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69TH ANNUAL MID-COLUMBIA SCIENCE FAIR CALL FOR SCIENCE FAIR JUDGES MARCH 7, 2024

Help continue the Richland Section's commitment to STEM education - plus free coffee & scones!

The 2024 fair will be an in-person event, with Judge interviews on Thursday, March 7, 2024, at the Columbia Center Mall. The Richland section has been a proud sponsor of STEM education in the Columbia Basin for many years. In addition to the general judging, the section will need help judging its own award for the best chemistry projects. Please help us judge and identify the best middle school (grades 6-8) and best high school chemistry projects (grades 9-12). Winners will be presented with a certificate of accomplishment and a \$50 cash prize and given an invitation to present at our section's annual social.

The section will be hosting a coffee and scone social for all Local Section volunteers at 8am at the Starbucks kiosk inside the center of the mall before judging begins at 8:30am. We hope to see you there and thank you for your support! More details about the schedule and guidelines for judging are available on the MCSF website at <https://www.midcolumbiasciencefair.org/judges>.

Contact David Heldebrant to be a judge:
david.heldebrant@pnnl.gov



A student discusses her project at a past science fair.

it's easy to volunteer!

The Richland Section chemistry awards are separate from any other award presented by the Mid-Columbia Science Fair (MCSF) and the winners are decided solely by the Richland Section. Therefore, it is not necessary to register as a judge with the MCSF. Simply contact the person heading up the Richland Section's efforts, David Heldebrant david.helderant@pnnl.gov, and meet at the mall Starbucks on **March 7 at 8am**. See you there!

GREETINGS FROM NEW SECTION CHAIR Shirmir Branch



I am honored to serve as a Chair for the members of the Richland Local Section. I am looking forward to an exciting year filled with events to continue sharing chemistry with the community. Please join me in giving our sincerest thanks to our former board members for their continued service and commitment to our local section. A special

thanks to our Past-Chair, Dr. Deepika Malhotra, who successfully guided our section through our 75th year as a local section through excellent leadership and guidance.

As chair, some of my many goals are to expand our efforts on diversity, equity, inclusion, and respect (DEIR) through

collaboration with other local organizations, strengthen connections with other ACS local sections, student chapters and other professional societies, and foster more programs that focus on you, the members, and your families.

The primary goal of this Section and the American Chemical Society is to provide a valuable experience in the chemical enterprise for each of our members and I encourage you to get involved in any way you wish. If you have suggestions and ideas that are helpful to our mission, please do not hesitate to send them to shirmir.branch@pnnl.gov or other members of our executive committee. Look for additional updates at our website acsrichland.org.

FAREWELL FROM PAST SECTION CHAIR Deepika Malhotra



As the past chair, I'm delighted to reflect on the remarkable achievements of our Richland Local Section over the past year. Celebrating our 75th anniversary, we successfully organized various outreach activities, significantly enhancing our focus on diversity, equity, inclusion, and respect (DEIR). Our active engagement in the Tri-Cities community and the creation of virtual events have fostered stronger connections among our members and the wider community. Our anniversary celebrations commenced with a memorable Science Café, where Dr. Sam Bryan shared his recollections and celebrated the Section's rich history.

Our section, supported by the Innovative Project Grant, proudly hosted two notable events. In partnership with the Eastern Oregon University Student Chapter, three experts from the Pacific Northwest National Laboratory shared insights about their careers and opportunities for students. This event highlighted the diversity within the Richland Section and facilitated networking with emerging scientists. The second event, a panel discussion titled "Honoring the History and Rejoicing the Present", was a celebration of our 75th anniversary and aimed to deepen our ties with the local community, paving the way for future collaborations.

Our commitment to DEIR was further evidenced by the "Exploring the Five Senses" event at the Pasco Farmers Market in June, sponsored by the Diversity, Equity, and Respect (DEIR) Grant. This event provided children with hands-on activities to understand the five human senses, enhancing community engagement.

