

The POGIL Inquirer

In The Spotlight Sheila Barbach

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From The POGIL Project Director



Dear Friends,

Greetings from Lancaster, PA! It may still be cold outside, but plans are already underway for our lineup of summer workshops.

Beginning in July, we have four 3-day workshops happening around the country that will energize you in the classroom and introduce you to a community of practitioners who are dedicated to transforming education. Check out our website for the details!

We will also hold our annual Writers' Retreat in July at Seattle Pacific University for those who want to hone their writing skills and create high-quality POGIL activities.

We are also excited to once again be part of the Biennial Conference for Chemical Educators in Oregon (July), and the National Science Teachers' Association conference in Boston (April) and hope to see many of you there.

We still have a few electronic offerings on tap this spring (our book series and our eSeries) and we invite you to contact us if you would like to see a 1-hour web-based session on a particular topic.

Have a wonderful spring, and we hope to see you at a POGIL event this summer!

Richard S. Moog

Upcoming Events

Feb. 26	Washington & Lee Univ., Lexington, VA
Mar. 4	eSeries - POGIL and NGSS
Mar. 28	NW Summit Meeting, Kirkland, WA
Apr. 8	POGIL Book Series - Assessment
May 19	Penn State Univ., State College, PA
May 26	Strake Jesuit Preparatory, Houston, TX
June 10	Utah Valley Univ., Orem, UT
June 10	Ankeny School District, Ankeny, IA
June 20-23	POGIL National Meeting, St. Louis, MO

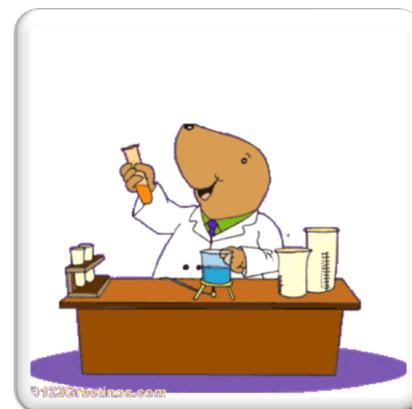
For more information on POGIL workshops, visit www.pogil.org



Ask The Mole

Q: What is the GI of POGIL?

A: The Guided Inquiry (GI) of POGIL is structured inquiry or identifying inquiry. A POGIL activity uses a learning cycle to support students in constructing knowledge about the disciplinary content related to a larger concept or driving question. Both the question and the desired learning outcomes for students drive the design of the activity. The activity structure is designed such that the learning-cycle components scaffold student learning through the activity. Once students complete the activity, they are able to answer the overarching question posed by the instructor as well as construct meaning of new knowledge and understanding. In this inquiry, the instructor no longer takes the role of being the deliverer of information, but rather takes the role of a facilitator of ideas and learning which enables student learning. The guided inquiry and process components are highly integrated within the classroom implementation of POGIL, and the effective implementation of guided inquiry requires the active engagement of students in constructing ideas and mastering material.



Excerpted from *POGIL: An Introduction to Process Oriented Guided Inquiry Learning for Those Who Wish to Empower Learners*, Edited by Shawn Simonson, Stylus Publishing, 2019.

Feel free to suggest your own topics. The more ideas we have, the happier the POGIL community will be! If you have any questions regarding inquiry learning, POGIL materials, or any POGIL-related knowledge, email marcy.dubroff@pogil.org

Where in the world is the POGIL water bottle?



Did your POGIL water bottle take a fabulous summer vacation or is it enjoying a lovely autumn trip? We'd love to see where our iconic bottle has traveled this past year!

Send us pictures of your bottle so we can find out where the bottle has gotten its passport stamped. Once again we will feature the photos on our website and on our Facebook page. Feel free to give us some detail! We love living vicariously through the bottle's adventures.

Send your photo or video of your water bottle to Marcy Dubroff at marcy.dubroff@pogil.org.

In the Spotlight: Sheila Barbach

Gerrard Berman Day School, Oakland, NJ

Although educators are often encouraged to specialize, Sheila Barbach has taught science at just about every grade level there is, from community college to middle school. She first encountered POGIL during her community college days, when she taught a remedial science class using the method. When Barbach started teaching middle school science at Gerrard Berman Day School in Oakland, New Jersey, she knew she wanted to bring POGIL with her—she just wasn't sure how.

