Corinne Chavern, Pittsburgh, PA
Susan Choman, E. Wenatchee, WA
Tom Cabbage, Great Falls, MT
Sandra DeYonge, Rye, NY
Sharon Dotger, Raleigh, NC
Phyllis French, Douglasville, GA
Michele Geisler, Rutland, VT
Michael Gregory, Pinedale, WY
Robin Hehn, Roundup, MT
Kathy Howe, Houston, TX
Jack Julian, Cairnbrook, PA
Linae Kendall, Saunemin, IL
David Lee, Taylorville, NC
Brita Lien, Alberton, MT
Eric Matthews, Bozeman, MT
Diane Mayer, Bozeman, MT
Birgitta Meade, Decorah, IA
Linda Moule, Claremont, CA

Susan Olsen, Brownsville, PA
Ryan Prnka, Skagway, AK
Rob Smith, Marengo, IL
Sonja Steffan-Squires, Lancaster, CA
Jim Striebel, Corvallis, MT
Nicole Trombetta, Duluth, GA
Melody VanderWeide, Grand Rapids, WI
Jeffery Wehr, Inverness, MT
Tim Ziegler, Stowe, VT

2004 Graduates

Kimberly Atkins, Annandale, MN
Christopher Cox, Buffalo, WY
Kelley Davis, Monkton, MD
Kirsten DeHart, Houston, TX
Patricia DiEduardo, Lewiston, ME
Terry Edinger, Trabuco Canyon, CA
Mary Margaret Eraci, Lombard, IL
Randall Farchmin, Menomonee, WI
Dona Furrow, Jackson Center, OH
Larry Gursky, Roy, WA
Emmylou Harmon, Kremmling, CO
Penny Juenemann, Two Harbors, MN
Loren Kane, Natick, MA
Robin Kent, Missoula, MT
Dan Kloster, Longmont, CO
Karen Krieger, Bozeman, MT
Deanna Meyer, West Jordan, UT
Lee Moss, Orangeville, UT
Michael Mulligan, Brazil
Katharine Murphy, Ogden, KS
DeAnn Neal, Midvale, UT
Jeannie Paszek, Reno, NV
Glenn Peterson, Greeley, CO
Kim Popham, Lolo, MT
Mary Porter, Melrose, MA
Gordon Powell, Cortland, OH
Chuck Shepard, Saltsburg, PA
Bernie Smith, Colstrip, MT
Dorothy Smith, Colstrip, MT
Scotty Stalp, Germany
Kim Walker, Johnson, KS
Ericka Wells, Jackson, WY
Jeff Youker, Placerville, CA
Brian Zeiszler, Elko, NV

2005 Graduates

Marc Afifi, Seaside, CA
Christine Bergholtz, Kenai, AK
Matt Bilan, Elgin, IL
Andy Broyles, Aberdeen, SD
Brendan Casey, La Mesa, CA
Peggy Collins, Dudley, MA
Andrew Conger, New Orleans, LA
Michelle Cullen, Valdez, AK
Richard Davis, Frazier, MT
Eric Dougherty, Newport, NC
Brian Edlund, Benson, MN

2005 Graduates - Continued

Rachel Endelman, Monroe, WA
Monica French, Salt Lake City, UT
Nelson Fuamenya, Hunan, China
Ricarda Hanson, Ashland, MT
Kelley Hoffman, Beaver Dam, WI
Diane Holloway, Osaka, Japan
Steve Huffman, Honolulu, HI
Cathy James-Springer, West Indies
Roby Johnson, Yuma, CO
Ryan Kapping, Wadena, MN
Nicole Kirschten, Newfield, NY
Anita Linder, MT. Zion, IL
Brad Loveday, Alamo NV
Justin Lovrien, Sioux Falls, SD
Leslie McDaniel, Memphis, TN
Carla McFadden, Oroville, WA
2005 Graduates (Continued)
Valdine McLean, Lovelock, NV
Leslie McDaniel, Memphis, TN
Carla McFadden, Oroville, WA
Valdine McLean, Lovelock, NV
Chris McNabb, Ganado, AZ
Jomae Mertz, Parker, Co
Eric Miller, Athens, OH
Lelia Mitchell, Brighton, MA
Mark Nevala, Klamath Falls, OR
Kristina Newman, Swanton, OH
Helga Pac, Bozeman, MT
Lori Peterson, Polson, MT
Lander Purvis, Bozeman, MT
Chris Putzler, Kalispell, MT
Margaret Rossignol, Boulder, CO
Matthew Rubin, Saugus, CA
Katherine Saylor, Fall City, WA
Tonya Shepherd, Pineville, LA
Chris Spera, Dixon, IL
Susan Steckel, Winchester, IL
Zachary Stroker, Columbia
Becky Sundin, Baker City, OR
Christine Sundly, Great Falls, MT
Brian Swarthout, Bozeman, MT
Harold Taylor, Bidwell, OH
Neysa Thiele, MT. Zion, IL
Erin Trame, Ann Arbor, MI
Josh Underwood, Tollesboro, KY
Travis Vandenburg, Independence, MO
Jennifer Werda, Plymouth, NH
LeAnne Yenny, Bozeman, MT