We also organized various virtual events, including the Chemical Safety Science Café with Dr. Robert H. Hill, who led a discussion on safety culture and laboratory incidents. Another highlight was the Science Café with Dr. Glenn Fuller, focusing on the industry's

shift to low-carbon feedstocks and related government policies.

Lastly, thanks to the LS-MEET grant, we hosted three glass-making classes for our members and their families, offering an educational and enjoyable experience in understanding the art and science of glass-making. Our visit to Heron Bluff Winery, owned by Eric and Leslie Hoppe, offered a unique blend of science and leisure, giving participants a chance to explore the vineyards and enjoy guided tastings. The "Eclipse Explorers" event at Columbia Basin College, a collaboration with Eastern Oregon University, further demonstrated our commitment to engaging young students in science.

In partnership with the Younger Chemists Committee of the American Chemical Society (YCC & ACS), we co-organized a series of events focusing on networking, professional development, and a research symposium. These events provided platforms for young chemists to connect, share experiences, and enhance their scientific communication skills.

These initiatives not only commemorated our 75th year but also strengthened our community presence and member engagement, setting a strong foundation for the Richland Local Section's future endeavors. I extend my deepest appreciation to our board members and volunteers whose tireless dedication and selfless efforts have been instrumental in making 2023 a remarkably successful year.

DID YOU KNOW?

Dr. Malhotra will present The Kavli Foundation Emerging Leader in Chemistry lecture at the Spring ACS national meeting. The subject will be *Many Flavors of Carbon Capture Technologies*.

2024 RICHLAND SECTION BUDGET FOR MEMBER INFORMATION



Padmaja Gunda,
Treasurer

Hello, Richland Section Members! I want to present to you the Section's 2024 budget, approved by the executive board.

The Richland Local Section provides a platform for members to connect, share knowledge, and engage in activities

related to chemistry and support various activities

and initiatives that align with ACS's mission of advancing the broader chemistry enterprise such as awards, scholarships, grants, and travel.

The Richland Section's major sources of income are the annual allotment from the national ACS organization (\$8,087), reimbursement from the ACS for section Councilor travel (\$3144), and local section dues (\$1,085). Thank you for the voluntary \$5 contribution you make when paying your annual ACS dues.

ACS Awards/Grants Received this year:

- IPG (Local Section Innovative Project Grant): \$3500
- LS-Meet (Local Section Member Engagement and Enhancement): \$2000
- DEIR (Diversity, Equity, Inclusion and Respect): \$3000

The common activities and expenses of 2024 Richland local section are:

- Meetings and Events
- Educational Outreach
- Professional Development
- Membership Engagement
- Student Involvement
- Community Services
- Publication of Newsletters

Although the overall budget shows a deficit of \$14,169, the Section has adequate carryover funds from previous years to cover this expense.

Please contact me, Padmaja Gunda (pgunda@columbiabasin.edu), if you have any comments and/or questions.

