NORTH CAROLINA: North Carolina Student Academy of Science, Dr. Jonathan Franz, Executive Director, North Carolina Student Academy of Science, St. Andrews Presbyterian College, Laurinburg 28352

OHIO: Ohio Academy of Science, Lynn Edward Elfner, Executive Officer, 445 King Ave., Columbus 43201

OKLAHOMA: Oklahoma Junior Academy of Science, Jimmie Pigg, Director, 300 N. Eastern, Moore 73160

OREGON: Oregon Museum of Science and Industry, David Heil, Science Education Manager, Oregon Museum of Science and Industry, 4015 SW Canyon Road, Portland 97221

PENNSYLVANIA: Pennsylvania Academy of Science, Dr. Kurt C. Schreiber, Professor, Department of Chemistry, Duquesne University, Pittsburgh 15282

TEXAS: Science Teachers Association of Texas, Dr. Virginia Rawlins, Assistant Professor of Physics, North Texas State University, Denton 76203

UTAH: Utah Academy of Sciences, Arts and Letters (Junior Academy Division), Richard S. Peterson, State Specialist in Science Education, Utah State Office of Education, 250 East 500 South, Salt Lake City 84111

VERMONT: University of Vermont, Dr. George C. Crooks, 74 Spear St., South Burlington 05401

VIRGINIA: Virginia Junior Academy of Science, Mrs. Luella VanNewkirk, Science Teacher, Thomas Jefferson Intermediate School, 125 Old Glebe Rd., Arlington 22204

WASHINGTON: Washington State Science Talent Search, Dr. Paul A. Lepse, 3469 3rd Ave. W., Seattle 98119

WEST VIRGINIA: West Virginia Academy of Science, Joseph F. Glencoe, Jr., Department of Biology, West Virginia Wesleyan College, Buckhannon 26201

WISCONSIN: Wisconsin Science Talent Search, Dr. Dean Nelson, Professor of Chemistry, Phillips 458, University of Wisconsin, Eau Claire 54701

WYOMING: (See Colorado-Wyoming)

THE 44th ANNUAL

Science Talent Search

for the
Westinghouse Science Scholarships
and Awards

1985 HONORS GROUP



Administered by SCIENCE SERVICE 1719 N Street N.W., Washington, D. C. 20036

FOR RELEASE: WEDNESDAY, JANUARY 16, 1985

The Science Talent Search was the pioneering endeavor to discover at the high school senior year level those who have the potential to become the research scientists and engineers of the future. It has fulfilled this function far beyond the hopes entertained when this educational project was conceived. Many millions of dollars in scholarships in colleges and universities throughout the nation, supplementing the Westinghous Science Scholarships, have been given to those who have thus been discovered to have high science talent.

This selection of students with research ability in science and engineering has become an institution and tradition due to approval from the academic community and the creditable records of winners in colleges, universities and professional positions.

The participation of a great industrial organization in the financing of the annual Science Talent Search is a notable contribution to the advancement of science in America. This activity can be considered a support of "pure research" of importance equal to the fundamental researches in the Westinghouse Research Laboratories. Science and education are grateful for the financial support of the forty-four Science Talent Searches by the Westinghouse Electric Corporation and the Westinghouse Educational Foundation.

Science Service, engaged in the interpretation and public understanding of science on a broad front, is proud of administering the annual Science Talent Search. From the newspapers, educators, scientists and engineers of America, there has been enthusiastic cooperation in this annual activity that means so much to high school seniors interested in science and engineering.

1985 Honors Group

The achieving of Honors in the Science Talent Search is an evidence of ability and interest in science and engineering which should be taken into consideration by colleges and universities in admissions and granting of scholarships. For this reason this Honors List is distributed to all universities and colleges of the United States. Each of those winning honors is being furnished with multiple certifications intended to accompany applications for college admissions and for scholarships, but a listing in this pamphlet should be accepted as an equivalent certificate. Listed are 108 girls and 192 boys.

From this list of 300 Honors, 40 are being chosen as Winners of the Washington trip. Among these, \$89,500 in scholarships and awards will be distributed. The Winners are being announced subsequent to the distribution of this list and their names will be published in SCIENCE NEWS of January 25, 1985, and it will be sent upon request accompanied by a self-addressed stamped envelope.

