Summary and Highlights

To support students in developing effective writing skills, we offer a multi-session workshops on science communication. We start with pre-assessment of the students’ writing and develop mini sessions tailored to 1) pre-assessment-identified needs and 2) common challenges faced by new scientific writers. Students have several opportunities for guided peer review coupled with post review reflection on their own writing, along with individual consultation with the Workshop leader.

To support students in developing effective science speaking skills, we build in several opportunities practice oral scientific communication through presentations of their proposals, working with visiting groups to the laboratory and, finally, by presenting their research in an end-of-program science symposium.

Specific Activities:

1) Several weeks prior to the start of the program, mentors are encouraged to send their selected REUs several key papers related to the planned research activity. Students are asked to read these papers prior to arrival.

2) By the end of week two, students develop a short (~3-4 page) written introduction and proposed methods for their summer work. The proposal is provided to the mentor and to the program coordinator, who both assess student writing style and the clarity of the methods. Students are provided with interactive feedback and additional writing training sessions designed improve writing style and develop strategies for the final report.

3) At the end of week two each REU presents a short (5 slides) oral presentation to their peers describing their proposed project and methods. Audience members provide written feedback on the presentation (talking style, content and clarity) in the form of a filled in matrix and written comments. Comments are consolidated and reviewed with each speaker by the program manager.

4) REUs are encouraged to help host public groups that visit the lab each weekend. This provides informal venues for students to learn to hone their ability to communicate their science.

5) With mentoring, students write short “elevator speeches” about their research, participate in a communication workshop where they hone their speeches for different audiences, and write and review each other’s lay-friendly summaries of their findings.

6) Science symposium: Each REU develops a scientific poster for an end of program undergraduate poster session for the USC community. Several summer programs are combined to increase the size and scope of this event. REUs are encouraged to take their posters back to their home institutions for display or to future professional scientific meetings.

7) Final research paper: Each REU develops a final report written in publication format.

Helpful student-level scientific writing reference: