My name is Dr. Alison Beharka, Instructor of Science Education at UNI. This fall I accepted the position as the new supervisor of the Science Education Resource Center. Formerly, I was an Assistant Professor and Field Experience Coordinator out of the Department of Teaching. I have also taught for six years at Malcolm Price Laboratory School as a middle school instructor. While at Price Lab, I facilitated an after school science program. I am very excited to join the SERC team and work with all the students and faculty here that make our kit-based science program possible. Having received the Carver Grant, I am looking forward to expanding and enhancing our kits. Additionally, I am excited to learn more about how our kits align with the Next Generation Science Standards.

My name is Dr. Lawrence (Larry) Escalada, Professor of Physics and Science Education. I took over as Chair of Science Education in August of 2013. I have been at UNI since 1997 with undergraduate and graduate degrees from Kansas State University. I taught high school physics in Topeka Kansas and now teach introductory physics and physical science courses as well as secondary science methods courses. My research involves developing high school physics curricula (e.g. PRISMS PLUS) and conducting professional development for secondary science teachers in addition to providing outreach opportunities (e.g. State of Iowa Physics Competition) for students. I look forward to working with you!

Dr. Escalada: Science Education Chair

Former Science Education Chair Retires

Dr. Cherin Lee, previously the UNI Science Education Chair, has retired. After 32 years of serving students, faculty, and the UNI community, Dr. Lee looks forward to spending more time relaxing and gardening. Dr. Lee will be greatly missed by all and was always well-liked for her constant smile and genuine concern for everyone around her. Congratulations, Dr. Lee, and enjoy your retirement!
Return to Staff Members

**Jordan Wilmes**, of West Des Moines, IA is returning to the SERC during his last semester at UNI. Jordan is a Biology Education major with endorsements in chemistry and physical science. He will be student teaching in the Des Moines area this spring. His future plans are to teach high school biology or chemistry. He also wishes to pursue a Master’s Degree in either Administration or Science Education. Jordan has been very involved with STEM outreach through the Department of Science Education here at UNI. He has also served the Cedar Valley Community as a STEM Ambassador. We wish Jordan the best of luck as he leaves UNI this winter to pursue his teaching career!

**Maddie Hartman** is returning for her senior year here at UNI as a Biology Education major who has a love of reptiles. In her free time, she likes to rock climb and takes part in the UNI Ballroom/Swing club. Once she graduates from UNI her dream job would be teaching middle school science somewhere. When asked what she likes about UNI, her response mirrors the thoughts of many other students. “What I like about UNI is the beautiful campus and how nice all of the people are.”

New Members Recruited to the SERC Staff

**Robin Livermore** is a junior Chemistry Teaching major from Coon Rapids, Minnesota. She is joining us for her first semester here in the SERC this fall. Robin is excited to join the team and get to know more about kit-based science and become involved with local teachers. She also works in the Governor’s STEM Advisory Council office at UNI. She is involved with the chemistry club, biology club, and women in physics club. Robin aspires to teach middle or high school science in the Minneapolis area. “Even though I am far from home, UNI has provided opportunities for me to grow and develop my passion for teaching science.”

**Emily Dutton** is a sophomore Chemistry Teaching major with endorsements in biology, physics, and earth science. She is an officer of the Student Affiliates of the American Chemical Society here at UNI, as well as a member of the National ACS. Originally from Davenport, IA, Emily hopes to teach in a high school setting wherever opportunity takes her. “UNI is a great place to discover who you are and who you want to become.”

**Emily Bachmeier** is a junior Math Education major with Spanish and Biology minors. She is a member of the Student Admissions Ambassadors, campus ministries, and participates in the Northern Iowa Symphony Orchestra at UNI. Emily is excited to hopefully teach middle school math in the near future, somewhere in the Midwest. However, she loves to travel and would enjoy teaching practically anywhere. “UNI has provided me with so many opportunities. I could not have asked for a better, more supportive community to help me in pursuit of my goals.”

**Taylor Johnson** started her freshman year at UNI this fall as a Biochemistry (Pre-Pharmacy) major with French and Creative Writing minors. From Indianola, IA, Taylor is a member of ACS here at UNI. Taylor hopes to become a pharmacist after getting her Master’s Degree. “UNI has been a great first step in my science career and I have met so many amazing people who will help me along the way.”

T.C. shares a quote about Science:

“What is a scientist after all? It is a curious man looking through a keyhole, the keyhole of nature, trying to know what’s going on.”