	2023 Actual (12/13/23)	2024 Proposed
REVENUES		
(1) Annual ACS Allotment (plus dues)*	\$8,335	\$8,087
(2) New member commissions	\$75	\$15
(3) Donations, contributions	\$0	\$0
3a) Bequests and/or trusts	\$0	\$0
(4) Rebate from ACS for Councilor travel expenses	\$2,000	\$3,144
(5) ACS Awards or Grants received (e.g., METT, IPG, ACS Inter-Chapter Relations Grant)	\$7,620	\$8,500.00
(6) Program revenue (short courses, lecture series etc.)	\$0	\$0
(7) Local section dues, affiliate dues	\$1,085	\$1,085
(8) Interest, dividends	\$130	\$130.00
(9) Special events and activities	\$0	\$0
(10) Meals (include total meals in revenue)	\$0	\$0
(11) Other revenue (describe and itemize)		
a) AIChE contribution to summer picnic	\$0	\$0
b) Early bird discount for leadership training	\$250	\$250
(12) TOTAL REVENUES	\$19,495	\$21,211
EXPENSES		
(13) Subsidies to subsections, topical groups, or affiliate groups	\$0	\$0
(14) Awards, scholarships, grants, etc.		
a) Travel awards/Registration for ACS student members	\$3,500	\$4,000
b) HS Teacher Grants	\$400	\$500
c) Outstanding Teacher Award	\$100	\$100
d) High School Student Award	\$100	\$750
e) General Awards	\$605	\$605
f) Supplemental Awards	\$200	\$200
(15) Administrative expenses (not including postage, printing, and shipping)	\$34	\$100
(16) Printing, publications, newsletters, meeting announcements, postage		
a) Newsletter	\$1,344	\$1,700
b) Public relations	\$0	\$200
c) Web update	\$65	\$200
d) Miscellaneous	\$0	\$75
(17) Local Meetings (include speakers' expenses)		
a) Speakers	\$0	\$300
b) ACS Picnic	\$0	\$300
c) ACS Annual social	\$7,194	\$5,500
d) Science Cafes	\$626	\$500
(18) Meals	\$0	\$200
(19) Travel subsidies to Councilors	\$2,358	\$2,500
(20) Travel subsidy and fee for Local Section Leadership Conference	\$1,332	\$2,300
(21) Other expenses (describe and itemize)		
a) K-12 outreach	\$243	\$1,000
b) Grant (METT, IPG, other ACS grants)*	\$6,766	\$8,500
c) NCW	\$208	\$500
d) Olympiad	\$200.11	\$500
e) Science Fair and award	\$650	\$650
f) Investigators of Science	\$600	\$600
h) Saturday Science (with CBC)	\$0	\$500
i) Diversity Affairs Committee	\$0	\$200
k) Earth Day	\$0	\$200
l) Project SEED	\$0	\$0
m) Joint society meeting	\$0	\$100
n) Women Chemists Committee	\$385	\$600
p) Government Affairs Committee	\$0	\$100
r) In kind support for WSU/CBC Chemistry Club	\$100	\$400
s) Environmental improvement committee	\$402	\$500
t) Chemical safety day	\$102	\$500
u) Young Chemist Committee	\$0	\$500
(22) TOTAL EXPENSES	\$27,513	\$35,380
(23) EXCESS (DEFICIT)	-\$8,018	-\$14,169

'24 OFFICERS & COUNCILORS

Meet your newly elected ACS Richland Section Officers and Councilors. They are volunteering their time and talents to help make this section inclusive for each and every member. Please help them in any way you can by volunteering your ideas and time to help our events succeed.



CHAIR
SHIRMIR BRANCH
(509) 375-3860
shirmir.branch@pnnl.gov



CHAIR-ELECT
SONIA ANGUIANO
(509) 440-8747
sonia.alcantaranguiano@pnnl.com



PAST-CHAIR
DEEPIKA MALHOTRA
(509) 372-6239
deepika.malhotra@pnnl.gov



SECRETARY
VANESSA DAGLE
(509) 371-6510
vanessa.dagle@pnnl.gov



TREASURER
PADMAJA GUNDA
(509) 542-4685
pgunda@columbiabasin.edu



COUNCILOR
ANNA CAVINATO
(541) 962-3561
acavinato@eou.edu



ALT. COUNCILOR
DAVID HELDEBRANT
(509) 372-6359
david.heldebrant@pnnl.gov

EXECUTIVE COMMITTEE MONTHLY MEETING

The Executive Committee will be hosting its March executive board meeting as a hybrid meeting at the **Richland Public Library**, 955 Northgate Dr, Richland, on **Wednesday, March 13 at 6pm**. Members are encouraged to join to learn more about how the Executive Committee works in order to make our Section work for you. A link to attend the meeting virtually will be sent by email as the date approaches (and will be posted on our website.) For more information, please contact: shirmir.branch@pnnl.gov.