"The challenge wasn't so much the content but the interpersonal skills," says Barbach, who does a lot of team-building with her students before launching a POGIL activity. "Pacing the class so that they have enough content knowledge going into the activities and having the right content standards made a big difference," she explains.

As the general studies principal at Gerrard Berman, Barbach now uses POGIL frequently. But she remembers what it was like to be the only teacher using the method—and how challenging it was to encourage teachers in different disciplines to experiment with active learning pedagogies, to.

"When I was hired, I didn't feel like I knew enough about teaching POGIL to give advice," she recalls, "but I knew I wanted to encourage teachers to try more hands-on teaching. A lot of the time, elementary science teachers are teaching through nonfiction reading."

Recently, Barbach earned her M.Ed. in school-wide change initiatives, so she often finds herself playing the role of coach for teachers who want to bring inquiry-based and student-centered learning into their own classrooms.

To shake things up at her school, Barbach even trotted out the "fishbowl" exercise POGIL facilitators use at national meetings and regional workshops. It worked, and even the ELA teacher wanted to figure out a way to use the method. "What I do think I'm good at is coaching teachers to reflect on how they teach, their own goals as a teacher, and how to incorporate inquiry-based learning into their teaching," Barbach says.

As it turns out, Barbach's commitment to coaching others might have something to do with having such a dedicated coach of her own. Her mentorship with Mare Sullivan, a veteran POGIL facilitator from the Seattle, Washington area, has helped Barbach find her footing in The POGIL Project.

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"Mare is an incredible person. She's generous with her time, and she's generous with her knowledge," she says.

"I was concerned that when I left higher ed and moved to middle school that I wouldn't have a space in The Project anymore," Barbach continues. "Mare is very supportive of people's growth. She finds people and makes a connection and steers you in the right direction without being prescriptive. With her, I really felt like I found a place in The Project as I transitioned to middle school. It made me feel confident that I could still be involved in The Project and expand its reach."

In addition to beta-testing new middle school science activities with Sullivan, Barbach also facilitates The POGIL Project's eSeries workshops, digital trainings for teachers who might not have the time or money to attend a longer POGIL workshop.

"It helps lower the barrier for teachers who might be struggling and helps them in a collaborative way," Barbach explains. "The eSeries is an opportunity to expand the reach of The Project and also support teachers growing in their pedagogy."

Even with new resources like the eSeries rolling out, Barbach feels there's more she and POGIL can do to reach teachers who are interested in POGIL. She thinks often of teachers at the elementary school level, for example, who don't necessarily have many POGIL activities to choose from, and who may feel the need to design their own.

Barbach's fascination with pedagogy, process, and access spurred her to collaborate on filming videos that demonstrate POGIL roles. "The facilitation, the process, is crucial," she says. "It's the whole thing, and it's much harder for teachers to learn facilitation than for students to learn an activity."

Now, Barbach is transitioning yet again—this time, to the role of administrator. It's made her think about how best to support teachers as they seek the professional development they need to continue growing in the classroom, she says.

"I'm really thinking now about my role as an administrator, and what that looks like with POGIL," says Barbach. She believes POGIL has a place at all levels of the curriculum, from K-12. "I think when your administrator's on board and facilitating professional development," she adds, "the POGIL Project is a way for everyone to develop a shared vocabulary for what good teaching looks like."

—Kristen Evans

Kudos!

Kristen Drury - Kristen Drury was selected as member of Stony Brook University's fifth class of honorees for the 40 Under Forty awards. This award represents the hard work Kristen Drury has put into her education and career. It is given to exceptional alumni under 40 who have demonstrated excellence in their chosen profession and who exemplify the "Spirit of Stony Brook" which include the following traits: commitment, passion, leadership and the pursuit of excellence.

Patrick Cafferty - Patrick Cafferty was awarded the Winship Award, a faculty award at Emory University, for the 2020-2021 academic year. The Winship Award provides a one academic term leave to work on proposed projects and funds to support professional expenses related to the project. Cafferty will be working on his project titled "Process Oriented Guided Inquiry Learning (POGIL) to Promote Active Learning at Emory" in the Spring term of 2021.

