

Death by...

Too Much of a Good Thing

Inside:

Scouting For Water & Kids In Science
2012 Section Chairs & Committee
International Year of Chemistry
Did You Know?

(inset) GIS Participants check for presence of proteins
in Halloween candies. Photo by Anna Cavinato

10th Annual Girls In Science ACS outreach through EOU

Celebrations for **National Chemistry Week** (NCW) in La Grande were particularly special this year as it marked the tenth annual Girls in Science (GIS) event! Ninety-three girls in grades six through eight from schools in eastern Oregon and southern Washington came to the Eastern Oregon University (EOU) campus on Saturday October 22nd to solve yet another mystery: ***What was ingested at a Halloween party that could have caused one of the guests to die?***

Basing experiments around the NCW theme ***Chemistry – Our Health, Our Future!***, members of the EOU Student Member Chapter and chemistry faculty worked with students and faculty from departments across campus to design a potential crime scene at a Halloween party where one of the guests died of “too much of a good thing!”.

The girls investigated the case using chemistry, biology, and digital imaging skills to sort out whether a murder had actually occurred. Among many challenging activities, they checked the identity of a mysterious powder found at the scene, they analyzed Halloween candies for potential presence of peanuts and sports drinks for sugar content. The girls had an opportunity to learn about diabetes and food allergies and ultimately understand the impact that chemistry has on our lives!

The event was sponsored by the **ACS Richland Section** with \$500 funding, the **Northeast Oregon Area Health Education Center** who took care of registration, food and T-shirts for the girls in attendance, and Eastern Oregon University. The GIS event was organized by ACS Richland Section’s Dr. Anna Cavinato; contact Anna for more information acavinat@eou.edu.



SCOUTING FOR WATER QUALITY IN THE GRAND RONDE

Six scouts from **Troop 511** waded into the Grand Ronde River (which flows through La Grande, Oregon) on October 4 to collect water samples and measure the water quality.

Scouts measured the water temperature on-site and that evening they tested the samples for pH, phosphate, hardness, turbidity, chloride, nitrate, and salinity.

Test kits were provided in part by the chemistry department at **Eastern**

Oregon University; MicroLab Inc. provided other test kits and standards.

The results were submitted to the **International Year of Chemistry Global Water Experiment**—check out their results at

<http://water.chemistry2011.org/web/iyc>.

For additional information, contact **Richard Hermens** at (541) 963-6716 or richard.hermens@me.com.

Scout Leader Edwin Baird looks on while Scouts Andrew Branen, Evan Foster, and Travis Stewart from Troop 511 conduct water quality tests.



2012 OFFICERS

Meet your newly elected ACS Richland Section officers and Committee Chairs. They volunteer their time and expertise to help make the Section the best it can be. Please offer any ideas (and time) you have to make 2012 a great success. Thank you to our outgoing officers: Dave Merrill (Treasurer for 3 years) and Aruna Arakali (Chair).



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2012 COMMITTEE CHAIRS

Please note that volunteers are still needed to help. If you have an interest in either chairing or participating on a committee, please contact David or the committee chair directly. We welcome your participation!

Standing Committee chairs appointed by the Section Chair are as follows:

PROGRAM	FRANNIE SKOMURSKI
MEMBERSHIP	POSITION OPEN
NOMINATION/AWARDS	ARUNA ARAKALI
BYLAWS	SAM BRYAN
PUBLIC RELATIONS	SANDY FISKUM & STEVE KROGRUD

STAY TUNED...

Additional committees will be forming soon!

If you want to participate contact the Section Chair David Heldebrant at:
(509) 372-6359 or David.heldebrant@pnnl.gov.

HOLIDAY PARTY FUN

What happens when you mix members from the ANS, ACS, IEEE, ISA, ASME, and HPS in December? A holiday party!

The Richland Section was one of several co-sponsors of the Holiday Party organized by the American Nuclear Society-Eastern Washington Section held on December 13 at the Shilo Inn, Richland. The IEEE, ISA, ASME, and HPS were also co-sponsors of the party.

Activities started with a fun meet-and-greet bingo game matching participants with a unique talent/characteristic. This was followed by an excellent dinner buffet and then a talk by **Robert Larson, Commissioner of the Port of Benton**. Larson presented slides of the numerous activities the Port of Benton has been involved with including land development and incubator buildings (from Prosser to Richland) as well as the new USSS Triton Sail Park in Richland. It was eye-opening to learn all the ways the Port of Benton is working to enhance employment opportunities in the area.

It was fun to meet the local members of our sister societies. Nearly **20 door prizes** were awarded at the end of the evening. Look for this activity next year—there is discussion of making this an annual event.

