

National Association  
for  
Research in Science Teaching

PROGRAM

32nd Annual Meeting

HOTEL DENNIS, ATLANTIC CITY, NEW JERSEY  
FEBRUARY 18, 19, 20, and 21, 1959

and

Joint Meeting

with the

Council of Elementary Science

International

FEBRUARY 21, 1959

**OFFICERS OF THE ASSOCIATION**  
**1958-1959**

*President*

THOMAS P. FRASER  
Morgan State College  
Baltimore, Maryland

*Vice-President and Program Chairman for 1959*

VADEN W. MILES  
Wayne State University  
Detroit Michigan

*Secretary-Treasurer*

CLARENCE M. PRUITT  
University of Tampa  
Tampa Florida

*Executive Committee*

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SECRETARY-TREASURER

CLARENCE H. BOECK  
University of Minnesota  
Minneapolis, Minnesota

NATHAN S. WASHTON  
Queens College  
Flushing, New York

*Program for February 21 Arranged by*

ARNOLD M. LAHTI  
Western Washington College  
Bellingham, Washington

# N. A. R. S. T. MEETING SCHEDULE

## Wednesday, February 18

10:00 a.m.-11:45 a.m. Executive Committee .....The Studio

12:30 p.m. Luncheon Smorgasbord .....Fjord Room

2:00 p.m.-4:30 p.m. Executive Committee .....The Studio

1. Progress Report and Report on Plans for the Future:

a. Re-Print of Francis D. Curtis' "*Digests of Investigations in the Teaching of Science*"

NATHAN S. WASHTON, Queens College, Flushing, N. Y.

b. "*Fourth Digest of Investigations in the Teaching of Science*"

KENNETH E. ANDERSON, University of Kansas, Lawrence

c. "*Fifth Digest of Investigations in the Teaching of Science*"

GEORGE G. MALLINSON, Western Michigan University, Kalamazoo

d. *Committee on the Seventh Annual Review of Research in Science Teaching*

EDWARD K. WEAVER, Co-Chairman, Atlanta University, Atlanta, Ga.

2. Other Business

6:00 p.m. Informal Seafood Dinner for  
NARST Members and Guests.....Hackney's

8:00 p.m. Committee Meetings .....The Studio

1. *Executive Committee*

2. *Committee on Needed Research in Science Education*

WILLIAM C. VAN DEVENTER, *Chairman,*

Western Michigan University, Kalamazoo

## Thursday, February 19

8:30 a.m.-9:15 a.m. Registration and Coffee  
Hour ..... Garden Lounge

9:15 a.m.-11:45 a.m. Investigations and  
Research Papers ..... Garden Lounge

CHAIRMAN: Milton O. Pella  
University of Wisconsin, Madison

1. "A Comparison of Inductive and Deductive Methods of Teaching High School Chemistry"  
SISTER ERNESTINE MARIE, Sisters of Charity, Halifax; Saint Patrick's Convent, Quebec, P. Q. (Paper read by title)
2. "Elementary Science in Connecticut, 1850-1900"  
LOUIS I. KUSLAN, New Haven State Teachers College (15 min.)
3. "Watch Your Language"  
MERVIN E. OAKES, Queens College, Flushing, N. Y. (15 min.)
4. "Responsibilities of Those Participating in the Training of Secondary School Science Teachers in the Pacific Northwest"  
JOHN S. SHRADER, Central Washington College, Ellensburg (15 min.)
5. "A Comparative Study of Achieving and Under-Achieving High School Boys of High Intellectual Ability"  
EDWARD FRANKEL, Bronx High School of Science, New York (15 min.)
6. "The Status of Science Education in the High Schools of Ohio"  
CHARLES L. KOELSCH, Specialist for Secondary School Science, U.S. Office of Education (20 min.)
7. "What Do Our Schools Mean by Conservation Education?"  
MARTHA E. MUNZER, Research Assistant, the Conservation Foundation, New York (20 min.)
8. "The Effectiveness of the Encyclopaedia Britannica, Harvey White Physics Films in the Teaching of High School Physics"  
MILTON O. PELLA, University of Wisconsin (20 min.)
9. Questions (15 min.)

