



MENTOR BACKGROUND INFORMATION

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.

IMPORTANT DATES: The **2020** program includes the following dates:

- **May 16** Orientation – overview and meeting with teacher [3:30pm-6pm]
- **July 13-17** Summer Session – teachers join you in your lab for 5 days
- **July 24** Poster Session – culmination of summer program [2 hrs]

In addition, we ask that mentors keep in contact with their teachers during the school year.

RESPONSIBILITIES

- 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].
- Host a teacher for 5 days in your lab and help direct the teacher's lab work [this should not be a job shadow].
- 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.
- Arrange for your teacher to attend a lab meeting [either your own lab or another lab].
- Attend the Open House/Poster session.
- 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, when feasible, 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, restriction enzyme digests, 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.

TEACHER PROJECT

After their experience in with SEP professional development, teachers develop resources that they can use in their classrooms. **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.

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.

CONTACT INFORMATION FOR SEP

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