

FILE COPY

**HONORS GROUP**

**IN**

**THE 25<sup>th</sup> ANNUAL**

***Science Talent Search***<sup>®</sup>

**for the**

**Westinghouse Science Scholarships**

**and Awards**

**1966**



**SCIENCE CLUBS OF AMERICA**

**Administered By Science Service**

**1719 N STREET N. W. WASHINGTON, D. C. 20036**

## The Meaning of Honors in the Science Talent Search

The achieving of Honors in the Science Talent Search, earned by the top 10% of those who complete entries in the Science Talent Search, is an evidence of science ability and interest which can be taken into consideration by colleges and universities in admissions and granting of scholarships. For this reason this Honors list is distributed to all the universities and colleges of the United States utilizing a list furnished by the American Council on Education.

All boys and girls awarded Honors in the Science Talent Search are considered so outstanding that any institution of higher learning will be justified in considering their abilities carefully.

In past years members of the Honors Group have made creditable records in the colleges and universities to which they have been admitted.

From the list of 300 honor awards, 40 are being chosen as winners of the Washington trip. Among these \$34,250 in scholarships and awards will be distributed. The list of winners is being announced subsequently to the distribution of this list and will be published in the Science News Letter of February 5, 1966, and it will be sent upon request accompanied by a self-addressed stamped envelope.

Each of those winning honors is being furnished with multiple certificates intended to accompany applications for college admissions and scholarships, but a listing in this pamphlet should be accepted as an equivalent certification.

The proportion of boys and girls in this list is determined by the ratio of boys and girls entering the contest. Listed are 82 girls and 218 boys. The girls determine their own chances in the Science Talent Search in accordance with the number that enter. Of the Honors Group, 71% of the boys and 88% of the girls rank in the upper 5% in their high school classes. Among the 300 who won Honors, 247 belong to science clubs of which 129 are affiliated with Science Clubs of America.

## The Annual Science Talent Search

The Science Talent Search was the pioneering endeavor to discover at the senior high school year level those who have the potentialities to become the research scientists 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 has become an institution and tradition due to approval from the educational world and the creditable records of winners in colleges, universities and professional positions.

In a real sense the annual Science Talent Search is more than a scholarship contest. It is a major step toward making scientific talent available for important tasks in our civilization.

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 twenty-five Science Talent Searches by the Westinghouse Educational Foundation, an organization endowed by the Westinghouse Electric Corporation for the promotion of education and science.

Science Service, engaged in the interpretation and popularization of science on a broad front, is proud of administering, through Science Clubs of America, the annual Science Talent Search. From the newspapers, educators and scientists of America there has been enthusiastic cooperation in this annual activity that means so much to high school seniors interested in science. The Science Talent Search is a continuing opportunity and responsibility of the more than 25,000 science groups and more than 750,000 members affiliated with Science Clubs of America.

FOR RELEASE: WEDNESDAY AFTERNOON, JANUARY 26, 1966

## Honors Group in the Twenty-fifth Annual Science Talent Search<sup>(R)</sup>

\* indicates girls  
H. S. indicates High School  
HOME ADDRESS is underlined  
AGE of winner follows name  
Title of project report submitted is on next line

### ALABAMA

Morris \*Hughes, Linda Louise 18 Mortimer Jordan H.S. Rt. 1, Warrior 35180  
Effects of Diets Containing Medium Chain Fatty Acids on Chicks

### ALASKA

Anchorage Walther, Dale Jay 17 East Anchorage H.S. 2428 E. 20th Ave. 99501  
Presenting an Immunological Approach to the Study of Plant Sensitization  
Manley, Robert Landes 17 West Anchorage H.S. 401 12th Ave. 99501  
Electrophoresis of Dogs' Blood

### ARIZONA

Phoenix \*Lee, Cynthia Laura 15 North Phoenix H.S. 916 E. Cambridge Ave. 85006  
Applications of Moire Patterns to Industrial and Psychological Problems  
Stevenson, John Alfred 17 North Phoenix H.S. 1421 E. Hoover Ave. 85006  
Moving Striations in a Glow Discharge Positive Column  
\*Jennett, Mary Ingrid 17 Xavier H.S. 2425 E. Harvard 85008  
Soybeans: Nutritious and Delicious  
Winslow Soo Hoo, Spencer 17 Winslow H.S. 512 Snyder Ave. 86047  
Relation Between Blood Serum Proteins and Diseases  
Yuma \*Storey, Kathryn Ann 18 Yuma H.S. Yuma Test Div., Yuma Proving  
Effects of Extreme Environmental Changes Ground 85364  
on the Growth and Reproduction of Certain Green Algae

### ARKANSAS

Lewisville Pickren, Jim Lloyd 17 Lewisville H.S. 410 Murphy, Box 215 71845  
The Effects of Pesticides Used by Farmers of the Maniece Bayou on Fish

