

THE 41st ANNUAL

Science Talent Search®

for the
Westinghouse Science Scholarships
and Awards

1982 HONORS GROUP



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

FOR RELEASE: WEDNESDAY, JANUARY 20, 1982

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 Westinghouse 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-one 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.

1982 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 scholarships, but a listing in this pamphlet should be accepted as an equivalent certificate. Listed are 90 girls and 210 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 30, 1982, and it will be sent upon request accompanied by a self-addressed stamped envelope.

(age follows name; home address underlined)

ALABAMA

Birmingham	Walton, Reginald Keith 17 <u>Shades Valley H.S. Annex, Resource Learning Center 7703 Rugby Ave. 35206</u> Effects of Macromolecules on the Growth of Hydroxyapatite Crystals
Florence	Hawkins, Jr., William Brown 17 <u>Bradshaw H.S. 301 Roxie Dr. 35630</u> New Records and Descriptions of Upper Cretaceous Serpulid Worms From the Mooreville Chalk, Greene County, Alabama
	McGlamery, George Lee 18 <u>Bradshaw H.S. 214 Robinhood Dr. 35630</u> Utilization of Solid Residues From Coal Burning Power Plants in Brickmaking
Huntsville	Griner, Jr., Gary Merle 17 <u>Huntsville H.S. 411 Zandale Dr. 35801</u> Body Wave Speeds Resulting From Earthquakes
Opp	Worley, Marsha Dawn 18 <u>Opp H.S. 707 Brookside Dr. 36467</u> Study of the Importance of an Educationally Oriented Environment

ARIZONA

Tucson	Videen, Gordon Wayne 17 <u>Sabino H.S. 2515 N. Indian Ridge Dr. 85715</u> Examination of the Diffraction Patterns of Fibers
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ARKANSAS

Hot Springs	Koppel, Wendy Lynn 18 <u>Lakeside H.S. 110 Jeff's Dr. 71901</u> Investigation Into the Genetic Effects of Dimethyl Sulfoxide
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CALIFORNIA

Alhambra	Gin, Robert Ong 17 <u>Alhambra H.S. 1418 Star Ridge Dr., Monterey Park 91754</u> Effects of Caffeine and Chloramphenicol on Replication and Recombination of Lambda Bacteriophage and Isolation of Defective Phage
	Heng, Arnold Brian Woo 17 <u>Alhambra H.S. 869 Crest Vista Dr., Monterey Park 91754</u> Development of an Assay for the Detection of Anti-Idiotypic Antibody
	Peck, Holly Victoria 17 <u>Alhambra H.S. 2232 Stranahan Dr. 91803</u> Computer Analysis of FACS Data
	Rodriguez, Martin Edvarado 18 <u>Alhambra H.S. 518 N. Electric Ave. 91801</u> Behavior in the Expression of Confidence in Non-English Speaking Patients During Pregnancy
Antioch	Chin, Daniel York Ngeng 17 <u>Antioch Sr. H.S. 911 Gatter Dr. 94509</u> What is the Pulling Capability of the Snail, <i>Helix aspersa</i> ?
Chatsworth	Cohen, Darrel Phillip 17 <u>Chatsworth H.S. 9806 Belmar Ave., Northridge 91324</u> Direct Effect of 2-Hydroxyestradiol (Catechol Estrogen) on Platelet Aggregability
Corning	Abel, Vickie Marie 17 <u>Corning Union H.S. Rt. 1, Box 433 96021</u> Phytophthora - Mode of Transfer and Possible Control Techniques
Lafayette	Chu, Jean Suyul 17 <u>Acalanes H.S. 3282 Ameno Dr. 94549</u> 1/f Spectral Density of Traffic Flow Rate

La Jolla Kashani, Mir Saied 16 La Jolla Country Day School 9862 La Jolla Farms Rd. 92037 Effects of Concentration and Temperature on the Rate of Oxidation-Reduction Reactions: A Computer-Assisted Investigation

Livermore Schell, Stephan Vincent 17 Granada H.S. 793 Caliente 94550 DDMS: Dynamic Disk Memory System for Increased Memory

Long Beach Herman, Ronald Dean 17 Long Beach Polytechnic H.S. 3514 Ladoga Ave. 90808 Coat Color and Breed Factors and Their Relationship to the Risk of Benign Skin Melanoma in Dogs

Lin, Richard 17 Long Beach Polytechnic H.S. 3663 Country Club Dr., Apt. B 90807 Effects of CO₂ Exposure on the Survival of *Apis mellifera* in Queenright and Queenless Colonies

Los Angeles Hulkower, Katherine Lynn 16 Yeshiva University of Los Angeles H.S. 320 S. Canon Dr., Beverly Hills 90212 Genetics and Methodology of Paternity Evaluations

Modesto Mellis, Adam George 17 Grace M. Davis H.S. 1139 Fordham Ave. 95350 Investigation of the Effects of Planetary Position on Solar and Geological Activity

Monterey Uyeda, Lynn Diane 17 Monterey H.S. 515 Toyon Dr. 93940 Chickpea (*Cicer arietinum*) Germination in Relation to Seed Coat and Seed Size

Moraga Cook, Anna-Marie 17 Campolindo H.S. 3261 Rohrer Dr., Lafayette 94549 Potential Energy to Evaluate the Stability of a Floating Prism

Newport Beach Mayer, Niels Phinn 17 Corona del Mar H.S. 2700 Pebble Dr., Corona del Mar 92625 High Speed Waveform Recorder Performs Computer Controlled Data Acquisition

Rancho Palos Verdes Neat, Mark Andre 18 Miraleste H.S. 6 Sundown Dr., Rolling Hills Estates 90274 Quantitative Investigation of Vitalistic Fields

Ridgecrest Banks, William David 17 S.E. Burroughs H.S. 509 Vera 93555 Generalizations on Two Theoretical Functions $\Phi(N)$ and $\Gamma(N)$

San Diego Anderson, Carolyn Anne 17 Crawford H.S. 5422 Dwyer Dr. 92115 Influence of Age and Sex on the Color Preferences of Children

San Marino Stanford, Theron William 17 San Marino H.S. 1840 Rose Ave. 91108 Some Results for Arithmetical Functions of Unitary Divisors

COLORADO

Greeley Volk, Dean Quentin 16 Greeley West H.S. 5100 25th St. 80634 Oscillating Iodine Clock Reaction

Lakewood Tucker, Thomas Allen 17 Bear Creek H.S. 7270 W. Radcliff Ave., Littleton 80123 IONS: An Adaptation of Inorganic Chemical Analysis to Computer-Interactive Simulation

CONNECTICUT

Berlin McCormack, Timothy Joseph 17 Berlin H.S. 62 Ellsworth Blvd., Kensington 06037 Energy Budgets for Three Different Size Classes of Blue Mussels, *Mytilus edulis* L.