(age follows name; home address underlined)

Athens

Fort Collins

ALABAMA

Williams, Todd Christopher 16 Athens H.S. 314 Hoffman St. 35611 Paleoclimatology

Athens	Williams, Todd Christopher 16 Athens H.S. 314 Hoffman St. 35611 Paleoclimatology
Birmingham	Using Size Variations in Fossil Marine Diatoms Redmill, Keith Alan 18 Resource Learning Center-Shades Valley H.S. Annex 2268
	Molecules Effects of Changing Substituent Groups on Large Molybdenum
Grand Bay	Knight, Lisa Karol 17 Mobile County H.S. Rt. 2, Box 312, Rosemere Dr. 36541 Construction of a Sau-3A Clone Bank to Screen for Genes Encoding for Alginic Acid
Montgomery	Biosynthesis in a Pseudomonas aeruginosa Cystic Fibrosis Isolate Hayes, Paul Robert 17 Sidney Lanier H.S. 4680 Ray Dr. 36109 Effect of Color Grounding on Math and Word Recognition Skills of Right Brained Students
Theodore	Keeley, Brian Lee 17 Theodore H.S. Route 3, Box 316 36582 Site 1Mb18, the Daughdrill Site: A Look Into Southwest Alabama's Past
Tuskegee	Moss, Terry Bernard 17 Tuskegee Institute H.S. P.O. Box 417 36088 Analyzation of the Radio Network as an Alternative Data Transfer Technique Between Computers
	ARKANSAS
Fayetteville	Sargent, Eugene 18 Fayetteville H.S. <u>1775 Janice Ave., 72701</u> Developmental Design of a Computer Interfaced Seismograph
	CALIFORNIA
Alhambra	Hwang, Jenny Ming-Chen 17 Alhambra H.S. 417 S. Third St. 91801 Isomerization of Phosphoenolpyruvate Carboxylase
	Roy-Burman, Arup 17 Alhambra H.S. 545 Colina Terr., Monterey Park 91754 Determination of the Carcinogenicity of Metal Compounds
Anaheim	Dohn, Richard Hai 16 Savanna H.S. 2171 W. Victoria 92804 Isolation and Purification of Lactoferrin From Human Milk
Antioch	Warthen, Gloria Jean 18 Antioch H.S. 1405 St. Francis Dr. 94509 Will Vitamin B-12 Affect the Learning Ability of Planaria?
Del Mar	Topolovac, Michael John 18 Torrey Pines H.S. M-14 North Lane 92014 Laminar Extension and Transitional Location in a Heated Boundary Layer
La Jolla	Shurman, Brett David 17 La Jolla Country Day School <u>8451 Whale Watch Way 92037</u> Subcellular Distribution and Partial Characterization of Phosphatidylinositol Phosphate Phosphatase
	Hu, Alan John 17 La Jolla H.S. 8422 Prestwick Dr. 92037 Mathematical Selection of
Lodi	the Optimum Uniform Partition Search Pham, Hieu Duc 17 Tokay H.S. 616 San Miguel Ave., Stockton 95210 Isolation of Histone from Chicken Erythrocytes
Los Alamitos	Hayashida, Jr., Kenneth Hiroshi 17 Los Alamitos H.S. 4233 Candleberry Ave. Seel
Mountain View	Beach 90740 Project Nitinol: Nitinol's Properties and Applications in Outer Space Beneze, William Joseph 18 St. Francis H.S. 19287 Brookview Dr., Saratoga 95070 Parallel Mircoprocessing
San Diego	Holman, Lance Elliot 17 Patrick Henry H.S. 6679 Park Ridge Blvd. 92120 Clinical Diagnosis of Hemophilia A
San Jose	Mathog, Joan Yonat-Efrona 18 Willow Glen H.S. 1773 Comstock 95124 Solubility of Abiologically Produced Organic Solids in Liquid Ethane: Implications for Titan
Van Nuys	Tsai, Bill Li-Chien 18 Van Nuys H.S. 8521 Enfield Ave., Northridge 91325 Minimizing the Total Drag of a Three-Dimensional Wing in Hypersonic Flow

