

ED 026 277

SE 006 341

Science Education Information Report, General Bibliography Series II, Instructional Procedures.

ERIC Information Analysis Center for Science Education, Columbus, Ohio.

Pub Date Dec 68

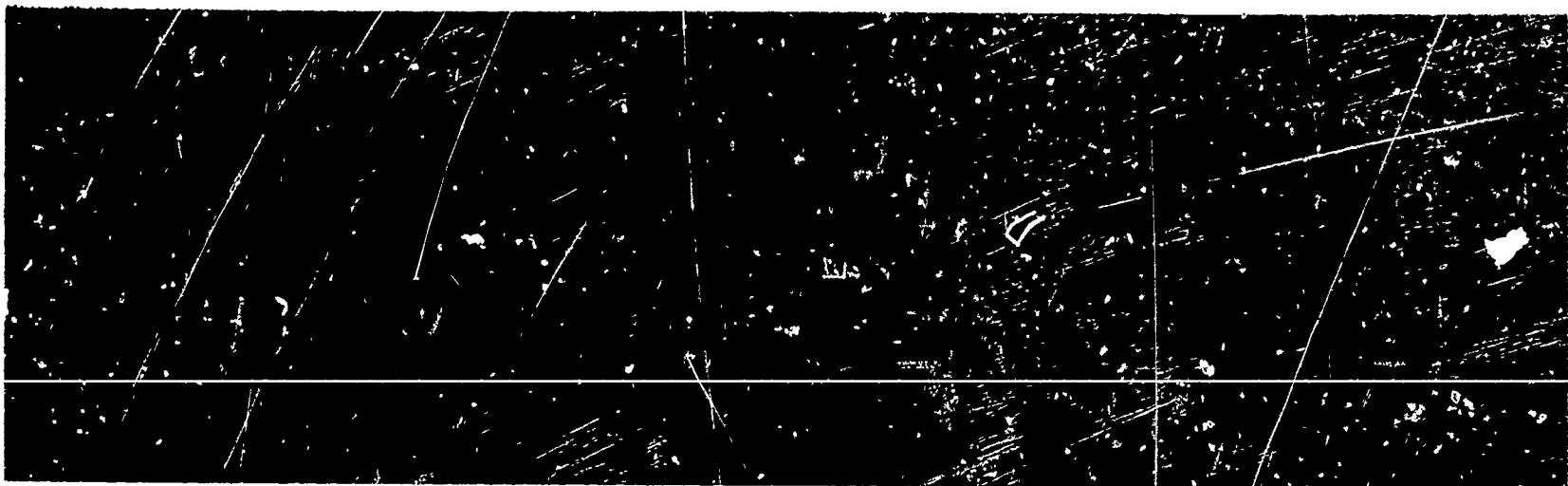
Note-66p.

EDRS Price MF-\$0.50 HC-\$3.40

Descriptors-Audiovisual Aids, \*Bibliographies, Biology, \*College Science, \*Elementary School Science, \*Instruction, Physical Sciences, Science Activities, \*Secondary School Science, Teacher Education, Teaching Methods

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# **SCIENCE EDUCATION INFORMATION REPORT**

**General Bibliography Series  
Bibliography 11**

**Instructional Procedures**

**ERIC Information Analysis Center  
for Science Education  
1460 West Lane Avenue  
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**December, 1968**

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# INSTRUCTIONAL PROCEDURES

1. SE 002 009 11 02 67 10 12 17 2 22 000 319  
AARON, GNANAOLIVU  
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2. SE 002 331 07 12 68 10 33 17 2 22 000 319  
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3. SE 002 770 03 19 68 07 20 06 3 00 000 362  
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4. SE 002 969 03 06 68 06 33 38 1 00 000 009  
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SIMPLE EQUIPMENT AND PROCEDURES IN ELEMENTARY LABORATORIES  
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7. SE 002 011 11 02 67 10 22 17 2 22 000 319  
 ALTENDORF, JAMES JOSEPH  
 A STUDY OF STUDENT ACHIEVEMENT IN HIGH SCHOOL CHEMISTRY USING  
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 CHEMISTRY, 1965, WICHITA, KANSAS, AMERICAN CHEMICAL SOCIETY  
 CHEMISTRY TEST
8. SE 002 681 11 08 67 10 25 30 2 00 000 003  
 ALYEA, HUBERT N.  
 MICROCHEMISTRY PROJECTED (TOPS)  
 JOURNAL OF CHEMICAL EDUCATION  
 06 00 67 8  
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9. SE 002 007 02 06 68 10 22 17 2 22 000 319  
ANDERSON, JUNE S.  
A COMPARATIVE STUDY OF CHEMICAL EDUCATION MATERIALS STUDY AND  
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MATERIALS STUDY, 1964, SCIENCE COLLEGE ABILITY TEST, WATSON-GLASER  
CRITICAL THINKING APPRAISAL

10. SE 003 619 09 10 68 10 86 20 1 00 000 006  
ANDERSON, KENNETH E.  
THE EDUCATIONAL PROCESS AND PROGRAMED INSTRUCTION

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02 00 63 7

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11. SE 003 706 03 21 68 14 82 18 1 00 000 006  
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12 00 61 7

\*BIOLOGY, \*CHEMISTRY, \*FILMS, \*INSTRUCTION, \*PROGRAMED INSTRUCTION,  
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12. SE 003 619 08 20 68 10 86 20 1 00 000 006  
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02 00 63 7