### CALIFORNIA

Atherton Johnston, Daniel Lawrence 17 Menlo-Atherton H.S. 370 Olive St., Menlo  
Effects of Various Treatments on Steel's Park 94026  
Microstructure  
Rubin, Richard Jerome 17 Menlo-Atherton H.S. 1325 Garden Lane, Menlo  
Limited Ecological Study of Five Biotic Park 94026  
Communities in Albany County, Wyoming  
Encinitas Kalins, David Ted 18 San Dieguito Union H.S. 2076 Gatun St., Del Mar  
Properties of Ionic Diffusion in Colloidal Silica  
Glendale Mellon, Jay Edward 17 Herbert Hoover H.S. 354 W. Loraine St. 91202  
Deleterious Effects of Two Nonionic Surfactants on the Primary  
Roots of Lotium multiflorum  
Lawndale Olson, Gary Arthur 17 Leuzinger H.S. 3815 W. 144th St., Hawthorne 90250  
Effect of Estrogen on the Uptake of Cholesterol-4-C<sub>14</sub>  
in the Brains of Male Rats  
Los Angeles Mille, Michael Roger 17 Fairfax H.S. 717 N. Hayworth Ave. 90046  
Attempt to Determine the Compound or Compounds That Elicit  
the Feeding Reaction in Dugesia dorotocephala  
Szolovits, Peter, 17 Fairfax H.S. 556 N. Serrano Ave. 90004  
Polytropic Approximation to Stellar Structure  
Oakland Gardner, Bruce Herbert 17 Fremont H.S. 5435 Yuba Ave. 94619  
Effects of Coffee on the Bacterium Bacillus cereus  
Pasadena Clarke, Steven Gerard 16 John Muir H.S. 760 S. Oak Knoll Ave. 91106  
Approach-Withdrawal Behavior and Interaction in the Rat

- Cline, Michael Alan 18 Pasadena H.S. 1215 Hastings Ranch 91107  
Resprouting in Chamiso in Relation to the Carbohydrate  
Reserves of the Crown Tissue
- Salinas Smith, Adrian Charles, Jr. 17 North Salinas H.S. 214 N. 1st St. 93902  
Computerized System for Correlating Human Logic and Binary Thought
- San Diego Anderson, Richard Barry 17 Clairemont H.S. 2248 Tokalon St. 92110  
Studies on the Structure of Bovine Serum Albumin
- \*Saarni, Elizabeth Strandell 17 Point Loma H.S. 1569 Catalina Blvd. 92107  
Toxicity to Rats of a Commonly Used Chlordane  
Pesticide
- \*Roome, Sharon Marie 17 Regina Coeli Academy 841 Billow Dr. 92114  
Identification and Comparison of Fluorescent Contaminants  
From Rubber and Plastic Laboratory Apparatus
- Terry, Herbert Alonzo 17 Will C. Crawford H.S. 6251 Jeff St. 92115  
Can Ultraviolet Radiation Induce Mutations Through the  
Egg of *Drosophila melanogaster*?
- Santa Monica Lamadrid, Enrique Russell 17 Santa Monica H.S. 1018 Cedar St. 90405  
Serum Glycolipids of the Fowl
- Tracy Lapsys, Michael Thomas 17 Tracy Joint Union H.S. Rt. 2, Box 164.  
Effects of Vitamin D<sub>2</sub> on Prenatal Growth Kasson Rd. 95376

#### COLORADO

- Denver \*Rothermel, Kathleen Mary 17 Cathedral H.S. 6867 S. Prince Cir.,  
Effects of Time Shift on the Intelligence, Littleton 80120  
Activity and Metabolism of White Mice
- Grand Junction Larson, Arden Lawrence 17 Central H.S. 571 30 1/4 Rd. 81501  
Investigation of the Color of Amethyst

#### CONNECTICUT

- Bloomfield Melnick, Avrohm Newton 17 Bloomfield H.S. 65 Jackson Rd.  
Role of Ionic Environment in Bacteriophage Adsorption
- Pawcatuck Lord, Steven Michael 17 Stonington H.S. 44 Clipper Dr., Mystic 06355  
New Method for Measuring the Acceleration of Gravity
- Waterbury \*O'Donnell, Margaret Ruth 17 Notre Dame Academy 347 Chase Ave. 06704  
Isotopic Tracers in Virus Reproduction

#### DELAWARE

- Wilmington Piech, Richard Frank 17 Henry C. Conrad H.S. 211 Augustine St. 19804  
Number of Isomers for any Hydrocarbon in the Methane Series

#### DISTRICT OF COLUMBIA

- Washington McClenon, Robert Craig 17 Woodrow Wilson H.S. 3723 Albemarle St.,  
Chemical Reactions in Silica Gel N.W. 20016