Brookfield Shaw, Karen Vonne 18 Brookfield H.S. 18 Oak Grove Rd. 06804 Effects of Long-Wave Ultraviolet Light Rays on Excised Carrot Root Tips Growing in a Nutrient Medium

Pawcatuck Tylaska, Timothy Thomas 18 Stonington H.S. Box 230 RFD 1, Mystic 06355 Experimental Hydrogen Engine and an Instrument to Measure Engine Performance

DISTRICT OF COLUMBIA

Washington Mackey IV, James Patrick 17 Gonzaga College H.S. 1423 Carrington Ln., Vienna, VA 22180 Kinetics of Carbon Fiber Oxidation

FLORIDA

Cocoa Baird III, Kenneth George 17 Cocoa H.S. 115 N. Indian River Dr. #112 32922 Design and Analysis of an Ion Propulsion Thruster

Coral Springs Sutton, Carl Allen 17 Coral Springs H.S. 8528 N.W. 19th Dr. 33065 Efficiency of a Photochemical Reaction Involving Trisethylenediamine Chromium III

Daytona Beach Gonsky, Linda Jean 17 Seabreeze Sr. H.S. 23 Bellwood Cir., Ormond Beach 32074 Antigen Distribution on *Acanthamoeba culbertsoni* Plasma Membrane

Fort Lauderdale Carreras, Christopher William 17 Nova H.S. 7400 S.W. 20th St., Plantation 33317 Water as a Catalyst in Phase Transformations Involving the Grinding of Zirconium Oxide

Wu, Doris Peiling 17 Nova H.S. 2200 S.W. 117 Terr., Davie 33325 Chemical Evidence for Species Boundaries in Widespread *Ipomoea* Species

Jacksonville Cole, John Pixley 17 Terry Parker Sr. H.S. 8718 Haverhill St. 32211 Torque Control for a Hovercraft

Sheng, Paul Shiu-Ping 17 Terry Parker Sr. H.S. 4080 Old Mill Cove Trail West 32211 Five Dimensional Imaging Approximation by Geometric Fractal Enhancement of Polytopic Projections

Melbourne Kirk, Simon James 17 Melbourne H.S. 644 Oakridge Dr., Indialantic 32903 Vitamin and Mineral Loss Related to Food Preparation

Miami Hall, Suelyn Denise 16 Miami Southridge H.S. 16941 S.W. 119 Ct. 33177 Induction of Sister Chromatid Exchanges in Rat Epithelial Cells by Procarcinogens

Niceville Phillips, James Anthony 17 Niceville H.S. 101 Third St. 32578 Analysis of Type One Solar Radio Emissions

Palatka Ahmad, Mohammed Omar 17 Briarwood School Rt. 4, Box 171 32077 In Search of a Correlation Between Bone Hardness and Strip-Out Torque in Bone Screws

Plantation Gross, Michael Leslie 17 South Plantation H.S. 7360 S.W. 9th St. 33317 Shelter Preference of the Western Atlantic Spiny Lobster, *Panulirus argus*

Rockledge Beck, Jr., Dexter Eugene 17 Rockledge H.S. 1120 Geiger St. 32955 Effects of SO₂ on Marsh Grapefruit Trees

Satellite Beach Kilbourne, Anita Inge Frieda 17 Satellite H.S. 640 Caribbean Rd. 32937 Temperature Preference Testing of *Ornithodoros turicata* (Acarine: Ixodoidea: Argasidae)

Willmore, Vincent Vivian 18 Satellite H.S. 678 Caribbean Rd. 32937 Activity of Antimutagenic Agents in the L5178Y Mouse Lymphoma Mutagen Assay System

Tampa Ngo, Dung Anh 17 C. Leon King H.S. 1901 E. 114th Ave. 33612 Separation of Dolomitic Limestone Impurities From Florida Phosphate Rock

GEORGIA

Atlanta Nahmias, David Erich 17 Briarcliff H.S. 859 Vistavia Cir., Decatur 30033 Detection of Antigen in Immune Complexes by *Staphylococcus* Immune Complex Electron Microscopy (STICEM)

Chung, Keith 17 Lakeside H.S. 2071 St. DeVile, N.E. 30345 Analysis of the Genetic Composition of *Corynebacteria* JK

Dunwoody Paterson, Thomas Scott 17 Peachtree H.S. 4008-B Dunwoody Park 30338 Designing and Testing of a New Artificial Intelligence Process

HAWAII

Aiea Taira, Russell Takashi 17 Aiea H.S. 98-261 Puuuli St. 96701 Role of Amino Acids in the Mechanisms Controlling Activity in the Sanderab, *Ocypode laevis* (Dana)

IDAHO

Blackfoot Griffin, Kent E. 17 Snake River H.S. Rt. 2, Box 200 83221 HP-41C Program for Finding Real and Complex Roots of Higher Order Polynomials

ILLINOIS

Chicago Duster, Kevin William 16 Percy Lavon Julian H.S. 8952 S. King Dr. 60619 Peroxidases in Induced Bean Plant Tumors

Getto, Helen Elaine 17 Lane Technical H.S. 4941 N. Mozart St. 60625 Kinetics of CO-Binding in Manganese III Hemoglobin Hybrids

Lim, Wendell Alan 16 University of Chicago Laboratory Schools H.S. 5631 S. Harper Ave. 60637 Inhibition of Juvenile Hormone Synthesis in the Tobacco Hornworm by Compactin

Johnson, Yvette Joyce 16 Whitney M. Young H.S. 1741 E. 91st St. 60617 Causes of Monsterism in the *Dileptus*

Evanston Goldman, John Douglas 17 Evanston Twp. H.S. 2400 Lincolnwood Dr. 60201 Feasibility of Performing the Fries Rearrangement of Thymal Acetate

Seth, Raj Kamal 18 Evanston Twp. H.S. 2323 Central Park Ave. 60201
Dynamics of Coupled Pendulums as Analog of Compound Nucleus Reactions
Shapo, Benjamin Mitchell 17 Evanston Twp. H.S. 1910 Orrington Ave.
60201 Quasar 3C273 and Gravitational Lenses
Highland Park Skolnik, Bruce Jeffrey 17 Highland Park H.S. 1735 Sherwood Rd. 60035
MICRO-CLASS: A Microorganism Classification Program
Peru Janko, Lori Ann 17 St. Bede Academy 2227 13th St. 61354
Their Last Supper
Rolling Meadows Buchholz, Donna Joy 17 Rolling Meadows H.S. 3605 Finch Ct. 60008
Chlortetracycline and Its Effects on the Thermal Death Values of
Bacteria

INDIANA

Bloomington Klein, Marc Alexander 17 Bloomington H.S. North 4521 Cambridge Ct.
47401 Evaluation of Lead and of Oxygen Free High Conductivity
Tracks for a Superconducting, Magnetically Levitated Train
Fort Wayne Stier, Steven Luke 17 Northrop H.S. 8712 Note Stine Rd. 46815
Select Stomatal Complex Features in the Fagaceae
Hammond Gray, Donald Lee 17 Bishop Noll Institute 2105 Wespark Ave., Whiting
46394 Artificial Intelligence
Kendallville Meyer, Richard C. 17 East Noble H.S. R.R. #2 46755
Fungicidal Studies on *Dibotryon morbosum* in vitro and in vivo
Michigan City Paulik, Mark Andrew 17 Marquette H.S. P.O. Box 174, Beverly Shores
46301 Chemometabolic Program Including Lactile, Vitamin A,
Retenzyne, and Selenium as Anti-Cancer Agents on Cancer in vitro
Jernberg, Emily Ruth 17 Rogers H.S. Box 314, Beverly Shores 46301
Type-A (Coronary-Prone) Behavior in Adolescents
West Lafayette Wasserman, Mark Daniel 17 W.H. Harrison H.S. 3512 Capilano Dr. 47906
Nature and Taxonomic Distribution of Foliar Trichomes in the Fagaceae