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- SE 003 855 07 12 68 19 22 17 2 00 000 006
13. ANDERSON, KENNETH E. AND OTHERS  
 AN EVALUATION OF THE INTRODUCTORY CHEMISTRY COURSE ON FILM BY  
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 INTERESTS, TEACHING PROCEDURES, ANDERSON CHEMISTRY TEST, 1961, SCHOOL,  
 AND COLLEGE ABILITY TESTS
- SE 002 607 03 15 68 10 23 38 1 00 000 003
14. ANDERSON, LARRY B. AND REILLEY, CHARLES N.  
 TEACHING ELECTROANALYTICAL CHEMISTRY  
 JOURNAL OF CHEMICAL EDUCATION  
 01 00 67 8  
 \*COLLEGE SCIENCE, \*CHEMISTRY, \*ELECTROANALYTICAL CHEMISTRY,  
 \*INSTRUCTION, ANALYTICAL CHEMISTRY
- SE 003 634 04 30 68 10 32 17 1 00 000 006
15. ANDREWS, REBECCA E.  
 SOME METHODS OF INSTRUCTION IN HIGH SCHOOL PHYSICS AND SOME GOALS  
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 SCIENCE EDUCATION  
 03 00 64 11  
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 \*TEACHING METHODS, EDUCATIONAL OBJECTIVES, INSTRUCTIONAL GOALS, RE-  
 SEARCH REPORTS, TESTS, TEACHING PROCEDURES, TEACHING TECHNIQUES,  
 1960, 1955

16. SE 003 795 08 12 68 10 92 11 3 00 000 457  
ASSOCIATION FOR SCIENCE EDUCATION  
TEACHING SCIENCE AT THE SECONDARY STAGE - A HANDBOOK ON THE  
TEACHING OF SCIENCE TO THE AVERAGE PUPIL  
JOHN MURRAY PUBLISHERS, LONDON  
67 275  
\*AUDIOVISUAL AIDS, \*BIOLOGY, \*CHEMISTRY, \*EVALUATION, \*EDUCATIONAL  
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METHODS COURSES, PROGRAMED LEARNING, REFERENCE MATERIALS, SCIENCE  
EDUCATION, TEXTBOOKS, ASSOCIATION FOR SCIENCE EDUCATION, ENGLAND, 1967
17. SE 002 634 03 06 68 10 33 30 1 00 000 002  
BAKER, D. JAMES  
DEMONSTRATIONS OF FLUID FLOW IN A ROTATING SYSTEM  
AMERICAN JOURNAL OF PHYSICS  
08 00 66 6  
\*COLLEGE SCIENCE, \*FLUID FLOW, \*INSTRUCTION, \*PHYSICS, \*SCIENCE  
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18. SE 002 369 08 08 68 10 42 17 2 22 000 319  
BATTEN, JAMES W.  
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CAROLINA, 1960
19. SE 002 711 07 08 68 10 29 20 1 00 000 003  
BATTINO, RUBIN  
CHEM ED - EDITORIALY SPEAKING  
JOURNAL OF CHEMICAL EDUCATION  
06 00 66 2  
\*COLLEGE SCIENCE, \*INSTRUCTIONAL IMPROVEMENT, \*INSTRUCTION,  
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20. SE 002 184 09 13 67 10 12 17 1 00 000 073  
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 \*INSTRUCTIONAL MATERIALS, \*MARINE BIOLOGY, \*RESEARCH REPORTS,  
 \*SECONDARY SCHOOL SCIENCE, ECOLOGY, 1966, TEXAS
21. SE 002 870 04 05 68 10 11 17 1 00 000 006  
 BENNETT, LLOYD M.  
 A STUDY OF THE COMPARISON OF TWO INSTRUCTIONAL METHODS, THE  
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 SCIENCE COURSE IMPROVEMENT PROJECT, STUDENT ABILITY, 1964
22. SE 002 020 11 02 67 19 32 17 3 22 000 319  
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 COMMITTEE FINAL EXAMINATION, 1966
23. SE 002 058 04 03 68 10 81 17 2 22 000 319  
 BICKEL, ROBERT F.  
 A STUDY OF THE EFFECT OF TELEVISION INSTRUCTION ON THE SCIENCE  
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 SCIENTIFIC ATTITUDES, TELEVISION, 1964



24. SE 003 541 03 20 68 10 33 17 1 00 000 006  
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25. SE 003 999 08 12 68 10 08 17 2 20 000 460  
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 04 00 63 3  
 \*CURRICULUM, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*TEACHING  
 METHODS, \*SCIENCE ACTIVITIES, ACHIEVEMENT, ACADEMIC ACHIEVEMENT,  
 BIOLOGY, CURRICULUM DEVELOPMENT, COMPARATIVE ANALYSIS, GRADE 4,  
 LEARNING, PHYSICAL SCIENCES, PROBLEM SOLVING, READING, HAWAII,  
 1958
36. SE 003 671 07 11 68 10 22 17 1 00 000 006  
 CARRIER, ELBA O.  
 USING A HISTORY OF SCIENCE CASE IN THE JUNIOR HIGH SCHOOL  
 SCIENCE EDUCATION  
 12 00 62 10  
 \*CHEMISTRY, \*EDUCATIONAL OBJECTIVES, \*INSTRUCTION, \*RESOURCE  
 MATERIALS, \*SCIENCE HISTORY, \*TEACHING PROCEDURES, CURRICULUM,  
 CURRICULUM DEVELOPMENT, GRADE 8, RESEARCH REPORTS, STUDENT  
 ATTITUDES, TEST ON UNDERSTANDING SCIENCE