COLORADO

Hydrographs

Gessler, Martina 17 Poudre H.S. 3205 Shore Rd. 80524 Deterministic Aspects of

CONNECTICUT

	CONNECTICUT
Farmington	Pai, Sung-Yun 16 Miss Porter's School 53 Forest Hills Dr. 06032 Effect of
Hamden	Hexachlorophene on Succinic and Isocitric Dehydrogenases Chang, Pang-Yuan Nicole 17 Hamden H.S. 1140 Paradise Ave. 06514 Influence of Light and Olfactory Cues on the Host-Finding Ability of the Parasitic Wasp
New Milford	Obencyrtus <u>kuvanae</u> Dixon, Sandra Annette 17 New Milford H.S. 7 Overlook Dr. 06776 Building a Spectrophotometer that Scans the <u>Visible Spectrum</u>
	DELAWARE
Wilmington	Roland, Douglas William 17 Brandywine H.S. 1216 Crestover Rd. 19803 Effect of Music on Students' Test Performance
	FLORIDA
Coconut Creek	Genn, Francine Natalie 17 Coconut Creek H.S. 6760 S.W. 6th Street, Margate 33068 Correlational Similarities Between Creative and Analytical Thinking in Gifted Students
Coral Gables	Rose, John Michael 16 Coral Gables Sr. H.S. 1841 S. Bayshore Lane, Miami 33133 Thermodynamic Properties of Tropylium Ion in Solution
Coral Springs	Christensen, Nancy Elizabeth 17 J. P. Taravella H.S. 1857 NW 93 Terr. 33065 Four Year Comprehensive Study of Hemispherical Dominance in the Brain Lewis, Greg Darren 18 J. P. Taravella H.S. 11064 N.W. 21 Place 33065 Role of Oxalic Acid in Bean Plant Destruction
Davie	Bookman, Karen Lynne 17 Nova H.S. 3421 S.W. 116 Ave. 33330 Role of Antibodies and Interferon in an Experimental Disease Model
Fort Lauderdale	Ames, Sheryl Lynn 17 Fort Lauderdale Christian School 7300 N.W. 10th Pl., Plantation 33313 Computerized Differential Identification Using Dental Configurations and Bitemarks of Homo sapiens
Jacksonville	Carovano, Jr., Ronald George 17 Terry Parker Sr. H.S. 5372 Timberline Drive 32211 Demonstration of Artificial Intelligence Bigbee, Anthony James 17 Stanton College Preparatory School 1499 Edgewood Ave. S. 32205 MEXL: A Three Dimensional Graphics Language with Hidden
	Line/Surface Removal Capacity Chassman, Peter John 17 Samuel W. Wolfson Sr. H.S. 9361 Beauclerc Woods Lane N.
Lake City	32217 Feasibility of Vertical Axis Windmills Bankston, Laurie Ann 17 Columbia H.S. Route 1, Box 657, Fort White 32038
Miami	Quantification of Neonatal Stress Levels Induced by the Brazelton Ramer, Marc Lewis 17 Miami Sunset Sr. H.S. 13814 S.W. 106 Terr. 33186 Finding the pK of the Ketimine-Nitrogen of the Schiff's Base Through Sodium Cyanoborohydride Reductive Inactivation
North Miami Beach	Alfonso, Robert Michael 16 North Miami Beach H.S. 17131 N.E. 6 Ct. 33162 Effects of Halothane on Ca-fluxes and Early Development of Sea Urchin Eggs
Orange Park	Snyder, William Brandon 18 Orange Park H.S. 383 Frog Hollów Rd. 32073 Transition in a Learning, Natural Language Processing System: From Learning by Analyzing Examples to Learning by Analyzing and Following Instructions in the "Target" Language
Pensacola	Diep, Thanh Am 18 Escambia H.S. 6421 Birkhead Dr. 32506 Landcover Analysis by Data Processing of Landsat Satellite
Plantation	Ronkin, Joel Barry 17 South Plantation H.S. 391 S.W. 58 Ave. 33317 Growth of Bacteriophage in the Presence of Various Plasmids
Pompano Beach	Ainsztein, Alexandra Mariel 18 Ely H.S. 8100 N.W. 73 Ave., Tamarac 33319 Europium Nitrate and Fluorescent Luminescence Strengthening Sensitivity and Detections of Pesticides Fordham, Dawn Louise 17 Ely H.S. 8113 N.W. 74 Terr., Tamarac 33319 Effects of
Rockledge	Stimulus Deviance on the N2a Component of the Evoked Potential Devereaux, Ann Stasi 17 Rockledge H.S. 966 Brunswick Ct. 32955 Fiber Optic Connectors Ricci, Laura Joan 17 Rockledge H.S. 1011 Woodsmere Pk. 32955 Three Year Study
Satellite Beach	on the Correlation Between Surspots and Atlantic Tropical Cyclones Jin, Craig Tsung-Wei 17 Satellite H.S. 335 Eutau Ct., Indian Harbor Beach 32937 Modeling Quadrupolar Rotational Oscillation for a Triangular Lattice Thaxton, Eric Alan 17 Satellite H.S. 2470 Colony Dr., Melbourne 32935 Corrosion of Copper
Sunrise	Nadler, Marcia Rita 18 Piper H.S. 2370 N.W. 87 Lane 33322 Saccharomyces cerevisiae: Potential Source of Electrical Energy

GEORGIA Rosser, Pamela Sue 17 Parkview H.S. 2685 Kinnett Dr. 30247 Does Sex Stereotyping Lilburn Exist at Parkview H.S.? HAWAII Honolulu Takamori, Ryan Kiyoshi 17 McKinley H.S. 1476 Akeke Pl., Kailua 96734 Water Purification in Kawainui Marsh Swift, Catherine Elise 17 Punahou School 420 Hao St. 96821 Classification of Asteroids Through Infrared Spectrophotometry ILLINOIS Chicago Hartman, Adam Lindsay 16 Lane Technical H.S. 2950 W. Sherwin 60645 Muscle Fibers in Relation to Body Pigments Khalif, Steven Gregory 17 Lane Technical H.S. 3051 W. Fargo Ave. 60645 Flexagons: The Hidden Face Dubman, Jonathan Morris 16 Latin School of Chicago 1550 N. Lake Shore Dr. #23A

> Bit-Mapped Graphics Using Pre-Shifted Shape Tables Amdur, Rachel Lee 17 Lincoln Park H.S. 1239 W. Montana 60614 Effect of Catecholamine-Active Drugs on Daphnia Heart Rate Penn, Anna Asher 17 University of Chicago Laboratory Schools H.S. 4950 S. Chicago

Beach Dr. 60615 Bacteriophage 86: Restriction Maps of dsDNA Clones From the Small Segment

60610 Development of a Smooth, Color-Consistent Animation Routine for Apple II

Illgen II, Richard Lynn 17 Saint Edward H.S. P.O. Box 8414, Bartlett 60103 Effect of Porphyrin Synthesis Inducing Drugs on Root Growth in Cucumber Seedlings Goldman, Steven Andrew 17 Evanston Township H.S. 2400 Lincolnwood Dr. 60201 Evanston

Elgin

Lisle

Wichita

Determination of Rate of Reduction of Dicyclopropyl Ketone with Sodium Borohydride Murdock, Kevin Charles 17 Evanston Township H.S. 2527 Marcy 60201 Determination of Relative Effectiveness of Sound Intensity Compared to Sound Pressure

Measurements in Improving Signal to Noise Ratio Wilkinson, Anne Marie 16 Evanston Township H.S. 1127 Ashbury Ave. 60202 Periodic Temperature Distribution in a Conducting Bar with Time Variant Boundary

Conditions Tarasewicz, Dariusz George 18 Benet Academy 724 Reidy 60532 Identification of Defective Lymphocyte-Derived Suppressor Factors of Astroglia Found in Multiple

Park Ridge Melnik, Roman 16 Maine Township H.S. East 9271 N. Aspen Lane, Des Plaines 60016 Intermediate Kinetics of Two Peroxidase Isozymes

Rockford Mercer, Stephen Edward 18 Auburn H.S. 2019 Clinton St. 61103 Development of Apparatus and Method for the Examination of Thermocapillary Convection in Binary Immiscible Systems

Skokie Rieger, Barry Arthur 17 Niles North H.S. 8441 Christiana 60076 Propagation of Bacteriophage SP18 in the Restricting/Modifying Host Bacillus subtilis R. Urbana Krummel, Matthew Frederick 16 University H.S. 702 W. Delaware Ave. 61801

Chemotaxonomic Study of Aplysina and Smenospongia Sponges

INDIANA

Schnute, Mark Edward 17 North H.S. 12817 U.S. Hwy. 41 N. 47711 Allelopathic Evansville Aspects of Melilotus alba Through Coumarin Highland

Tseng, Anne An-Li 17 Highland H.S. 3018 44th St. 46322 Esterase and Acid Phosphatase Isozyme Expressions in Ictalurus (Catfish) Indianapolis Yegerlehner, James Douglas 18 Perry Meridian H.S. 8204 S. Delaware St. 46227 Fin

Canting: A Novel Method of Rocket Stabilization Beglin, Robert Michael 17 Marquette H.S. P.O. Box 419, Beverly Shores 46301 Michigan City Electrical Cell Hybridization and the Discovery of a New Cell Line

Hendricks, John McKay Johnson 17 Marquette H.S. 1215 Elston St. 46360 Growth Factor Analog Attempts to Restore Differentiation in Amyotrophic Laterial Sclerosis and Neurofibromatosis

Takla, Nora Vanessa 18 Harrison H.S. 75 Shiloh Ct. 47906 Effect of the Lysosome West Lafayette Inhibitor NH4Cl on Vero Cells Infected With Herpes Simplex Viruses I-TK

KANSAS

Chawla, Ajay 17 Southeast H.S. 2041 Capri Ct. 67207 Ultraviolet Light Induced Reactions Between Thymidine and Lysine: Characterization of Photoproducts

