

Finalists of the 54th Annual Westinghouse Science Talent Search

Designed to discover and develop scientific, mathematical, and engineering ability among high school seniors, the Science Talent Search is conducted annually by Science Service in partnership with the Westinghouse Electric Corporation.

The forty finalists of the 54th Annual Science Talent Search, among whom \$205,000 in Westinghouse Science Scholarships will be distributed, represent about 2.4 percent of those who completed entries in this scientific and educational competition.

These 18 females (one deceased) and 23 males are awarded an all-expenses-paid trip to Washington, D.C. to attend the Science Talent Institute, March 8 through 13, 1995. Here ten of the finalists will be selected by the board of judges to receive one of the following four-year Science Scholarships: one \$40,000 (\$10,000 per year), one \$30,000 (\$7,500 per year), one \$20,000 (\$5,000 per year), three \$15,000 (\$3,750 per year), four \$10,000 (\$2,500 per year). The remaining 30 contestants will be given Westinghouse Science Scholarships of \$1,000 each.

The finalists are 15 to 18 years of age and come from 33 cities in 17 states. They were picked by the judges from among 1667 contestants who completed their entries by writing a report on their scientific research and submitting it along with an official entry form and supporting documents. Completed entries were received from 49 states, the District of Columbia, Puerto Rico, American Samoa, and a Department of Defense School in Germany.

This listing is organized by the high school the finalist attends. The student's name, age, home address and project title follow. If the student's home town differs from that of her/his school, it will be noted in the home address.

CALIFORNIA La Jolla

La Jolla High School
Boas, Franz Edward (17) 4975 Via Lapiz, San Diego 92122
Properties of Branch Prediction Schemes
Chen, Irene Ann (17) 3345 Villanova Avenue, San Diego 92122
Expression and Function of Two Novel Genes (PEM and MCAT-2): Implications for Metastasis and Arginine Transport
Yu, Elaine Wei-Yin (17) 8480 La Jolla Shores Drive 92037
Novel Suppressor for Inflammatory Responses

FLORIDA North Palm Beach

The Benjamin School
Miller, Christian Basil (17) 1 Leaman Lane, Palm Beach 33480
*Solutions to Human Induced Problems that Affect the Loggerhead Sea Turtle, *Caretta caretta**

Springfield

Rutherford High School
LeVine, Kara Jane (18) 7560 Coleridge Road, Panama City 32404
Using Tall Oil Fatty Esters to Replace Petroleum Oil in Newspaper Printing Inks

Winter Park

Winter Park High School
Hattangadi, Neil Ashok (17) 4703 Warrington Drive, Orlando 32826
No More Fertilizers? - Nitrogen Fixation with Non-Legumes

INDIANA Bloomington

High School North
Biss, Daniel Kalman (17) 4685 Heritage Woods Road 47401
On the Symmetry Groups of Hypergraphs of Perfect Cwatsets

IOWA Davenport

Davenport West High School
Holmes, Nathan Daniel (18) 600 South Downey Street, Walcott 52773
Taking a Byte Out of Inefficiency: Study in Improving the Efficiency of Radiant Hydronic Heating Systems Using PC-Based Interfacing

Ft. Madison

Ft. Madison Senior High School
White, Amy Rosemary (17) 2092 Pin Oak Drive 52627
Mobility vs. Availability: Lithic Organization at the Evie Site

KANSAS Shawnee Mission

Shawnee Mission South High School
Stiaszny, Martin Tibor (17) 10734 Walmer, Overland Park 66211
Characterization and Comparison Study of Micelles and Dendrimers

MARYLAND Silver Spring

Montgomery Blair High School
Dasgupta, Samit (16) 1916 Autumn Ridge Circle 20906
On the Schinzel Hypothesis for Polynomials

MICHIGAN Battle Creek

Pennfield High School
Duncan, Katherine Ann (17) 6310 White Rabbit Road 49017
*Cheetah (*Acinonyx jubatus*) Behavioral Observation Study and Analysis of Management Techniques at Binder Park Zoo*

Beverly Hills

Detroit Country Day School
Mishra, Prashant (17) 5074 Cardinal Drive, Troy 48098
Non-Empirical Study of the Charge Distribution and Effective Nuclear Charge of the Atoms H to Ar

Bloomfield Hills

Roeper City and Country School
Wolfe, Daniel Brandon (17) 6177 Beachwood Drive, West Bloomfield 48324
Synthesis and Stretch-Alignment of Polydiacetylene Thin Films

MINNESOTA St. Paul

St. Paul Academy & Summit School
Menon, Anil Samoilenko (18) 4206 Longfellow Avenue S., Minneapolis 55407
Interspecific Aggression in a Minnesota Bird Aviary

MISSISSIPPI Ridgeland

St. Andrew's Episcopal School
Barron, Leah Katherine (18) 400 Northpointe Parkway, Jackson 39211
Closing the Gap: Study of Effect of Reinforcement, Accuracy, and Fluency on Young Children for Varying SES Groups

NEW JERSEYLivingstonLivingston High School

Cummins, Jordan Matthew (18) 69 Shrewsbury Drive 07039
Unprecedented Aromatic Intramolecular 1,5-Hydrogen Migration in Benzophenones -- New Free Radical Rearrangement Missed by a Century of Organic Chemists