Have you received an award, or know of a colleague who should be mentioned here? Email Marcy Dubroff at marcy.dubroff@pogil.org with the information!

Coming Soon to POGIL



Physical Science Activities
Designed to Support the NGSS*



Mare Sullivan
Editor

Physical Science Activities Designed to Support the NGSS (*Flinn Scientific*)

Edited by Mare Sullivan

This book is the third edited by Sullivan and her team of educator/writers. In it, the authors present a collection of POGIL activities that originate from specific NGSS Performance Expectations and intentionally incorporate Science and Engineering Practices plus Cross-Cutting Concepts. The activities also build mastery of foundational concepts, reinforce structured collaborative learning, are inquiry-based, lower the barrier for ELL students, and prompt teachers to act as facilitators of student learning rather than to directly teach basic concepts.

The book will be available later this spring at Flinn Scientific.

Sullivan and her team are also working on a collection of conceptual physics activities that should be available by the end of 2021.

Check the POGIL website for the latest collections at pogil.org/educators/become-a-pogil-practitioner/curricular-materials

POGIL Published Works

Using POGIL Techniques in an Information Literacy Curriculum

Erik Mitchell and Derrik Hiatt

This article presents a case study of the authors' experience using the POGIL method in an information literacy (IL) course. We describe our approach to using POGIL and discuss both the instructor and student observations about the experience. The article concludes with recommendations for future uses of POGIL in IL.

<https://doi.org/10.1016/j.acalib.2010.08.010>

Implementing Guided Inquiry in Biochemistry: Challenges and Opportunities

Jennifer Loertscher and Vicky Minderhout

Guided inquiry is an active learning strategy that engages students in specially designed activities with the goal of helping them develop disciplinary knowledge and transferable skills. This evidence-based pedagogy has been used widely in STEM, including in the molecular life sciences. In this chapter we describe defining features of guided inquiry learning and characterize the challenges and opportunities associated with implementing it in the biochemistry classroom. Specifically, we describe aspects of implementation that are particular to an upper division, interdisciplinary course and we address how activities and classroom facilitation can be structured for an application-based discipline like biochemistry.

DOI: [10.1021/bk-2019-1337.ch005](https://doi.org/10.1021/bk-2019-1337.ch005)

Activities Using Process-Oriented Guided Inquiry Learning (POGIL) in the Foreign Language Classroom

Catherine Johnson

Process-Oriented Guided Inquiry Learning (POGIL) is a method that requires students to work in small groups, view models or diagrams, and answer carefully designed questions that guide them to an understanding of the subject matter on their own, with minimal direction from the instructor. Several studies show that the method has been highly effective in teaching high school and university math and science students. This paper shows that the method is also effective in the foreign language classroom, and explains its main features and implementation.

www.jstor.org/stable/41302903.

Results from a Survey of Faculty Adoption of Process Oriented Guided Inquiry Learning (POGIL) in Computer Science

Helen H. Hu, Clifton Kussmaul, Brian Knaeble, Chris Mayfield, and Aman Yadav

This paper presents an analysis of CS faculty perceptions of the benefits of POGIL, the obstacles to POGIL adoption, and opportunities for professional development. Participants strongly agreed that with POGIL, students are more engaged and active, develop communication and teamwork skills, and have better learning outcomes. The largest perceived obstacle was lack of preparation time; other obstacles included availability of relevant POGIL activities and pressure to cover more content. Participants expressed a desire for further training and mentoring beyond workshops. Our data analysis also considers bivariate associations and interactions. The results should help to improve professional development for CS faculty adopting evidence-based strategies, and thereby help more CS students to be successful.

<https://doi.org/10.1145/2899415.2899471>



POGIL Implementation Guides are here!

This guide explains POGIL® implementation and provides tips for running a successful POGIL lesson. With POGIL, students work on carefully crafted guided inquiry activities that are scaffolded to help students master content and develop life and learning skills.

<https://www.flinnsci.com/pogil-implementation-guide/ap10647/>

Registration for Summer Workshops is Open!

If you are a high school teacher or college/university instructor and want to enhance your professional development, our POGIL 3-day workshops are for you! You will learn about POGIL's philosophy and methodology, and benefit from additional focus on activity writing, classroom facilitation, and/or lab implementation. Informative posters and plenary sessions will provide you with opportunities to meet and network with other POGIL users.