37. SE 002 426 02 14 68 10 22 17 1 00 000 008  
 CHAREN, GEORGE  
 THE EFFECT OF OPEN-ENDED EXPERIMENTS IN CHEMISTRY ON THE  
 ACHIEVEMENT OF CERTAIN OBJECTIVES OF SCIENCE TEACHING  
 JOURNAL OF RESEARCH IN SCIENCE TEACHING  
 63 4  
 \*CHEMISTRY, \*INSTRUCTION, \*OPEN-ENDED EXPERIMENTS, \*SECONDARY  
 SCHOOL SCIENCE, CRITICAL THINKING, EDUCATIONAL OBJECTIVES,  
 LABORATORY ACTIVITIES, RESEARCH REPORTS, SCIENCE ACTIVITIES,  
 MANUFACTURING CHEMISTS ASSOCIATION
38. SE 002 165 03 08 68 10 23 29 1 32 000 355  
 CHERONIS, NICHOLAS D. AND OTHERS  
 AN EXPERIMENTAL APPROACH TO TEACHING CHEMISTRY TO SUPERIOR  
 STUDENTS  
 BROOKLYN COLLEGE, DEPARTMENT OF CHEMISTRY  
 59 11  
 \*ABLE STUDENTS, \*ACCELERATION, \*CHEMISTRY, \*COLLEGE SCIENCE,  
 \*COURSE CONTENT, \*INDEPENDENT STUDY, \*INSTRUCTION, \*PROGRAM  
 DESCRIPTION, \*RESEARCH REPORTS, ACHIEVEMENT, ORGANIC CHEMISTRY,  
 SECONDARY SCHOOL SCIENCE, BROOKLYN COLLEGE, NEW YORK, 1959
39. SE 003 651 04 30 68 10 72 17 2 00 000 006  
 CHESS, EDITH G.  
 THE MANNER IN WHICH TWO SAMPLES OF NINTH-GRADE GENERAL SCIENCE  
 STUDENTS ANALYZE A NUMBER OF SELECTED PROBLEMS  
 SCIENCE EDUCATION  
 03 06 62 7  
 \*GENERAL SCIENCE, \*GRADE 9, \*INSTRUCTION, \*PROBLEM SOLVING,  
 CRITICAL THINKING, LEARNING, RESEARCH REPORTS, SECONDARY SCHOOL  
 SCIENCE, SEX DIFFERENCES, 1956
40. SE 002 024 10 30 67 10 22 17 2 22 000 319  
 CLEWELL, WILLARD STANLEY, JR.  
 A STUDY OF THE EFFECTS OF TEACHING INTERMEDIATE ALGEBRA AND  
 CHEMISTRY AS AN INTEGRATED PROGRAM IN THE ELEVENTH GRADE  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 64 129  
 \*ALGEBRA, \*ACHIEVEMENT, \*CURRICULUM DEVELOPMENT, \*CHEMISTRY,  
 \*DISSERTATIONS, \*INTEGRATED ALGEBRA CHEMISTRY, \*INSTRUCTION,  
 \*RESEARCH REPORTS, \*SECONDARY SCHOOL SCIENCE, GRADE 11, TEACHING  
 PROCEDURES, 1964



41. SE 003 694 08 12 68 10 13 17 1 00 000 006  
 COLYER, LUTHER  
 A COMPARISON OF TWO METHODS OF TEACHING BIOLOGY AT THE COLLEGE  
 LEVEL  
 SCIENCE EDUCATION  
 C2 00 60 7  
 \*ACHIEVEMENT, \*BIOLOGY, \*COLLEGE SCIENCE, \*CURRICULUM DEVELOPMENT,  
 \*INSTRUCTION, \*TEACHING PROCEDURES, \*TEACHING METHODS, ACADEMIC  
 ACHIEVEMENT, TEACHING, 1960
42. SE 003 677 07 11 68 10 85 20 1 00 000 006  
 COLYER, LUTHER M.  
 THE PRINCIPLE-UNIT-PROJECT METHOD OF TEACHING SCIENCE  
 SCIENCE EDUCATION  
 12 00 62 5  
 \*BIOLOGY, \*COURSE ORGANIZATION, \*INSTRUCTION, \*SECONDARY SCHOOL  
 SCIENCE, \*TEACHING TECHNIQUES, ABILITY GROUPING, CREATIVITY,  
 COURSE OBJECTIVES, EVALUATION, PROJECTS, SCIENCE UNITS, SCIENCE  
 ACTIVITIES
43. SE 002 785 07 08 68 10 33 32 1 22 000 298  
 COMMISSION ON COLLEGE PHYSICS  
 COMMISSION ON COLLEGE PHYSICS NEWSLETTER  
 COMMISSION ON COLLEGE PHYSICS  
 10 00 66 6  
 \*COLLEGE SCIENCE, \*CURRICULUM, \*INSTRUCTION, \*NEWSLETTERS,  
 \*PHYSICS, AUDIOVISUAL AIDS, FILMS, INSTRUCTIONAL MATERIALS,  
 INSTRUCTIONAL MEDIA, SCIENTIFIC RESEARCH, COMMISSION ON COLLEGE  
 PHYSICS
44. SE 003 610 04 30 68 10 81 17 1 00 000 006  
 COX, LOUIS T.  
 WORKING WITH SCIENCE IN THE KINDERGARTEN  
 SCIENCE EDUCATION  
 03 00 63 8  
 \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*KINDERGARTEN,  
 \*SCIENCE EDUCATION, CRITICAL THINKING, EDUCATIONAL OBJECTIVES,  
 EDUCATIONAL PROBLEMS, STUDENT ATTITUDES, SKILL DEVELOPMENT,  
 TEACHER ROLE, 1959