1:15 p.m.-3:30 p.m. Papers by Invitation ..... Garden Lounge

CHAIRMAN: Vaden W. Miles  
Wayne State University, Detroit

1. "Continental Classroom: Evaluation Program"  
EDWIN P. ADKINS, National Coordinator,  
Continental Classroom (45 min.)
2. "The Crisis in Science Education Research"  
ELLSWORTH S. OBOURN, Specialist in Secondary School Science,  
U. S. Office of Education (45 min.)
3. "What Action Must NARST Take to Meet the Crisis?"  
WILLIAM C. VAN DEVENTER, Western Michigan University, Kalamazoo  
(45 min.)

3:45 p.m.-5:15 p.m. Unresolved Issues and Problems  
in Science Education Research

1. Discussion Group I ..... Garden Lounge

CHAIRMAN: John Woodburn  
The John Hopkins University,  
Baltimore, Maryland

RECORDER: Margaret McKibben  
National Science Teachers Association,  
Washington, D. C.

2. Discussion Group II ..... Card Room

CHAIRMAN: Herbert A. Smith  
University of Kansas, Lawrence

RECORDER: Mervin E. Oakes  
Queens College, Flushing, New York

3. Discussion Group III ..... The Studio

CHAIRMAN: J. Darrell Barnard  
New York University, New York

RECORDER: W. Edgar Martin  
U. S. Office of Education, Washington, D. C.

8:00 p.m. Discussion Groups Continued.....Same Rooms

### Friday, February 20

8:30 a.m.-10:00 a.m. Seventh Annual Review of Research  
in Science Education.....Garden Lounge

CO-CHAIRMEN: Edward K. Weaver, Atlanta University,  
Atlanta, Georgia, and  
Ellsworth S. Osbourn, Specialist for Science,  
U. S. Office of Education, Washington, D. C.

1. Elementary Level (30 min.)

BETTY LOCKWOOD WHEELER  
Central Michigan College, Mt. Pleasant

2. Secondary Level (30 min.)

MARGARET MCKIBBEN  
National Science Teachers Association, Washington, D. C.

3. College Level (30 min.)

JOHN H. WOODBURN  
The Johns Hopkins University, Baltimore, Maryland

10:15 a.m.-11:45 a.m. Investigations and Research  
Papers ..... Garden Lounge

CHAIRMAN: Waldo W. E. Blanchet  
Fort Valley State College,  
Fort Valley, Georgia

1. "Problems in Semantics of Importance in Science Teaching"  
ALBERT F. EISS, State Teachers College, Indiana, Pa. (15 min.)

2. "The Development and Present Status of School Science Fairs"  
CHARLES F. BECK, JR., Mt. Lebanon High School, Pittsburgh, Pa. (15 min.)

3. "Results of Three Experimental Studies Aimed at Testing Korzybskian Principles"  
THOMAS M. WEISS, Arizona State University, Tempe (20 min.)
4. "Principles of Alternating Current for the College Physics Course for Prospective Science Teachers"  
R. M. HELMS, East Carolina College, Greenville, North Carolina (20 min.)
5. "Problem Solving Techniques in Teaching Secondary School Physics"  
PETER DEAN, Wayne State University, Detroit, Mich. (20 min.)

1:15 p.m.-3:00 p.m.      Investigations and Research  
Papers ..... Garden Lounge

CHAIRMAN: Thomas P. Fraser  
Morgan State College, Baltimore, Maryland

1. "The Academic and Teaching Backgrounds of Secondary Science Teachers in the State of Ohio"  
CHARLES L. KOELSCH, U. S. Office of Education, Washington, D. C. (20 min.)
2. "Reactions of Science Educators to Certain Published Science Education Findings"  
EDWARD K. WEAVER, Atlanta University, Atlanta, Georgia (20 min.)
3. "Dreyfus Program for the Improvement of Science Teaching in New Jersey Secondary Schools"  
IRWIN H. GAWLEY, New Jersey State Teachers College, Montclair, N.J., and FRED T. PREGGER, New Jersey State Teachers College, Trenton, N. J. (20 min.)
4. "A Comparison of Two Methods of Teaching College Biology: Lecture and Principle-Unit"  
LUTHER COLYER, The College of Emporia, Emporia, Kansas (20 min.)
5. "The Preparation Needed by Science Teachers in Community Colleges"  
NATHAN S. WASHTON, Queens College, Flushing, N. Y. (20 min.)
6. "Some Characteristics of Honors Section Students in Natural Science at a State University: A Follow-Up"  
(paper read by title)  
IRVIN J. LEHMANN, Michigan State University, East Lansing

