

National Association
for
Research in Science Teaching

PROGRAM

33rd Annual Meeting

HOTEL SHERMAN, CHICAGO, ILLINOIS
FEBRUARY 10, 11, 12 AND 13, 1960

and

Joint Meeting

with the

Council of Elementary Science
International

FEBRUARY 13, 1960

OFFICERS OF THE ASSOCIATION

1959-1960

President

VADEN W. MILES
Wayne State University
Detroit, Michigan

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CLARENCE H. BOECK
University of Minnesota
Minneapolis, Minnesota

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Atlanta, Georgia

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Morgan State College
Baltimore, Maryland

Program for February 13 Arranged by

ALBERT PILTZ
Detroit Public Schools
Detroit, Michigan

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

Wednesday, February 10

- 4:00 P.M. EXECUTIVE COMMITTEE Room 106
- 8:00 P.M. 1. Executive Committee, Election of New
Members (Open to all Members) Room 106
2. Research Committee Room 105

Thursday, February 11

- 8:30 A.M. - 9:15 A.M.
Registration and Coffee Hour Room 107
- 9:30 A.M. - 11:45 A.M.
Investigations and
Research Papers Old Chicago Room

CHAIRMAN: Clarence H. Boeck
University of Minnesota, Minneapolis

1. "*Achievement of Matched Groups in Grades 9, 10, 11 in High School Biology.*" SAM S. BLANC, Denver Public Schools, Colorado (20 min.)
2. "*Effects of Changing the Typical Sequence High School Science Courses to Ninth Grade Biology and Tenth Grade Physical Science.*" LLOYD H. HEIDGERD, State University of New York, College for Teachers, Buffalo. (20 min.)
3. "*Improvement of Astronomy Education (K-16) Through a State-Wide Program.*" ROGER WAYNE PRICE, St. Cloud State College St. Cloud, Minnesota. (20 min.)
4. "*The Ability of Eighth Grade Pupils to Indicate Understandings of Three Simple Machines.*" MILTON ROSENBERG, Queens College, Flushing, New York (20 min.)
5. "*A Two-Year Study of Teaching Human Biology via Television.*" B. JOHN SYROCKI, State University of New York, College of Education, Brockport. (20 min.)

6. "What Research Says About the Relationships of Non-Academic Correlates to Student Achievement in Science." KENNETH E. ANDERSON, University of Kansas, Lawrence. (20 min.)

1:15 - 3:30 P.M.

Investigations and
Research Papers..... Old Chicago Room

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

1. "Facilities and Equipment Available for Teaching Science in Public High Schools." CHARLES L. KOELSCH, Office of Scientific Personnel, National Academy of Sciences, Washington, D.C. (30 min.)
2. "An Evaluation of Certain Objectives of High School Physics with Reference to the Training of Future Physics Majors and General Education for All Students." DONALD E. LEE, La Sierra College, Arlington, California. (20 min.)
3. "The Interpretation and Measurement of Scientific Attitude." JOSEPH D. NOVAK, Purdue University, Lafayette, Indiana and W. ARDON BRANDYBERRY, High School, Colby, Kansas. (15 min.)
4. "The Competencies of Secondary School Science Teachers." LEROY SPORE, Tulare County Schools, Visalia, California. (20 min.)
5. "Science Principles in Conservation." V. E. VIVIAN, Glassboro State College, Glassboro, New Jersey. (20 min.)
6. "Additional Experimental Evidence Supporting Korzybskian Principles." TOM WEISS, Arizona State University, Tempe, Arizona. (20 min.)

3:45 P.M. - 5:00 P.M.

Unresolved Issues and Problems in
Science Education Research..... Old Chicago Room

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

1. Progress Report
2. Discussion: Establishment of Research Centers and Implementing the Research on Established Issues.

8:00 P.M. - 10:00 P.M.

Work Sessions on Issues and Problems and Research
Centers Rooms to be Announced at 3:45 Session

Members and guests of NARST in attendance will be
divided into working sessions as follows: College,
Secondary, Elementary and Research Centers.

Chairmen and recorders for each group will be selected
at the time of the meeting.