#### FLORIDA

- Bradenton \*Decker, Karen Patricia 17 Manatee H.S. 1400 Dartmouth Dr. 33505  
Determination of Hexosamines in Tissues of Steers Fed  
Varying Amounts of Shrimp Meal
- Coral Gables Cormier, Denny Charles 17 Coral Gables Sr. H.S. 1252 Venetia 33134  
Binary Galaxies
- Segel, Richard Lawrence 17 Coral Gables Sr. H.S. 3290 S.W. 16th Ter.,  
Effect of Wind Direction on Wind Speed and Miami 33145  
Type of Weather
- Spitzer, Philip Robert 17 Coral Gables Sr. H.S. 6000 S.W. 94th Ave.,  
Chemically Induced Mutations in *Drosophila* Miami 33143  
*melanogaster*
- Fort Schultz, Kenneth David 17 Nova H.S. 3513 N.W. 33rd Ct. 33309  
Lauderdale Catalytic Action on the Hydrogen Peroxide Fuel Cell
- Jacksonville Thigpenn, James Alfred IV 17 Terry Parker H.S. 5317 S. River Rd. 32211  
Biochemical and Microscopic Study of the Ehrlich Ascites  
Tumor Grown *in vivo* in *Mus musculus*
- Largo \*Green, Martina Elizabeth 17 Largo H.S. 486 W. Overbrook St. 33540  
Chromosome Studies of Abnormal Human Leucocytes
- Melbourne Becton, Daniel Walker 18 Melbourne H.S. 2420 N. Aia, Indianalantic  
Effect of Reserpine on the Maze Performance of Mice

- Miami Feiertag, Thomas Andrew 17 Miami Coral Park H.S. 1712 S.W. 85th Ct.  
Influence of Pre-Training in Escape on Subsequent 33155  
Avoidance Conditioning
- Miami Beach Casselhoff, Samuel Jacob 17 Miami Beach H.S. 55 Palm Ave. 33139  
Modified Method of Paper Chromatographic Analysis of the  
Genetic Structure of *Drosophila melanogaster*
- North Miami Drury, Dean Robert 17 North Miami Sr. H.S. 16200 N.E. 3rd Ave., North  
Paramagnetic Nature of Catalase Miami Beach 33162
- Feldman, Leonard I. 17 North Miami Sr. H.S. 1451 N.E. 157th St. 33162  
Isolation of Gamma Globulin by Column Chromatography
- Manguba, Thomas Clarke 17 North Miami Sr. H.S. 12350 N.W. 15th Ave.  
Solution of Satellite Orbits Using Digital Computers 33167
- Orlando Gresham, Zane Oliver 17 Oak Ridge H.S. 3112 Joyce Dr. 32809  
Identification and Estimation of Fatty Acids Liberated From  
Milk Fat by Three Methods of Lipase Activation
- Panama City \*Glackin, Brigid Keane 17 Bay Co. H.S. 1604 W. 10th Ct. 32401  
Degradation of Kinetics of Tubercidin
- Pensacola Bales, Thomas Oren, Jr. 17 Pensacola H.S. 199 Mango Ave. 32503  
NMR Studies of Solvent Effects on Tautomeric Equilibrium  
of Hexafluoroacetylacetone
- Tallahassee Gilberg, Andrew Nicholas 17 Leon H.S. 1148 Circle Dr. 32301  
Effective Modeling of Meandering Rivers
- Moore, Wesley Frowe 17 Leon H.S. 1841 Country Club Dr. 32301  
The Dirt Rocket
- West Palm Beach Hunter, Gregory Michael 17 Forest Hill H.S. 235 Marlborough Rd.,  
Effects of Adrenal Steroids on Gastric Box 6265 33405  
Secretion

#### GEORGIA

- Atlanta Alder, James Stephens 17 Cross Keys H.S. 1821 Duke Rd., Chamblee  
Viral Immunity Demonstrated Using 30005  
Immunoelectrophoresis
- Brogdon, William Gail 17 Cross Keys H.S. 1562 Grant Dr., N.E. 30319  
Isolation of Plant Fractions Toxic to Insects
- \*Beech, Theo Marilyn 17 Fulton H.S. 2659 Lois Lane, S.E. 30315  
Does the Mother Factor During Infancy Affect Growth and  
Behavior in Maturity?
- Cross, Robert Newton 17 W. F. Dykes H.S. 540 Carolwood Lane 30305  
Study of Extracellular Amino Acids and Proteins Found in the  
Medium of *Aspergillus niger* and *Aspergillus clavatus*
- Brunswick Hires, Stephen Dennis 17 Glynn Academy 3128 Hampton Ave. 31520  
Survey of Beta and Gamma Activity of Glynn County Soils
- Chamblee \*Farnsworth, Anne Garry 17 D'Youville Academy 176 Bolling Rd., Atlanta  
Associativity on Desargues-Satisfied Plane 30305

#### HAWAII

- Honolulu Ho, Thomas Inn Min 17 Kaimuki H.S. 2345 Orchid St. 96816  
Effects of Nuclear Radiation on the Mortality and Development  
of the Brine Shrimp, *Artemia salina* L.
- \*Ibaraki, Ruby Eiko 17 Kaimuki H.S. 610 University Ave. 96814  
Effect of Early Nutrition on the Subsequent Serum  
Cholesterol Content of Pulets
- \*Cotton, Deborah Jean 16 Maryknoll H.S. 1359 Haloa Dr. 96818  
Time and Order of Appearance of Some Endochondral  
Ossification Centers in the Rabbit Fetus
- Nakamura, Jeffrey Masaichi 17 Punahou School 2926 Kahawai St. 96822  
Isolation and Characterization of Deoxyribonucleoprotein  
of the Protozoan, *Tetrahymena*