-Jacques Yves Cousteau
A Word from Science Education Chair and SERC Supervisor

We hope that your year has gotten off to a great start! We look forward to working with you during this 2014-15 academic year. The latest news for the SERC include:

- Dr. Alison Beharka is our new SERC supervisor.
- SERC student staff have been expanded to 6 students.
- Recently Awarded Carver grant will allow use to expand and update FOSS science kits to address Iowa Core and NGSS with workshops being planned for teachers to implement kits next year.
- Engineering is Elementary teacher guides will be added to our inventory and available for checkout soon.
- UNI Ramps & Pathways PreK-2nd Grade materials will be added to our inventory and available for checkout soon.

Stay tuned for further developments! Feel free to contact us with any questions and/or comments.

Larry Escalada (Lawrence.Escalada@uni.edu) & Alison Beharka (Alison.Beharka@uni.edu)

Acquisition of Carver Charitable Trust Grant

UNI Science Education was recently awarded a Carver Charitable Trust grant to expand and update the FOSS science kits consistent with the Iowa Core and the Next Generation Science Standards for checkout to teachers through the SERC beginning the 2015-16 academic year. Funds from the grant will also provide workshops for teachers to be able to implement the kits in their classrooms beginning the summer of 2015.

Kit Check Outs Now on Trimesters

As those of you who have reserved kits so far this year may know, we recently switched all kit check-out time periods to trimesters. This switch was done to allow teachers and students more time with the kits and to streamline kit organization here at the SERC. Changing to trimesters will not affect the availability of kits per trimester or the procedures with which kits are checked out.

However, one way to make sure this shift does not cause a lag in the arrival of kits to you is to make sure the kits you are using are leaving your schools to come back to us by the date listed on the Van Transport Green Sheets that are on every box of the kit. The date we put on those sheets is the last possible day the boxes should be leaving your school.

This year’s trimester dates are as follows:

- 1st Trimester: 8/21 - 1/7
- 2nd Trimester: 11/17 - 2/13
- 3rd Trimester: 2/23 – 5/22

As always, thank you for your attention to return dates for the kits and your patience with the SERC.

“The true sign of intelligence is not knowledge but imagination.”

-Albert Einstein
Notice:
Materials must be CLEANED & DRIED before returning them in the kit.
ALSO: You must replace any items in the kit which have been used during any experiment or which have been damaged during use. If you do not replace these items you will be fined accordingly for the missing and/or damaged items.

SERC Spotlight: Lori Wurtz

My name is Lori Wurtz and I grew up in Cedar Falls and attended Cedar Falls High School. I graduated from UNI with a BA in Home Economics in Business and spent many years in retail management. I also spent many years as a computer help desk technician at John Deere and worked as a procurement specialist for a local company ordering parts from Asian and domestic suppliers and coordinating overseas shipments and purchase orders. I started work here at UNI in Science Education close to five years ago. In addition to my other administrative duties, I assist in supervision of our SERC student staff members and place all orders to replenish our kit materials. This entails making sure that materials are ordered from the correct supplier, order tracking, check in, returns and updates to our master inventory spreadsheets for each supplier. I also invoice all schools that check out our kits and follow up on any accounting/billing inquiries. If you have any questions about invoices or billing, feel free to email me at Lori.Wurtz@uni.edu.

Additional Resources and New Materials

In addition to the supplies within the kit, there are also additional guidelines online to assist in kit usage. Here are some links that may be of use to you in order to look over possible kits you wish to use and to explore more possibilities with the kits.

Foss Website:

STC (Carolina) Website:
http://www.carolinacurriculum.com/stc/

Insights Website:
http://www.kendallhunt.com/insights/

Just remember to refer to the SERC web page to know which kits we offer from each publisher. Also, if you are trying to access the online resources for a specific kit, register yourself as a teacher on the website and they will send you a password to use to have access to further resources.

There are also new materials available for checkout within the SERC.

Engineering is Elementary

Engineering is Elementary is an engineering curriculum for Grades 1-5. See http://www.eie.org/ for details. Engineering is Elementary teacher guides which can be used with some science kits will be available for checkout by teachers soon.

UNI Ramps and Pathways

Ramps and Pathways is a physical science curriculum for children PreK-2 grade developed by the UNI Regents' Center for Early Development Education. See http://www.uni.edu/rampsandpathways/ for details. Ramps and Pathways materials will be available for checkout by teachers soon.

Dates to Send Kits Back to the SERC

The mint green Van Transportation Information sheets that are in a plastic sleeve on every kit should be referenced for kit return dates. See the highlighted portion in the image to the right. This is the last possible date the kit can leave your school building to ensure it is returned to the Science Education Resource Center on time for the due dates. When we set up the trimester dates, the last date listed is the day the kit is due back in the SERC. In the past we have had issues receiving the kits back on time so we have a new policy going into effect to help things running smoothly for the new school year. If you have any questions in regards to this please feel free to contact SERC staff members.
The positive feedback we receive is what helps us know that these kits are making a difference in the classroom, and keeps the staff going to continue to provide this great service to you. We do also receive feedback in regards as to how we can improve our services for you. We take your feedback seriously and like to know what we can do to continue to maintain this service in the best fashion to better benefit you, the teachers and students.

