GENERAL SCIENCE

Washington Trip Winners

HOME ADDRESS follows name of school

	CALIFORNIA
Concord	Leaver, Sherie Lynne 16 Mt. Diablo H.S. 1318 Grove Way
Los Angeles	Emmel, Thomas Chadbourne 17 Susan M. Dorsey H.S. 5341 West Blvd. 43
San Diego	Lyngholm, Carl Lewis 17 San Diego H.S. 1609 Cypress Ave. 3
	COLORADO
Denver	Waterhouse, William Charles 17 East H.S. 1337 Syracuse St.
Greeley	Jessup, David Maurice 17 Greeley H.S. 1606 23rd Ave.
	ILLINOIS
Chicago	Anglim, Mary Terese 17 Aquinas Dominican H.S. 8435 S. Dante Ave. 19
Des Plaines	McDonnell, Robert Norman 17 Maine Twp. H.S. 530 N. Home Ave., Park Ridge
Evanston	Higgins, Robert Bienville 16 Evanston Twp. H.S. 1307 Judson Ave.
	Swigert, Stevenson Helm 17 Evanston Twp. H.S. 811 Monticello Pl.
	INDIANA
Lafayette	Burghorn, Susan Evelyn 16 Jefferson H.S. R. R. 10
Shelbyville	Allen, Wilson Edwin 17 Shelbyville H.S. 1220 Elm St.
	MARYLAND
Catonsville	Grimm, Frank Wayne 17 Catonsville Senior H.S. 59 Edmondson Ridge Rd. 28
Rockville	Ganz, Edward 17 Walter Johnson H.S. 6505 Marjory Lane, Bethesda 14
	MASSACHUSETTS
Natick	Robinson, Robert William 17 Natick H.S. 1 Murdoch Rd.
Pittsfield	Goguen, Joseph Amadee, Jr. 17 Pittsfield H.S. 268 Dalton Ave.
	MONTANA
Great Falls	Balmer, Nancy June 17 Great Falls H.S. 2612 Fifth Ave., S.
Helena	O'Connell, Richard John 17 Helena Senior H.S. 624 Gilbert St.
	NEW JERSEY
Princeton	Vajk, Joseph Peter 16 Princeton H.S. Wallace Rd., Princeton Junction
	NEW YORK
Brooklyn	Marks, Peter 16 Brooklyn Technical H.S. 108-19 67th Dr., Forest Hills 75
	Dick, Miriam 16 Erasmus Hall H.S. 84 Midwood St. 25
	Fetell, Arnold Jay 16 Erasmus Hall H.S. 325 Ocean Ave. 25
Elmont	Peterson, Harold Thomas, Jr. 17 Elmont Mem. H.S. 999 DeWitt St., Valley Stream
New Rochelle	Davis, Marion Stanton 16 New Rochelle H.S. 72 Sutton Manor
New York	Danies, Eileen Carol 15 Bronx H.S. of Science 95 W. 195th St. 68
	Gitlin, Todd Alan 16 Bronx H.S. of Science 1641 Metropolitan Ave. 62
	Berman, Kenneth Murray 17 Stuyvesant H.S. 137-60 232nd St., Laurelton 13
Uniondale	Greenhouse, Jeffrey Alan 16 Uniondale H.S. 158 Emery St., Hempstead
	OHIO
Chillicothe	Schwalbe, Carl Hellmuth 16 Chillicothe H.S. 319 Fairway Ave.
Cleveland	Zika, Jeanne Alice 17 Lourdes Academy 3789 W. 129th St. 11
Loudonville	Kloss, Kenneth Eugene, Jr. 17 Loudonville H.S. 410 N. Union St.
	PENNSYLVANIA
Easton	Leavitt, Jonathan David 16 Easton H.S. 627 W. Lafayette St.
Philadelphia	Entine, Ruth Rhoda 17 Philadelphia H.S. for Girls 4593 N. Ninth St. 41
Pittsburgh	Garland, Stephen Jay 17 Mt. Lebanon H.S. 108 Elatan Dr. 16
	RHODE ISLAND
Newport	Bamberg, Paul Gustav, Jr. 16 Rogers H.S. 266 Indian Ave., Middletown
	SOUTH CAROLINA
Orangeburg	Humphreys, David Russell 16 Orangeburg H.S. 615 Park Ave.
	TENNESSEE
Chattanooga	Letcher, John Seymour, Jr. 17 The Baylor School 208 Maiden Lane, Lexington, Va.
	Massey, Leonard Daniel, Jr. 16 McCallie School 3310 Parker Lane
	TEXAS
Baytown	Corneil, Paul Hampton 17 Robert E. Lee H.S. 1910 Florida St.
	WISCONSIN
Marshfield	Gates, Ronald Eugene 17 Columbus H.S. 408 W. 14th St.
Milwaukee	Henkel, Dennis Phil 16 Rufus King H.S. 161 N. Story Pkwy. 8

QUARTZ "COOKER"—R. A. Sullivan (left) and R. A. Laudise stand behind a high pressure autoclave used in growing synthetic quartz crystals. Mr. Laudise holds a smaller crystal and experimental vessel used in early research at Bell Telephone Laboratories. Mr. Sullivan holds a large quartz crystal grown in the Western Electric Company's large autoclave at its Merrimack Valley Works.

CHEMISTRY

Synthetic Quartz Can Put End to Its Importation

➤ THIS COUNTRY's dependence on Brazil as a supplier of natural quartz may soon be at an end.

Large-scale domestic production of synthetic quartz by a process known as hydrothermal crystallization is now possible, R. A. Laudise of Bell Telephone Laboratories, Inc., Murray Hill, N. J., and R. A. Sullivan of Western Electric Company, Merrimack Valley Works, North Andover, Mass., told the American Institute of Chemical Engineers meeting in Cincinnati.

Quartz crystal is an essential component of long-distance communications equipment. Natural crystals of a size and quality suitable for communications use are found mainly in Brazil, where it is mined by individuals. Lately, the Brazilian supply has become unstable "due to the apparent depletion of larger stones."

Hydrothermal crystallization, according to the two engineers, is the use of an aqueous solvent under high temperature and high pressure to increase the solubility of a material ordinarily hard to dissolve to a point where it can be crystallized on a seed crystal at an appreciable rate.

They reported synthetic stones produced in a pilot plant were of excellent quality and that initial estimates of the process' feasibility appeared to have been conservative.