#### IDAHO

- Burley \*Holmes, Yvonne 17 Burley H.S. 216 Diana Dr. 83318  
Gaseous Uranium Reactor: Power for MHD
- Hailey \*Dietrich, Mary Karen 17 Wood River H.S. 415 E. Galena 83333  
Pigmentation in Bacteria Induced by Mutations

## ILLINOIS

- Chicago \*Bader, Mary Frances 17 Lourdes H.S. 7222 S. Millard 60629  
Photosynthesis With *Euglena* and Analysis of Amino Acids in *Euglena*  
Hoffenberg, Leslie Irwin 16 Mather H.S. 6145 N. Fairfield 60645  
A Problem in Finite Geometry With Applications  
Pilat, John Frederick 16 Mather H.S. 6214 N. Whipple St. 60645  
Investigation of a Possible Evolutionary Sequence Among  
Normal Spiral Galaxies  
\*Young, Linda 17 Wells H.S. 811 N. Wood St. 60622  
Study of Bleaching in *Euglena*
- Elgin Dearing, Michael Paul 18 St. Edward Central Catholic H.S. 420 W. Highland 60120  
Laser: Design and Construction
- Evanston Trippel, Stephen Bowman 18 Evanston Twp. H.S. 1454 Asbury 60201  
Effects of Hyperbaric Oxygenation on Cerebral Metabolism
- Glenview Rogers, John Lenzie III 17 Glenbrook South H.S. 2313 Swainwood Dr. 60025  
Making and Using the Reflecting Telescope
- Joliet \*Greger, Janet Lee 17 Joliet Twp. H.S. West R. 2, Box 231, Plainfield 60544  
Effects of Pure Oxygen on *Tenebrio molitor* at  
Varying Pressures
- La Grange Dizikes, Louis James 17 Lyons Twp. H.S. 5239 Central Ave., Western Springs 60558  
Speed of Rotation of the Sun Computed  
Through the Doppler Effect  
Findley, Thomas Wagner, Jr. 16 Lyons Twp. H.S. 222 S. Spring Ave. 60525  
Photosynthesis in *Euglena*
- Normal Lozar, Robert Carl 17 Lyons Twp. H.S. 702 N. Spring Ave., La Grange Park 60528  
A Phenomenon of the Solar Surface
- Belshe, Robert Bland 18 University H.S. 402 N. School St. 61761  
Investigations of the Sand Dollar as a Possible Organism  
for Ionium Dating
- Northlake \*Kyrias, Carol Ann 17 West Leyden H.S. 500 Geneva Ave. 60164  
A New Prime Number Sieve
- Olympia Fields Liang, James Chien 16 Rich Central H.S. 400 Todd St., Park Forest 60466  
Theoretical Study of the Solar Interior and a Simplified  
Structural Model
- Park Ridge Nelson, Dale Arvid 16 Maine Twp. H.S. East 7752 W. Davis St., Morton Grove 60053  
The Inverse: Symmetry of Functions About the  
Line  $y=x$
- Rockford Ahlgren, Joseph Robert 17 Guilford H.S. 2416 Highcrest Rd. 61107  
Distribution of First Digits  
Hecox, Kurt Evan 17 Guilford H.S. 4400 Eastridge Dr. 61107  
Determination of the Flavonoids in Grapefruit
- Skokie \*Dimschultz, Sally Jo 17 Niles Twp. H.S. North 5341 Arcadia St. 60077  
Correlation of Phenotype With Genotype in the Muscular  
Dystrophic Mouse
- Silver, Michael Evan 17 Niles Twp. H.S. West 7352 N. Kenneth Ave., Lincolnwood 60646  
Analytical Diagnostics Through Paper  
Electrophoresis
- Villa Park Saule, Uldis 17 Willowbrook H.S. O.S. 650 Prospect Ave., Elmhurst 60127  
Relative Lunar Altitudes From Shadow Measurements

## INDIANA

- Auburn Cripe, Jerry Dale 17 Auburn H.S. 108 S. Wilson St. 46706  
Synthesis of a Never Before Prepared Compound,  
2, 4, 6, 8-Tetramorpholinopyrimido(4, 5-g)pteridine  
Ward, Charles Richard 17 Auburn H.S. 208 S. Clark St. 46706  
Quinonal Effects on Antimycin-A Inhibition Reversal in *Drosophila*
- Bloomington \*Brown, Janis Elizabeth 17 University H.S. 2208 Covenanter  
Photometric Observation, Reduction and Data Interpretation  
of the Pleiades Cluster
- Clinton Nardi, Jim Benjamin 17 Clinton H.S. R.R. 1, Rosedale 47874  
Role of the Pineal System in the Schooling Behavior of Fishes
- Evansville Lake, David Alan 17 Benjamin Bosse H.S. 1606 Conlin Ave. 47714  
Analogies Between Mechanical and Electromagnetic Waves
- Fort Wayne Marciniak, Thomas Andrew 17 Central Catholic H.S. 3941 N. Washington Rd. 46804  
Electrophoresis of the Proteins in Parotid Fluid
- Gary Christakis, Dean George 17 Horace Mann H.S. 324 Chase St. 46404  
Behavior of the Metagon Relative to Piasmogenic Functions  
and to the Origin of RNA Tumor Viruses