45. SE 002 411 09 06 67 10 81 17 1 00 000 006  
 CRABTREE, J. F.  
 A STUDY OF THE RELATIONSHIPS BETWEEN "SCORE", "TIME", "I. Q.",  
 AND "READING LEVEL" FOR FOURTH GRADE STUDENTS USING PROGRAMED  
 SCIENCE MATERIAL  
 SCIENCE EDUCATION
- 04 00 67 3  
 \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTIONAL PROCEDURES, \*PROGRAMED  
 INSTRUCTION, ACADEMIC ACHIEVEMENT, GRADE 4, RESEARCH REPORTS, 1964
46. SE 003 136 03 04 68 10 82 20 1 00 000 101  
 DAVIS, IRA C.  
 THE MATHEMATICS OF MOST VALUE TO PUPILS OF SCIENCE  
 THE MATHEMATICS TEACHER
- 39 4  
 \*ACADEMIC ACHIEVEMENT, \*EDUCATIONAL OBJECTIVES, \*INSTRUCTION,  
 \*MATHEMATICS, \*MATHEMATICS EDUCATION, \*PAPERS, \*SECONDARY SCHOOL  
 SCIENCE
47. SE 003 612 04 30 68 10 12 17 1 00 000 006  
 DAVIS, JERRY B.  
 ATTITUDE CHANGES ON FALLOUT AND RACE ASSOCIATED WITH SPECIAL  
 INSTRUCTION IN BIOLOGY  
 SCIENCE EDUCATION
- 03 00 63 6  
 \*BIOLOGY, \*INSTRUCTION, \*RACIAL ATTITUDES, \*RADIATION, \*STUDENT  
 ATTITUDES, INTELLIGENCE DIFFERENCES, SECONDARY SCHOOL SCIENCE, 1961
48. SE 003 449 07 11 68 10 33 30 1 00 000 002  
 DAVIS, WILLIAM P., JR.  
 COMPUTER USE IN THE INTERMEDIATE PHYSICS LABORATORY  
 AMERICAN JOURNAL OF PHYSICS
- 06 00 65 2  
 \*COLLEGE SCIENCE, \*COMPUTER ASSISTED INSTRUCTION, \*INSTRUCTION,  
 \*PHYSICS, \*SCIENCE ACTIVITIES, LABORATORY EXPERIMENTS, NUCLEAR  
 PHYSICS, PHYSICAL SCIENCES, SCIENCE EXPERIMENTS, UNDERGRADUATE  
 STUDY, DARTMOUTH COLLEGE

49. SE 003 701 07 11 68 10 32 20 1 00 000 006  
 DEAN, PETER  
 PROBLEM SOLVING TECHNIQUES IN TEACHING SECONDARY SCHOOL PHYSICS  
 SCIENCE EDUCATION  
 12 00 61 5  
 \*ELECTRICITY, \*INSTRUCTION, \*LIGHT, \*PROBLEM SOLVING, \*PHYSICAL SCIENCES, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE, \*TEACHING TECHNIQUES, SCIENCE ACTIVITIES, SCIENCE MANPOWER PROJECT, WAYNE STATE TEACHERS COLLEGE
50. SE 003 428 05 29 68 10 13 17 1 00 000 073  
 DEARDEN, DOUGLAS M.  
 AN EVALUATION OF THE LABORATORY IN A COLLEGE GENERAL BIOLOGY COURSE  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 03 00 60 7  
 \*BIOLOGY, \*COMPARATIVE ANALYSIS, \*COLLEGE SCIENCE, \*GENERAL EDUCATION, \*INSTRUCTION, \*LABORATORY TRAINING, \*TEACHING METHODS, INDIVIDUAL INSTRUCTION, RESEARCH REPORTS, STUDENT ATTITUDES, 1959
51. SE 003 668 07 11 68 10 13 17 1 00 000 006  
 DEARDEN, DOUGLAS M.  
 A STUDY OF CONTRASTING METHODS IN COLLEGE GENERAL BIOLOGY LABORATORY INSTRUCTION  
 SCIENCE EDUCATION  
 12 00 62 3  
 \*BIOLOGY, \*COLLEGE SCIENCE, \*COMPARATIVE ANALYSIS, \*INSTRUCTION, \*LABORATORY TRAINING, \*TEACHING METHODS, INDIVIDUAL DIFFERENCES, RESEARCH REPORTS, SCIENTIFIC THINKING TEST, BIOLOGICAL KNOWLEDGE TEST, BIOLOGICAL ATTITUDE TEST, 1959
52. SE 002 027 10 30 67 10 81 17 3 22 000 319  
 DECKER, MARTIN GEORGE  
 THE DIFFERENTIAL EFFECTS UPON THE LEARNING OF THE NATURAL SCIENCES BY FIFTH GRADERS OF TWO MODES OF TEACHING OVER TELEVISION AND IN THE CLASSROOM  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 65 168  
 \*ACHIEVEMENT, \*DISSERTATIONS, \*ELEMENTARY SCHOOL SCIENCE, \*PROBLEM SOLVING, \*INSTRUCTIONAL PROCEDURES, \*RESEARCH REPORTS, COMPARATIVE ANALYSES, GRADE 5, INSTRUCTIONAL TELEVISION, LEARNING, NATURAL SCIENCES, TELEVISION, 1965, BOSTON, MASSACHUSETTS, MINNESOTA  
 TEACHER ATTITUDE INVENTORY