2006 Graduates

Cheryl Abbott, Palmer, AK
Stacie Laducer Blue, Fargo, ND
Larry Boyd, Marysville, WA
Rich Calhoun, Lakeville, CT
Chuck Campbell, Russellville, AR
Dawn Carson, Shepherd, MT
Alicia Cepaitis, Fort Collins, CO
Sue Counterman, Littleton, CO

Randy Daniel, Huntsville, AL
Yvette Deighton, Sparks, NV
Lindsay Forys, White, PA
Greg Gaffey, Beloit, WI
Amanda Gilbreath, Madison, AL
Tara Hall, Golden, CO
Laura Hauswald, Seattle, WA
Lauren Hinchman, Charlevoix, MI
Laura Holmquist, Bigfork, MT
Joanna Hubbard, Anchorage, AK
Margie Huber, Gahanna, OH
Ken Mager, Oak Forest, IL
Michael Magno, Monroe, NT
Steve McCauley, Boulder, MT
Kevin McChesney, Reynoldsburg, OH
Rebecca Mentzer, Columbus, OH
Kathy Meyer, Apple Valley, CA
Sherry Miller, West Coxackie, NY
Gina Monteverde, Winthrop, WA
Leslie Morehead, Leslie, TX
Lori Ann Muchmore, Lolo, MT
Troy Nordick, South Jordan, UT
Kenny Peavy, Kuala Lumpur, Malaysia
Rhonda Phillips, Saskatchewan
Vasanth Prasad, Tamilnadua, India
Craig Richards, Calusa, CA
Brad Shuler, Elk Ridge, UT
Carla McFadden, Oroville, WA
Brad Shuler, Elk Ridge, UT
Diane Ripollone, Garner, NC
Brad Shuler, Elk Ridge, UT
Brian Sica, Idaho Falls, ID
Chris Straatman, New Holland, SD
Bonnie Streeter, Whitefish, MT
Brian Sullivan, Great Falls, MT
Michael Telling, Boulder, MT
Paul Tinger, Akron, OH
Genevieve Walsh, Bozeman, MT
Molly Ward, Bozeman, MT
Amy Washtak, Bozeman, MT
Deb Williams, Ames, IA
Rick Wyman, Hardin, MT
Besty Youngman, Phoenix, AZ

2007 Graduates

Serena Ayers, Springfield, NJ
Jason Barr, Charlotte, FL
Lindsay Bartolone, Chicago, IL
Lesley Chappel Bunch, Palmer, AK
Lisa Carpenter, Shepherd, MT
Mark Calhoun, Tucson, AZ
Jenifer Ceven, Avon, MA
Tonya Chapweske, Miles City, MT
Stacey Dobrosky Cool, Merced, CA
Victor Dalla Betta, Kalispell, MT
Bradley Deacon, Montoursville, PA
Dale Dennler, Cresco, IA
Bruce Dudek, Ashland, MT
Brooke Durham, Reynoldsburg, OH

Jane Fisher, Kingston, NY
James Flora, Pleasant Hope, MO
Jonathan Frostad, Olympia, WA
Kimberley Garner, Anchorage, AK
Jeffrey Gaston, Anchorage, AK
Kelly R. Gorski, Kelly, WY
Jeff Grom, Belgrade, MT
Angela Haas, Gardiner, MT
Marie Akers Hamaker, Cincinnati, OH
Lisa Hawkins, Taejon, South Korea
Kelly Hayden, Bozeman, MT
Shelia Higgins, Bentonville, AR
Bernard Hoczur, Daytona Beach, FL
Linda Jones, McLaughlin, SD
Julianne Kent, Bradenton, FL
Alexa Knight, Grants Pass, OR
Karla Laubach, Kingston, WA
Catherine Le, San Jose, CA
Rebekah Levine, East Burke, VT
Jean Lewis, Jackson, WY
Cooper Mallozzi, Leadville, CO
Jason Martin, Houston, TX
Jeffery Moll, Haverhill, MA
Michelle Marcil-Spicer, Houston, TX
Stephanie Parker, Tucson, AZ
Jacki Pealater, Willits, CA
Stuart Perez, Redfield, KS
Lisa Pingrey, Custer, SD
Cary Rosillo, Jupiter, FL
Patrick Simmons, Chesterfield City, VA
Michael Sitter, Polson, MT
Brian Stiff, Billings, MT
Rebecca Tolzman, Bozeman, MT
Nina Tyree, Alexandria, VA
Peggy Van Valkenburgh, Peterborough, NH
Michelle Vitko, Norwich, CT
Bryanna Vogt, Craig, CO
Christy Ware, Newtown Square, PA
Sharon Welter, Golden Valley, MN
Jenine Rued Winslow, San Diego, CA
Emily Wrubel, Peterborough, NH