- Hammond Coulis, Paul Anthony 17 Hammond H.S. 1518 MacArthur Dr., Munster 46321  
Effect of Sex Hormones on Thymic Involution in Mice
- Indianapolis Wood, James Allan 17 Thomas Carr Howe H.S. 5969 University Ave. 46219  
Effects of Oxygen on Learning Ability of Mice
- Terre Haute Deming, Leo Drake 17 Garfield H.S. 3024 N. 12th St. 47801  
Solar Effect on High Altitude Atmospheric Density

## IOWA

- Bettendorf Kulp, Richard Paul 17 Bettendorf H.S. 1921 N. Oak St. 52722  
Thermal Velocity of Aqueous Ions as a Function of Temperature
- Scott, John Ralph, Jr. 18 Bettendorf H.S. 713 28th St. 52722  
Study of Infinity
- Cedar Rapids Godar, Terrance John 17 Regis H.S. 324 10th St. Marion 52302  
Study of the Effect of Aspirin on the Nervous System of White Rats
- Des Moines Binns, Kevin R. 18 Theodore Roosevelt H.S. 321 Glenview Dr. 50312  
Analysis of Caucasian-Christian Influence at West Des Moines  
Indian Burials
- Kingsley \*Stearns, Nancy Angeline 18 Kingsley-Pierson H.S. 315 Dover St., Box 103 51028  
Relative Distribution of *Trichinella spiralis* Larvae  
in the Laboratory Mouse

## KANSAS

- Liberal \*Light, Virginia Lou 18 Liberal H.S. 714 N. Clay 67901  
Photoreactivation of *Escherichia coli* B After Inactivation  
by Ultraviolet Irradiation
- Manhattan \*Kitchell, Margaret Anne 17 Luckey H.S. 118 Longview Dr. 66502  
Sensitivity Tests for the Effective Use of Cancer  
Chemotherapeutic Agents
- Seneca Haug, James Douglas 17 S.S. Peter & Paul H.S. R.R. 2 66538  
Mutation of *Agrobacterium tumefaciens* by Ultraviolet Irradiation  
and the Effect of Urethane on the Mutation Rate

## KENTUCKY

- Louisville \*Mather, Jennie Powell 17 Durrett H.S. 4505 S. Park Rd. 40219  
Effects of Drugs on Learning Ability in Two Inbred Strains of Mice  
Goad, Larry Edward 17 Mayme S. Waggener H.S. 67 West Wind Rd. 40207  
Nuclear Magnetic Resonance: Study of the Interrelation of  
Spin-Spin Coupling and Molecular Diamagnetism

## LOUISIANA

- Baton Rouge Courtney, Mark William 17 Baton Rouge H.S. 2655 Iowa St. 70802  
Mortality Profiles in Hopewell Indian Populations
- New Orleans \*Galler, Janina Regina 16 Benjamin Franklin H.S. 4208 S. Galvez St. 70125  
Microdetermination of Monoamine Oxidase by Gel  
Electrophoresis on Polyacrilamide Gels  
Portnoy, Robert Charles 17 Benjamin Franklin H.S. 5417 Hewes St. 70125  
Effect Upon Equilibrium Constants in Iodine Complexes Due  
to Change in Aromatic Concentrations  
Lee, Robert Emile, Jr. 17 St. Augustine H.S. 2234 Upperline St. 70115  
Construction and Testing of a Low-Frequency Electron  
Paramagnetic Resonance Spectrometer
- Opetousas \*Donatto, Brenda Marie 17 Holy Ghost H.S. Rt. 3, Box 380 70570  
Influence of Selected Vitamins and Metals on Reversing  
the Growth-Inhibiting Action of Three Antibiotics

## MARYLAND

- Baltimore Versace, John Michael 17 Mt. St. Joseph H.S. 506 Hazlett Ave. 21229  
Investigation of Properties of Powers
- Beltsville Jefferson, David Randolph 17 High Point Sr. H.S. 4922 Prince Georges Ave. 20705  
Isosceles Trigonometry
- Bethesda \*Coleman, Marcia Jeanne 17 Bethesda-Chevy Chase H.S. 1605 N. Portal Dr., N.W., Washington, D.C. 20012  
Effects of Incubation  
Temperatures on the Survival of Cultures of *Neisseria meningitidis*
- Gerver, Michael Jonathan 16 Bethesda-Chevy Chase H.S. 8504 16th St., Silver Spring 20910  
Nonrelativistic Applications of  
Non-Euclidean Geometry