53. SE 003 088 05 29 68 10 33 38 1 00 000 002  
 DEEDS, W. E.  
 PROCEEDINGS OF THE AMERICAN ASSOCIATION OF PHYSICS TEACHERS - THE  
 USE OF VIDEOTAPE RECORDS IN TEACHING COLLEGE PHYSICS  
 AMERICAN JOURNAL OF PHYSICS  
 01 00 67 1  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*PHYSICS, \*TEACHING TECHNIQUES,  
 \*TELEVISION, AUDIOVISUAL AIDS, INSTRUCTIONAL TELEVISION
54. SE 002 374 07 12 68 10 81 17 2 22 000 319  
 DEITMEIER, HOMER J.  
 THE EFFECT OF THE INTEGRATION OF SCIENCE TEACHING BY TELEVISION  
 ON THE DEVELOPMENT OF SCIENTIFIC REASONING IN THE FIFTH-GRADE  
 STUDENT  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 61 38  
 \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*PROBLEM SOLVING,  
 \*SCIENCE PROJECTS, \*STUDY GUIDES, \*TEACHING TECHNIQUES,  
 COMPARATIVE ANALYSIS, DOCTORAL THESES, GRADE 5, INSTRUCTIONAL  
 TELEVISION, INSERVICE TEACHER EDUCATION, RESEARCH REPORTS,  
 SCIENTIFIC METHCDOLOGY, SEX DIFFERENCES, TEACHER EDUCATION,  
 TELEVISION, BOSTON, MASSACHUSETTS AUDOBON SOCIETY, EASTERN  
 MASSACHUSETTS COUNCIL FOR SCHOOL TELEVISION, 1961
55. SE 001 919 03 29 68 10 23 17 2 09 000 346  
 DELAP, JAMES H. AND LEONARDSON, MARSHA  
 PROGRAMMED INSTRUCTION IN CHEMISTRY - A REPORT OF AN EDUCATIONAL  
 EXPERIMENT BY THE DEPARTMENT OF CHEMISTRY IN CONJUNCTION WITH THE  
 FORD GRADUATE PROGRAM  
 STETSON UNIVERSITY, DELAND, FLORIDA  
 64 7  
 \*ACHIEVEMENT, \*COLLEGE SCIENCE, \*CHEMISTRY, \*COMPARATIVE ANALYSIS,  
 \*CONVENTIONAL INSTRUCTION, \*INSTRUCTION, \*PROGRAMED INSTRUCTION,  
 GENERAL EDUCATION, PROGRAM EVALUATION, RESEARCH REPORTS, STUDENT  
 ATTITUDES, STUDENT MOTIVATION, STETSON UNIVERSITY, FORD GRADUATE  
 PROGRAM, 1964

56. SE 002 674 08 08 68 10 23 29 1 00 000 003  
 DILTS, ROBERT V.  
 METHODS OF SEPARATION - THE SOPHOMORE ANALYTICAL COURSE  
 JOURNAL OF CHEMICAL EDUCATION  
 06 00 67 4  
 \*CHEMISTRY, \*CURRICULUM, \*INSTRUCTION, \*PROG M DESCRIPTIONS,  
 \*STUDENT SCIENCE INTEREST, HIGHER EDUCATION, LABORATORY TECHNIQUES,  
 LABORATORY PROCEDURES, SCIENCE COURSES, TEACHING PROCEDURES,  
 TEXTBOOKS, TEXTBOOK SELECTION, VANDERBILT UNIVERSITY, NASHVILLE,  
 TENNESSEE
57. SE 003 292 04 18 68 10 82 20 2 00 000 096  
 DOWNING, ELLIOT R.  
 A COMPARISON OF THE LECTURE-DEMONSTRATION AND THE LABORATORY  
 METHODS OF INSTRUCTION IN SCIENCE  
 SCHOOL REVIEW  
 25 5  
 \*ACADEMIC ACHIEVEMENT, \*INSTRUCTION, \*LECTURE DEMONSTRATION,  
 \*LABORATORY EXPERIMENTS, \*SECONDARY SCHOOL SCIENCE, CHEMISTRY,  
 PHYSICS, RESEARCH REVIEWS, 1925
58. SE 003 459 03 04 68 10 91 17 3 51 000 280  
 DRENCHKO, ELIZABETH K.  
 THE COMPARATIVE EFFECTIVENESS OF TWO METHODS OF TEACHING GRADE  
 SCHOOL SCIENCE  
 UNITED STATES DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, OFFICE  
 OF EDUCATION, COOPERATIVE RESEARCH BOARD  
 66 95  
 \*ACADEMIC ACHIEVEMENT, \*EFFECTIVE TEACHING, \*ELEMENTARY SCHOOL  
 SCIENCE, \*INSTRUCTION, \*TEACHING METHODS, BIOLOGY, BIBLIOGRAPHIES,  
 CONCEPT FORMATION, COMPARATIVE ANALYSIS, EDUCATIONAL OBJECTIVES,  
 EARTH SCIENCE, GENERAL SCIENCE, GRADE 4, PROBLEM SOLVING, PHYSICAL  
 SCIENCES, RESEARCH REPORTS, 1966, SEQUENTIAL TESTS OF EDUCATIONAL  
 PROGRESS, RUTGERS, NEW JERSEY
59. SE 003 660 08 12 68 10 43 20 2 00 000 006  
 DUPRE, HUNTLEY  
 A COMPARATIVE STUDY OF AN INTRODUCTORY GEOGRAPHY COURSE ON ETV  
 AND IN THE CLASSROOM  
 SCIENCE EDUCATION  
 02 00 62 11  
 \*EARTH SCIENCE, \*EDUCATIONAL TELEVISION, \*GEOGRAPHY, \*INSTRUCTION,  
 \*TEACHER EDUCATION, \*TEACHING TECHNIQUES, COURSE DESCRIPTIONS,  
 GENERAL EDUCATION, TELEVISION