GREETINGS FROM SECTION CHAIR



Dear Colleagues:

Thank you for the opportunity to serve as the 2012 elected chair for our local chapter of the American Chemical Society. To further our mission of bringing greater visibility to chemistry careers in the Tri-Cities and eastern Oregon, I will need your help!

As you know, the ACS is the largest scientific professional society in America. We pride ourselves on our professional and personal interest and support of each other and our communities. For this reason, we will continue with our community outreach, seminars, scholarships and educational programs.

Last year our chapter not only was involved in our local communities, but we also supported the **International Year of Chemistry**. A big “thank you” goes to our officers, committee members and volunteers for generously donating their time and talents that made last year a great success! The officers of this organization are here to support the ACS, but more importantly, you – our members.

I hope to see more of you this year at our meetings, science cafés, social events and educational outreach programs. Getting involved is easier than you think, and more rewarding than you can imagine.

I’m looking forward to another great year and hope to get better acquainted with you and other new colleagues.

Thank you, *Dave*

P.S. Remember, if you are not part of the solution, you are part of the precipitate!

UPDATE YOUR CONTACT INFO

It is time to update your contact information (e-mail, phone, and address) at the ACS website (national). It is easy! Just call the ACS membership office at **1-800-ACS-5558** or **login with your member ID** and update your profile.



<http://acs.labworks.org>

Richland Section American Chemical Society
Sandy Fiskum, Editor
Email: sandy.fiskum@pnnl.gov

ADIEU FROM 2011 SECTION CHAIR



Dear Fellow Members,

I hope you had a wonderful holiday season. I would like to take a moment and reflect on the activities in 2011 and share the pride I feel for the Richland section. 2011 was unique because the year started with celebrations in support of the **International Year of Chemistry (IYC)** and continued with various IYC activities throughout the year including the making of wall-size Nobel Laureate quilts. Other highlights of the section included the **Nuclear Science Merit Badge** training for boy scouts, **Girls in Science** project, Paper/Poster presentations at **ACS National Meetings**, **Chem-Luminary awards** for 2010 projects, **National Chemistry Week** contest, and many more activities. All of these activities were possible due to the support from our section members and volunteers. I am very thankful to all the members who participated in making these activities a great success. The calendar of events and details of activities were readily made available on the local section website. I hope you had an opportunity to read the details and stay tuned with the calendar of events. I want to acknowledge the tireless efforts and support of committee members in making 2011 a successful year for the ACS Richland section. My heartfelt thanks go to a great team. I urge all members to come forward and share their ideas and talents, and provide their support to Dr. David Heldebrant and his team. The local section needs each and every member to help bridge the generation gap and motivate students to excel in chemistry and science. Thank you all for a wonderful year!