- Giese, Stephen Charles 17 Walt Whitman H.S. 6209 Dahlonga Rd. 20016  
An Introduction to Moire Patterns
- Levintov, Michael Harvey 16 Walt Whitman H.S. 5604 Vernon Pl. 20034  
A Theory of Artin Braids
- \*Nelson, Karen Mary 17 Walt Whitman H.S. 7912 Robison Rd. 20034  
Quantitative Assay of Normal and Abnormal Human Hemoglobins
- Wolin, Edward Michael 17 Walter Johnson H.S. 7521 Spring Lake Dr.,  
Lactic Dehydrogenase Isoenzyme Electrophoresis Apt. B-1 20034
- Hyattsville Broughton, Warren Lewis 17 Northwestern Sr. H.S. 4904 Ravenswood Rd.,  
Homologous Transplantation of Teeth in Riverdale 20840  
Guinea Pigs
- \*Good, Mary Josephine 18 Northwestern Sr. H.S. 6908 Wells Pkwy. 20782  
Thin-Layer Chromatographic Investigation of Complex Ions
- Kelsey, Edward Joseph 17 Northwestern Sr. H.S. 6402 Queens Chapel Rd.  
Analysis of the United States One Cent Coin 20782  
Using Probability
- \*Vandermause, Karen Maria 17 Regina H.S. 507 Lincoln Ave., Takoma  
Instability of a Ferric Complex Park 20012
- Lanham \*Francis, Patricia Ruthann 17 Duval Sr. H.S. 12149 Long Ridge Lane, Bowie  
Role of Catalase and Peroxidase in Leucocyte Metabolism 20715
- Silver Spring Kidwell, Mark Elliott 17 Northwood H.S. 407 Gilmoure Dr. 20901  
Properties of Modular Multiplication Tables of Prime Base
- \*Lamoreux, Susan Faye 17 Northwood H.S. 411 Dennis Ave. 20901  
Preparing Skin for Transplantation in Major Burn Cases
- Rochkind, Marc Jeffrey 17 Northwood H.S. 207 Bluff Ter. 20902  
The Dipolar Coordinate System

#### MASSACHUSETTS

- Andover \*Briggs, Sharon Kay 17 Andover H.S. 49 Wildwood Rd. 01810  
Chelation and Zinc Nutrition in the Albino Rat and Japanese Quail
- Boxford Civin, Curt Ingraham 16 Masconomet Reg. H.S. 30 Pinehurst Dr. 01921  
Effects of Age on the Germinative Ability of *Bacillus megaterium* Spores
- Braintree \*Haponik, Joanne Carol 16 Archbishop Williams H.S. 69 Brookside Rd.  
Heat Stability of Polyvinyl Chloride Plastics 02184
- Viita, Paul Sears 17 Braintree H.S. 53 Parkside Cir. 02184  
The Isoperimetric Problem
- Brookline Michaelson, James Selib 17 Brookline H.S. 78 Beverly Rd. 02167  
*In vivo* Studies With Phytohemagglutinin
- Fall River Forczyk, Stephen Martin 17 B.M.C. Durfee H.S. 418 Eastern Ave. 02723  
Secondary Cycles in Long-Period Variable Stars
- Holden \*Hall, Katharine Mary 17 Wachusett Reg. H.S. 16 Harrington Dr. 01520  
Effect of Different Variables on the Rate of Reaction
- Needham Jensen, Harbo Peter, Jr. 17 Needham H.S. 38 Abbott St. 02192  
Derivation of a Formula by Which to Predict the Rate of a Certain Reaction
- Ten Eyck, Richard Kyle 17 Needham H.S. 58 Warren St. 02192  
Study of Percutaneous Absorption
- \*Weller, Nancy K. 17 Needham H.S. 56 Winding River Rd. 02192  
Investigation of an Extract From Rye Grass Seed
- New Bedford Cohen, Benjamin Jack 17 New Bedford H.S. 48 Stetson St.  
Probability
- Goodman, Mark Lloyd 17 New Bedford H.S. 47 Carroll St. 02740  
Effect of Adrenalin on Catalase Activity
- Howard, Jack Arthur 16 New Bedford H.S. 251 Hawthorn St. 02740  
My Theory on the Origin of Sex Chromatin Bodies
- Revere Demaria, Alfred, Jr. 17 Revere H.S. 95 Oxford St. 02151  
Some Aspects of the Red Alga, *Porphyridium cruentum*
- Westwood \*Richardson, Judith Marie 17 Westwood H.S. 76 Washington St., Islington  
Effect of Ribonuclease on a Planarian's Memory Retention 02091

#### MICHIGAN

- Ann Arbor Kuipers, Benjamin Jack 16 Ann Arbor H.S. 1724 Arbdale 48103  
The Continuum Hypothesis
- Reitz, John Christopher 17 Ann Arbor H.S. 3066 Overridge Dr. 48104  
Action of Foreign Auxins in a Plant Shoot
- Schwab, Leslie Edward 17 Ann Arbor H.S. 1475 Arlington 48104  
Effect of Lithium Nitrate Upon Pond Organisms

- Detroit \*Sicko, Linda May 17 St. Andrew H.S. 7091 Holmes 48210  
Effects of Adrenocorticotrophic Hormone and Desoxycorticosterone Acetate on the Blood of *Rana pipiens*

#### MINNESOTA

- Richfield Anderson, Floyd Owen 17 Richfield H.S. 7545 Park Ave. 55423  
Suppression of Male Phenotypic Characteristics in *Drosophila melanogaster* by Thermal Means
- Roseville Videen, Tom Otis 17 Alexander Ramsey H.S. 2204 N. Oxford St. 55113  
Relationship Between Candle Diameter and Wick Diameter in Determining the Rate of Combustion in a Candle
- Winona Kangel, James Peder 17 Winona Sr. H.S. Sugar Loaf Rt. 3 55987  
Regular m-Dimensional Figures in a Regular n-Dimensional Figure