60. SE 003 542 04 18 68 10 86 20 1 00 000 006  
 EISS, ALBERT F.  
 PROBLEMS IN SEMANTICS OF IMPORTANCE IN SCIENCE TEACHING  
 SCIENCE EDUCATION  
 10 00 61 5  
 \*INSTRUCTION, \*PHYSICAL SCIENCES, \*SEMANTICS, \*SCIENCE TEACHING,  
 \*SCIENCE VOCABULARY
61. SE 002 375 07 12 68 10 12 17 2 22 000 319  
 EL-DIB, FATHY ABDEL  
 A STUDY TO DETERMINE THE INSTRUCTIONAL ACTIVITIES USED BY  
 BIOLOGY TEACHERS IN TEN SELECTED MICHIGAN HIGH SCHOOLS AND THE  
 VALUES ATTACHED TO THEM BY STUDENTS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 61 318  
 \*BIOLOGY, \*INSTRUCTION, \*OUTDOOR EDUCATION, \*STUDENT ATTITUDES,  
 \*SECONDARY SCHOOL SCIENCE, \*SCIENCE EXPERIMENTS, \*TEACHER  
 TECHNIQUES, DOCTORAL THESES, DISCUSSION, LABORATORY TECHNIQUES,  
 LECTURE, RESEARCH REPORTS, SCIENCE ACTIVITIES, MICHIGAN, 1961
62. SE 003 070 02 27 68 10 32 30 1 00 000 007  
 ESLER, WILLIAM K.  
 CREATIVE LABORATORY IN A TRADITIONAL PROGRAM  
 THE SCIENCE TEACHER  
 10 00 67 4  
 \*INSTRUCTION, \*LABORATORY ACTIVITIES, \*PHYSICS, \*SECONDARY  
 SCHOOL SCIENCE, \*SCIENCE ACTIVITIES, DISCOVERY LEARNING, PHYSICAL  
 SCIENCE STUDY COMMITTEE
63. SE 003 661 07 11 68 10 23 17 1 00 000 006  
 FALK, DORIS F.  
 THE LEARNING OF CHEMICAL EQUATIONS - MEANINGFUL VERSUS MECHANICAL  
 METHODS  
 SCIENCE EDUCATION  
 02 00 62 5  
 \*COLLEGE SCIENCE, \*CHEMISTRY, \*CHEMICAL EQUATIONS, \*INSTRUCTION,  
 \*LEARNING, \*PHYSICAL SCIENCES, \*RESEARCH REPORTS, \*UNDERGRADUATE  
 STUDY, TEACHING TECHNIQUES, AMERICAN COUNCIL ON EDUCATION  
 PSYCHOLOGICAL EXAMINATION, EQUATIONS TEST, ANDERSON CHEMISTRY TEST



64. SE 003 066 02 27 68 05 92 31 1 00 000 007  
 FINLEY, ALBERT C. AND LOUDERBACK, H. M.  
 A DIFFERENT KIND OF HIGH SCHOOL KEYED TO INDIVIDUALIZED  
 INSTRUCTION
- THE SCIENCE TEACHER  
 10 00 67 3  
 \*CURRICULUM, \*DEVELOPMENT REPORTS, \*INDIVIDUAL INSTRUCTION,  
 \*SCIENCE FACILITIES, \*SECONDARY SCHOOL SCIENCE, \*TEAM TEACHING,  
 BIOLOGY, CHEMISTRY, INSTRUCTION, PHYSICAL SCIENCES, PHYSICS,  
 BIOLOGICAL SCIENCES CURRICULUM STUDY, CHEMICAL EDUCATION  
 MATERIALS STUDY, PHYSICAL SCIENCE STUDY COMMITTEE, QUANTITATIVE  
 PHYSICAL SCIENCE
65. SE 002 866 06 10 68 10 85 20 2 00 000 006  
 FISCHLER, ABRAHAM S.  
 SCIENCE, PROCESS, THE LEARNER - A SYNTHESIS
- SCIENCE EDUCATION  
 12 00 65 8  
 \*INQUIRY, \*INSTRUCTION, \*LEARNING, \*OBJECTIVES, CONCEPT FORMATION,  
 CURRICULUM, EDUCATIONAL PROGRAMS, ELEMENTARY SCHOOL SCIENCE,  
 SECONDARY SCHOOL SCIENCE, SCIENCE CURRICULUM IMPROVEMENT STUDY,  
 ELEMENTARY SCIENCE STUDY PROJECT, PHYSICAL SCIENCE STUDY  
 COMMITTEE, CHEMICAL BOND APPROACH, CHEMICAL EDUCATION MATERIALS  
 STUDY
66. SE 003 670 08 12 68 10 82 20 2 00 000 006  
 FISCHLER, ABRAHAM S. AND SHORES MAN, PETER B.  
 TEAM TEACHING IN THE ELEMENTARY SCHOOL - IMPLICATIONS FOR RESEARCH  
 IN SCIENCE INSTRUCTION
- SCIENCE EDUCATION  
 12 00 62 11  
 \*ADMINISTRATIVE ORGANIZATION, \*ELEMENTARY SCHOOL SCIENCE,  
 \*GROUPING (INSTRUCTIONAL PURPOSES), \*INSTRUCTION, \*STUDENT  
 EVALUATION, \*TEAM TEACHING, COOPERATIVE PLANNING, LARGE GROUP  
 INSTRUCTION, SMALL GROUP INSTRUCTION, PROGRAMED INSTRUCTION,  
 SELF-CONTAINED CLASSROOMS, SCHOOL AND UNIVERSITY PROJECT FOR  
 RESEARCH AND DEVELOPMENT
67. SE 002 514 04 03 68 10 85 20 1 00 000 007  
 FISH, ALPHORETTA S. AND GOLDMARK, BERNICE  
 INQUIRY METHOD - THREE INTERPRETATIONS
- THE SCIENCE TEACHER  
 02 00 66 3  
 \*OBJECTIVES, \*QUESTIONING TECHNIQUES, COLLEGE SCIENCE, ELEMENTARY  
 SCHOOL SCIENCE, INSTRUCTION, SECONDARY SCHOOL SCIENCE, TEACHING  
 PROCEDURES, TEACHER ROLE