2008 Graduates

Steven Alexander, Canton, NY
Jenelle Bailey, Wenatchee, WA
Marlessa Benson, Appleton, WI
Jennifer Brashear, Brunswick, GA
Matthew Bryant, Memphis, TN
Christopher Carucci, Boston, MA
Jennifer Crow, Mundelein, IL
Deborah Dilloway, Fairway, KS
Tracy Durish, Clarion, PA
Andrew Gelman, Westbrook, ME
John Getty, Bozeman, MT
Molly Godar, Rochester, IL
John Gordon, Weidman, MI
Paul Halfpop, Hardin, MT
Martin Hudson, Hannacroix, NY
Jill Hughes-Koszarek, Hartland, WI

2008 Graduates - Continued

Louise Jones, Naperville, IL
Tim King, Glide, OR
Jeffery Klipstein, Estes Park, CO
Sara Koffarnus, Westminster, CO
Jonell Prather, Missoula, MT
Charles Reade, Sacramento, CA
Laura Ritter, Royal Oak, MI
Franz Ruiz, El Cajon, CA
Kristina Sappenfield, Eagle, CO
Eric Sawtelle, Whitefish, MT
Donald Selusnik, Delavan, WI
Lisa Skilang, Marion, IA
Linda Smith, Missoula, MT
Kathryn Solberg, Sisseton, SD
Jennifer Swan, Sherman Oaks, CA
Angela Swanson, Rockford, IL
Nathan Whelham, Bothell, WA
Laura Wick, Palmer, AK
Kathleen Woldtvedt, Cut Bank, MT
Jaime Wolfe, Saginaw, MN
Wendy Worrall, Abbotsford, BC
June Wozny, Elkhorn, WI

2009 Graduates

Phillip Ammann, Wilmot, SD
Jenni Vee Andersen, Helena, MT
John Bell, Bozeman, MT
Callan Bentley, Annandale, VA
Carolyn Clark Bielser, Dillon, MT
Terry Carlsen, Walla Walla, WA
Aimee J. Chlebnik, W. Yellowstone, MT
Shelly Chrismon, Yoakum, TX
Christopher Cimino, Citrus Heights, CA
Brett Damerow, Hutchinson, MN
Natalie L. Davis, Livingston, MT
Meg DeAntoni, San Diego, CA
Jenny Derks-Anderson, Eugene, OR
Thelma Devlin, Dededo, Guam
Lilliam Edmon, Kamuela, HI
Ayn Eklund, Webster City, IA
Steve Eversoll, Kalispell, MT
Richard Fillerup, Driggs, ID
Thom Flinders, Holderness, NH
Elizabeth Fracchia, Glen Falls, NY
Doug Frost, Salen, NJ
Stacie Fry, Buenos Aires, Argentina
Victoria R. Ginsburg, Sandy, UT
Rob Greenberg, Chapel Hill, SC
Jenny S. Heckathorn, Valdez, AK
Patti Jelinek, Memphis, TN
Suzanna Johnson, Auburn, CA
Carlie J. Jones, Renton, WA
Michael E. Joyce III, Oak Bluffs, MA
Leslie C. Karpiak, Des Plaines, IL
Daniel Kinsey, Harlem, MT
Ron Koczaja, Fairbanks, AK
Lucy C. Karwoski Korpi, Holland, MI
Anton Kortenkamp, Monticello, MN