IOWA

Cedar Rapids Kuipers, David Ryan 17 John F. Kennedy Sr. H.S. 1733 26th St., N.W.
52405 Synthesis and Characterization of Nonstoichiometric Zirconium
Monosulfide Compounds
Marshalltown Grier, Douglas John 18 Marshalltown H.S. 501 Orchard Dr. 50158
Enhancement of Glycine max Through the Use of Controlled Levels
of Electromagnetic Radiation
Oelwein Serra, Gina Elizabeth 17 Oelwein H.S. 28-12th Ave., S.E. 50662
Glycine max Inoculation Stimulates Growth and Produces Higher Yields

KANSAS

Lawrence Wu, Lawrence Yung-Hui 17 Lawrence H.S. 133 Providence Rd. 66044
Effects of Various Concentrations of Arsenic on Contender Bush Green
Bean (*Phaseolus vulgaris*) Seed Germination and Seedling Growth

KENTUCKY

Benton Lundblad, Anders Erik 17 Marshall County H.S. Rt. 3, Box 86 42025
Tetrahedron Solar Heated Balloon: An Inexpensive Launcher of Light
Scientific Equipment
Mt. Sterling Baker, Jeffrey Todd 17 Montgomery County H.S. Rt. #1, Oaklawn Dr.
40353 Effect of Circuit Inductance on the Transversely Excited
Nitrogen Laser

MAINE

Fort Kent Bouchard, Marian Ruth 18 Community H.S. 66 Pleasant St. 04743
Sensitivity of Restriction Point Specific Growth Control to Hormones

MARYLAND

Bethesda Titlow, Christian Charles 17 Walter Johnson H.S. 5512 Sonoma Rd. 20817
Effect of Different Mediums on Properties of a Clonal Leydig Tumor
Cell Line
Tsai, Donald Edward 17 Walter Johnson H.S. 5310 Alta Vista Rd. 20814
Analysis of Total Lipids and Cholesterol Contents in the Blue Crab,
Callinectes sapidus Rathbun

Columbia

Greenbelt

Rockville

Silver Spring

Telesetsky, Stephanie Ann 16 Stone Ridge Country Day School of the
Sacred Heart 16 Eton Overlook, Rockville 20850 Uptake of
Antibiotics in Mutants of *Escherichia coli* Altered in Outer Membrane
Yienger, Brenda Elizabeth 17 Oakland Mills H.S. 9450 Penfield Ct.
21045 Use of a New Bioassay to Study Brassica, a Newly Discovered
Plant Growth Substance
Perrone, Jeanmarie 17 Eleanor Roosevelt H.S. 12207 Valerie Ln., Laurel
20708 Beta-lactamase Production in Plasmid pTX-354 of *Bacillus*
thuringiensis
Ryan, Stephen Dennis 17 Charles W. Woodward H.S. 5014 Cushing Dr.,
Kensington 20895 Detection of IgG Antibodies to *Coccidioidomycosis*
by an Enzyme-Linked Immunosorbent Assay (ELISA)
Post, Ernest Rehmatulla 15 John F. Kennedy H.S. 11011 Inwood Ave.
20902 Datablob: An Environment to Aid Coordinated Multiprocessor
Programming
Gelman, Andrew Eric 16 Springbrook H.S. 13311 Clifton Rd. 20904
Solution of Some Second Degree Diophantine Equations
Hoffman, Scott Andrew 17 Springbrook H.S. 12625 Billington Rd. 20904
Inhibitory Effects of Endogenous Compounds in *Phaseolus vulgaris*
Upon IAA-Oxidase Activity and IAA-Induced Growth
Shykind, Benjamin Michael 17 Springbrook H.S. 903 Burnt Crest Ln.
20903 Enzyme Linked Immunosorbent Assay for Beta₂-Microglobulin
Whang, Kenneth Carl 16 Springbrook H.S. 54 Stonegate Dr. 20904
Activated Unisils and Cholesterol Oxidation Products

MASSACHUSETTS

Brockton Celia, Nicholas S. 17 Cardinal Spellman H.S. 44 Glendower, Avon 02322
Effects of Parametric Variations on the D.C. Motor
Falmouth Inoue, Theodore Dana 17 Falmouth H.S. 40 Shore St. 02540
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Framingham Mabrouk, Suzanne Theresa 17 Framingham South H.S. 9 Wildewood Terr.
01701 Gel Permeation Chromatography of Antioxidants: Molecular
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Lexington Adler, Michael Charles 17 Lexington H.S. 3 Sunny Knoll Terr. 02173
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Ideal Gases
Rockport Lanciani, Daniel David 17 Rockport H.S. 185 Atlantic Rd., Gloucester
01930 Design of a 16-bit Microprocessor
Topsfield Cavanaugh, David Langdon 17 Masconomet Regional H.S. 278 Perkins
Row 01983 Quantitative Discussion of the Heat Produced by the
Naturally Occurring Decomposition of Manure

MICHIGAN

Detroit Spears, Jené Marlene 17 Renaissance H.S. 18900 Stansbury 48235
Thermoanalytic Basis for Selecting Heat Storage Materials
Nadison Heights Napiewocki, John Leonard 17 Bishop Foley H.S. 26228 Wexford,
Warren 48091 Activity of Virulent T4r Coliphages
St. Clair Shores Hill, Steven Michael 17 Lakeview H.S. 26104 Cubberness 48081
Equations for Lagrangian Points

MINNESOTA

Chaska Ackerman, Alan Scott 18 Chaska H.S. 6890 Uttica Ln., Chanhassen 55317
Design for Efficiency of the Hybrid Electric Car
Olson, Kevin Edward 17 Chaska H.S. 277 Highland Dr. 55318
Membrane Deformability Technique for the Study of Blood Platelets
Richfield Crankshaw, Carolyn Leigh 18 Richfield Sr. H.S. 7008 Elliot Ave., S.
55423 Comparative Biochemistry of Hepatic Mitochondrial Mixed-
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MISSISSIPPI

Natchez Tiwari, Pinky Sajala 16 Trinity Episcopal Day School P.O. Box 8,
Fayette 39069 Effects of Gibberellin on Micromorphology of Rye Grass

MISSOURI

- Cardwell Phillips, John Kenneth 17 Southland H.S. R.R. #1. Arbyrd 63821
Bacterial Test for Mutagens Combined With a Sensitivity Test for
Anti-Cancer Substances
- Independence Carnahan, Annette Eileen 17 William Chrisman H.S. 15900 E. South Ave.
64050 Analysis of Secondary Plant Product Dynamics
- St. Joseph Nelson, Janet Elizabeth 17 Central H.S. 1070 Crestview Ln. 64506
Synthesis, Extraction, Characterization, and Fungicidal Properties
of Juglone (5-Hydroxy-1,4-Naphthoquinone)

MONTANA

- Helena Shillingstad, Robert Bret 18 Helena Sr. H.S. 526 S. Sanders 59601
Metal Plastics in the Prevention of Tooth Decay