GLASS MAKING EVENT @DB STUDIO

Thanks to a grant from the national ACS, our section's Members and their families were able to enjoy three glass classes from db Studio at Bernard Griffin Winery and Vineyard. We had the opportunity to learn about the glass making process, specifically glass frits which we used to make our art pieces. Thank you to everyone who was able to join. If you would like to learn more about db Studio and the classes it offers, feel free to visit their website <https://dbstudiofusedglass.com>

MAKE PLANETARIUM PLANS @CBC

Thanks to a grant from the national ACS, Richland Section Members and their families are invited to enjoy upcoming planetarium events at Columbia Basin College! These are family friendly and fun events. If you would like to learn more about the planetarium before the shows, please visit <https://www.columbiabasin.edu/planetarium>. A reminder email with an RSVP form will be sent out before show dates at the CPCCo Planetarium. Mark your calendars!

DATES: February 17 & April 20 **TIME:** 12-2pm, shows begin promptly at 12:30pm

IN THE WORKS @MOONSHOT BREWING TOUR

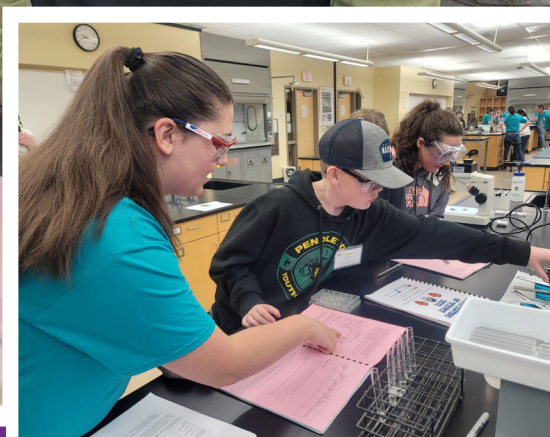
We are excited to be planning a brewery tour and beer tasting event at Moonshot Brewing in Richland. No details are available yet; an email will be sent to the membership as they become available. As always, you can check the "Events" tab of the section's website, acsrichland.org, for the latest information.



INVESTIGATIONS OF SCIENCE IN LA GRANDE



A student investigates a "zombie" in the lab.



The second **Investigators of Science** event was held on the campus of **Eastern Oregon University** of Saturday on November 4, 2023 and attracted 101 participants (all genders) in grades 6-8. This was an exciting day of **hands-on STEM exploration** where participants dived head-first into an engaging science mystery that explored topics in chemistry, biology, mathematics, and computer science. For the first time activities related to human health and performance were also introduced. The investigation involved solving a mystery around a possible **'Zombie Apocalypse'** after a well-known professor started displaying 'zombie like' behaviour after returning from a research trip. Activities in chemistry revolved around the **NCW theme "The Healing Power of Chemistry"** where participants were tasked with identifying the nature of a shiny liquid (a gallium-tin mixture) by determining the melting point. This was to rule out that the zombie like behavior had been

caused by exposure to mercury. Other experiments involved analyzing different powders to identify potential exposure to toxins and a DNA extraction from "zombie flesh". In other rotations, participants built a neuron model, made DNA bracelets, and conducted tests on reflexes and reaction times. **Over 30 volunteers** including members and student members of the **Richland Section**, faculty and staff at Eastern Oregon University and community members helped to organize and run the event. A big thank you to **Northeast Oregon Area Health Education Center (NEOAHEC)** who played a major role in organizing the event. Additional financial support was provided by the La Grande Soroptimists organization. The Richland Section supported this event with \$600 and additional giveaways purchased from ACS. Additional financial support was provided by the **La Grande Soroptimists** organization.