Thomas Kozikowski, Frostburg, MD
Kelly Kramer, DeForest, WI
Karen Kuchar, Naperville, IL
Jason Laducer, Belcourt, ND
Lon LaGrave, Baumholder, Germany
Am L. Manhart, Jackson, WY
Scott D. Masarik, Brussels, WI
Jean Philip Mathot, Irvine, CA
Rory Newcomb, Tallinn, Estonia
Lacy Noble, Three Forks, MT
Loralyn O'Kief, Valentine, NE
Lau Olsen, Sao Paulo, Brazil
Leslie Pierce, Barrow, AK
Mike Plautz, Missoula, MT
Ronald P. Ramsey, Sewanee, TN
Julie Kallio Robinson, Deerfield, MA
Laurie K. Rugemer, Bozeman, MT
Bruce Alexander, Sinclair, Bermuda
Todd M. Samson, East Helena, MT
Cathy Stierman, Dubuque, IA
Steve Sundberg, Moline, IL
Nathan Talafuse, Billings, MT
Lucinda Fisher Talsma, Sheldon, IA
Howard Tenenbaum, La Jolla, CA
Tana Verzuh, Durango, CO
Joe Le Weaver, Marion, NC
Patricia J. Weaver, Halifax, PA
Lisa M. Weeks, Eagle Lake, FL
Christine West, Haugan, MT
Erin Wilson, Honolulu, HI
Joe Wright, Hollis, NH

2010 Graduates

Aimee Flavin Artigues, Crested Butte, CO
James T. Ausprey, East Machias, ME
Carol Jane Baker, Billings, MT
Cheryl A. Barrientos, Denville, NJ
Susan H. Barton, Big Sky, MT
Robert David Baughman, Moss Point, MS
Randall Jay Berndt, Rosholt, WI
Susan Berrend, Salt Lake City, UT
Allen R. Bone, Pablo, MT
Christy Bone, Missoula, MT
Larene Bowen, Lame Deer, MT
Donna Brayfield, Springfield, IL
Linda Briggeman, Missoula, MT
Kelly P. Broderick, Bradenton, FL
Rebecca B. Burg, Dixon, MT
Katherine Burke, Helena, MT
Kara Ann Burrous, Sugar Land, TX
Anjali Devi Chandran, Napa, CA
Erika Christianson, Bozeman, MT
Jann C. Clouse, Missoula, MT
Stanley B. Covington, Beijing, China
Michelle A. Cregger, Chewelah, WA
Carrie Jo Dagg, Fairfield, IL
Quinn Michael Daily, Carbondale, CO
Bonnie E. Daley, San Francisco, CA
Ann Dannenberg, Newtown, MA

Tracy Ann Dickerson, Corvallis, MT
Aaron Eling, Sandy, UT
Stacey M. Ellis, Polson, MT
Dawn Nicole Estrella, Union City, CA
Janet C. Fenker, San Jose, CA
Devon M. Flamm, Hardin, MT
Michael J. Flamm, Hardin, MT
Emily M. Ford, Boyce, VA
Dennis Fulkerson, Lisbon, IA
Joshua Gates, Wilmington, DE
Cherri Gerber, Kelowna, British Columbia
Tim Germeraad, Flossmoor, IL
Lisa C. Green, Boyce, VA
Paula J. Groenveld, Harrisburg, SD
Jean Marie Kron Hagler, Savage, MT
Stephanie A. Hall, Rosebud, MT
Lisa Dawn Hart, Crested Butte, CO
Amy L. Haverland, Poesta, IA
Angie Hewitt, Bozeman, MT
Kathy Pickens Hirst, Ashland, MT
Seth A. Hodges, St. Michaels, AZ
Miranda Hollow, Charlo, MT
Katie E. Hubbell, Naperville, IL
Deb L. Hughes, Andalusia, AL
Dora M. Hugs, Pryor, MT
Cheryl Hugs, Pryor, MT
Thomas A. Ippolito, Coatsville, PA
Cathy L. Jamison, Wake Forest, NC
Sara Elizabeth Jay, Bozeman, MT
Pamela Kaatz, Sechelt, British Columbia
Margaret Kane, Prescott, AZ
Renee Kelch, Ronan, MT
Bonnie J. Keller, Blacksburg, VA
Rose Kent, South Royalton, VT
Lorna Sue Lange, 29 Palms, CA
Erin Kelly Lynch, Bozeman, MT
Mary L. Maier, Missoula, MT
Patrice Malamis, Rochester, IL
Dan McGee, Belt, MT
Amanda McGill, Clinton, MT
Stuart Miles, Asheville, NC
Tami A. Morrison, Polson, MT
Mary K. Osman, Newark, DE
Gerald Ott, Elverson, PA
Beth Peterson, Highland Park, IL
Alfred T. Poirier Jr., Dover, NH
Sarah S. Poletto, Naperville, IL
Anne Powers, Kingston, Ontario
Page-Marie Price, Lolo, MT
Holly Prull, Bend, OR
Tina L. Raeder van Stirum, Gonzales, CA
Nancy Farrington Reid, Natick, MA
Paul E. Robinson, Valhalla, NY
Susan R. Rolke, Rindge, NH
Melinda K. Rothschild, Parker, CO
Jeff Salter, Salt Lake City, UT
Scott Schafer, Weston, WI
Michael A. Schoenborn, Seattle, WA
Catherine Schuck, Missoula, MT
Debra Lea Schwake, Lodge Grass, MT