3:15 p.m.-5:15 p.m.      Business Meeting ..... Garden Lounge

CHAIRMAN: Clarence H. Boeck  
University of Minnesota, Minneapolis

1. Review of the Activities of the Association  
THOMAS P. FRASER, President, NARST, Morgan State College, Baltimore, Maryland
2. Relationships with the National Science Teachers Association  
HERBERT A. SMITH, President, NSTA, University of Kansas, Lawrence

3. *Relationships with the American Association for the Advancement of Science*  
 GEORGE G. MALLINSON, Western Michigan University, Kalamazoo  
 JOHN R. MAYOR, Director of Education, AAAS, Washington, D. C.
4. *Relationships with the American Association of Colleges for Teacher Education*  
 THOMAS P. FRASER, Morgan State College, Baltimore, Md.  
 VADEN W. MILES, Wayne State University, Detroit, Mich.
5. *Relationships with the U. S. Office of Education*  
 (including the National Defense Act of 1958)  
 CHARLES L. KOELSCH, Office of Education, Washington, D. C.
6. *Relationships with the Council of Elementary Science International*  
 WILLARD JACOBSON, President, CESI, Teachers College, Columbia University, New York, N. Y.
7. *Report of Committee on Educational Trends*  
 ABRAHAM RASKIN, Co-Chairman, Hunter College, New York, N. Y.  
 JEROME METZNER, Co-Chairman, Bronx High School of Science, New York, N. Y.
8. *Report of Publications Committee*  
 ELLSWORTH S. OBOURN, Co-Chairman, U. S. Office of Education, Washington, D. C.  
 NATHAN WASHTON, Co-Chairman, Queens College, Flushing, N. Y.
9. *Report of the Committee on Needed Research in Science Education*  
 WILLIAM C. VAN DEVENTER, Chairman, Western Michigan University, Kalamazoo
10. *Reports of Special Committees*
11. *Report of Secretary-Treasurer*  
 CLARENCE M. PRUITT, University of Tampa, Tampa, Florida
12. *Report of Election of Officers for 1959-60*
13. *New Business*

None

8:00 p.m.

Next Steps for NARST.....Garden Lounge  
 Reports by the Recorders of the Group Discussions on February 19; Unresolved Issues and Problems in Science Education Research

CHAIRMAN: S. Ralph Powers  
 President of NARST, 1939  
 Professor Emeritus, Teachers College,  
 Columbia University, New York, N. Y.

Group I Margaret McKibben, NSTA,  
 Washington, D. C.

Group II Mervin E. Oakes, Queens College,  
 Flushing, N. Y.

Group III W. Edgar Martin, U. S. Office of Education,  
Washington, D. C.

SUMMARY: Edward K. Weaver, Atlanta University,  
Atlanta, Georgia

Open Discussion

### Saturday, February 21

Joint Meeting of the Council of Elementary Science International  
and the National Association for Research in Science Teaching.

8:30 a.m.-9:00 a.m. Registration ..... Garden Lounge  
9:00 a.m.-10:30 a.m. Investigations and Research  
Papers ..... Garden Lounge

CHAIRMAN: Willard Jacobson, President CESI  
Teachers College, Columbia University,  
New York, N. Y.

1. *"Acquiring Knowledge and Attaining Understanding of Children's Scientific Concept Development"*  
JOHN GARONE, New York City Public Schools, New York
2. *"Considerations In Selecting, Developing, and Validating Experience Units in General Biology for Prospective Elementary Teachers"*  
JOHN SYROCKI, State University Teachers College, Brockport, N. Y.
3. *"The Teaching of Science in Elementary Schools by Recent Graduates of Atlantic Christian College as Related to Their Preparation"*  
J. P. TYNDALL, Atlantic Christian College, Wilson, N. C.
4. *"A Plan for a Professionally Treated Course in General Science Centered Around Persistent Life Situations for Use at Wayne State University with Prospective Teachers of Junior High School Science"*  
FRANK YOUKSTETTER, Wayne State University, Detroit, Michigan
5. *"Using a Checklist to Evaluate Elementary School Science Programs"*  
EVAN C. RICHARDSON, New Jersey State Teachers College, Newark, N. J.
6. *"The Effectiveness of a Television Series in Improving an Elementary School Science Program"*  
WILLIAM REINER, Board of Education of the City of New York, New York