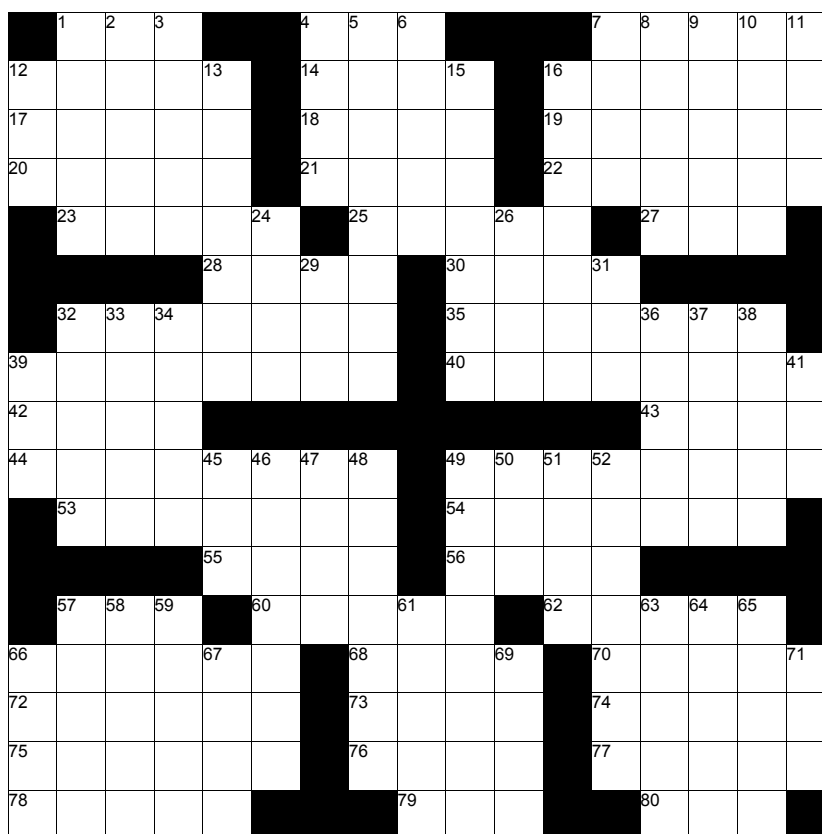
CROSSWORD PUZZLE - ONE WORD: PLASTICS

ABOUT THE AUTHOR Robert Pike is a professor of chemistry at The College of William & Mary. He is an inorganic chemist with interests in Materials for Sensors and Catalysts, Metal-Organic Networks Chemistry, X-Ray Crystallography, and Chemistry Education, in addition to creating crossword puzzles.

One Word: Plastics Robert D. Pike

ACROSS

1. Pester
4. Sprite
7. Hexafluoropropylene-vinylidene fluoride copolymer
12. Polyethylene terephthalate, sometimes metallized
14. Health, beauty & style magazine
16. Controversial 1948 Rossellini/Fellini film
17. Agenda
18. A hazy recollection
19. Moon landing program
20. Latin name
21. Mil. alliance headquartered in Brussels
22. Poly(tetrafluoroethylene)
23. Kind of neighbor
25. ____ Carlo
27. Cable carrier for MLB, etc.
28. Dry river bed
30. Spelling of "Beverly Hills 90210"
32. Captured again
35. What's ____? (A rose is a rose)
39. Quantum description of the electron
40. Polydimethylsiloxane
42. See 24 down
43. Schlepp
44. Polyoxybenzylmethylene-glycolanhydride
49. Veterinarian, often
53. Vision aldehyde, a vitamin A derivative
54. Device that converts information formats
55. Annapolis sch.
56. Gawk at
57. ____-Lev, superconducting effect
60. Put a halt to, in legalese
62. Southern Hemisphere mountains
66. Poly(paraphenylene terephthalamide)
68. Concerning, abbrev.
70. U.S./Israel lobby grp.
72. Mesmerized
73. Golf or tennis tournament
74. Scrimshaw medium
75. Outwits during a chase



© Literate Software Systems

76. Technology prefix
77. Polycarbonate
78. Poly(metaphenylene isophthalamide)
79. Topic of heated debate often, abbrev.
80. Anti anti

DOWN

1. Poly(hexamethylene adipamide)
2. Texas battle site
3. Founder of Microsoft
4. Book i.d.
5. 2,4,6-Triamino-1,3,5-triazine + formaldehyde polymer
6. A dwarf planet
7. Drag on an e-cigarette
8. "Bye now"
9. Costs on the road
10. Polyacrylonitrile
11. Element with no stable compounds
12. Web portal associated with 3 down
13. Continuation of a subscription

