**Title:** Pledge Project 2018: *STEM Career Education and Tour of Chemistry Department*

**Summary:** Members of the Alpha Phi Pledge class (approximately 22 people) planned and performed presentations at Atascadero High School and SLO High School about a variety of STEM careers. Small groups of high school students were provided tours of the chemistry and biochemistry department, including entry into several labs.

**Goal:** To reach out to local high school students and show them many different science-based opportunities by presenting in classrooms and clubs and having students shadow a variety of research labs at Cal Poly.

**Preparation:** Members began by creating committees dedicated to different facets of the project. These included coordination, preparation, materials, presenting, tour, and transportation committees. Members began by reaching out to local high schools to see if there was interest and if presentations in classrooms were feasible. A template email was used for the initial contact, and several of these initial emails were sent to the high school teachers until a response was received.

Members created slides regarding STEM fields including physics, earth science, biology, chemistry, astrology, and biochemistry. Research in the chemistry and biochemistry department at Cal Poly was covered at the end of the presentation. Invitation to tour the department was also extended at this time via a paper sign-up sheet. Members were also asked to prepare for questions regarding their research and general college questions.

Sign-up documents on google drive were created for drivers and carpools for a total of four (4) hour-long presentations at SLO High School and Atascadero High School. Groups of 2-4 people presented at each high school.

Small tours (around 4 students per) were organized with Dr. Bush and Andrea in addition to permission to enter labs from several professors. Safety waivers had to be signed by the high school students to enter the labs. Three (3) tour guides were present for the tours, with coffee and pastries provided.

**Budget:** ~ $120

~ $75 spent on coffee and pastries for tours.

The rest of the budget was not spent. Drivers could ask the members they were driving to chip in for gas, but it was not reimbursed by the pledge project fund (though this wouldn’t have been a problem).

**Discussion:** The presentations were successful, though in the future astrology would not be included in the presentations (no one really knew about this field, and it is typically not offered as a major, I’m not sure how it was there in the first place). Students responded best to personal experiences, and asked questions about how members chose their majors and about their research. For future preparation, I would suggest asking members to practice talking about their research in layman’s terms, as fields such as organic chemistry research are hard to explain to AP chemistry students.

Tours of the chemistry and biochemistry department were successful largely because of the tour guides (Jadyn, Will), who talked about their experiences within the department as well as providing information beyond the department including personal interests, experiences, and college life. I (Emily) stopped by to check in, and several of the high school students requested chemistry tutoring for high schoolers from Alpha Chi Sigma. This idea did come to fruition (thanks to Logan).

**Resources:**

|  |  |  |
| --- | --- | --- |
| High School | Chemistry Department Contact | Presented? Y/N |
| Atascadero High School | John Fortejohnforte@atasusd.org | Y |
| Paso Robles High School | Evan Johnstonewjohnston@pasoschools.org | N |
| SLO High School | Ryan Ritchierritchie@slcusd.org | Y |
| Mission Prep (SLO) | [Ann Morelos](https://www.missionprep.org/apps/email/index.jsp?e=634763716375638163556369637563836281637163636383638363636375637363776381635563776245637563816359&n=Ann%20Morelos) | N |
| Central Coast New Tech. | [Jennifer Rushing](https://www.ccnth.org/apps/email/index.jsp?e=63656355637363736363635763556381624563816387638363616363637363596281636963716387638363536245637563816359&n=Jennifer+Rushing) (Science Chair) | N |

[Presentation](https://docs.google.com/presentation/d/1ZEzhHj-zrIPCi6aEmz_n6B5coZaFU1EX2FneMXE2GvU/edit?usp=sharing)

[Original Proposal](https://docs.google.com/document/d/1KpWig6OolTcjIMZLRk2mKOqIfxjEYtYbgN3XwpDT7zo/edit?usp=sharing) note: the proposed shadowing idea became tours of the department.

[Template email sent to teachers](https://docs.google.com/document/d/1Y_aaAb4dmDA3I76W-1kzqGNuDWNiasCAmnsMDsLvWRI/edit?usp=sharing)