Best Regards, *Aruna*

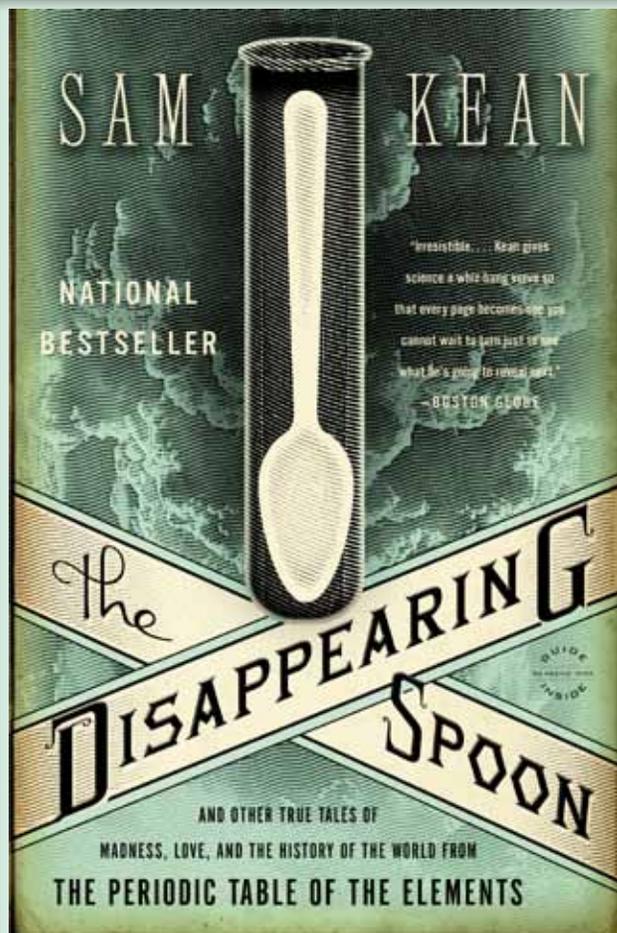
NUCLEAR SCIENCE MERIT BADGE



*Merit Badge to
be Offered*



Richland ACS Section member Sandra Fiskum is organizing a training event in March for Scouts and other youth (13 to 17 years old) interested in learning about nuclear science. During the 2-Saturday course, experts in nuclear science fields will teach material as outlined in the **Boy Scouts of America Nuclear Science merit badge** book. Most activities are interactive and will be conducted in a small group setting. This experience should be fun, interesting, and rewarding. At the conclusion of this 2-day class, each Scout will have completed the requirements to earn the Nuclear Science merit badge. Girl Scouts may be awarded an activity badge by the Girl Scouts of America. Non-scouts will receive a certificate of completion. Contact Sandy at (509) 628-1424 or sandenf@msn.com for more information. Dates: March 3 and March 10.



DID YOU KNOW?

The Periodic Table of the Elements is one of our crowning scientific achievements, but it's also a treasure trove of passion, adventure, betrayal, and obsession. Sam Kean pens fascinating tales about every single element as they play out their parts in human history, finance, mythology, conflict, the arts, medicine, and the lives of the (frequently mad) scientists who discovered them in *The Disappearing Spoon*, (published by Little, Brown and Company, 2010).

Why did Gandhi hate iodine (I, 53)? Why did the Japanese kill Godzilla with missiles made of cadmium (Cd, 48)? Why did tellurium (Te, 52) lead to the most bizarre gold rush in history? Why did a little lithium (Li, 3) help cure poet Robert Lowell of his madness? And how did Gallium (Ga, 31) become the go-to element for laboratory pranksters?" Kean explores the answers to these questions (and many more), fusing

science with the classic lore of invention, investigation, discovery, and alchemy, from the Big Bang through the end of time.

This is a delightfully crafted book filled with easily-grasped analogies and humor for making scientific points. It makes chemistry intriguing and interesting not only for the chemist, but also for students and non-chemist types. It is highly recommended by your newsletter editor (as well as a host of others as it is now a National Bestseller).

The Disappearing Spoon was recently released in paperback, electronic copy, and is available from any bookstore. Want to learn more? Listen to the NPR discussion with author Kean:

<http://www.npr.org/templates/story/story.php?storyId=128388187>

it will surely whet your appetite.

Additional information is at <http://samkean.com/>.

INTERNATIONAL YEAR OF CHEMISTRY 2011 IN REVIEW



Reception Celebrating the IYC 2011 Showcases Rich Chemistry Heritage



EOU students, faculty and ACS Richland Section board members at the IYC Celebration at WSU-TC.



ACS Richland Section board members and Committee Chairs in front of the six ChemLuminary awards received in 2011 for 2010 activities at the IYC Celebration at WSU-TC.

Photos by Richard Hermens



One of two quilts made by college students displayed by ACS Richland Section Members from left to right: Sandy Fiskum, Steve Krogsrud, Karen Grant, Aruna Arakali, and Phillip Koech.

Photo by David Merrill



The second of two quilts on display at the IYC Celebration November 18.

Photo by Richard Hermens

The Richland Section celebrated the IYC with a reception at the Washington State University campus atrium in Richland on the 18th of November, honoring students, Fellows, and 50- and 60-year members. The reception attracted about 75 local and regional students and chemists. Highlights included:

Posters presented by the Eastern Oregon University (La Grande) students showing their recent work

Display (and judging) of the two Nobel Laureate quilts prepared by students and faculty from Columbia Basin College and WSU-TC

Recognition of ACS Fellows: Jean Futtrell, Bruce Kay, Yong Wang, Janet Bryant, and Gregg Lumetta

50-year Member Recognition: John Campbell, Richard Hermens, David Dodd, Mathias Lardy, David Lini

60-year Member Recognition: Richard Nightingale (see In-Memory)

The posters reflected the students' interest in chemistry research projects and their enthusiasm for pursuing higher learning goals. In sharing their research, the students learned more about the rich chemistry heritage in our region and met talented people and well-wishers. The poster presentations were coordinated by Professor Anna Cavinato.

The quilt preparations were organized by Professor Karen Grant of CBC/WSU-TC (see Nobel Laureate Quilt story in this newsletter). On behalf of ACS, the Richland section gave the chemistry ambassador button and sash to the recognized individuals. **KIDS Discover Chemistry** magazine copies were also distributed for handing out to school students.

A big thank you goes to the efforts of Richland Section committee members and volunteers for planning this IYC event. The Richland Section was proud to honor the Fellows/service members/students, and recognize their accomplishments and contributions to chemistry.

NOBEL LAUREATE QUILT

How do you knit together the amazing chemistry discoveries of the last 100+ years and college chemistry students? With a quilt of course!