NEW MEXICOMontezumaArmand Hammer United World College

Lubowicz, Katarzyna (18) P.O. Box 413 87731
Consumer Demand in Poland's Bread Industry: Case Study of Two Warsaw Bakeries: "Jan Piekarz" Bakery and "SPC" Bakery

NEW YORKArmonkByram Hills High School

Bongaarts, Paul P. (17) 28 Elizabeth Place 10504
Pseudo-Etalon Holography

BellmoreJohn F. Kennedy High School

Levine, Reed Loring (17) 2565 Glenn Drive 11710
Ski Injuries and Knowledge of Fatalities: Two-Part Study
 Sims, Daniel Billy (17) 3006 Lee Place 11710
Feeding Mechanisms and Species Differentiation of Bear Gulch Paleoniscoids

BronxBronx High School of Science

Holder, Jenelle Cassia (16) 1116 Nostrand Avenue, Brooklyn 11225
Thermodynamic Stability of DNA Oligomers Containing Human Centromere Sequences

Manfield, Laura (17) 102-30 66th Road, Apt. 26D, Forest Hills 11375
Nitric Oxide-Cyclooxygenase Interactions in Chondrocytes: Implications for Management of Arthritis

BrooklynEdward R. Murrow High School

Petrocelli, Gina (17) 1750 Coleman Street 11234
Effect of Smoking Behavior, Self-Esteem and Locus of Control on Registered Nurses' Perceptions of Consequences of Smoking and on Registered Nurses' Recognition of their Role Model Status

CedarhurstLawrence High School

Wollman, Joel David (18) 653 Park Lane 11516
Facial Configurations as Inducers of Yawning Behavior and Effect of Yawning on Stretching in Arthritis Patients

JerichoJericho Senior High School

*Kim, Soo Yeun (17) 15-80 Old Cedar Swamp Road, Brookville 11545
Taphonomy of a Neanderthal Cave: Comparative Analysis of Bone Breakage Patterns to Discern Hominid Behavior: Two-Year Study

Long BeachLong Beach Senior High School

Phillips, Tracy Caroline (17) 25 Curley Street 11561
"Money Talks:" Wallet-Sized Currency Vocalizer for the Blind

New YorkStuyvesant High School

Khazanov, Aleksandr Leonidovich (15) 679 Ocean Parkway, Brooklyn 11230
Conjugacy Problem for Families of Matrices, with Applications to Fermat's Equation in Matrices and Theory of Symmetries on Affine Varieties

Lin, Chit-Kwan (17) 280 Rector Place, Apt. 7E 10280
Effects of Replication-Defective Adenovirus Infection on Cellular Morphology and Monolayer Integrity of MDCK cells in vitro

Port WashingtonPaul D. Schreiber Senior High School

Bunyavanich, Supinda (17) 22 Birchdale Lane 11050
Efficacy of Chitosan and Bentonite in Enhanced Municipal Wastewater Treatment

Longiaru, Minsu De Bortoli (17) 20 Pepperday Avenue 11050
Low Cost Epitaxy: Growth and Characterization of Cu(100) Films on Hydrogen Terminated Si(100) Surfaces

SetauketWard Melville High School

Sengupta, Debleena (17) 7 Arbor Ridge Lane, South Setauket 11720
Applications of Bioadsorbents in Removal of Heavy Metal Contaminants
 Srivastava, Neil Castillo (17) 8 Penelope Drive 11733
Role of Nitric Oxide in Combination with Growth Factors on Cell Motility: Implications for Wound Healing

NORTH CAROLINADurhamDurham Academy Upper School

Kasson, Peter Matthews (17) 206 Hillcrest Circle, Chapel Hill 27514
Simulation of Cross Reactivity of Immunogenic Peptides Derived from HIV

North Carolina School of Science & Math

Sutherland, Ronald Worth (18) 1202 Gray Owl Garth, Cary 27511
Temporal Fluctuations of Plant Diversity During Old Field Succession

OREGONEugeneSouth Eugene High School

Conrad, Jacinta Carmel (17) 3960 Dillard Road 97405
Search for New Physics of the Left-Handed Quark Doublet (t,b)

PortlandOregon Episcopal School

Voelker, Courtney Christine Joan (17) 1441 S.W. Clay Street, Apt. #204 97201
Transfer of Taxol from Yew Tree Cuttings into a Culture Medium Over Time

TEXASConroeAcademy of Science and Technology

Harris, Thomas Joe (18) 44 Falling Star Court, The Woodlands 77381
Understanding and Expanding the Niche of the Red-Cockaded Woodpecker II

PlanoPlano Senior High School

Yeh, Deborah Chuan (17) 4016 Fair Meadows Drive 75024
Characterization of a Choline Oxidase-Chemiluminescent Detection System and its Potential Use in Phospholipase D- and Immunodetection Assays

VIRGINIANewport NewsDenbigh High School

Weber, Griffin M. (17) 29 Lakeshore Drive 23602
Asthma and Weather: A Mathematical Model

WASHINGTONSunnysideSunnyside Senior High School

Kassebaum, Jeremy David (17) 4970 Hudson Road, Outlook 98938
Analysis of Environmental Water Contaminants and Their Effects on in vitro Isolated Enzyme Systems

*deceased