2010 Graduates - Continued

Justin L. Smith, Coatsville, PA
Karen M. Smith, Lame Deer, MT
Nichole Spindler, Bradford, PA
Jennifer Stadium, Bozeman, MT
James Stuart, Bozeman, MT
Bryna Thomson, Dallas, TX
Bill Thornburgh, Carmel, IN
Charlotte Waters, Vancouver, WA
Michelle Weber, Dubuque, IA
Nancy Wells, Saltsburg, PA
Heide Westwood, Hardin, MT
Sue White, Derby, KS
Gail Whiteman, Bozeman, MT
Deanna Rose Zerbe, Lodge Grass, MT

2011 Graduates

Melanie S. Acker, Ulysses, PA
Patti Rae Bartlett, Seeley Lake, MT
Jennifer Moore Bernstein, Portland, OR
Lindsay Paige Bower, Middleburg, VA
Brennan Brockbank, Fairfax, CA
Deborah Brown, Nyssa, OR
Nancy Lee Bryant, Burlington, NC
David Buck, Dixfield, ME
Joel Burgener, Lima, MT
Sandra J. Climenhaga, Albion, NY
Sarah Marie Connor, Kalispell, MT
Joann C. Dayton-Wolf, Kingston, NY
Joe DeLuca, Almere, The Netherlands
Joyce Dooley, Bentonville, AR
Katherine Echazarreta, Vienna, VA
Kendra Eneroth, Spokane, WA
Jonathan R. Ernst, Wentzville, MO
Eric Esby, West Hills, CA
Lane A. Fischman, Antioch, IL
Brandon Fritz, Williamsburg, IA
Jeremy Fuller, Wolfeboro, NH
Sheri Gates, Nagykovacsi, Hungary
Ashley Gillespie, East Helena, MT
Tanya Gordon, Boise, ID
Amy M. Gramling, Hillsdale, MT
Heather M. Grant, Ojai, CA
Christopher Green, Painesville, OH
Christopher Gunderson, Absarokee, MT
Hadley Hentschel, Carbondale, CO
Susanne L. Hokkanen, Matteson, IL
Megan Hopkins, Naperville, IL
Daryl Allan Holst, Bangkok, Thailand
Jasper Howell, Afton, WY
Cheryl A. Hudson, Tifton, GA
An'juli Johnson, Billings, MT
Darren Kellerby, Anchorage, AK
Marty King, LeGrand, IA
Shannon Knodel, Belgrade, MT
JoDe Knutson-Person, Bismarck, ND
Jacob L. Lame, Colorado Springs, CO
Maya A. Lampic, Chicago, IL
Karen L. Lund, Huntingdon, England

2011 Graduates (Continued)

Kathryn Madden, Beaufort, SC
Margaret K. Magonigle, Hanna, HI
Danny Mattern, El Dorado, KS
Emily McKenna, Belding, MI
Christian R. Mills, Rawlins, WY
Amiee L. Modic, Katy, Texas
Christopher G. Monsour, Tiffin, OH
Richard Montoya, Eureka, MT
Erik Nickerson, Boulder, CO
Cameron Novak, Fredericksburg, VA
Aaron Olmanson, Golden Valley, MN
Bradley Pederson, Belle Plaine, MN
Timothy D. Percoski, Bloomfield, CT
Janet E. Perry, Ashland, ME
Alanna Piccillo, Palisade, CO
Paul Pierre, Nassau, Bahamas
Erin Quintia, Columbia Falls, MT
Jonathan C. Reveal, Nashville, TN
Mary Seabrok Ritter, Bethlehem, PA
Seth Robertson, Renton, WA
Peter Rust, Wilmington, DE
Robin Scardino, Hong Kong, China
Jessica F. Schultz, Culdesac, ID
Ralph E. Spraker, Jr., Columbia, SC
Marcie Steen, Mount Vernon, OH
Joyce Striclyn, Terre Haute, IN
Nancy Hoggard Talley, Tarboro, NC
Shaun Terry, Lovelock, NV
Katherine Theobald, Alexandria, VA
Marta Toran, Boone, NC
Jeanne Torske, Broadus, MT
Audrey Urista, Winston, OR
Shari F. Ward, Ashland, ME
Tom Wellnitz, Johns Creeks, GA
Matthew Wigglesworth, Honolulu, HI
Jennifer Williams, Honolulu, HI
Andrea Gissing Yordan, Philadelphia, PA

