

ASA Connecticut Chapter High School Outreach Program

21st Annual ASA CT Chapter Mini-Conference

Friday, April 14, 2023

ASA CT Chapter H.S. Outreach Program - Agenda

- Objective of the CT High School Outreach Program
- Opportunities in the classroom
- Teachers/Speakers
- Commitment/Resources
- Pilot Program 2021-2022
- 2022-2023 CT H.S. Outreach Program
- Q and A Session

Objective of the CT High School Outreach Program

The program aims to bring professional statisticians/data scientists and statistics college students into Connecticut High Schools to ignite student's interest in the statistical and data sciences profession

- ✓ The demand for statisticians and data scientists is growing
- ✓ This program is in the spirit of promoting the practice and profession of statistics/data science

Opportunities in the classroom:

1. Professional statisticians coming into the schools (or virtually) to introduce themselves, give a little background on their journey into statistics, provide an overview of how they use statistics in their jobs/some case studies of interesting applications of statistics in the real world, and a Q & A.
2. Undergraduate/graduate students coming into the schools (or virtually) to introduce themselves, give a little background on their decision to pursue a college statistics degree, provide an overview of what they are studying in statistics/some interesting research projects in statistics/data sciences, and a Q & A.
3. Option to create a more focused discussion, based on a specific topic that is being taught in the classroom (e.g. for an AP Statistics classroom)

To help me with matching schools and speakers, I ask the following questions.

Teachers:

1. Are you interested in an in-person and/or a virtual presentation (i.e. through zoom)?
2. What type of speaker are you interested in a) a professional statistician, b) an undergraduate/graduate student, or c) a more focused discussion, based on a specific topic that is being taught in the classroom (e.g. for an AP Statistics classroom)?
3. Are you interested in a one-time visit or possibly further interaction with the speaker (i.e. more than one visit)?
4. What course/grade level will the speaker be addressing?
5. What type of information would you like to have presented?
6. Ideally, about how long should the presentation be (including a Q & A session)?
7. Please provide a target timeline for when you would be interested in having a speaker present (i.e. month/day).

Speakers:

1. Are you available for an in-person and/or a virtual presentation? Do you have a preference?
2. What days/hours are you available during the week (i.e. mornings/afternoons)?
3. How far are you willing to drive, if doing an in-person visit? Also, where are you located?
4. Are you interested in a one-time visit to a school or possibly further interaction with the teacher/class (i.e. more than one visit at the same school)?
5. Are you interested in a) making a presentation, 2) creating a more focused discussion, based on a specific topic that is being taught in the classroom, or 3) both?

Once I have received the answers, I go through the process of matching speakers/teachers based on in-person or virtual request, geographic region (if in-person), presentation or focused discussion, and timeline.

Commitment: One-hour presentation session per school year, plus preparation and travel time (if in-person session)

Resources: Speakers can create their own material or build upon existing resources/materials provided by the CT ASA Chapter.

For teachers: ASA has many free programs and resources for high school teachers and students at the following websites:

www.amstat.org/AMSTAT/Education/K-12-Educators/ASA/Education/K-12-Educators.aspx

www.statisticsteacher.org

www.thisisstatistics.org

www.nytimes.com/column/whats-going-on-in-this-graph

For speakers: ASA resources to help in planning a presentation on why students should consider a degree and a career in statistics:

- Promotional toolkit (materials to help introduce students to careers in statistics),
- Powerpoint presentation with talking points (to show how exciting and important the field of statistics is and how it has grown in recent years),
- Videos (www.youtube.com/ThisIsStats featuring statisticians explaining why statistics is such a great career choice – choose the video that best fits your presentation or your audience),
- Fact sheet handouts (featuring some of the most important information about careers in statistics – these can be handed out to students),
- Statistical Significance series (found in the ‘K-12 Educators – Publications’ - highlighting the contributions statisticians make to society, from health care and the economy to national security and the environment)

The speaker can make their own original presentation or they can use any of the resources above.
The main thing is to have fun and share one’s excitement for statistics!

Pilot Program:

- ❖ 2021-2022 school year (tail end of pandemic)
- ❖ Reached out to our participating high school teachers from our CT ASA K-12 poster competition (math and statistics, including AP statistics)
- ❖ 8 H.S. teachers asked to participate (locations throughout the state – math and statistics)/8 speakers assigned (4 professional statisticians/4 college undergrad and grad students)
- ❖ 3 presentations given (2 in-person, 1 virtual)

Challenges: Teachers were juggling the return to the classroom after the pandemic. 1 teacher moved. 4 presentations were postponed until a future date– all teachers/schools were still very interested in the program

Pilot Program:

Teacher comments:

“She discussed ways that statistics directly impacts their daily lives and how closely it is associated with (or uses) some of the introductory statistical concepts they learned in their AP stats course.”

“She added slides about herself and talked about some of the applied projects she has worked on during her internships and in her current research.”

“It was truly inspirational. He combined statistics with computer science. It was riveting! We are definitely interested in hearing him speak again next year, if he is available.”

“The students really enjoyed hearing him speak and the exciting content that he presented. They enjoyed the many real-world examples that he included, as well as his own perspectives from internships and coursework.”

“He did an amazing job at presenting statistics careers and the skills necessary in order to be successful.”

2022-2023 Program:

- ❖ 2022-2023 school year
- ❖ Reached out to our participating high school teachers from our CT ASA K-12 poster competition (math and statistics, including AP statistics)
- ❖ Reached out to high schools participating in UCONN's Early College Experience (ECE) Program – including AP Statistics
- ❖ 7 H.S. teachers participating (locations throughout the state – math and statistics)/7 speakers assigned (4 professional statisticians/3 college undergrad and grad students)
- ❖ 7 Presentations scheduled for April through end of May 2023.

Questions??

Do you have any questions about the High School Outreach Program?

For more information, please reach out to CT ASA board member Sabrina Vogel Marler (sabrina.marler.ext@boehringer-ingelheim.com)

2022-2023 Chapter Programs:

- ❖ December 2022: virtual Career Panel (BeiGene, Boehringer Ingelheim, Pfizer, Takeda, Traveler, Yale School of Public Health)
- ❖ March – April 2023: CT ASA K-12 data science poster competition (virtual), sponsor and judges
- ❖ April 21-23, 2023: ASA DataFest on-site at Wesleyan University in Middletown, sponsor and volunteer
- ❖ June 7-9, 2023: Dose Finding and Other Topics in Drug Development at University of Connecticut, Storrs & online, sponsor
- ❖ Short courses, ASA travel courses, etc