



FRED HUTCH
Frontiers in
Cancer Research
Science Education Partnership

➤ MENTOR BACKGROUND INFO 2022

Thank you for your interest in mentoring a Science Education Partnership Teacher. Science teachers impact hundreds of students every year and your support can make a real difference.

KEY DATES FOR MENTORS 2022

Sat, May 14	Opening Day Introductory Meeting (3:00-4:00pm)*
July 18-22	Summer Session – teachers join you in your lab (5 weekdays)
July 29	Open House/ Poster Session (2 hrs)

**Times are tentative and will be confirmed before the program date*

RESPONSIBILITIES

- Ensure that your PI has agreed to host a teacher and that your lab members are aware.
- Host a teacher for 5 days (minimum 4 hrs/day) in your lab and help direct the teacher's lab work (this should not be a job shadow).
 - Prep your teacher to work in your lab including any safety training.
 - Together with the teacher, decide on a brief hands-on lab research activity for them to conduct while in your lab (see below for ideas).
 - Arrange for your teacher to audit a lab meeting (either your own lab or another lab).
 - Help your teacher to schedule interviews with at least two other people at Fred Hutch (either a different lab position or career path).
 - Spend time discussing the teacher's teaching situation, understanding current theories of learning and teaching, and learning about the broader science education context in the US.
 - Work alongside your teacher to analyze a data set and build conclusions together.
 - Review your teacher's open-house poster.
 - Plan a lesson to teach in your teacher's class in the following year (mandatory for MCB student mentors, optional but highly recommended for others).
- Review the teacher's Open House Poster.
- Attend the Open House/Poster session at the end of the workshop.
- Participate in program evaluation and provide feedback.
- Keep in contact with your teacher during the school year, be available to serve as a resource and answer questions, and zoom in or visit the teacher's classroom.

LAB RESEARCH ACTIVITY

Teachers will learn the basics of working with DNA prior to joining you in the lab. They will have practiced pipetting and gained familiarity with bacterial transformation and gel electrophoresis.

SEP emphasizes hands-on learning so please give your teacher the opportunity to participate actively in experiments.

For example, they could do molecular biology procedures such as plasmid mini-preps, ELISAs, or PCR. It is important that they understand why they are doing the procedures and how those procedures relate to the big picture for your lab or the questions you are exploring.

Many of the past SEP teachers have really enjoyed their immersion in a research lab—participating in the bench science, interacting with the group members, and attending lab meetings to learn how scientists interact, discuss different experimental approaches, and make sense of their findings.

Some of the teachers may have previous lab experience or been a researcher in a previous career. However, your research area will likely be new to them! For these teachers, we emphasize that they focus on the discourse practices, collaborative relationships, and authentic research done in the lab and reflect how they can translate those ideas into their classrooms.

TEACHER PROJECT

After their experience with SEP professional development, teachers develop resources that they can use in their classrooms (their SEP “project”). **We do not expect this project to directly relate to the scientific research that they participate in while working in your lab!** While this occasionally happens, most teachers modify existing SEP kits or curriculum. Often, teachers are inspired to incorporate more inquiry or additional elements of scientific thinking or discussion into their teaching. They also experience the importance of troubleshooting experimental procedures and struggling to understand unexpected or ambiguous results. It is often their experience with these dimensions of science that leave lasting impressions and have teachers reflecting on how they can incorporate more experimental work into their teaching.

[SEP KIT LIST - for reference](#)

LEARNING FROM YOUR TEACHER

SEP is committed to the idea that both scientists and science educators are professionals with much to learn from one another. We hope that you will use this opportunity to learn about strategies for teaching scientific ideas as well as learning more about education in general.

OVERALL PROGRAM SCHEDULE 2022

Early May	Mentors select teachers from the applicant pool. Mentors can choose to host either one or two SEP teachers in the lab. Mentors can also arrange for the teacher to work with multiple people in the lab as long as there is one point person responsible for the overall experience.
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Fri, May 13 Sat, May 14	Opening Day workshop with all cohort teachers in the Fred Hutch Teaching Lab (B1-076). Teachers will spend the day learning the basics of micropipetting plus the use of selected kits loaned to teachers.
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On Saturday afternoon, **May 14, 3-4pm, mentors will meet their teachers** to discuss goals for the summer lab days. Please make prior arrangements with SEP and the teacher if you are not available on this day. Please bring an accessible article (Scientific American level or similar) for your teacher to read on the general area of your research. You will

receive a reminder message about attending this session at the beginning of May.

May - June Try to make additional contact with your teacher before the Summer Session. If possible, visit your teacher's classroom to observe and/or help with a class before school ends. Past mentor scientists have found this to be a valuable, eye-opening experience!

July 11 - 29 SEP Summer Session (**mentor responsibilities highlighted**)

July 11-15 Lab Skills Training & Mini Workshops

July 18-22 Mentor Research Experience

July 25-28 Project Work Time & Mini Workshops

July 29 Open House and Poster Session (open to the public)

2022-2023 School Year Set up a time to either visit your mentee's classroom to deliver an in-person talk/activity or a virtual talk/activity and lab tour.

SEP SOCIAL MEDIA

Feel free to take pictures with the teachers this summer and share them on our social media. Instagram: @sciedhutch & Twitter: @sciedhutch

CONTACT INFORMATION FOR SEP

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Lab/office location and mailstop: A1-023 (Weintraub building, South Lake Union Campus)

Visit our website at <http://www.fredhutch.org/sep>

SUMMER SCHEDULE OVERVIEW FOR TEACHERS

(TBD)