KENTUCKY

50	KENTUCKY
Bowling Green	Buckberry, Brian Dodge 17 Bowling Green H.S. 913 Smith Lane 42101 Effect of Light on the Food Intake of Hadenoecus subterraneus
Paducah	Johnson, Polly 17 Paducah Tilghman H.S. 635 Woodland Dr. 42001 Immunization of Cucumber Against Colletotrichum lagenarium
	MAINE
East Sullivan	Tye, Marcus Jacques 16 Sumner Memorial H.S. R.R. 1, Box 394, Gouldsboro 04607 Demonstrating the Existence or Absence of Extrasensory Perception Abilities in Students
	MARYLAND
Baltimore	Goldberg, Shraga Nahum 17 Mechina H.S. 140-21 69 Ave., Flushing, NY 11367 Neonatal Leukocyte Phagocytosis: Effects of Adult and Neonatal Sera and a Commercial Gamma Globulin Preparation
Bethesda	Offutt, Laura Anne 17 Country Day School of the Sacred Heart-Stone Ridge 9304 Elmhurst Dr. 20814 Treatment of Depression With Monoamine Oxidase Inhibitors Lee, Lucia H. 17 Walter Johnson H.S. 9807 Belhaven Rd. 20817 Construction of
Columbia	Recombinant DNA Plasmids Call, Stephanie Ann 17 Oakland Mills H.S. 9302 Old Line Dr. 21045 Repellency of Fatty Acids Isolated from Plant Extracts
Joppa	Dolce, Joseph William 17 Joppatowne H.S. 1415 Harford Square Dr., Edgewood 21040 Different Measure of String Flexibility
Poolesville	McKenna, Carrie Louise 17 Poolesville H.S. 19137 Dowden Circle 20837 Role of Dominance Display in Rhesus Macaques
Silver Spring	Hitt, Lorin Moultrie 17 Springbrook H.S. 15004 Butterchurn Lane 20904 Technique to Evaluate the Effects of Radiation on the 80186 Microprocessor
Walkersville	Wood, Mark Christopher 17 Walkersville H.S. 8382 Discovery Blvd. 21793 Development and Application of an Automated Flame Photometer
	MASSACHUSETTS
Brockton	Gesner, Michael William 17 Cardinal Spellman H.S. 95 E. Main St., Avon 02322 Development and Testing of Optimized Model Rocket Designs
Brookline	Kantrowitz, Mark 17 Maimonides School 81 Stanton Rd. 02146 General Solution of Recursion Equations
Dracut	Pelletier, Christina Yvonne 17 Dracut H.S. 1051 Methuen St. 01826 Responses to Thematic Apperception Tests
Lexington	Pollen, David 18 Lexington H.S. 8 Loring Rd. 02173 Effects of Gravitational Tidal Forces in Close Galactic Encounters on Galactic Structures
North Brookfield	Ambach, Karen Leslie 17 North Brookfield H.S. Bates St. 05135 Effect of 6- benzylaminopurine on the in vitro Proliferation Rate and Phenotypic Stability of a Variegated Chloroplast Mutant of the Empress Tree
Plymouth	Tift, Sharion Ann 17 Plymouth-Carver H.S. 83 Hillside Dr. 02360 Sex Comparison of the Ontogeny of Glutamic Acid Decarboxylase Activity in Regions of the Developing Rat Brain
Reading	Niles, Daniel T. 17 Austin Preparatory School 74 Carter Rd., Lynn 01904 Photoexcitation of H ₂ CS
Somerville	Maravelis, Lesleyann 17 Somerville H.S. 236 Broadway 02145 Effects of Radiation and Conjugal Systems on Escherichia coli
	MICHIGAN
Ann Arbor	Clague, Allan Mark 18 Pioneer H.S. 3444 Robinwood Dr. 48103 Cepheid Variable Stars to Determine Distance Duderstadt, Katharine Anne 17 Pioneer H.S. 2282 Delaware 48103 Effect of
Detroit	Temperature on Microbial Population Growth McCastle, Victor Achilles 18 Cass Technical H.S. 433 Algonquin 48215 Anisotropic Pyrites and Their Relation to the Modes of Occurrence of Sulfer and Arsenic in Coal McGill, Regina Lynn 17 Frank Cody H.S. 8066 Indiana 48204 Effects of Inter- Stimulus Intervals on Frequency Discrimination Thresholds Bluncson, Cherie Rebecca 17 Detroit Central H.S. 3225 Tyler 48238 Protein Changes in Gravistimulated Cereal Grass Shoots on Earth With Possible Applications in Space West, Andre James 17 Renaissance H.S. 7391 Guthrie 48213 Determination of Phospnorus by Differential Pulse Polarography