2012 Graduates

Jessica Anderson, Deer Lodge, MT
Tanya M. Anderson, Hardin, MT
Tom Anderson, Twin Valley, MN
Donald James Asbury, Lame Deer, MT
Kathy Aune, Frenchtown, MT
Kristian Basaraba, Sherwood Park, Alberta
Luke Beall, Fairview, PA
Adam Bohach, Clinton, IA
Jason Boss, Bellflower, CA
Angie Brist, Traer, IA
Jodi L. Brokaw, Hardin, MT
Robin A. Cameron, Jackson, WY
Lorilyn A. Chapman, Livingston, MT
Katherine Chesnutt, Boone, NC
Joanna Chierici, East Windsor, NJ
David Chimo, Corvallis, MT
Natasha L. Cleveland, Frederick, MD
Erin Colfax, Morristown, NJ
Jordan Lacy Cook, Lakewood CO

Matthew Cornelius, Lingle, WY
Jennifer Courtney, Mason, OH
Karla B. Cramer, Florence, MT
Tom Davies, Weston, WI
Kristina Davis, Potomac, MT
Jeffrey Edwin DeGlopper, Milwaukee, WI
Joshua Dennis, Dover, PA
Kim Devore, Manhattan, MT
Heather G. S. Deitz, Regina, Canada
Kaye Ebelt, Missoula, MT
Nathan R. Fairchild, Redding, CA
Jessica Felchle, Billings, MT
Amy Flindt, Roseville, CA
Ryan Foley, Great Falls, MT
Rebecca Fulk, Steamboat Springs, CO
Jason Getz, Woodberry Forest, VA
Kellina Gilbreth, Colorado Springs, CO
Vanessa Nashee Green, Lawrenceburg, TN
Lori Hacck, Kremmling, CO
Charlotte Hagerman, Eagar, AZ
Shawna Halsey, Billings, MT
Angela J. Hammang, Dillon, MT
Michelle Hammond, Lake Worth, FL
Jeremy Harder, Big Sky, MT
Yvette Strandell Hart, Hastings, NE
Annie Hesterman, Westminster, CO
Brian Holtzhafer, Orefield, PA
Brandon Honzel, Missoula, MT
Angie Hopwood, Superior, MT
Laura Hovland, Bozeman, MT
Jessica Hughes, Arlee, MT
Douglas Martin Janeczko, Goshen, NY
Jennifer Jones, Ogallala, NE
Alan Kalf, Lexington, MA
Mark Kellogg, Camdenton, MO
Batya Kinsberg, Eaglewood, NJ
Leah M. Knickerbocker, Bozeman, MT
Karyn Ann Kretschmer, Genoa City, WI
Charla Lake, Ronan, MT
Mary Larson, Polson, MT
Ann Leach, Leavenworth, WA
Candice M. Lommen, Mapple Valley, WA
Hilary M. Lozar, Roman, MT
Hermes Lynn, Livingston, MT
Jill D. Mahoney, Fairfax, VA
Sibley A. Malee-Ligas, Arlee, MT
Kasey Marks, Missoula, MT
Cara Marlowe, Dubai, United Arab Emirates
Joy Mayer, Green Bay, WI
Colleen Marie McDaniel, Houston, TX
Miles McGeehan, Manhattan, MT
Randy Metzger, Orwigsburg, PA
Robert Moyer, Birstol, PA
Susannah Spradlin Murphy, Frenchtown, MT
Jennifer Narimatsu, Bremerton, WA
Kimberley Orr, Lethbridge, Alberta
Alisha Pablo, Hot Springs, MT
April Peterson, North Bay, Ontario
Sadie Peterson, Silver Springs, MD
Melinda Reed, Florence, MT