Chemistry students at Washington State University/Tri-Cities Campus and Columbia Basin Community College volunteered to make quilt squares depicting a Nobel-prize winning discovery.

The students prepared quilt squares in recognition of the **International Year of Chemistry (IYC)**. Each square depicted the year the Nobel Prize was awarded, the scientist's name, an illustration of the discovery, as well as the student's name.

All of this had to fit into a 9x9 inch square. Other than that, the students could use their creativity and imagination to bring the essence of the discovery to visual clarity.

Two quilts were prepared (1901 -1959 and 1960-2010) each displaying 51 Nobel Laureates and the CBC/WSU/IYC logos and ACS Richland Section sponsor. The quilt production was a unique chemistry project displaying the Nobel laureates' contribution to chemistry/mankind. The quilt squares

were judged at the IYC reception on November 18, 2011.

Prizes were awarded for the best illustration of the discovery (**Anna Workman**, \$100); most artistic (**Jesus Romero**, \$50); and two prizes for the most creative (**Suzanne Kaye** and **Brittany Chase**, \$50 each).

This project was coordinated by Professor Karen Grant, member of the Richland Section ACS with help from **Jan Hylden** (CBC adjunct instructor). The ACS Richland Section helped sponsor the project by providing funding for the fabric, quilting, and prizes.

The quilts will eventually be auctioned off to raise funds for chemical instrumentation and supplies supporting chemistry students at both schools.

This project also represents a way for the Richland ACS Section to help the chemistry programs at both WSU-TC and CBC at a time when the state has drastically curtailed funding for higher education.

SCIENCE FOR KIDS



Saturday Science for Kids Participants in Ontario, OR. Photo provided by Anna Cavinato

What a better way to celebrate the end of the **International Year of Chemistry (IYC)** than to share our passion for chemistry with children in Ontario, Oregon!

The event took place on Saturday, November 12th at the **Four Rivers Charter School** and was geared at reaching out to minority students in the area although it was open to any boy or girl in grades 6 through 8. Twenty-three children participated in the day's activities that revolved around the four themes of IYC: energy, environment, materials, and health.

Activities related to energy included testing materials for building batteries with the greatest voltage and understanding electrical circuits. Activities related to the

environmental theme included learning about the effects of UV rays and testing UV rays on light sensitive beads (the children really enjoyed making bracelets out of them!) as well as learning about surface tension and how to mop up oil spills.

Participants also explored memory metals, learned about polymers in diapers, and tested bouncy balls at different temperatures including when immersed in liquid nitrogen.

Finally, health activities included measuring the caloric content of nuts and testing the conductivity of skin in the presence and absence of salt. The day concluded with a magic show organized by the student members. Children received a T-shirt, lunch,

and copies of the IYC ACS publications ***Celebrating Chemistry***.

Jackie Grant, EOU Native American Admission Counselor, played a major role in coordinating the program. Additional support was provided by staff of the **Northeast Oregon Area Health Education Center** who helped advertising the program and with registrations and all logistical arrangements.

The event was made possible by an IYC grant from the **American Chemical Society Undergraduate Program** to the **EOU Student Member Chapter** for \$750.

Questions? Contact Dr. Anna Cavinato at acavinat@eou.edu.

2012 COMING EVENTS

MARCH 25-29

ACS National Meeting
San Diego, CA

ACS RICHLAND BOARD MEETINGS

6-7:30pm All Members are welcome!

February 8 TCIC210

March 14 TCIC 223

April 11 TCIC 223

JUNE Annual Member Picnic

IN MEMORY

Richard Nightingale, 85, died Nov. 18. Richard transferred to the Laboratory in 1965 from General Electric. He was a program manager at the time of his retirement from Battelle in 1991. Richard is survived by his wife Joyce, three daughters, four grandchildren and eight great-grandchildren.

NCW POSTER CONTEST AT CBC

Chemistry students at Columbia Basin College (CBC) used their imagination to develop posters supporting **National Chemistry Week (October 23 – 28)** with the theme **Chemistry – Our Health, Our Future**. Posters needed to point out specific examples of how chemistry is everywhere and is important to our health.

The Richland Section of the ACS supported this effort by funding the first prize (\$25). The winner was selected from 51 entries. Congratulations to **Julie Denise** (1st prize) for her depiction of the **Chemistry of Magnesium**, **Juan Mejia** (second prize) for his illustration of **Water/Oxygen** and **Michelle Munck** (3rd prize) for her presentation of **Shampoo – Healthy Hair for the Future**.

Posters were on display in the CBC Science Building corridors for three weeks. Thanks to **Karen Grant** of the Richland ACS Section for organizing this annual event.