MINNESOTA

	MINNESOTA	
Edina	TeWinkel, Leslie Michelle 17 Edina H.S. 4219 Alden Dr. 55416 Effects of Random Reinforcement on Beluga Whales at the Minnesota Zoo	
Marshall	Paxton, Douglas John 18 Marshall Sr. H.S. P.O. Box 6, Ghent 56239 Effects of Solar Heating a Space Enclosed by an Envelope	
٥	MISSISSIPPI	
Wiggins	Walden, Alan Keith 17 Stone H.S. P.O. Box 66, Perkinston 39573 Effect of Ultrasound on the Hydrolysis of 2-Bromo-2-Methylpropane in Aqueous Acetone Media	
	MISSOURI	
Joplin	Meyer, Gregory Brian 17 Memorial H.S. R.R. 7, Box 638 64801 Effects of Heavy	
Neosho	Metals on the Near-Infrared Chlorophyll "A" Absorption Band in Hosta ventricosa Morehead, Teresa Kay 17 Neosho H.S. 503 S. Washington 64850 Effects of Various Types of Music Upon Human Brain Waves	
St. Joseph	Sommers, John Marcus 17 Central H.S. 2002 N. 34 Terr. 64506 Investigation of the Properties of Aqueous Solutions of Chlorine Dioxide with Suggestions for Practical Application	
	Thompson, Marilyn Sue 17 Central H.S. <u>2605 Gene Field Rd. 64506</u> Effect of Heavy Metals on Anaerobic and Aerobic Digestion as Determined by Inductively Coupled Plasma and Ultaviolet Detection of Adenosine-5'-Triphosphate	
	MONTANA	
Missoula	Hyndman, David William 17 Hellgate H.S. 615 Hastings Ave. 59801 Pattee Creek Flood: Its Causes and Effects	
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Hildreth	Swarthout, Brenda Lee 18 Hildreth Public H.S. <u>Route 1 68947</u> Memory: Can It Be Enhanced by Supplementary Sensory Aids?	
	NEW JERSEY	
Edison	Masterson, Cheryl Ellen 17 St. Thomas Aquinas H.S. 45 Emerson St., Carteret 07008 Optimized Passive Solar Storage System Controlled By Passive Solar Switch	
Elizabeth	Passner, Jonathan Michael 17 Jewish Educational Center 3 Disbrow Ct., East Brunswick 08816 Temperature Calibration of a Two-Dimensional Simulated Crystal Driven by White Noise	
Glen Rock	Boroson, Bram Seth 17 Glen Rock JrSr. H.S. 47 Ridge Rd. 07452 Symmetries and Generalizations of an Infinite Rectangular Array of Nonnegative Integers	
Long Branch	Sorkowitz, Enid Rachel 17 Long Branch H.S. 376 West End Ave., Apt. 62 07740 Relationship Between Brain Hemispheric Dominance and the Writing Position of the Preferred Hand	
North Bergen	Lee, Henry 17 North Bergen H.S. 904 73 St. 07047 Studies on the Sugars in Corn by Carbon-13 NMR with Computer Peak Matching	
Oakland	Seibel, Jeffrey Louis 17 Indian Hills H.S. 1035 Dogwood Trail, Franklin Lakes 07417 Immunoprecipitation of Marek's Disease Herpesvirus A and B Antigens With Immune Chicken Serum	
Parsippany	Alroy, Liore Ze'ev 16 Parsippany H.S. <u>17 Sandlewood Dr. 07054</u> Application of the Bootstrap Method for the Evaluation of Theoretical Populations Exhibiting Different Frequency Distributions	
Roselle	Whitney, Glen Thomas 15 Abraham Clark H.S. 14 Kaymark Dr., Medfield, MA 02052 Application of Burnside's Lemma to Graph Enumeration	
Waldwick	Motyka, Mark Anthony 17 Waldwick H.S. 44 John Dow Ave. 07463 Bernoulli Numbers and Their Applications	ŝ
	NEW YORK	
Ardsley	Lefkowitz, Robert Allan 17 Ardsley H.S. <u>76 Joyce Rd., Hartsdale 10530</u> Multi-Breath Studies of Lung Function	
Baldwin	Paul, Louis Craig 17 Baldwin Sr. H.S. 3528 Bertha Dr. 11510 Effect of Temperature	
Daldwin	on Facet Number in the Bar-Eyed Mutant of Drosophila melanogaster	

Park, Christina Hee Youn 17 Benjamin N. Cardozo H.S. 41-43 Little Neck Pkwy., Little Neck 11363 Transfection of NIH 3T3 Mouse Cells by Mouse and Human Macrophage Tumor DNAs, MAC and U937

Sarfati, Caryn Renee 17 Benjamin N. Cardozo H.S. 48-44 196 St., Flushing 11365 Various Summations with the Farey Series and the Farey Series of Fibonacci Denominators

Shim, Joseph 18 Benjamin N. Cardozo H.S. 240-44 68 Ave., Douglaston 11362 Soybean Nodulation and Nitrogen Fixation by Plasmid Mutants of a Bacterium Rhizobium japonicum Strain

Tujak, Laura 16 Benjamin N. Cardozo H.S. 52-51 Little Neck Pkwy., Little Neck 11362 Effect of Orienting Procedures on Children's Phonemic Analysis

Wu, Clara 17 Benjamin N. Cardozo H.S. 218-12 43 Ave. 11361 Searching for Centered K-Gonal Numbers

Wu, James Kuo-Ching 18 Benjamin N. Cardozo H.S. 32-14 Parsons Blvd., Flushing 11354 Measurements of the Secondary Currents in Meanders

Dell, Kristi Ann 17 Bellport H.S. 16 Munsell Rd., East Patchogue 11772 Indications of Indian Presence From a Surface Site in Northwest Indiana

Cho, Baek Yun 18 Brooklyn Technical H.S. 60-15 Woodside Ave., Woodside 11377 Ultraviolet Luminescence Study of Doped Trivalent Cerium Ion

Lai, William 17 Fort Hamilton H.S. 6916 Third Ave. 11209 Analysis of Littorina littorea Locomotion Under Simulated Turbulent Conditions

Yermak, Yelena M. 16 James Madison H.S. 1833 E. 12 St. 11229 Daydreaming: Relationship Between SDT and SIT