#### MISSISSIPPI

- Biloxi Johnson, Glen Norman 17 Biloxi H.S. 322 W. Forrest Ave. 39531  
Analysis of Ship Island Sand

#### MISSOURI

- Springfield Dugan, Daniel Carl 17 Parkview H.S. 728 S. Rogers 65804  
Effect of Cupric Ions on the Crystalline Habit of Tartrate Compounds

#### MONTANA

- Anaconda Campana, Charles Frank 18 Anaconda Sr. H.S. 1810 Ogden Ave. 59711  
Photosynthetic Phosphorylation in Isolated Chloroplasts
- Big Sandy Quinn, Robert Martin 18 Big Sandy H.S. R.R. 59520  
Translocation of Dicamba in Herbaceous Plants

#### NEBRASKA

- Omaha Thorndyke, Perry Wayne 16 Benson H.S. 2519 N. 51st Ave. 68104  
Verbal Simulation of Speech Patterns and Word Formation Using an A-to-D Conversion Technique With a Computer

#### NEW JERSEY

- Englewood Levy, Daniel Philip 17 Dwight Morrow H.S. 146 Pleasant Ave. 07631  
Stellar Internal Conditions
- Hanover Helmers, Carl Tvedten, Jr. 17 Hanover Park H.S. 29 Elmwood Rd.,  
Formation of Beach Cusps Florham Park 07932
- Long Branch Jacobs, Stephen Alan 17 Long Branch H.S. 3 Van Court Ave., Elberon  
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- Middletown \*Compton, Susan Elizabeth 16 Middletown Twp. H.S. 123 Kings Hwy. 07748  
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UTAH

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- Pariser, Robert Jay 17 Norfolk Academy 1090 Algonquin Rd. 23505  
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WASHINGTON

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- \*Hardin, Carole Lee 17 Holy Names Academy 616 21st E. 98102  
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- Waukesha \*Thill, Mary Jean 17 Catholic Memorial H.S. 13360 Marquette Ave., Elm  
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WYOMING

- Douglas Hardesty, Richard Lee 17 Converse County H.S. 626 S. 12th St. 82633  
Distribution and Variations in Euphydryas anlicia  
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\* \* \* \* \*

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Mr. James L. Major, Physics Teacher, Clarksville High School, Clarksville

Texas: Texas State Science Talent Search  
Dr. Robert W. Higgins, Head, Chemistry Dept., Texas Woman's University, Denton

Utah: Utah Junior Academy of Sciences, Arts and Letters and Utah State Science Talent Search  
Mr. Richard S. Peterson, State Supv. of Science Education, 223 State Capitol Bldg.,  
Salt Lake City

Vermont: University of Vermont  
Dr. George Chapman Crooks, Assoc. Prof. of Chemistry, University of Vermont,  
Burlington

Virginia: Virginia Academy of Science  
Prof. Edgar V. Russell, Jr., Assoc. Prof. of Chemistry, Virginia Polytechnic Institute,  
Blacksburg

Washington: Washington State Science Talent Search Committee  
Dr. Hugh W. Johnston, Prof., Chemistry Dept., Whitworth College, Spokane

West Virginia: West Virginia Academy of Science  
Rev. Frank Haig, S.J., Assoc. Prof. of Physics, Wheeling College, Wheeling

Wyoming: (See Colorado-Wyoming)

Cleveland  
Dayton  
Minford

\*Loynachan, Louise Ann 17 Mayfield H.S. 1271 Sunset Rd. 44124  
Morse, Larry Eugene 18 Belmont H.S. 1027 Hampshire Rd. 45419  
\*Gilbert, Joy Diane 17 Minford H.S. Rt. 2 45653

OHIO

Norman

\*Cosgrove, Ann M. 17 Norman H.S. 1212 Cruce St. 73069

OKLAHOMA

Ambler

Wagner, Henry, Jr. 16 Wissahickon H.S. Grasshopper Lane, Gwynedd  
Valley 19437

PENNSYLVANIA

Philadelphia

Rafsky, Lawrence Craig 16 Central H.S. 3461 School House Lane 19144

VIRGINIA

Alexandria  
Arlington

Duggan, James 16 Groveton H.S. 2214 Lida Ct. 22306  
Grossman, Jerrold Wayne 17 Wakefield H.S. 2113 S. Dinwiddie St. 22206

WEST VIRGINIA

Beckley

\*Powers, Linda Sue 17 Woodrow Wilson H.S. 128 Mankin Ave. 25801

\*Indicates girls  
H.S. indicates High School

HOME ADDRESS follows name of school  
AGE of winner follows name



SCIENCE SERVICE, INC. - 1719 N Street, N.W. - Washington, D.C. 20036

*Washington Trip Winners  
of the  
Twenty-fifth Annual Science Talent Search<sup>®</sup>  
for the Westinghouse Science Scholarships and Awards*

The forty Washington trip winners of the 25th Annual Science Talent Search, among whom \$34,250 of Westinghouse Science Scholarships and Awards will be distributed, represent about 1% of those who completed entries in this scientific and educational competition.