Friday, February 12

8:30 - 9:30 A.M.

Eighth Annual Review of Research in
Education George Bernard Shaw Room

CO-CHAIRMEN: Cyrus W. Barnes
New York University, New York
Ellsworth S. Obourn
U.S. Office of Education, Washington, D.C.

1. Elementary Level (To be presented Saturday, Feb. 13, at joint session
with CESI)
BETTY LOCKWOOD WHEELER, Central Michigan University, Mt.
Pleasant.
2. Secondary Level (30 min.)
HUBERT EVANS, Teachers College, Columbia University, New York,
N. Y.
3. College Level (30 min.)
JOHN H. WOODBURN, The Johns Hopkins University, Baltimore,
Maryland.

9:45 - 12:00 A.M.

Investigations and Research
Papers George Bernard Shaw Room

CHAIRMAN: Loren T. Caldwell
Northern Illinois University, De Kalb

1. "A Preliminary Report on the Evaluation of the Continental Class-
room." JOHN J. KELLEY, AACTE, National Coordinator, New York.
(20 min.)

2. "An Experiment on Supplementing TV Instruction." ARNOLD M. LAHTI, Western Washington College of Education, Bellingham. (20 min.)
3. "Recommendations for Masters Degree Preparation for Master Teachers of Biological Science in High School." H. WILLIAM CRALL and MAURICE MYERS, Western Illinois University, Macomb. (20 min.)
4. "Institutional Influences in Undergraduate Training of Ph.D. Physicists and Chemists." B. R. SIEBRING, University of Wisconsin, Milwaukee (20 min.)
5. "An Experimental Evaluation of a Student-Centered Method and a Teacher-Centered Method of Biological Science Instruction for General Education of College Students." KENNETH V. OLSON, Colorado State College, Greeley. (20 min.)
6. "A Study of Contrasting Methods in College General Biology Laboratory Instruction." DOUGLAS M. DEARDEN, University of Minnesota, Minneapolis. (20 min.)

1:15 P.M. - 2:45 P.M.

Investigations and Research

PapersGeorge Bernard Shaw Room

CHAIRMAN: Donald A. Boyer

Winnetka Public Schools, Winnetka, Illinois

1. "Elementary School Science from Two Perspectives - 1892 and the Present." CYRUS W. BARNES, New York University, New York, and CLARENCE M. PRUITT, University of Tampa, Tampa, Florida. (20 min.)
2. "Techniques for Developing Scientific Inquiry Abilities of Children in Grades One through Six." LOUISE A. NEAL, Colorado State College, Greeley. (20 min.)
3. "The Relative Achievement of the Objectives of Elementary Science in a Representative Sampling of Minnesota Schools." JANE JOHNSTON, Moorhead State College, Moorhead, Minnesota. (20 min.)
4. "Developing Teacher Competence in Elementary School Science." BERNARD E. MICHALS, Los Angeles State College, Los Angeles, California. (20 min.)
5. "In-Service Teacher Education and Pupil Outcomes in Elementary Science." GORDON M. A. MORK, University of Minnesota, Minneapolis. (20 min.)