NEBRASKA

- Omaha deShazer, Douglas John 18 Northwest H.S. 7816 Evans 68134
Shock Wave Models Explaining Unusual Breakage Pattern of Rigid Objects
- Stephenson, Patrick C. 18 Northwest H.S. 8025 Boyd 68134
Explanation of Animal Strength by Examination of Tendon Insertion
in the Human Forearm

NEW HAMPSHIRE

- Exeter Ranzini, Stephen L. 16 Phillips Exeter Academy 116 Ware Rd.,
Williamsburg, VA 23185 Interference With the Free Market and
the Great Depression: The Role of Agriculture in the Twenties

NEW JERSEY

- Lawrenceville Brown, Mark David 17 Notre Dame H.S. R.D. #1, Box 170 D. Rock Rd.,
Lambertville 08525 Measuring Molecules Using the Langmuir
Molecular Film Balance
- Ramsey Michaud, Paul Richard 17 Ramsey H.S. 1 Westwind Ct., Saddle River 07458
Divisibility Observations for the Numbers Generated by $x^4 + 4A^4$
- Teaneck Rintel, Robert Allen 17 Teaneck H.S. 708 Downing St. 07666
Chlorpromazine's Blockage of Metabolic Cooperation Indicates Its
Potential as a Tumor Promoter and a Teratogen
- West Long Branch Silverman, Jared Adam 17 Shore Regional H.S. 3 Darien Dr. 07764
Adenine Nucleotide Transport by *Chlamydia psittaci*

NEW MEXICO

- Albuquerque Walker, Randy Gene 16 Eldorado H.S. 12408 Morrow N.E. 87112
Factors Related to the Spelling Success of State and National
Bee Participants

NEW YORK

- Albany Pu, Anthony Twenty 17 Colonial Central H.S. 19 Delafield Dr. 12205
Nuclear Protein Characterization
- Baldwin Greenwald, Richard Mark 17 Baldwin Sr. H.S. 1514 Coolidge Ave. 11510
Indirect Method of Determining the Stiffness Constants of the Facets
of the Lumbar Spine
- Katz, Jeffrey Stuart 17 Baldwin Sr. H.S. 976 Green Pl. 11510
Endothelial Cell Density Following Penetrating Keratoplasty
- Bayside Abramson, Michael Andrew 16 Benjamin N. Cardozo H.S. 67-21 224 St.
11364 Grateful Graphs
- Chun, David 17 Benjamin N. Cardozo H.S. 56-27 218 St. 11364
Feeding Behavior of the Grasshoppers, *Melanoplus differentialis* and
Melanoplus sanguinipes, When Tested on Wilted and Turgid Leaves of
Various Plant Species
- Etsios, Dean Arthur 17 Benjamin N. Cardozo H.S. 361 Arleigh Rd.,
Douglaston 11363 Chemoreception in *Asterias forbesi* and the
Defense Mechanism of the *Mercenaria mercenaria*
- Hochwald, Steven Norbert 16 Benjamin N. Cardozo H.S. 37-19 Regatta
Pl., Douglaston 11363 Influence of Drugs Affecting Microtubules
on Flagellate Transformation of *Naegleria gruberi*

- Honig, Marc Adam 17 Benjamin N. Cardozo H.S. 56-37 231 St. 11364
Effect of Bacteria, Inactivated by Heat or Streptomycin, Upon the
Development of Sea Urchin Embryos, *Lytechinus variegatus*
- Just, Emily J. 17 Benjamin N. Cardozo H.S. 249-06 Thornhill Ave.,
Little Neck 11362 Sums of Odd Composite Integers
- Kaplan, Brian Jay 17 Benjamin N. Cardozo H.S. 240-12 67 Ave.,
Douglaston 11362 Action of a Mannose-Containing Lectin on the
Aggregation and Plaque Forming Abilities of *Actinomyces naeslundii*
- Lee, Susan Shin-ji 17 Benjamin N. Cardozo H.S. 34-35 73 St., Jackson
Heights 11372 The Role of Carnitine Acetyltransferase in the
Metabolism of Yeast, *Torulopsis bovina*
- Lubush, Lynne Beth 17 Benjamin N. Cardozo H.S. 66-27 Commonwealth
Blvd., Douglaston 11362 Search for Visitation and Oviposition
Repellents for the Onion Fly, *Hylemyia antiqua* (Diptera: Anthomyiidae)
- Sklamberg, Todd Peter 17 Benjamin N. Cardozo H.S. 56-03 East Hampton
Blvd. 11364 Species and Organ Specificity of Hepatitis B Surface
Antigen Binding
- Taylor, Jonathan 17 Benjamin N. Cardozo H.S. 53-31 213 St. 11364
Bactericidal Effects of Chlorhexidine Diacetate and Organotin on
Silkworms Infected With *Serratia marcescens*
- Wintner, Jeffrey Michael 16 Benjamin N. Cardozo H.S. 252-15 Cullman
Ave., Little Neck 11362 Keynesian and Classical, Neo-Classical
Economic Theories and Three Economic Models
- Witt, Steven Nathaniel 17 Benjamin N. Cardozo H.S. 67-07 214 St. 11364
Size as an Antipredatory Refuge of the Marsh Periwinkle
Littorina irrorata (SAY)
- Bellmore Schneider, Alan Mark 17 John F. Kennedy H.S. 3257 Hewlett Ave.,
Merrick 11566 Purification of Driselase
- Bronx Feldschuh, Jonathan Adam 17 Horace Mann School 615 W. 252 St. 10471
Design of an Integrated Instrument for the Measurement of Human
Blood Volume
- Kantor, Ronald Marc 16 Riverdale Country School 679 W. 239 St. 10463
Significance of Singularities in the Stability of Axisymmetric, Mirror
Confined Plasmas
- Brooklyn Meyers, Kevin Robert 16 John Dewey H.S. 2129 76 St. 11214
PROOF: The Minimum of $A^4 + B^4 - C^4$ Equals 64 When $1 < A < B < C$
- Chu Fong, Fay 16 Fort Hamilton H.S. 6738 Ridge Blvd. 11220
Aromatic Polyamides With Low Flammability
- Brown, Mitchell Scott 17 Abraham Lincoln H.S. 3062 Brighton 13 St.
11235 Effect of Light on the Permeability of the Lettuce Plant's
Root Tip Cell Membrane by Way of the Phytochrome System
- Kosacolsky, Claudia Sylvia 17 Abraham Lincoln H.S. 2580 Ocean Pkwy.
11235 Mass Production of Biomass Within a Self-Sufficient Environment
- Gordon, Reena Beth 15 Midwood H.S. 40 Ocean Pkwy. 11218
Some Principles Governing the Association of Adverbials With
Clauses in English Sentences
- Joseph, Andrew Kennedy 17 F.D. Roosevelt H.S. 81 E. 91 St. 11212
Study of Human Pancreatic Adenocarcinoma Cell Lines
- Futter, Dror Meir 17 Yeshiva of Flatbush Joel Braverman H.S.
33 Walcott Ave., Staten Island 10314 Vector Analysis as Applied
to Magnetic Fields
- Boiceville Murray, Patricia A. 16 Oteora Jr.-Sr. H.S. 43 Park Dr., Woodstock
12498 Determination Through the Use of S-p-Nitrobenzyl-6-thioinosine
of Whether the Conjugates of 1-Beta-D-Arabinofuranosyleytosine
Hydrolyze Inside or Outside of the L1210 Lymphoid Leukemia Cell
- Dix Hills Chow, Christopher Yat-Chuen 17 Half Hollow Hills H.S. East 14 Pettit Dr.
11746 Urinary Lactic Dehydrogenase Isoenzyme Assay in the
Differential Diagnosis of Upper and Lower Urinary Tract Infections
- Kelly, Adam Peter 17 Half Hollow Hills H.S. East 19 Millet St. 11746
Sanitary Water Fountain
- Malinowski, John Robert 17 Half Hollow Hills H.S. East 14 Tiara Pl.
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Circadian Rhythm of Cell Division in *Euglena gracilis* (Z)
- Newmark, Evan Michael 17 Half Hollow Hills H.S. West 92 McCulloch Dr.
11746 A Suitable Preparation for Recording Action Potentials From
the Giant Nerve Fibers of the Earthworm
- Scherr, Stephen Mark 17 Half Hollow Hills H.S. West 18 Talisman Dr.,
11746 Symmetrical Tracking of Post-Mitotic *Naegleria gruberi*
Daughter Cells