68. SE 003 261 08 08 68 10 08 17 1 00 000 021  
 FOX, RAYMOND B.  
 DIFFICULTIES IN DEVELOPING SKILL IN CRITICAL THINKING  
 JOURNAL OF EDUCATIONAL RESEARCH  
 04 00 62 3  
 \*CRITICAL THINKING, \*INSTRUCTION, \*LEARNING, \*SECONDARY SCHOOLS,  
 \*SOCIAL SCIENCES, \*SCIENTIFIC METHODS, EDUCATIONAL BACKGROUNDS,  
 RESEARCH REPORTS, TEACHING PROCEDURES, TEACHING TECHNIQUES
69. SE 002 422 08 08 68 10 23 17 2 00 000 008  
 GELLER, MOLLY  
 THE MEASUREMENT OF THE EFFECTIVENESS OF A TEACHING MACHINE  
 PROGRAM IN THE ORGANIC CHEMISTRY AREA OF FIRST YEAR COLLEGE  
 CHEMISTRY  
 JOURNAL OF RESEARCH IN SCIENCE TEACHING  
 63 5  
 \*ACHIEVEMENT, \*COMPARATIVE ANALYSIS, \*CONVENTIONAL INSTRUCTION,  
 \*INSTRUCTION, \*TEACHING MACHINES, COLLEGE SCIENCE, CHEMISTRY,  
 EVALUATION, ORGANIC CHEMISTRY, RESEARCH REPORTS, TEACHING  
 TECHNIQUES, KONCEPT-O-GRAPH TEACHING MACHINE, ACS COOPERATIVE  
 TESTS, NEW YORK UNIVERSITY
70. SE 002 467 04 05 68 10 12 17 2 22 000 319  
 GENNARO, EUGENE DANIEL  
 A COMPARATIVE STUDY OF TWO METHODS OF TEACHING HIGH SCHOOL  
 BIOLOGY - BSCS YELLOW VERSION AND LABORATORY BLOCKS WITH  
 COLLATERAL READING  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 64 188  
 \*ACADEMIC ACHIEVEMENT, \*BIOLOGY, \*COMPARATIVE ANALYSIS, \*INSTRUCTION,  
 \*SECONDARY SCHOOL SCIENCE, \*TEACHING METHODS, DOCTORAL THESES,  
 GRADE 9, INDEPENDENT STUDY, PROBLEM SOLVING, RESEARCH REPORTS,  
 BIOLOGICAL SCIENCES CURRICULUM STUDY, 1964
71. SE 002 345 01 12 68 10 12 17 1 22 000 319  
 GILBERT, MARION LUHMAN  
 THE NATURAL SCIENCE MUSEUM AS A TEACHING RESOURCE FOR BIOLOGY  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 62 139  
 \*ACADEMIC ACHIEVEMENT, \*BIOLOGY, \*EDUCATIONAL RESOURCES, \*MUSEUMS,  
 \*RESEARCH REPORTS, \*SECONDARY SCHOOL SCIENCE, \*TEACHING PROCEDURES,  
 COLLEGE SCIENCE, DOCTORAL THESES, ELEMENTARY SCHOOL SCIENCE, FIELD  
 TRIPS, NATURAL HISTORY, SCIENCE FACILITIES, GENERAL SCIENCE, 1962,  
 NELSON BIOLOGY TEST, UNIVERSITY OF NEBRASKA STATE MUSEUM

72. SE 003 879 07 12 68 10 23 20 2 00 000 003  
 GLASSER, L.  
 TEACHING SYMMETRY  
 JOURNAL OF CHEMICAL EDUCATION  
 09 00 67 10  
 \*COLLEGE SCIENCE, \*CHEMISTRY, \*INSTRUCTION, \*PHYSICAL SCIENCES,  
 \*SYMMETRY, \*SCIENCE MATERIALS, \*TEACHING TECHNIQUES, SCIENTIFIC  
 CONCEPTS
73. SE 002 031 11 14 67 10 81 17 2 22 000 319  
 AN EXAMINATION OF SOME EFFECTS OF PUPIL SELF-INSTRUCTION METHODS  
 COMPARED WITH THE EFFECTS OF TEACHER-LED CLASSES IN ELEMENTARY  
 SCIENCE OF FIFTH GRADE PUPILS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 65 220  
 \*ACADEMIC ACHIEVEMENT, \*CONVENTIONAL INSTRUCTION, \*ELEMENTARY  
 SCHOOL SCIENCE, \*INSTRUCTION, \*INDIVIDUAL INSTRUCTION, \*RESEARCH  
 REPORTS, COMPARATIVE ANALYSIS, DOCTORAL THESES, GRADE 5, SCIENCE  
 INTEREST, 1965
74. SE 003 325 06 06 68 10 52 17 3 51 000 279  
 GORDON, JOHN M.  
 THE EFFECTIVENESS OF FOUR VARIATIONS OF PROGRAM SCIENCE MATERIALS  
 EDRS, NATIONAL CASH REGISTER COMPANY,  
 67 40  
 \*AUDIOVISUAL AIDS, \*ACADEMIC ACHIEVEMENT, \*GRADE 7, \*INSTRUCTION,  
 \*PROGRAMED INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, COGNITIVE  
 DEVELOPMENT, ELECTRICITY, PHYSICAL SCIENCES, RESEARCH REPORTS,  
 UNITED STATES OFFICE OF EDUCATION, NATIONAL DEFENSE EDUCATION ACT,  
 WEST JUNIOR HIGH SCHOOL, LANSING, MICHIGAN
75. SE 002 380 07 12 68 10 32 17 2 22 000 319  
 GRASSELL, EDWARD M.  
 AN EVALUATION OF EDUCATIONAL FILMS IN THE TEACHING OF HIGH SCHOOL  
 PHYSICS IN OREGON  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 60 269  
 \*COMPARATIVE ANALYSIS, \*CONVENTIONAL INSTRUCTION, \*FILM  
 EVALUATION, \*INSTRUCTIONAL FILMS, \*INSTRUCTION, \*PHYSICS, \*SECONDARY  
 SCHOOL SCIENCE, \*TEACHING TECHNIQUES, DOCTORAL THESES, FILMS,  
 RESEARCH REPORTS, WHITE PHYSICS FILM SERIES, 1960