15. ____-piece, illustration facing a title page
16. To the side
24. With 42 across, Japanese noodle dish
26. Singer Braxton
29. Long-time W&M prof. & polymer chemist (initials)
31. Common extension for configuration files
32. Sensing method that uses long wavelengths
33. Elicit
34. Key belief
36. Behaved
37. Michael or Mary Tyler
38. Pass through a portal
39. Techno/hip-hop sound
41. Mountain follower
45. Actress Lucy of "Charlie's Angels"
46. Puts one thing into another
47. Catches some rays
48. State of happiness
49. Poly(2-chlorobutadiene)
50. Courses offered by VA Tech, but not W&M, abbrev.
51. Home of the Pac-12 Bruins
52. Lamisil application location
57. Edison home, ____ Park, NJ
58. Yiddish form of Abraham
59. Air freshener brand
61. Equal
63. Sketchy joints
64. Thermosetting polymer glue
65. Poly(vinylidene chloride)
66. Highly sharpened
67. Pinnacle
69. Keto tautomer
71. Nickname for Ms. Nixon of "Sex and the City"

SATURDAY SCIENCE AT COLUMBIA BASIN COLLEGE

The first ever **Saturday Science** event in the Tri-Cities area took place at **Columbia Basin College** (CBC) on Saturday October 14, 2023. The event was titled **Eclipse Explorers** as it coincided with the solar eclipse and provided hands-on activities in physics, chemistry and biology for 50 children in grades 5-8. The day started with a visit to the CBC planetarium where participants first congregated outside to view part of the eclipse through eclipse viewing glasses provided by the organizers. This was followed by a planetarium show and a **real time NASA broadcast of the full eclipse**. Next, participants rotated through hands-on activities learning how microscopes

work and how to use them to observe biological specimens; making mini rockets fueled by hydrogen gas; and exploring lenses and telescopes. The day concluded with a **magic show** provided by the **Eastern Oregon University (EOU) Student Chapter** and a CBC faculty.

The event was very successful and engaging for all. It was made possible by a collaboration between CBC and EOU faculty and students with additional funds provided by a **grant from ACS** and matching funds from the Richland Section. **Over 25 volunteers** (EOU & CBC faculty and students) were involved in the organization and implementation of the science day.



UPCOMING EVENTS

FEBRUARY 17 FAMILY PLANETARIUM PROGRAM

Columbia Basin College Planetarium from 12-2PM

Information: sonia.alcantaranguiano@pnnl.gov

FEBRUARY 22 INTRODUCE A GIRL TO ENGINEERING
Richland Public Library 4-6PM

Information: shirmir.branch@pnnl.gov

MARCH 7 MID-COLUMBIA SCIENCE FAIR JUDGING
Columbia Center Mall at 8AM

Contact David Heldebrant: david.heldebrant@pnnl.gov

MARCH 13 SECTION EXECUTIVE COMMITTEE MTG
Richland Public Library, 955 Northgate Drive at 6PM

Information: shirmir.branch@pnnl.gov

APRIL 20 FAMILY PLANETARIUM PROGRAM
Columbia Basin College Planetarium from 12-2PM

Information: sonia.alcantaranguiano@pnnl.gov

INTRODUCE A GIRL TO ENGINEERING DAY

The Richland Section will be hosting a booth at the "Introduce a Girl to Engineering Day" event to be held Thursday, February 22, between 4 and 6 pm at the Richland Public Library. This free event is open to all girls from 3rd - 12th grades. Here is a website with more information: <https://myrichlandlibrary.libcal.com/event/11719521>

The Richland Section's booth will share a hands-on activity about vapor pressure. If you are interested in helping at the booth, please contact Shirmir Branch, email shirmir.branch@pnnl.gov

**POINT
TO
PONDER**

*I no doubt deserved my
enemies, but I don't believe
I deserved my friends.*

— Walt Whitman

FIND UP TO DATE INFORMATION ON EVENTS & MORE HERE: <https://acsrichland.org>