- Elmhurst Chan, Rebecca 17 Newtown H.S. 51-60 Van Kleeck St., Apt. 6L 11373
Development of an Enzyme-Linked Immunosorbent Assay for the
Detection of Anti-Hepatic Triglyceride Lipase Immunoglobulin G
- Flushing Greenberg, Carole Ann 17 Francis Lewis H.S. 157-39 24 Ave., Whitestone 11357
Attitudes Towards the State of Israel Between Russian
Jewish Emigres Over and Under 35 Years of Age
- Lepson, Scott Paul 16 Francis Lewis H.S. 42-34 164 St. 11358
Attitudes Towards Subminimum Wages Among a Cross Section of
Middle Class Youth in Central Queens
- Patel, Rakesh Ishver 17 Francis Lewis H.S. 53 11 192 St., Fresh Meadows 11365
Construction of a Chimeric Plasmid Suitable for Cloning
the Methanol Dehydrogenase Gene of *Pseudomonas* TP1
- Forest Hills Ling, Julie 17 Forest Hills H.S. 98-09 74 Ave. 11375
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and Spectroscopic Studies of the Reduction of Pyrazine in Acidic Media
- Glen Cove Shoeman, Andrew Michael 17 Glen Cove H.S. 12 Broadfield Pl. 11542
Computer Communications Network
- Glen Head Kashin, Peter Simon 18 North Shore H.S. 47 Glen Cove Dr. 11545
Hybrid Simplex-Khachiyan Method of Linear Programming
- Great Neck Sanders, Steven 17 Great Neck South H.S. 47-12 Jayson Ave. 11020
Densities of Normal Liquids
- Hicksville Rokito, Andrew Scott 17 Hicksville H.S. 34 Eagle Ln., East Hills 11576
Membrane Immunoglobulin Receptors on Bovine B Lymphocytes in
the Peripheral Blood
- Ithaca Freed, Denise Elaine 17 Ithaca H.S. 108 Homestead Cir. 14850
Electro-hydrodynamic Instability in a Nematic Liquid Crystal
- Jamaica Cheng, Chin Long 17 Jamaica H.S. 90-19 183 St., Hollis 11423
Digital Computer Simulation Program
- Cotton, John Lawrence 17 Jamaica H.S. 75-23 175 St., Flushing 11366
Inhibition of Pheromone Production in *Periplaneta americana* Through
the Use of Antibiotics
- Eldridge, Noel Elvin 17 Jamaica H.S. 206-38 Whitehall Terr., Queens Village 11427
Effect of Selectively Impaired Sensory Perception
on *Periplaneta americana*
- Gerstle, Michael Bernard 17 Jamaica H.S. 75-31 174 St., Flushing 11366
Mapping of Recombinant Mitochondrial DNA
- Marcus, Sharon 15 Jamaica H.S. 76-07 167 St., Flushing 11366
Programmed Cell Death and Proteolysis: The Mechanism of the
Proteolytic Enzyme in the Intersegmental Muscles of *Manduca sexta*
- Marx, Steven Owen 17 Jamaica H.S. 75-07 195 St., Flushing 11366
Microbial Transformation of Pergolide to Pergolide Sulfoxide by
Helminthosporium and *Aspergillus* Species
- Johnstown Hunt, Peter David 18 Johnstown H.S. 14 E. Madison Ave. 12095
Factors Affecting Numbers of Evening Grosbeaks at a Feeding Station
in Winter in North-Central New York
- Long Beach Libutti, Steven Kenneth 17 Long Beach H.S. 291 Blackheath Rd. 11561
Mutations Induced by Specific Wavelengths of Laser Light
- Roth, Douglas Albert 17 Long Beach H.S. 700 Shore Rd., Long Beach 11561
Isolation and Elucidation of the Leaf Flavonoids of
Hofmeisteria fasciculata
- Suss, Eric Burton 17 Long Beach H.S. 63 Armour St. 11561
Analysis of the Fat Soluble Pigments of Strains of Geographically
Diverse and Morphologically Similar Thermophilic Cyanobacteria
- Weindorf, Alan L. 17 Long Beach H.S. 855 E. Broadway 11561
Color Sensitivity Peaks Found in *Uca pugnax* and *U. pugnator*
- Weisz, James Matthew 17 Long Beach H.S. 18 Park Dr. 11561
Occurrence and Origin of Chitinolytic Activity in the Intestinal Tract
of the Carnivorous Insect *Nigronia serricornis* (Say)
- New York Balogh, Peter Leslie 18 Bronx H.S. of Science 35-27 81 St., Queens 11372
Energy From Salinity Gradients: An Analysis of Reverse
Vapor Compression Desalination
- Berliner, Edward Fredrick 17 Bronx H.S. of Science 2600-12 N. Netherland Ave. 10463
Mathematics in Orbit
- Cheng, Pei-Yee 17 Bronx H.S. of Science 91-38 50 Ave. Elmhurst 11373
A Solid-Phase Immunometric Approach to the Assay of
Factor VIII Coagulant Antigen
- Chun, Jay Young 17 Bronx H.S. of Science 1735 E. 13 St., Brooklyn 11229
Role of vWF on the Coagulant Activity of AIIF
- Dong, Nancy 16 Bronx H.S. of Science 2543 Williamsbridge Rd., Bronx 10469
Binding of Calmodulin to Monoamine Oxidase
- Ghosh, Supriya 17 Bronx H.S. of Science 108-44 64 Ave., Queens 11375
Number Theoretic Function: $\lambda(n) = n - \phi(n)$
- Hammer, Michael Scott 16 Bronx H.S. of Science 253-04 60 Ave., Little Neck 11362
Effects of Chlorpromazine on the Motility of *Chlamydomonas*
- Jha, Sanjaya 16 Bronx H.S. of Science 67-34 Bell Blvd., Queens 11364
Role of Histone H1^o in Mammalian Cells
- Kim, Irene Hyeunjun 17 Bronx H.S. of Science 43-10 Kissena Blvd., Apt. 16D, Flushing 11355
Effects of Cyclic-AMP and Hyperthermia
on HeLa Cells
- Kim, Saechin 17 Bronx H.S. of Science 30-59 34 St., Long Island City 11103
Perfect and Beyond
- Lee, Jung Hyon 17 Bronx H.S. of Science 13 E. Fordham Rd., Bronx 10468
Morphogenetic Studies on Tissue Cultures of the Fern,
Polypodium Sanctae Rosae
- Liang, Ling-Chi Stephanie 18 Bronx H.S. of Science 72-22 153 St., Flushing 11367
Effect of Acetylcholine-Like Compounds on the
Measurement of Potassium Ion Concentrations by the Potassium Ion
Electrode System
- Liu, Frank Chieh 17 Bronx H.S. of Science 170-08 35 Ave., Flushing 11358
A Research, Involving *Lumbricus terrestris*, Into the
Possibility of Roles for Prostaglandins on Lower Life Forms
- Maglio, Paul Philip 17 Bronx H.S. of Science 149-62 Powells Cove Blvd. 11357
To Find the Cut-Vertices of a Graph
- Masuo, Andy Tetsuji 17 Bronx H.S. of Science 137-10 Kalmia Ave., Flushing 11355
Polarity and the Movement of Indole-3-Acetic Acid
in the Root Tissue of *Daucus Carota*
- Meixner, Jill Robin 17 Bronx H.S. of Science 3611 Henry Hudson Pkwy. 10463
Monoclonal Antibodies Against Human Immunoglobulin G
- Morishima, Alyssa 16 Bronx H.S. of Science 2750 Johnson Ave. 10463
Mutagenic Effects of Store-Bought Saccharin on the Salivary Gland
Chromosomes of *Drosophila virilis*
- Sauter, Rebecca Tamar 17 Bronx H.S. of Science 4465 Douglas Ave. 10471
Effects of Gibberellic Acid on the Fruiting Bodies of the
Slime Mold, *Physarum polycephalum*
- Shapiro, Daliah 17 Bronx H.S. of Science 66 Overlook Terr. 10040
Spin Label Studies of Heat-Induced Tolerance of Sorghum to PC Toxin
- Steinberg, Bryan Martin 17 Bronx H.S. of Science 71-48 Harrow St., Forest Hills 11375
Colicin Inhibition of Conjugation in *Escherichia coli*
- Tso, Li 17 Bronx H.S. of Science 217-37 Hempstead Ave., Queens Village 11429
Practical Numbers
- Turitz, Jonathan Gilbert 17 Bronx H.S. of Science 5601 Riverdale Ave. 10471
Serum Replacement in Growth Medium for *Trypanosoma brucei*
in vitro
- Vuksanaj, Pashko 17 Bronx H.S. of Science 2550 Marion Ave. 10458
Two Related Diophantine Equations
- Sapolsky, Robert A. 17 Collegiate School 360 E. 72 St. 10021
Effects of Age on Adaptation Mechanisms in the Human Visual System
as Measured by the Visual Evoked Potential
- Bergwerk, Ari Joshua 17 Ramaz School 71-42 Harrow St., Forest Hills 11375
Aurovertin Production and Activity in Microbiological Systems
- Blumenfeld, Laura Rose 17 Ramaz School 73 Piccadilly Rd., Great Neck 11023
Isolation and Characterization of the Soluble Cytoplasmic
Antigen RO in Order to Screen Patients With Symptoms of Systemic
Lupus Erythematosus
- Miller, Peter Neal 17 Ramaz School 45 E. 89 St., Apt. 9E 10028
Gene Transfer in *Bacillus alcalophilus*
- Berman, Mark Arthur 17 Stuyvesant H.S. 162-21 Powells Cove Blvd., Whitestone 11257
Effect of *Helminthosporium carbonum* on Lignin,
Chlorogenic Acid, and Phytoalexin Accumulation in Potato Tuber Tissue
- Chang, Richard Ke-Jen 17 Stuyvesant H.S. 34-2 Kent Pl. Blvd., Summit NJ 07901
Theoretical Analysis of the Edge-Defined Film-Fed Growth
Process of Silicon Ribbons
- DeCross, Arthur Joseph 17 Stuyvesant H.S. 49 City Blvd., Staten Island 10301
Transmission of Energy
- Dienes, Keith Roger 18 Stuyvesant H.S. 90-60 Union Turnpike, Glendale 11385
Isometric Transformation in N Dimensions
- Elkies, Noam David 15 Stuyvesant H.S. 25 Montgomery St. 10002
Improved Lower Bound on the Greatest Element of a Sum-Distinct
Set of Fixed Order