2012 Graduates - Continued

Marcie Reuer, Grande Cache, Alberta
Joe M. Ruffatto, Great Falls, MT
Marco Santarelli, New Fairfield, CT
Michele Schaub, Crow Agency, MT
Anne Farley Schoeffler, Hudson, OH
Rachel Screnar, Bozeman, MT
Matthew J. Shargel, Walnut Creek, CA
Jennifer Sherburn, Hesperia, MI
Aaron Shotts, Mechanicsburg, PA
Carolyn Slagle, East Helena, MT
LaCee Small, Ashland, MT
Dale Spady, Westlake Village, CA
Stephanie Statema, Park Ridge, IL
Lauren Stepro, Norfolk, VA
Lisa Russell Stevens, Crow Agency, MT
Reba K. Storm, Hardin, MT
Melissa Anne Sullivan, Carlsbad, CA
Clinton Swartz, Middleburg, PA
Robin Tillman, Cranbrook, Canada
Brandy L. Thrasher, Missoula, MT
Lizabeth A. Townsend, East Helena, MT
Molly Underwood, Redwood City, CA
Jay Walls, British Columbia, Canada
Tylene M. Walters, Manhattan, MT
Paula Wang, Poplar Island, MD
Lee Weldon, Missoula, MT
Rachel M. White, Belgrade, MT
Wendy D. Whitmer, Spokane, WA
Beth Workman, Bainbridge, OH
Rachel Lee Zupke, Seattle, WA

2013 Graduates

Georgia Alvarez, Vancouver, WA
Kelly Arnold, Clarksville, TN
Suzanna Barnhart, La Crosse, WI
David Bates, San Francisco, CA
Charles Benson, Bellevue, NE
John Bishel, Port Allegany, PA
Dana Blomquist, Helena MT
Andrew Bright, Gabrills, MD
Tina Brothers-Tillinger, Helena, MT
Jennifer Bruns, Juliaetta, ID
Joe Clark, Carson City, NV
Carrie Clement, Helena, MT
Judith Coats, Eldorado Del Mar, CA
Crystal Cornwell, Ronan, MT
Brooklyne Coulter, Strasburg, CO
Joe Crider, Helena, MT
Emily Currier, Helena, MT
Janeen Curtis, Darby, MT
Jennifer Curtis, Rockport, ME
James Davies, Ridgefield, WA
Caleb Dorsey, Loyalton, CA
Pamela Drescher, Culver City, CA
Amy Dushane, Yuba City, CA
Lori Egan, Thornton, CO
Holly Faris, Hamilton, MT
Laura Feldkamp, Wichita, KS

Tyler Ferebee, Pawnee City, NE
Jason George, Notus, ID
Lance Gerow, Riyadh, Saudi Arabia
Dale Glass, Potomac, MD
James Glynn, Chicago, IL
Shannon Greco, Princeton, NJ
Rachel Grey, Winnsboro, LA
Taylor Green, Red Lion, PA
Michael Greenhoe, Kandern, Germany
Courtney Harrell, Peyton, CO
Michael Helseth, Yakima, WA
Robin Henrichs, Mc Cook, NE
Benjamin Heyde, British Columbia
Alice Hinck, Broadus, MT
Jennifer Hood, Dayton, TN
Jeanna Jaspersen, Montrose, CO
Beverly Jaworski, Burtonsville, MD
Tamara Jendro, Helena, MT
Susan Johnson, Southbury, CT
Shari Juroszek, Bozeman, MT
Kevin Kenealy, Nevada, IA
Linda Kocian, Elk Grove Village, IL
Amanda Kozak, Ashland, OH
Scott Lannen, Phoenix, AZ
Robert Lee, Shelby, MT
Brett Lehner, APO, CA
Heather Leiberg, Helena, MT
Martha Lord, Hamilton, MT
Doug Lymer, Houston, TX
Dalton McCurdy, Fairfield, CT
Julie McDonnell, Oak Park IL
Heather McWhorter, Las Vegas, NV
Murry Metge, Great Falls, MT
Ashley Milbrandt, Helena, MT
Julie Morris, Peotone, IL
John Nilsen, Dhahran, Saudi Arabia
Laura Patch, Brevard, NC
Brian Phillips, Rabun, GA
Dorcella Plain Bull, Crow Agency, MT
Mary Ragusa, Bloomingdale, IL
Jayanthi Ramakrishna, Chennai, India
Chris Reidburn, Watertown, SD
Stacey Rhodes, Waynesville, MO
Andrea Robbins, Buhl, IN
Christopher Rocheleau, Southington, CT
Pablo Rojo, Brooksville, FL
Sally Sanders, Tallahassee, FL
Josie Shern, Bozeman, MT
Charles Shields, Greencastle, ID
Judith Silva, Franklin, ME
Michelle Slaughter, Lincoln, CA
Matthew Sloan, Glenview, IL
Adam Smith, Sioux Falls, SD
Charles Strobino, APO, Germany
Angela Swank, Livermore, CA
Chris Swiden, Watertown, SD
Sarah Tabor, Bozeman, MT
Kenneth Taylor, Bozeman, MT
Carol Teintze, Bozeman, MT
Zachary Thomas, Mountainburg, AR