Chan, See Wai 18 Midwood H.S. 1451 E. 99 St. 11236 Homogeneous Liquid-Liquid Solvent Extraction of Uranium From Aqueous Solution and Sea Water

Faden, Erika Lynn 17 Midwood H.S. 472 E. 18 St. 11226 Women and Mathematics: The Inferiority Syndrome

Weiserbs, Kera F. 17 Midwood H.S. 671 E. 17 St. 11230 Monte Carlo Simulation of Darwinian Evolution

Levine, Patti Joy 17 Edward R. Murrow H.S. 1972 E. 29 St. 11229 Using Juvenile Hormone Analogues as Insecticides

Lotito, Christopher James 17 Edward R. Murrow H.S. 2529 E. 23 St. 11235 Effects of Monosodium Glutamate (MSG) on the Reproduction and Behavior of Drosophila melanogaster

Baird, Michael Alleyne 18 Prospect Heights H.S. 122 Fenimore St. 11225 Coenzyme Q is Linked to a Peptide: Purification and Characterization

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Bekerman, Marc Stephen 16 South Shore H.S. 2440 E. 72 St. 11234 Dimension Slicing Graziano, Michael Steven 17 City Honors H.S. 354 Starin 14216 Effects of Simultaneous Tasks on Hemispheric Control

Barker, Sheri Michelle 17 Half Hollow Hills H.S. East 4 Parsons Dr. 11746 Environment Corrosion Parameters in the Containment of Low-Level Nuclear

Levine, Naomi Rachelle 16 Half Hollow Hills H.S. East 21 Suncrest Dr. 11746 Investigations of Golden Functions and Predictions of Their Possible Applications to Morphogenesis

Moy, York Paul 17 Half Hollow Hills H.S. East 3 Ponderosa Dr., Melville 11747 Bronchial Lavage of Allergic Asthmatic Patients Following Allergen Broncoprovocation

Woo, Joyce 17 Eastchester H.S. 359 Marbledale Rd., Tuckahoe 10707 Human Scalp Hair Analysis for Nicotine and Cotinine

Bacares, Angela Maria 17 Newtown H.S. 85-20 Britton Ave. 11373 Are Heat Shock Proteins the Last Proteins Synthesized Prior to Programmed Cell Death? Coritsidis, Maria 17 Newtown H.S. 34-40 90 St., Jackson Heights 11372 Ethnicity

Retention Among Greek American Students

Damato, Anna Margaret 16 Newtown H.S. 88-12 Elmhurst Ave. 11373 Comparison of Attitudes Towards Bioethical Issues in a Group of Teenagers and Adults Li, Bonnie Pailing 16 Newtown H.S. 42-43 Ithaca St. #3K 11373 Filtration Rates of

the Hard Clam, Mercenaria mercenaria

Martadarma, Pramita 17 Newtown H.S. 62-89 Wetherole St., Rego Park 11374 Role of Women as Perceived by Children of Working Mothers vs. Non-Working Mothers

Rai, Rabindra Singh 16 Newtown H.S. 42-37 Hampton St. 11373 Influence of Environment on the Moral Development of Asian Cultures

Jha, Bhuvdutt 17 John Bowne H.S. 15 Highland Pl., Yonkers 10705 Development of a Method for Obtaining and Analyzing Membrane Acceleration

Gilady, Elizabeth Ilona 17 Francis Lewis H.S. 42-16 166 St. 11358 Use of Conodonts to Determine the Boundary Between Two Similar Rock Units, the St. Louis and Ste. Levison, Marra Ellen 17 Francis Lewis H.S. 27-27 166 St. 11358 Factors Influencing Altruistic Behavior: A Holocaust Situation Analysis

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Sekhar, Gina 16 Francis Lewis H.S. 69-97 Park Dr. E., New York 11367 Effects of Coculturing Photosynthetic and Methanogenic Bacteria on Various Substrates to Increase Methane Production

Chen, Daniel N. 18 Forest Hills H.S. 62-39 99 St., Rego Park 11374 Measure of Sharpness for Geometric Inequalities

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Murata, Yoshihiko 17 H. Frank Carey H.S. 378 Euston Rd., Garden City South 11530 Transport Defects as the Biochemical Cause of Eye Color Mutations in Drosophila melanogaster

Berrafati, Joseph Fauci 17 Irvington H.S. P.O. Box 7065, Ardsley-on-Hudson 10503 Development of a Biochemical Profile for Group G. streptococcus Kauffman, Jeffrey Ira 17 Irvington H.S. Lewis Rd. 10533 Simplified Technique for

the Identification of Strains of Staphylococcus aureus Using Peptidoglycan Analysis Meghji, Shabnam 17 Hillcrest H.S. 94-08 40 Rd., Elmhurst 11373 Stability of Fission Tracks in Tourmaline

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The forty Washington trip winners of the 44th Annual Science Talent Search, among whom \$89,500 of Westinghouse Science Scholarships and Awards will be distributed, represent about 3.7% of those who completed entries in this scientific and educational competition.