11:00 a.m.-12:00 a.m. Implications of Research.....Garden Lounge

CHAIRMAN: Willard Jacobson

1. *"Implications of Research for the Preparation of Primary Teachers"*  
CLARK HUBLER, Wheelock College, Boston, Massachusetts
2. *"Implications of Research for the Preparation of Intermediate Teachers"*  
CLARENCE BOECK, University of Minnesota, Minneapolis
3. *"Implications of Research for the Preparation of Junior High School Teachers"*  
HERBERT A. SMITH, University of Kansas, Lawrence

12:15 p.m.-2:00 p.m. Luncheon (Honoring the Twenty-Six Presidents of NARST) ..... Ozone Room

**SPEAKER:** Randall M. Whaley, Executive Director,  
Advisory Board on Education,  
National Academy of Science—  
National Research Council, Washington, D.C.

**SUBJECT:** *“New Demands on Research in Science Education”*

2:15 p.m.-3:45 p.m. Concurrent Discussion Groups

**TOPIC:** What Preparation Helps the Teacher Teach for Pervasive Objectives?

Group I ..... Garden Lounge

**LEADER:** Brenda Lansdown,  
Brooklyn College, New York

**RECORDER:** James Perlman, San Francisco State College,  
San Francisco, Calif.

Group II ..... Card Room

**LEADER:** William Rogers, Classical High School,  
Lynn, Mass.

**RECORDER:** John Schrader, Central Washington College  
of Education, Ellensburg

Group III ..... The Tent

**LEADER:** Helen Challand, National College of Educa-  
tion, Evanston, Ill.

**RECORDER:** Robert Werher, Teachers College,  
Columbia University, New York

Group IV ..... The Studio

**LEADER:** Charles Prewitt, Willimantic State Teachers  
College, Willimantic, Conn.

**RECORDER:** Harold Tannenbaum, State University of New  
York, New Paltz

4:00 p.m.-5:00 p.m. Reports of Discussion Groups  
by Recorders ..... Garden Lounge

**CHAIRMAN:** Willard Jacobson

*National Association For Research  
In Science Teaching*

THE NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING is an organization devoted to the pursuit of research in curriculum organization, course content and teaching methods in the field of the sciences. Membership in the Association includes science teachers and administrators at all levels, elementary, secondary and college. The organization was founded in 1928, at Cambridge, Massachusetts.

N.A.R.S.T. meets annually, usually alternating between an eastern seaboard location and a mid-western location. At the meetings, research papers in the field of science education are presented, along with symposia on topics of interests to teachers and educational research workers. Since 1947 the Association has included committees for the review of science education research at the elementary, secondary and college levels in cooperation with the U. S. Office of Education. The reviews are published annually in *Science Education*, the official publication of the organization.

Membership in N.A.R.S.T. is by nomination and election. The constitution provides for membership drawn from those active in research in science education, and those outstanding in science educational leadership. N.A.R.S.T. is affiliated with the American Association for the Advancement of Science, and for the past several years has cooperated with the other science teaching organizations in sponsoring a program at the annual meeting of the A.A.A.S.

PRESIDENTS OF  
NATIONAL ASSOCIATION FOR RESEARCH IN  
SCIENCE TEACHING

1928 .....	W. L. Eikenberry	1944 .....	Florence G. Billig
1929 .....	W. L. Eikenberry	1945 .....	Florence G. Billig
1930 .....	W. L. Eikenberry	1946 .....	C. L. Thiele
1931 .....	Elliot R. Downing	1947 .....	Earl R. Glenn
1932 .....	Elliot R. Downing	1948 .....	Ira C. Davis
1933 .....	Francis D. Curtis	1949 .....	Joe Young West
1934 .....	Ralph K. Watkins	1950 .....	N. Eldred Bingham
1935 .....	Archer W. Hurd	1951 .....	Betty Lockwood
1936 .....	Gerald S.-Craig	1952 .....	Betty Lockwood
1937 .....	Walter G. Whitman	1953 .....	J. Darrell Barnard
1938 .....	Hanor A. Webb	1954 .....	George G. Mallinson
1939 .....	S. Ralph Powers	1955 .....	Kenneth E. Anderson
1940 .....	Otis W. Caldwell	1956 .....	W. C. Van Deventer
1941 .....	Harry A. Carpenter	1957 .....	Waldo W. E. Blanchet
1942 .....	G. P. Cahoon	1958 .....	Nathan S. Washton
1943 .....	Florence G. Billig	1959 .....	Thomas P. Fraser

**NOTES**



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