Many of the comments were in reference to the cleanliness or condition of the kit. To address this we need to reach out to all who use these kits. We have a very limited time to receive, clean, and restock the kits and get them back out the door to the next teacher who has requested it. In order to keep them in better shape, we have applied a new notice to all kits. We hope that this will help keep kits cleaner and more organized.

“This kit created a wonderful learning experience for my students.”
- Tina VanDenHul on FOSS: Structures of Life Kit

“I love this kit! And so do my kids :))” - Paula Miller on FOSS: Populations and Ecosystems Kit

Thoughts from Fellow Teachers on Our Services

Reservation Set Up for 2014-2015

We had a great response to getting reservations set up in a timely fashion. The response was overwhelming with reservation numbers higher than previous years, and yet we were able to, for the most part, fulfill every one’s first choice for their kit selection.

If any of you who are reading this newsletter wish to be involved in receiving and utilizing the kits we offer, please contact the SERC via any forms of communication listed on the back page of the newsletter. That way we can make sure to get your current contact information so you can set up your reservations for next school year.

For those teachers who have used, and continue to use our services, please share this information with fellow teachers you know so science can become a hands on adventure in ore classrooms in the area.
Featured Kits!!

Elementary Science Kit: GEMS: Eggs, Eggs, Everywhere

“Eggs, Eggs, Everywhere not only has students explore eggs and the animals that come from them, but their form and function, the way they move, and the relationship of how they move in relation to their shape. Students investigate further into nesting and parenting behaviors, habitats, and the life cycles of some animals that lay eggs. Eggs, Eggs, Everywhere provides opportunities for students to sort, graph, and explore number sense, patterns, and statistics. Introduce your students to the wonder of eggs through engaging activities, inviting stories, and dramatic play.” - Carolina Curriculum

This kit is recommended for Pre K-1st grade. Meets four National Standards, so keep this kit in mind when setting up lesson plans for next school year.

Middle Science Kit: FOSS: Human Brains and Senses

“In this course, students will have the opportunity to think about the fact that they have a brain, and to engage in activities that explore some of their routine, but outlandishly complex, brain activities seeing, feeling, hearing, smelling, tasting, and remembering. Students investigate how the brain and senses acquire, interpret and respond to information. An emphasis on vision and touch leads to investigations of the structure and function of the sensory organs and the brain itself. Imaging techniques (MRI and EEG) are used to reveal brain anatomy and activity. Students also explore learning, memory, and sensory dysfunction." - FOSSWeb

It is broken down into 9 Investigations that help students make the connections between their senses and the brain. Keep this kit in mind for Life Science section of your school year. This kit is recommended for 6th to 8th grade science classes.
Middle Science Kit: STC: Floating and Sinking

“In Floating and Sinking, students begin by simply making and testing predictions about whether a set of objects will sink or float. This investigation serves as an introduction to inquiries regarding the effect weight, size, and shape have on whether an object floats or sinks, which challenge most students’ conceptions. Students are introduced to a spring scale, and use it to measure the weight of their objects and the buoyant force on fishing bobbers. Students explore the effect of shape on buoyancy in depth by manipulating a ball of clay and testing multiple times to determine whether it sinks or floats. This prepares them for a design challenge in which they design a clay boat that will float and hold a specific capacity of marbles. By recording and analyzing their own data, students become aware of surprising phenomena—some “floaters” are heavier than some “sinkers”, and large objects are not always heavier than smaller objects. Students are challenged to apply prior knowledge to the inquiries in each lesson to make predictions and solve challenges.” -Carolina Curriculum

This kit is recommended for 4th and 5th grade science classrooms. Enjoy watching your students form hypothesis and then experiment to see what sinks and what floats.

Elementary Science Kit: DSM: Length and Capacity

“Tap your students’ natural desire to know how big? how far? how much? with this introduction to measurement. Students explore linear measures of length, width, and height by ordering sets of sticks, rectangles, and blocks according to relative size. Meter sticks and metric rulers are used to measure classroom distances. Students compare and measure the capacities of different-shaped containers in liters and milliliters. Not only do they find out how far and how much, they learn the importance of uniform standard units of measure. In addition to proficiency with measuring tools and seriation, they gain the invaluable skill of estimation. (12 Activities)” -Delta Education

This kit is recommended for 2nd and 3rd grade levels, and comes stocked with all the supplies needed to explore and compare the things around your students in your classroom.