



DR. NELSON YING TRI REGION SCIENCE AND ENGINEERING FAIR

Dr. Nelson Ying Tri Region Science and Engineering Fair Fact Sheet

- The *Dr. Nelson Ying Tri Region Science and Engineering Fair* (Ying TRSEF) will take place on March 20-21, 2010 at Onondaga Community College in Syracuse, NY. Fair Weekend includes three separate competitions – the Rube Goldberg College Machine Contest and Career Competition, the Ying Scholar Finals, and the science fair presentation and judging of middle and high school students' science projects, judge registration, training and deliberation, and Public Viewing. NASA will provide professional development workshops at the Science Fest, and other organizations will sponsor displays and demonstrations. Sunday afternoon closes with the Awards Ceremony for all three events. Hundreds of participants, judges, parents, teachers, mentors, and guests will make our Science Fest a weekend for all to remember.
- The Ying TRSEF offers participation to 350,000 middle and high school students across the twenty-seven "orphaned" counties in New York State – those youth who previously had no access to a regional science fair affiliated with the International Science and Engineering Fair.
- Judges for our Senior Research Students hold degrees in science or engineering, education or law, representing corporate, academic and professional organizations across the state. Junior Level Research Judges include adults and college students interested in science and/or education, and eager to encourage young people to use their minds. Poster Presenters at both levels choose to do an extensive report on a topic in one of the STEM fields – **Science, Technology, Engineering or Mathematics** – and prepare a presentation. Judges will interview those students as well, so they gain real practice with the Judging Process.
- Every Science Fair student and Poster Presenter receives a *Certificate of Participation*. One-third to half of all participants also receive *Honors, High Honors, or Highest Honors*. Fair participants are eligible as well as for *Special Awards* sponsored by colleges, business, industry and government. Two Senior Level students represent the Ying TRSEF as Finalists in the *Intel International Science & Engineering Fair*. If funding permits, we could advance a team project.
- Why are science fairs important? Because students need to explore their talents and challenge their minds in the STEM fields just as they do in languages, writing, music and sports. Our regional science fair gives schools and families a straightforward and cost-effective way to do just that. The student's experience can ignite a passion that will become a career; the mentor's role becomes the passing of the torch of STEM knowledge to a future scientist or engineer.
- See the reverse to look at why the TRSEF is so important to Upstate New York!

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The Ying TRSEF is a 501(c)3 nonprofit association affiliated with the Intel International Science and Engineering Fair.

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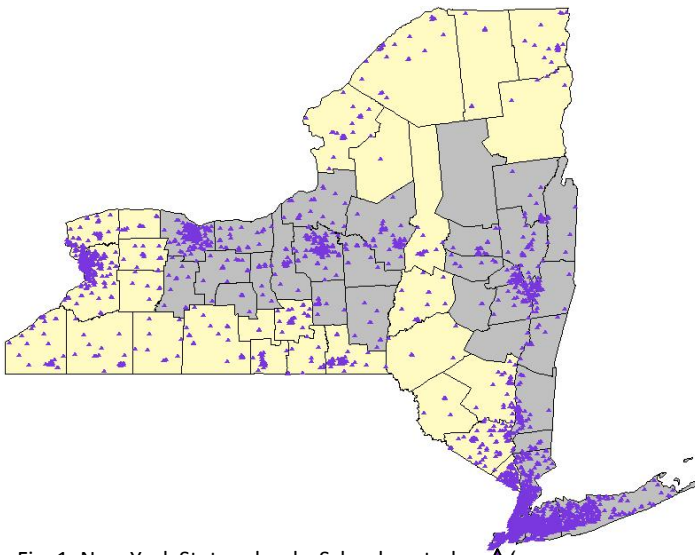


Fig. 1. New York State schools. Schools noted as ▲'s; TRSEF counties are in beige, and include high-density areas in Erie, Broome, Chemung, Orange and Rockland Counties.

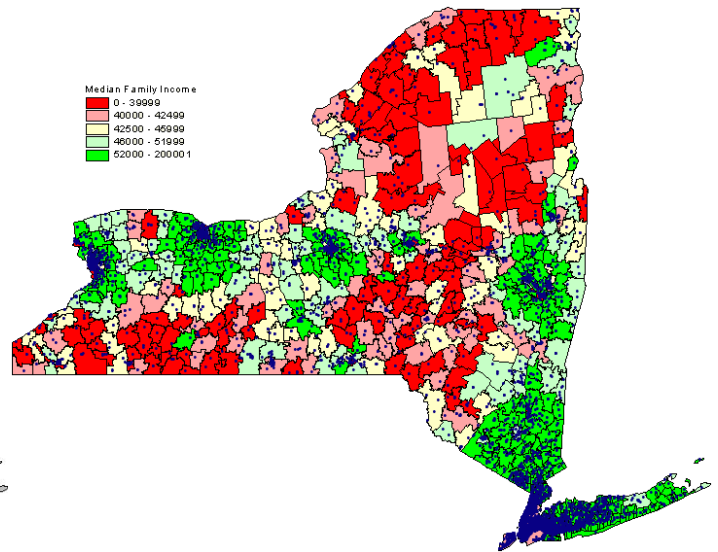


Fig. 2. NYS Public Schools and Unified School Districts correlated with median family incomes and again marking schools with ▲'s. Note the concentration of incomes below \$43,000 (red and rose) in districts served by the TRSEF!

Both maps from Source Proximity – <http://proximityone.com/nyschools.htm> – based on data provided by schools, districts, and Census 2000.

The most powerful reason for the Ying TRSEF is the potential that exists in young people which we cannot tap without opening the door to the real world experience of using what they learn in science and math classes to *do real science and engineering!* Outstanding school-based programs exist – Science Research in the High School and Project Lead the Way, to name only two – but they require heavy front-end investment. Schools are free to conduct their own local fairs – certainly an inexpensive option – but regulations heap teachers and staff with testing and other requirements that swallow every working hour and more.

Look at the median family incomes in Fig.2, and you will see swaths of school districts challenged in even more ways. For fifty years, SOME New York State students have gone to their regional science fair. They live near Rochester, Syracuse, Utica and Albany, or Downstate. Those who reside in 27 other counties across Upstate? Orphaned. Totally out of the loop of regional science fairs, of reasons to find mentors, of the challenge to work hard and own one's learning, of the access to scholarships and other awards that celebrate determination, imagination and achievement.

Since 2006, the Ying TRSEF has offered an alternative to big ticket programs and makes precollegiate science research and its rewards available to 350,000 students in the orphaned counties. Individuals – parents, merit badge counselors, 4-H leaders, retired teachers, local doctors and lab technicians, engineers and union members – gain a network that promotes their stepping forward and on a personal scale making a difference now and for the future. We can lobby for changes in regulations. We can hunt for major program funding. But NOW we can ignite the passion of young people and recruit the talents of adults with the TRSEF.

Our goal? To provide young people who dream of building solar cars or curing cancer the same opportunity that football and trumpet dreamers have – to try on their future while still in school. To see if they have what it takes to reach their goals, and to help them dream bigger and climb higher.

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