Jacob Thompson-Krug, Omaha, NE
Kristina Troge, Doral, FL
Dina Tucker, Austin, TX
Jennifer Vaughn, Houston, TX
Carrie Wager, Medina, OH
Cindy Watson Pottebaum, Winterset, IA
Mary Ann Watt, Concord, NH
Irene Wilcox, Clearwater, MN
Danielle Wilczak, Clearwater, MN
Suzanne Wilson, Olympia, WA

2014 Graduates

Joshua Abernethy, Asheboro, NC
Deanna Bailey, Huntington, VT
Mariann Bernard, Escondido, CA
Marcia Blome, Omaha, NE
James P. Bratka, Gahanna, Ohio
Dean Brown, Medicine Hat, Alberta
Cameron Burns, Spokane, WA
Joshua Caditz, Carpenteria, CA
Irene Catlin, Portland, OR
Matthew Clay, Webb City, MO
Kara Lee Coates, Spring Creek, NV
Justi Crofutt, Pinedale, WY
Hank Davis, Asheville, NC
Coreen Ann Dingler, Lufkin, TX
Rebecca Love, Dobson Kinsman, OH
David Dooling Jr., Alamogordo, NM
Daniel DuBrow, Chicago, IL
Chance Duncan, Dardanelle, AR
Camilla Dusenberry, Helena, MT
Stephanie Fields, Ocean City, NJ
Shari Generaux, Oakland, CA
Elaine Gibbs, Valrico, FL
Sara Danielle, Grotbo Helena, MT
Lily Guajardo, Cedar Park, TX
Matthew Haack, Wilmington, DE
Jacquelyn Haas, West Bend, WY
Jennifer Heisler, Kent, OH
Kyle Herdina, Winona, MN
Analea Hronek, Red Lodge, MT
William Iliff, Sacramento, CA
Angie Jenkins, Independence, IA
Heidi Kirsten Jessen, Yuma, AZ
Christine Jones, Vancouver, WA
Alecia Jongeward, Bozeman, MT
Carisa E. Ketchen, Kalispell, MT
Katherine Koessler, Maplewood, MN
Terina Konrad, Heyburn, ID
Chris Koper, Koper Reading, PA
Marka Latif, Bozeman, MT
Scott Lilley, New Canaan, CT
Tanya Long, El Cajon, CA
Quincie R. Lords, Belt, MT
Nicolai Love Jackson, MO
Lisa Lundgren Gainesville, FL
Robert Lynch Edgewater Park, NJ

2014 Graduates - Continued

Logan D. Mannix, Helena, MT
Krista Martens, West Glacier, MT
Matthew McClellan, Lake Charles, LA
Doralee McCormick, Cincinnati, OH
Ashley McGrath, Helena, MT
Casey S. McHugh, Missoula, MT
Candace McMullan, Fishers, IN
Dawn Mercer Turner, Huntsville, AL
Mark H. Meredith, Dardanelle, AR
Mary Mingels, Somerset, ME
Heather Mitchell, Houlton, ME
Stephen Mohr, Austintown, OH
Jeffrey Noblejas, Oakland, CA
Eric Todd Ojala, Lolo, MT
Sherry Otruba, Roanoke, VA
Kal Pokley, Port Austin, MI
Michael Poser, Hobson, MT
Lynn Powers, Bozeman, MT
Katie Redmond, Chicago, IL
Randy Zane Rowland, Sheridan, WY
Christina Anne Scott, Gold Bar, WA
Kaylee Christine Shaw, Kalispell, MT
Ahmed Shawli, Bozeman, MT
Carol Lee Smith, Van Alstyne, TX
Jennifer A Smith, Colorado Springs, CO
Garold Sumner, River Falls, WI
Michael H. Tang, Irvine, CA
Melissa Thompson-Krug, Blue Eye, MO
LeAnn Thongvanh, Des Moines, IA
Rachel Tinkler, New Berlin, WI
Donna Raquel Tully, Kanéohe, HI
Jessica Radl Vasquez, Cedar Rapids, IA
Christina L. Wallace, Thornfield, MO
Jocelyn Wells, St. John, New Brunswick, CA
Clinton Whitmer, Poplar, MT

2015 Science Education Symposium Notes



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