Eneman, Jonathan David 16 Stuyvesant H.S. 100 W. 94 St. 10025
Effects of Calcium Chloride Ions on Regeneration in an Axotomized
Giant Axon in *Periplaneta americana*

Gurel, Ogan 17 Stuyvesant H.S. 1 Washington Square Village 21 10012
APLSIMUL: A Simulation Based Universal 16-bit Microprocessor
Software Development System

Hirschhorn, Joel N. 15 Stuyvesant H.S. 29 Washington Square West
10011 On the Distribution of Twin Primes

Lee, Jennifer Grant 17 Stuyvesant H.S. 2219 Ave. 1, Brooklyn 11210
Conjugation and Characterization of Tetramethylrhodamine
Isothiocyanate Derivatives of Cytochrome c

Liu, Morgan Yih Yang 17 Stuyvesant H.S. 370 Riverside Dr., Apt. 11-D
10025 Computer Simulation Model of the *Panonychus ulmi*-*Amblyscius*
fallacis Prey-Predator Interaction and Its Response to Chemical Pesticide

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Island 10310 Speed of Light in BVO_4

Silverman, Wendy Michele 17 Stuyvesant H.S. 3 Washington Square Village
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Dugesia tigrina

Wang, Elizabeth Hsinyi 16 Stuyvesant H.S. 153-13 78 Ave., Flushing 11367
Electron Spin Resonance Studies on the Temperature Dependence of
Sulfoquinovosyl Diglyceride Isolated From *Hordeum vulgare*

Zagorski, David Jerry 17 Stuyvesant H.S. 110 W. 86 St. 10024
Carmichael Numbers

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Alterations of Asialo-GM2 Patterns in Synchronized 3T3-Kirsten Sarcoma
Virus-Transformed Cells at Specific Periods of the Cell Cycle

Broyde, Michael Jay 17 Yeshiva University H.S. for Boys 372 Island Ave.,
Woodmere 11598 Effect of Gene *Wh* on Sperm Tail Protein Composition
in the Syrian Hamster, *Mesocricetus auratus*

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Effects of Time-Varying Electromagnetic Fields on Radish Seeds

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Terr. 14870 System Controller and Data Processor

Rosenthal, Peter Brian 17 Plainview-Old Bethpage H.S. 122 Grace St. 11803
PEa1(h) Genome and Cloning Techniques

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11364 Effect of Cyanine Dye #4 on Growth and Octopine Production
in Habituated Crown Gall Tumors of *Helianthus Annuus*

Beever, Cindy Luann 17 Grover Cleveland H.S. 53-24 66 St., Maspeth
11378 Cloning Electrical Polarity Preference in *Paramecia*

Bonura, Maria Anne 17 Grover Cleveland H.S. 1867 Greene Ave. 11385
Effects of the Steroid Prednisone on the Physiology and Morphology of
Paramecium caudatum and *Paramecium bursaria*