Details

Cost: \$475 which includes registration, materials, three lunches, and two dinners.

Housing: On-campus housing for two nights is available for an additional \$199 and includes two breakfasts.

Graduate credits: Two quarter graduate credits (equivalent to 1.34 semester credits) will also be available through Seattle Pacific University for an additional fee of approximately \$110.

Visit www.pogil.org to register today!

Three Tracks to Choose From in 2020

These workshops are designed for both those who are new to POGIL and those who have previously attended a POGIL workshop. On the first day of the workshop, those who are new to POGIL will attend a Fundamentals of POGIL session while those participants who have previously attended a POGIL workshop should attend their choice of two sessions of universal application. The start of the second day will expose all participants to POGIL activity structure and facilitation in a POGIL classroom. For the remainder of the workshop, participants will follow a series of sessions focused on their chosen area of interest - **Activity Writing**, **Classroom Facilitation** or **POGIL Labs**.

For more information on the tracks, please visit <https://pogil.org/2020-3-day-summer-workshops>.

Scholarship Opportunity

A limited number of scholarships are available to rural high school STEM teachers from the States of Washington, Idaho and Oregon. Recipients are selected on meeting eligibility criteria and demonstrating a commitment to student-centered learning. Visit www.pogil.org for more information.

Locations

Muhlenberg College
Allentown, PA
July 7-9

University of St. Thomas
St. Paul, MN
July 8-10

Washington Univ. in St. Louis
St. Louis, MO
July 14-16

University of Puget Sound
Tacoma, WA
July 27-29

Contact Marcy Dubroff to find out which track is right for you (marcy.dubroff@pogil.org) or Julie Boldizar (Julie.boldizar@pogil.org) or Ellen Harpel (eharpel@pogil.org) for additional information about the workshops.

Facilitator Training January 2020



The POGIL Project held its biennial Facilitator Training this past January in Myrtle Beach, SC. Nineteen enthusiastic practitioners went through a rigorous 3-day training in student-centered teaching techniques so that they can become skilled workshop facilitators for The Project. At left are: Top: Miranda Beam, Rodney Austin, Olga Glebova, Courtney MacDonald, Tracey Andrejko, Matt Tuchler, An Le, Elissa Bell, Sara Fox, Lydia Kitts, Suzanne Ruder (facilitator), Wayne Pearson, James Ellinger, Andy Aspaas, Ivanna Bozidarevic, George Armstrong. Bottom: Andy Bressett (facilitator), Dee Weikle, Kendra Walther, Emily Sendin, Mary Baxter, and Laura Trout

Writers Retreat – July 2020

Seattle Pacific University, Seattle, WA
July 13- 16

The 2020 POGIL Writers' Retreat will provide an opportunity for individuals or small teams to spend focused time on developing, writing, and improving POGIL activities with the mentorship of experienced POGIL author coaches. The 4-day agenda includes workshop sessions focused on activity authoring, feedback sessions, and ample time for writing and interacting with other authors and author coaches.

Applicants will need to complete the POGIL Writers' Retreat application by **April 2**.

A **registration fee** of \$600 includes all workshop materials and 4 lunches. Dinners will be the responsibility of the participant. On-campus **housing** for the nights of July 12, 13, 14 & 15 is available for an additional \$300 and includes four accompanying breakfasts.

Attendees who are interested in earning **graduate credits** will pay an additional fee of \$165 directly to Seattle Pacific University during the first day of the retreat.

For additional information and details on this workshop, please contact Ellen Harpel at ellen.harpel@pogil.org.

Looking to Book a Workshop?

- If you would like to bring a POGIL workshop to your area, please get in touch with us! We are interested in teaching more instructors about POGIL at both the high school and post-secondary levels and want to help them make their classrooms and laboratories more student-centered.

Please visit our website and submit a request a workshop form or email Marcy Dubroff at marcy.dubroff@pogil.org.



Send us your news!

We'd love to feature your news, your grant, or your video on the POGIL website and in the POGIL newsletter. Send news to Marcy Dubroff at marcy.dubroff@pogil.org

Get all the latest POGIL news by following us on Twitter or Facebook! Sign up to get our @POGIL tweets at [twitter.com](https://twitter.com/POGIL).

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The POGIL Project

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