

## Pelham Memorial High School Science Research Program

## **Mentor Information**

The Pelham Science Research Program is a 4 year commitment for high school students who are motivated, enthusiastic and dedicated to conducting high level research. Students enrolled conduct an extensive literature review in an area of science that interests them prior to reaching out to a mentor. Upon finding a mentor they work together to propose an original research question / purpose, perform experimentation and analysis, write a formal paper, possibly publish with the mentors, and finally apply to and present at multiple State, National and International Symposia.

The program affords students the opportunity to participate in the community of scientific research and scholarship as part of their high school experience. It furthers excellence in performance and achievement while drawing from and developing scientific capabilities in a broad spectrum of the student body.

## The Process:

Students are afforded the opportunity to choose and explore a topic of interest which may stem from, but not limited to mathematics, physical science, life science, social science, computer science or psychology. They will develop skills using electronic databases to conduct literature searches and analyze the information which they obtain. Students then prepare a statement of what they intend to study based off of their literature searches and contact a scientist in that field to discuss possible opportunities. *All of this is intended to involve the student in a learning process which results in an original research project under the supervision of a mentor (professional in the field) and classroom research teacher.* This project is conducted over the summer between Sophomore and Junior year in high school, and students are often allowed back between Junior and Senior year, to either continue in the same direction or identify a new project in the field. The culmination of their learning experience with a mentor is a research paper, which is used to create a powerpoint and poster board presentation. Students must participate in the experience of presenting their research to our community in addition to State, National and International Symposia.

All steps in the students' progress are carefully monitored by the classroom teachers to ensure that students engage in each phase of scientific research and have attained the desired capabilities.

Please do not hesitate to contact us if you have any questions or concerns, especially if prior to accepting any of our students.

Steven Beltecas Science Research Co-Director (917) 416 - 9602

Email: sbeltecas@pelhamschools.org

Joseph DiBello Science Research Co-Director (845) 242 - 6865

Email: jdibello@pelhamschools.org

## MENTOR & STUDENT INTERNSHIP REQUIREMENTS

\*Under normal circumstances a student would work with a mentor in person on a daily basis\*
Under our current situation we will accept virtual mentor meetings of at least 1 time per week, averaging 30 minutes / meeting. (we recommend at least 2 meetings per week)

• Students are expected to work approximately 4 - 6 weeks in the summer on a project with a Mentor (minimum of 100 hours of working on your research is required)

**note**: Student Researchers that have collected a *significant amount of data in the past*, consisted of students working over 200 hours in the lab with their mentor

- Mentors will be teaching students techniques and guiding students as they collect data
- Mentors please understand that students will be required by our program to use information gathered through their work, under the mentor, in papers, posters or ppt during symposia. If the mentor is working on something that they do not want out to the public yet, then the student must work on a different project or upon Mentor's approval can code for certain terms that the mentor does not want released. Part of our program is to teach students how to communicate the research they have conducted to authentic audiences via written papers, powerpoint and poster board presentations (please communicate any concerns about this with the student AND research teacher)
- All paperwork for competitions will be finalized with Steven Beltecas and Joseph DiBello (science research teachers). There will be some forms for the mentor to complete along with recommendations and certifications for the competitions.

(most forms and recommendations should be filled out prior to leaving the lab in the summer)

- Mentors and Students should remain in contact throughout the school year
- If the mentor and student agree, it is ideal for the student to return to the same program and mentor for work the following year. Students can work on the next phase of the original project or work on something entirely different. We understand that sometimes this is not possible.
- Mentors and Teachers will also meet virtually to discuss and monitor student accountability

The Pelham Science Research Program, The University at Albany and the various symposia will require specific forms and paperwork to be filled out and signed off by the mentor. It will be the student's responsibility to process all the paperwork.

Please keep in mind, all projects must be reviewed PRIOR TO EXPERIMENTATION by the local or labs' IRB, SRC, IACUC, etc. Please confirm that the student's project falls under the umbrella of the current approval process for your institution, as it may be needed for the student's application process for each symposium. You will be asked to sign paperwork verifying approval.

Once again, thank you so much for volunteering as a mentor. Without your support, programs such as ours would not exist. We are truly fortunate to have your support in our student's exploration of science.

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