Hutter, Heidi Sonya 17 Grover Cleveland H.S. 66-53 60 Pl. 11385
Effects of Ultraviolet Light on the Symbiotic Relationship of *Paramecium*
bursaria and *Zoochlorella*

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Middle Village 11379 In vitro Investigation and Computer Simulation
of the Transpiration-Cohesion Theory

Wright, Elizabeth Kathryn 17 Grover Cleveland H.S. 1925 Greene Ave. 11385
Effect of Monosodium Glutamate on *Drosophila melanogaster*

Katz, Steven Bruce 17 Beach Channel H.S. 406 Beach 136 St., Belle
Harbor 11694 Testing of *Cryptocodium cohnii* Dinoflagellates
(Y Breeding Group) for Genetic Linkage

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Effect of Electrical Stimulation on the Growth of the Mustard-Tendergreen

Sokol, Joseph Lawrence 18 South Side Sr. H.S. 103 Atkinson Rd. 11570
Synthesis and Biological Evaluation of Retinoic Acid Derivatives for
Chemoprevention of Cancer

Lozada, Eriberto Patrick 17 Roslyn H.S. 50 Wren Dr., East Hills 11576
Uric Acid Degrading Anaerobic Bacteria in the Alimentary Canal of the
Madagascan Cockroach

Rosner, Mitchell Howard 17 Roslyn H.S. 160 Hummingbird Dr., Roslyn
11576 Effects of the Age of Sexual Maturity of the Male
Nothobranchius guentheri on the Rate of Development of His Offspring

Smithtown

Stearn, Anne Elizabeth 16 Roslyn H.S. 20 Chestnut Dr., East Hills 11576
Sleep Patterns and Performance in Pre-adolescent Males

Poltun, Susan Beth 17 Smithtown H.S. West 245 Bow Dr., Hauppauge 11788
Distances on 30S Ribosomal Subunits From *Escherichia coli* as Measured
by Fluorescence Energy Transfer

Snyder, Lynne Page 18 Smithtown H.S. West 14 Bridlepath Rd. 11787
Sites of Erythrocyte D-Glucose Binding

Cangiano, Peter 17 New Dorp H.S. 327 Durant Ave. 10308
Digital Circuit Simulation

Yang, Lee 17 New Dorp H.S. 66 Park Hill Ln. 10304
Effect of Allium sativum on *Drosophila melanogaster*

Babkowski, Robert Christopher 17 W.T. Clarke H.S. 770 Salisbury Park
Dr. 11590 Effects of Salinity, Temperature NH_4NO_3 , and Multichromatic
Lights on the Growth of the Rhodophyceae *Gracilaria tikvahiae*

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Holland 14080 Wind Turbine Site Analysis

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Jamestown

Maas, Lori Kay 17 Jamestown Sr. H.S. Box 665 58401 Anti-Bacterial
Analysis of Plant Extracts Using Various Extraction Procedures

OHIO

Akron

Chen, Alice 17 Harvey S. Firestone H.S. 639 Garnette Rd. 44313
Carbenicillin and Lysozyme Enrichment for Nitrate Auxotrophs of
Rhizobium leguminosarum

Atwater

Rinker, Carrie Winifred 17 Waterloo H.S. 6226 Waterloo Rd., Box 338
44201 Construction and Characterization of Δ (topA cysB) Donor Strains

Cincinnati

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Application of Symmetry Properties to Determine the Molecular
Geometry of a Chloroform Molecule

Winstel, Mary Ann Patricia 17 Oak Hills H.S. 2810 Hocking Dr. 45238 Cathodic Protection

Kent

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Gravitational Effects of Planetary Conjunctions

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Holography

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Systems Using Flat Bed and Evacuated Tube Prototypes

Toledo

Knox, Mark Andrew 17 St. John's H.S. 1545 Indian Creek Dr.,
Temperance, MI 48182 Evaluation of Molecular Forces in the Two
Component System of Paradichlorobenzene and Biphenyl

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Analysis

OKLAHOMA

Moore

Lee, Sang Gil 18 Moore H.S. 801 S. Bouziden 73160 Degradation of
the Plasma Lipoprotein With Human Milk Lipoprotein Lipase and Hepatic
Triglyceride Lipase

Norman

Wang, Frank Yu-Heng 17 Norman H.S. 3706 Quail Dr. 73069
Construction, Analysis and Application of Modular Representations

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Burchard, Julia 17 Stillwater H.S. 213 W. Elm St. 74074
Molpadija arenicola Hemoglobins

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Unidentified Agrobacterium Tumefaciens Strains

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Way 97330 Structural Adaptations of the Wavy-Leaved Thistle
for Thermal Symbiosis

Charter, Andrew Joseph 18 Hillsboro Sr. H.S. 750 S.W. Dennis 97123
Development and Application of Enzyme-Linked Immunosorbent Assay
for the Detection and Quantitative Analysis of Monoclonal Antibody
Production

- Nyssa Atagi, Jolene Hana 17 Nyssa H.S. Rt. 1, Box 627 97913
Analysis of Salts in Atriplex
Hansen, Renate Elizabeth 17 Nyssa H.S. Rt. 2, Box 330 97913
A Possible Ophiolite Sequence at Frenchy Butte, Oregon
Vale Reynolds, Frank Ronald 18 Vale Union H.S. 236 Glenn St. South 97918
Rules Governing Meteor Showers Derived From Photographic
Observations

PENNSYLVANIA

- Bethlehem Bader, William Alan 17 Liberty Sr. H.S. 1402 Lorain Ave. 18018
A RATFOR Compiler and Logic Analyzer
Harrisburg Hegarty, John Patrick 18 Bishop McDevitt H.S. 1017 Scenery Dr. 17109
Construction of Recombinant DNA Molecules Containing Simian Virus
40 and/or Herpes Simplex Virus DNA Sequences
Philadelphia Elshami, Ashraf Ahmed 18 Central H.S. 7212 N. 20th St. 19138
Amino Acid Content and Regenerative Properties of Planaria *Dugesia
dorocephala*
Moskowitz, Samuel Mark 17 Central H.S. 308 Wellesley Rd. 19119
Measurement of Biomembrane Electrical Activity: Development of an
OP AMP Controlled System
Springfield Parente, Jr., John Peter 17 Cardinal O'Hara H.S. 612 Barry Dr. 19064
Thin Layer Chromatography
Wyncote Rickles, Lori Fran 17 Cheltenham Twp. H.S. 7811 Conwell Rd.,
Philadelphia 19118 Ultraviolet and Visible Spectroscopy of
5,6- and 7,8-Benzoflavones in FeTPPC1

SOUTH CAROLINA

- Columbia Purvis, Cheryl Charlene 18 J.H. Hammond Academy 4499 Chicora St.
29206 Silent Alarm
Gold, Abraham Alden 17 Keenan H.S. 305 Juniper St. 29203
Zymomonas Method for Ethanol Fermentation
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Enzymic Saccharification of Cellulose

SOUTH DAKOTA

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Physics and the Sound of Music

TENNESSEE

- Gallatin Baker, Mark David 15 Gallatin Sr. H.S. 163 Indian Lake Rd., Hender-
sonville 37075 The Mean-Life of the Muon
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Sectional Echocardiography
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Physical Characteristics of Elemental Whisker and Polycrystalline
Cadmium