3:00 P.M. Business Meeting.....George Bernard Shaw Room

CHAIRMAN: Vaden W. Miles
Wayne State University, Detroit

1. *Review of the Activities of the Association*
VADEN W. MILES, *President*, NARST
2. *Relationships with the National Science Teachers Association*
DONALD G. DECKER, *President*, NSTA, Colorado State College, Greeley
3. *Relationships with the American Association for the Advancement of Science*
GEORGE G. MALLINSON, *NARST representative on the Cooperative Committee of the AAAS*, Western Michigan University, Kalamazoo
4. *Relationships with the American Association of Colleges for Teacher Education*
LOREN CALDWELL, *NARST representative to AACTE*, Northern Illinois University, DeKalb
5. *Relationships with the U.S. Office of Education*
PAUL E. BLACKWOOD, *Specialist for Elementary Science*, U.S. Office of Education
HERBERT A. SMITH, *Chief of Science, Mathematics, and Foreign Languages*, U.S. Office of Education
6. *Relationships with the Council of Elementary Science International*
JOHN G. NAVARRA, *President*, CESI, Jersey City State College, Jersey City, New Jersey
7. *Relationships with the National Academy of Sciences – National Research Council*
CHARLES L. KOELSCHE, *Special Assistant to the Director*, Office of Scientific Personnel, National Academy of Sciences – National Research Council, Washington, D.C.
8. *Report of Committee on Educational Trends*
ABRAHAM RASKIN, *Co-Chairman*, Hunter College, N.Y.
JEROME METZNER, *Co-Chairman*, Bronx High School of Science, New York, N.Y.
9. *Relationships with the National Commission on Teacher Education and Professional Standards*
JOSEPH D. NOVAK, *Department of Biological Sciences*, Purdue University, Lafayette, Indiana
10. *Report of Research Coordinator of NARST*
ELLSWORTH S. OBOURN, *Co-Chairman, Specialist for Science*, U.S. Office of Education, Washington, D.C.

11. *Report of Special Committees*
Committee for Revision of the Constitution and Bylaws
MERVIN E. OAKES, *Chairman*, Queens College, Flushing, N.Y.
12. *Report of Secretary-Treasurer*
CLARENCE M. FRUITT, University of Tampa, Tampa, Florida
13. *Reports of Standing Committees (Constitution)*
Publications Committee
Audit Committee
Program Committee
Nominations Committee
14. *Election of Officers for 1960-61*
15. *New Business*

7:30 P.M. Meeting of Combined Organizations

Grand Ballroom, Conrad Hilton Hotel

American Association of Colleges of Teacher Education
National Association for Research in Science Teaching

7:30 Music

8:30 Address – To be announced

Social Hour – Combined Organization

Normandy Lounge

Conrad Hilton Hotel

Saturday, February 13

Joint Meeting of the Council for Elementary Science International
and the

National Association for Research in Science Teaching

8:30 A.M. - 9:00 A.M.

Registration Old Chicago Room

9:00 A.M. Elementary School Science

Investigations..... Old Chicago Room

CHAIRMAN: John G. Navarra, President CESI
Jersey City State College, New Jersey

1. "Review of Science Education Research — Elementary Level." BETTY LOCKWOOD WHEELER, Central Michigan University, Mt. Pleasant.
2. "A Study of the Relationships Between the Recorded and Observed Conservation Behavior of Children in an Urban Classroom." CLARENCE R. TREXLER, University of the State of New York, College of Education, Oswego, New York.
3. "Teaching Concepts of Modern Astronomy to Elementary School Children." J. MYRON ATKIN, University of Illinois, Urbana.
4. "A Study to Determine to What Extent the Learnings Acquired by Each Member of a Class During the First and Second Grade Can Justify Providing All Young Children with a Science Program Based Upon Experimentation." MARY ELLIOTT JONES, Chevy Chase, Maryland.
5. "Teleology in Elementary Science." MERVIN E. OAKES, Queens College, Flushing, New York.
6. "A Report of the Grand Rapids Survey." JACQUELINE BUCK MALLINSON, Western Michigan University, Kalamazoo.
7. "Improving Elementary Teacher Education." NATHAN S. WASHTON, Queens College, Flushing, New York.
8. "An Inquiry Into Possible Factors Involved in the Reluctance of Elementary School Teachers to Teach Science." EDWARD VICTOR, Northwestern University, Evanston, Illinois.

12:15 P.M. - 2:00 P.M.

Luncheon: Presentation of *Science Education*
Recognition Awards. Old Gold Room

Speaker: Grover E. Maxwell,
Philosophy of Science Center
University of Minnesota, Minneapolis

Subject: "A Scientific World View"

*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. Washon
1943.....	Florence G. Billig	1959.....	Thomas P. Fraser
1960.....			Vaden W. Miles

NOTES



The Sign Of The Turtox Pledges Absolute Satisfaction

PROGRAM COURTESY OF GENERAL BIOLOGICAL SUPPLY HOUSE, CHICAGO, ILLINOIS