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

Eleven girls and 29 boys (proportion determined by ratio of boys and girls completing entries) are being invited to Washington, D.C., for an all-expense trip March 2 through 7, 1966, to attend the Science Talent Institute. Here five winners will be selected by the board of judges to receive one of the following Westinghouse Science Scholarships: \$7,500 (\$1,875 a year), \$6,000 (\$1,500 a year), \$5,000 (\$1,250 a year), \$4,000 (\$1,000 a year), \$3,000 (\$750 a year). The remaining 35 contestants will be given Westinghouse Science Awards of \$250 each.

The trip winners are 16 to 18 years of age and come from 37 cities in 20 states. They were picked by the judges from among 25,798 contestants of whom 2,883 completed their entries by taking a science aptitude examination, obtaining recommendations and writing a report on their science project. Completed entries were received from 49 states and the District of Columbia.

Of the 40 Twenty-fifth Annual Science Talent Search Winners, 32 ranked in the top 5% of their graduating class and 20 were first, second or third. Most of the winners are members of science clubs and many of them are club presidents or other officers. Most of their clubs are affiliated with Science Clubs of America. Girls accounted for 27% of the entries this year.

## *Washington Trip Winners*

ARIZONA

Phoenix Stevenson, John Alfred 17 North Phoenix H.S. 1421 E. Hoover Ave. 85006

CALIFORNIA

San Diego \*Saarni, Elizabeth Strandell 17 Point Loma H.S. 1569 Catalina Blvd. 92107

COLORADO

Grand Junction Larson, Arden Lawrence 17 Central H.S. 571 30 1/4 Rd. 81501

FLORIDA

Tallahassee Gilberg, Andrew Nicholas 17 Leon H.S. 1148 Circle Dr. 32301

GEORGIA

Atlanta Brogdon, William Gail 17 Cross Keys H.S. 1562 Grant Dr., N. E. 30319  
\*Beech, Theo Marilyn 17 Fulton H.S. 2659 Lots Lane, S. E. 30315

ILLINOIS

Chicago Hoffenberg, Leslie Irwin 16 Mather H.S. 6145 N. Fairfield 60645  
La Grange Lozar, Robert Carl 17 Lyons Twp. H.S. 702 N. Spring Ave., La Grange  
Park 60528

INDIANA

Auburn Cripe, Jerry Dale 17 Auburn H.S. 108 S. Wilson St. 46706  
Clinton Nardi, Jim Benjamin 17 Clinton H.S. R.R. 1, Rosedale 47874

IOWA

Des Moines Binns, Kevin R. 18 Theodore Roosevelt H.S. 321 Glenview Dr. 50312

KENTUCKY

Louisville Goad, Larry Edward 17 Mayme S. Waggener H.S. 67 West Wind Rd. 40207

LOUISIANA

New Orleans Lee, Robert Emile, Jr. 17 St. Augustine H.S. 2234 Upperline St. 70115  
Opelousas \*Donatto, Brenda Marie 17 Holy Ghost H.S. Rt. 3, Box 380 70570

MARYLAND

Beltsville Jefferson, David Randolph 17 High Point Sr. H.S. 4922 Prince Georges  
Ave. 20705  
Bethesda Levintow, Michael Harvey 16 Walt Whitman H.S. 5604 Vernon Pl. 20034

MASSACHUSETTS

Andover \*Briggs, Sharon Kay 17 Andover H.S. 49 Wildwood Rd. 01810  
Braintree Vitta, Paul Sears 17 Braintree H.S. 53 Parkside Cir. 02184  
Needham \*Weller, Nancy K. 17 Needham H.S. 56 Winding River Rd. 02192

MINNESOTA

Richfield Anderson, Floyd Owen 17 Richfield H.S. 7545 Park Ave. 55423  
Roseville Videen, Tom Otis 17 Alexander Ramsey H.S. 2204 N. Oxford St. 55113

NEW JERSEY

Long Branch Jacobs, Stephen Alan 17 Long Branch H.S. 3 Van Court Ave., Elberon  
07741

NEW YORK

Amityville \*Silkworth, Mary Lou 18 Amityville H.S. 21 Rochelle Ct. 11701  
Brooklyn Offenbach, Howard A. 17 Erasmus Hall H.S. 901 Washington Ave. 11225  
Edelstein, William 17 Midwood H.S. 2303 Ave. D 11226  
Forest Hills Klyde, Barry J. 17 Forest Hills H.S. 141-15 72nd Ave., Flushing 11367  
Huntington Silverman, David Lee 16 Half Hollow Hills H.S. 4 Bramble Lane, Melville  
Jamalca Frank, Richard Alan 17 Jamalca H.S. 159-21 71st Ave., Flushing 11365  
New York Fishman, Norman 17 Bronx H.S. of Science 1236 Burke Ave. 10469  
\*Winikoff, Janet 17 Hunter College H.S. 45 Park Terrace W. 10034  
Spring Valley MacCarry, Timothy James 17 Spring Valley Sr. H.S. 18 Lenore Ave.,  
Monsey 10952