TEXAS

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Morphogenesis of Spherulites, Utilizing X-Ray Microanalysis
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Heterogeneity Observed in Myeloma Proteins of Three IgG_k Patients
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Paleomagnetism of Georgia Diabases
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Purification of an Embryonic Protein in *Oncopeltus fasciatus*
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Software Link for Dissimilar Computers

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Via Sunlight (Modified)

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Regulation of *Modiolus demissus* When Exposed to a Hyposmotic Stress
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Roundup
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Effects of Temperature on Electrolytic Capacitors
Springfield Brown, Karen Suzanne 17 West Springfield H.S. 8308 Brixton St. 22152
Mutagenic Effects of Metals on *Lactobacillus casei* e

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PROTO-ROVER II: A Two Year Study in Robotics
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Junction 25443 Response of Macroinvertebrates to Lowered pH as Related
to Buffering Capacity of Streams
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Chromosomal Aberration Due to Routine Dental X-Rays

WISCONSIN

- Brookfield Colin, Todd Berger 18 Brookfield Central H.S. 21705 Clearfield Rd.
53005 Effects of a Magnetic Field on Reaction Rates of Ferromagnetic
Elements
Trieglaff, Tracy Lynn 18 Brookfield Central H.S. 19040 Quail Hollow Dr.
53005 Wood Studies: Lignin Content vs. Tensile Strength
Madison Horowitz, David Andrew 17 James Madison Memorial H.S. 6417 Antietam Ln.
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Immunosorbent Assay (CELISA)
Middleton, Donald Kevin 17 James Madison Memorial H.S. 6402 Landfall
Dr. 53705 Localization of Acid Phosphatase in *Volvox*
Waukesha Newman, Donald James 17 Waukesha North H.S. 1966 Cascade 53186
Home Plant Tanks
Wisconsin Rapids Matthews, Anne Marie 18 Assumption H.S. 2120 Ranger Rd. 54494
Resistance of *Escherichia coli* to Chlorination

WYOMING

Cheyenne

Miner, Robert Roland 18 East H.S. 2660 Kelley Dr. 82001
Comprehensive Congruence Systems

* * * * *

Washington Trip Winners

of the

Forty-first Annual Science Talent Search[®]

for the Westinghouse Science Scholarships and Awards

The forty Washington trip winners of the 41st Annual Science Talent Search, among whom \$89,500 of Westinghouse Science Scholarships and Awards will be distributed, represent about 4% 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 D.C. 20036.

Thirteen girls and 27 boys are being invited to Washington, D.C. for an all-expense paid trip February 25-March 1, 1982, 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 15 to 18 years of age and come from 30 cities in 16 states. They were picked by the judges from among 13,259 contestants of whom 950 completed their entries by writing a report on their science project, submitting personal data and teacher recommendations. Completed entries were received from 49 states, the District of Columbia, Puerto Rico and Overseas American Schools.

New York

Elkies, Noah David 15 Stuyvesant H.S. 25 Montgomery St. 10002
Gurel, Ogan 17 Stuyvesant H.S. 1 Washington Square Village 20 10012
Hirschhorn, Joel N. 15 Stuyvesant H.S. 29 Washington Square West
10011
Zietchick, Tommy Gay 17 Stuyvesant H.S. 73 22 189 St. Flushing 11366
Smithtown Snyder, Lynne Page 18 Smithtown H.S. West 14 Bridlepath Rd. 11787

OHIO

Cincinnati
Kent
Sullivan

Dolbries, Karen Bernadette 17 Oak Hills H.S. 6285 Kingook Dr. 45211
Isa, Mitchell 15 Theodore Roosevelt H.S. 5641 Horning Rd. 44240
McMeese, Kelly Ann 17 Black River H.S. 47149 Bursley Rd. Wellington
14090

OKLAHOMA

Norman

Wang, Frank Yu Hong 17 Norman H.S. 3706 Quail Dr. 73069

PENNSYLVANIA

Philadelphia

Eishami, Ashraf Ahmed 18 Central H.S. 7212 N. 20th St. 19138

TEXAS

Houston

Wilfong, Blake Linton 17 Westbury H.S. 5831 Ettrick Dr. 77035

WISCONSIN

Madison

Horowitz, David Andrew 17 James Madison Memorial H.S. 6417 Antietam
Ln. 53705



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Washington Trip Winners

HOME ADDRESS follows name of school

AGE of winner follows name

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CALIFORNIA

Corning Abel, Vickie Marie 17 Corning Union H.S. Rt. 1, Box 433 96021
 Monterey Uyeda, Lynn Diane 17 Monterey H.S. 515 Toyon Dr. 93940
 Newport Beach Mayer, Niels Phinn 17 Corona del Mar H.S. 2700 Pebble Dr.,
 Corona del Mar 92625
 San Marino Stanford, Theron William 17 San Marino H.S. 1840 Rose Ave. 91108

CONNECTICUT

Pawcatuck Tylaska, Timothy Thomas 18 Stonington H.S. RFD #1 Box 230,
 Mystic 06355

GEORGIA

Atlanta Nahmias, David Erich 17 Briarcliff H.S. 859 Vistavia Cir., Decatur 30033

ILLINOIS

Chicago Getto, Helen Elaine 17 Lane Technical H.S. 4941 N. Mozart St. 60625
 Llm, Wendell Alan 16 University of Chicago Laboratory Schools H.S.
 5631 S. Harper Ave. 60637
 Evanston Goldman, John Douglas 17 Evanston Twp. H.S. 2400 Lincolnwood Dr.
 60201
 Seth, Raj Kamal 18 Evanston Twp. H.S. 2323 Central Park Ave. 60201
 Rolling Meadows Buchholz, Donna Joy 17 Rolling Meadows H.S. 3605 Finch Ct. 60008

INDIANA

Bloomington Klein, Marc Alexander 17 Bloomington H.S. North 4521 Cambridge Ct.
 47401

MARYLAND

Bethesda Telesetsky, Stephanie Ann 16 Stone Ridge Country Day School of the
 Sacred Heart 16 Eton Overlook, Rockville 20850

MICHIGAN

Detroit Spears, Jené Marlene 17 Renaissance H.S. 18900 Stansbury 48235

MISSOURI

St. Joseph Nelson, Janet Elizabeth 17 Central H.S. 1070 Crestview Ln. 64506

NEW JERSEY

West Long Branch Silverman, Jared Adam 17 Shore Regional H.S. 3 Darien Dr. 07764

NEW YORK

Bayside Hochwald, Steven Norbert 16 Benjamin N. Cardozo H.S. 37-19 Regatta
 Pl., Douglaston 11363
 Taylor, Jonathan 17 Benjamin N. Cardozo H.S. 53-31 213 St. 11364
 Bronx Kantor, Ronald Marc 17 Riverdale Country School 679 W. 239 St. 10463
 Brooklyn Gordon, Reena Beth 15 Midwood H.S. 40 Ocean Pkwy. 11218
 Dix Hills Malinowski, John Robert 17 Half Hollow Hills H.S. East 14 Tiana Pl. 11746
 Jamaica Marcus, Sharon 15 Jamaica H.S. 76 07 167 St., Flushing 11366
 Long Beach Weindorf, Alan L. 17 Long Beach H.S. 855 E. Broadway 11561
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