Designed to discover and develop scientific and engineering ability among high school seniors, the Science Talent Search is conducted annually for the Westinghouse Science Scholarships and Awards by Science Service, 1719 N Street, N.W., Washington, DC 20036.

Ten girls and 30 boys are being invited to Washington, DC for an all-expense paid trip February 28-March 4, 1985, to attend the Science Talent Institute. Here 10 winners will be selected by the board of judges to receive one of the following four-year Westinghouse Science Scholarships: One \$12,000 (\$3,000 per year), two \$10,000 (\$2,500 per year), three \$7,500 (\$1,875 per year), four \$5,000 (\$1,250 per year). The remaining 30 contestants will be given Westinghouse Science Awards of \$500 each.

The trip winners are 16 to 18 years of age and come from 31 cities in 13 states and Puerto Rico. They were picked by the judges from among 15,265 contestants of whom 1,069 completed their entries by writing a report on their science project, submitting personal data and teacher recommendations. Completed entries were received from 48 states, the District of Columbia and Puerto Rico.

Washington Trip Winners

HOME ADDRESS follows name of school

AGE of winner follows name

	CALIFORNIA
La Jolla Mountain View Van Nuys	Hu, Alan John 17 La Jolla H.S. 8422 Prestwick Dr. 92037 Bencze, William Joseph 18 St. Francis H.S. 19287 Brookview Dr., Saratoga 95070 Tsai, Bill Li-Chien 18 Van Nuys H.S. 8521 Enfield Ave., Northridge 91325
	FLORIDA
Coral Gables Fort Lauderdale	Rose, John Michael 16 Coral Gables Sr. H.S. 1841 S. Bayshore Lane, Miami 33133 Ames, Sheryl Lynn 17 Fort Lauderdale Christian School 7300 N.W. 10th Pl., Plantation
Rockledge	Ricci, Laura Joan 17 Rockledge H.S. 1011 Woodsmere Pk. 32955
	ILLINOIS
Chicago	Amdur, Rachel Lee 17 Lincoln Park H.S. 1239 W. Montana 60614 Penn, Anna Asher 17 University of Chicago Laboratory Schools H.S. 4950 S. Chicago Beach Dr. 60615
Evanston	Wilkinson, Anne Marie 16 Evanston Township H.S. 1127 Ashbury Ave. 60202
	MASSACHUSETTS
Brockton Brookline Lexington	Gesner, Michael William 17 Cardinal Spellman H.S. 95 E. Main St., Avon 02322 Kantrowitz, Mark 17 Maimonides School 81 Stanton Rd. 02146 Pollen, David 18 Lexington H.S. 8 Loring Rd. 02173
	MICHIGAN
Ann Arbor Detroit	Duderstadt, Katharine Anne 17 Pioneer H.S. 2282 Delaware 48103 McCastle, Victor Achilles 18 Cass Technical H.S. 433 Algonouin 48215

	MISSOURI
St. Joseph	Thompson, Marilyn Sue 17 Central H.S. 2605 Gene Field Rd. 64506
	MONTANA
Missoula	Hyndman, David William 17 Hellgate H.S. 615 Hastings Ave. 59801
	NEW JERSEY
Elizabeth	Passner, Jonathan Michael 17 Jewish Educational Center 3 Disbrow Ct., East Brunswick 08816
Glen Rock	Boroson, Bram Seth 17 Glen Rock JrSr. H.S. 47 Ridge Rd. 07452
	NEW YORK
Baldwin Brookhaven	Paul , Louis Craig 17 Baldwin Sr. H.S. 3528 Bertha Dr. 11510 Dell, Kristi Ann 17 Bellport H.S. 16 Munsell Rd., East Patchogue 11772
Buffalo	Graziano, Michael Steven 17 City Honors H.S. 354 Starin 14216
Liverpool New York	Lee, Leonard Tze-Yung 17 Liverpool H.S. 4372 Luna Course 13088
New Tork	Gelfand, Boris Y. 17 Bronx H.S. of Science 3840 Orloff Avenue 10463
	Kuo, John Shu-Shin 17 Bronx H.S. of Science 154-26 17 Rd., Whitestone 11357 Chan, Paul 17 Stuyvesant H.S. 84-65 Kneeland Ave. 11373
	Friedman, Michael 17 Stuyvesant H.S. 495 E. 18 St., Brooklyn 11226
	Horiuchi, Junjiro 17 Stuyvesant H.S. 500 E. 63 Street 10021
	Zelicof, Audrey 16 Stuyvesant H.S. 110-14 69 Rd., Forest Hills 11375
Webster	Janne, Pasi Antero 17 United Nations International School 500 E. 63, \$13C 10021 Nash, Huw Michael 17 Webster H.S. 1200 Severn Ridge 14580
	OREGON
Beaverton	Gaidos, Eric James 17 Beaverton H.S. 6455 S.W. Scholls Ferry Rd., Portland 97223