

# K-12 Students Flock To ToxTown In San Diego: Results of an SOT K-12 Education Outreach Workshop

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## Introduction

Just prior to the 2015 Annual Meeting of the Society of Toxicology in San Diego, CA, thousands of K-12 students and science enthusiasts attended the **San Diego Festival of Science and Engineering**.



- The Southern California Chapter of SOT hosted a **TOX TOWN** booth at EXPO Day, the grand finale event.
- A global slate of SOT volunteers ensured the event was a smashing success.

## Booth Activities

- To introduce students to the science and profession of toxicology, activities included
  - TIC-TAC-TOX:** Toxicology True-or-False?
  - What's all the buzz about caffeine?** Caffeine and dose-response trivia
  - Risk Bites** YouTube video: *Staying Alive and Thriving: A Toxicology Primer*
  - ScrubClub®** Handangos were folded by the younger crowd to learn about germs and proper hand washing.
  - Participant Survey:** Some results are summarized in this poster.

## USA Science and Engineering Festival Affiliated Events

- You too can have this much fun!
- Find the affiliated annual event in your neighborhood:



<http://www.usasciencefestival.org/affiliate-events/affiliate-event-map-and-directory.html>

## TIC-TAC-TOX

- Answer toxicology-related True (O) or False (X) questions on a quest to get three-in-a-row and win an Einstein captioned with [www.toxicology.org](http://www.toxicology.org).



% of High School Participants Surveyed found Tic-Tac-Tox to be <sup>a</sup>	
Very informative	60%
Somewhat informative	40%
Not Informative	0%
Did not participate	11 people

<sup>a</sup> Excludes elementary and middle school students that responded; 43 high school students respondents, excluding those that "did not participate" in this particular booth activity



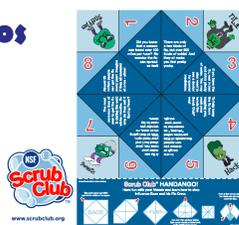
## What's all the buzz about caffeine?

- Students answered trivia questions related to caffeine pharmacology and dose-response and guessed the caffeine content of common consumer products.
  - 95% of participants** found this event to be "very informative" or "somewhat informative".
- SOT booth volunteers sported t-shirts with a caffeine molecule.
- Did you know that a carbon anhydride bond is the only thing distinguishing caffeine from chocolate?



## ScrubClub® Handangos

- Folding Handangos helped elementary school students learn about germs and proper hand washing.



## How much did you know about Toxicology BEFORE this event?

	BEFORE:	AFTER:
Nothing (toxi-what did you say?)	26%	2%
Minimal knowledge (I can say and spell toxicology but...)	50%	3%
Familiar with it (snake venom scares me)	24%	65%
Well-versed in toxicology (I'm half-way to my Ph.D.)	0%	16%

## "I DECIDED TO STOP BY THE BOOTH" BECAUSE:

% of High School Participants Surveyed	
I was curious about ToxTown and Toxicology	59%
I was curious about caffeine and consumer products	24%
I saw the exciting props and displays	17%
My friend dared me to	0%
I got lost looking for another booth	0%

## RISK BITES

- Participants viewed a specially designed 3-minute YouTube episode
  - 4,500+ views since uploaded March 2015
  - Developed by 2015 SOT Communications Award winner, Dr. Andrew Maynard, who was on hand in the flesh!



## What was the most popular activity of the day?

- According to the survey results, this "activity" had the **highest participation rate** and the **highest satisfaction rating!**

## "Interaction with Toxicologist at the Booth"

Very informative	73%
Somewhat informative	27%
Not Informative	0%
Did not participate	5 people

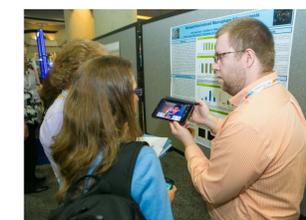
- Additional survey results not depicted here are available by contacting Virunya Bhat ([bhat@nsf.org](mailto:bhat@nsf.org)). Questions relate to:
  - The role of toxicologists in creating a safer and healthier world,
  - Toxicology careers and pursuing a college degree in toxicology,
  - Consumer product safety issues in the media
  - Other age ranges (elementary and middle school)

## Thank You Volunteers!

- The Southern California Regional Chapter of SOT, along with dozens of SOT Annual Meeting attendee volunteers who arrived early (several from international locations) thoroughly enjoyed volunteering for this outreach and mentoring event.

## High School Poster Exposition

- Students benefited from the unique opportunity to present their own toxicology research project in a designated session.
  - This session was highly attended thus allowed the students to interact with Annual Meeting attendees.



**TOMORROW!**  
 Stop by the HIGH SCHOOL POSTER EXPOSITION near the SOT Pavilion on **Tuesday March 15, 2016 10:00a-12:00p**

**SOT 55th Annual Meeting and ToxExpo**  
 March 13-17, 2016

- Students from remote locations also presented through a virtual poster session.

## Support Toxicology Education Outreach

- Submit K-12 toxicology education materials to the resource portal: <https://www.toxicology.org/script/loginredirect1.asp?Fn=/MS/K12Materials/activities/Submission.asp>
  - Ensure you have authority to submit (a licensing statement is included).
  - Resources may be uploaded as a Word document, pdf, or URL.
- APPLY for an **SOT DOMESTIC TOXSCHOLAR** award!
  - Give a science or career presentation at a university or college that has limited toxicology infrastructure
  - Up to \$500 support for visits to undergraduate campuses, Fall and Spring application deadlines
  - Whether you go individually or as a team, resources for your visit are available! <http://www.toxicology.org/awards/gf/toxscholar.asp>
- Submit a **TOXICOLOGY EDUCATION OUTREACH ABSTRACT** for 2017 SOT in Baltimore, MD.
  - Same deadline and website as scientific abstracts



**ToxTown** was a huge success due to financial and/or in-kind support from:

- SOT Education Committee
- SOT K-12 Education Subcommittee
- Southern California Regional SOT Chapter
- SOT Strategic Funding Grant
- SOT members who volunteered to assist
- Eastman Charitable Foundation
- NSF International



Southern California Chapter  
**SOT** Society of Toxicology  
 Creating a Safer and Healthier World by Advancing the Science of and Increasing the Impact of Toxicology

EASTMAN