76. SE 002 676 02 21 68 02 23 20 1 00 000 003  
 GROB, ROBERT L.  
 A JUNIOR YEAR ANALYTICAL-ORGANIC LABORATORY  
 JOURNAL OF CHEMICAL EDUCATION  
 06 00 67 3  
 \*ANALYTICAL CHEMISTRY, \*COLLEGE SCIENCE, \*CHEMISTRY, \*CURRICULUM  
 DEVELOPMENT, \*ORGANIC CHEMISTRY, \*SCIENCE COURSES, INSTRUCTION,  
 LABORATORY COURSES, SCIENCE ACTIVITIES, AMERICAN CHEMICAL SOCIETY,  
 1966
77. SE 003 838 06 11 68 11 95 20 2 00 000 007  
 GROSS, BARBARA  
 MINNESOTA'S SCIENCE CENTER - AN AUTO-TUTORIAL LABORATORY  
 THE SCIENCE TEACHER  
 09 00 67 2  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*TEACHER EDUCATION, BIOLOGY  
 AUTOINSTRUCTIONAL PROGRAMS, CHEMISTRY, EARTH SCIENCE, PHYSICS,  
 PHYSICAL SCIENCES, SCIENCE FACILITIES, SECONDARY SCHOOL SCIENCE
78. SE 002 696 02 22 68 10 23 38 1 00 000 003  
 GUGGENHEIM, E. A.  
 MOLECULES VERSUS MOLES  
 JOURNAL OF CHEMICAL EDUCATION  
 05 00 66 2  
 \*COLLEGE SCIENCE, \*CHEMISTRY, \*INSTRUCTION, \*MOLES, \*MOLECULES,  
 \*SCIENTIFIC TERMINOLOGY
79. SE 002 348 02 12 68 10 13 17 2 22 000 319  
 HAFFER, PAUL EGAN  
 SHORT FIELD UNITS IN CONTRAST TO THE LONG FIELD TRIP AS A VEHICLE  
 FOR TEACHING BIOLOGY TO PROSPECTIVE ELEMENTARY TEACHERS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 62 105  
 \*BIOLOGY, \*COMPARATIVE ANALYSIS, \*COLLEGE SCIENCE, \*FIELD TRIPS,  
 \*RESEARCH REPORTS, \*TEACHER EDUCATION, \*TEACHING TECHNIQUES,  
 DOCTORAL THESES, ELEMENTARY SCHOOL SCIENCE, STUDENT ATTITUDES,  
 STUDENT INTEREST, 1962, STATE UNIVERSITY COLLEGE, POTSDAM, NEW YORK



80. SE 000 877 08 29 68 10 33 17 1 51 000 280  
 HAMBY, D. C. AND OTHERS  
 DEVELOPMENT OF UNDERGRADUATE LABORATORY EXPERIMENTS AND  
 CLASSROOM DEMONSTRATIONS UTILIZING SOLID AND GAS LASERS  
 U. S. OFFICE OF EDUCATION, COOPERATIVE RESEARCH BRANCH,  
 WASHINGTON, D. C.  
 64 67  
 \*COLLEGE SCIENCE, \*DEMONSTRATIONS (SCIENCE), \*PHYSICS,  
 SCIENCE ACTIVITIES, INSTRUCTIONAL MATERIALS DEVELOPMENT,  
 LASERS, MASERS, OPTICS, \*RESEARCH REPORTS, UNITED STATES  
 OFFICE OF EDUCATION
81. SE 003 182 03 19 68 10 13 17 2 22 000 319  
 HANDLER, SHIRLEY WOLZ  
 THE USE OF COMMUNITY RESOURCES AS A METHOD IN THE TEACHING OF  
 BIOLOGY AT THE EAST TEXAS BAPTIST COLLEGE  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 58 184  
 \*BIOLOGY, \*COMMUNITY RESOURCES, \*COLLEGE SCIENCE, \*COURSE  
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 ANALYSIS, DOCTORAL THESES, EFFECTIVE TEACHING, LECTURE, OUTDOOR  
 EDUCATION, RESEARCH REPORTS, SECONDARY SCHOOL SCIENCE, STUDENT  
 ATTITUDES, 1958, TEXAS, EAST TEXAS BAPTIST COLLEGE
82. SE 002 107 07 08 68 10 32 29 2 00 000 009  
 HARRIS, JOHN  
 THE LABORATORY IN PROJECT PHYSICS  
 THE PHYSICS TEACHER  
 05 00 67 4  
 \*INSTRUCTIONAL MATERIALS, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE,  
 \*SCIENCE DEMONSTRATIONS, \*SCIENCE EXPERIMENTS, \*SCIENCE  
 EQUIPMENT, PHYSICS, PROGRAM DESCRIPTIONS, HARVARD PROJECT PHYSICS
83. SE 002 586 10 10 67 10 33 30 1 00 000 002  
 HARTMAN, ROGER D.  
 USE OF COMPUTERS IN AN UNDERGRADUATE LIGHT AND OPTICS LABORATORY  
 AMERICAN JOURNAL OF PHYSICS  
 09 00 66 6  
 \*COLLEGE SCIENCE, \*COMPUTERS, \*INSTRUCTIONAL PROCEDURE, \*OPTICS,  
 \*PHYSICS, \*SCIENCE ACTIVITIES, COMPUTER PROGRAMS, OPTICS,  
 LABORATORIES, OPTICAL EXPERIMENTS

84. SE 003 184 03 19 68 10 83 17 2 22 000 319  
 HATCHER, BENJAMIN EDWARD  
 AN EXPERIMENTAL STUDY OF THREE DIFFERENT PATTERNS OF STUDENT  
 PARTICIPATION IN A GENERAL-EDUCATION SCIENCE COURSE FOR COLLEGE  
 FRESHMEN  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 57 279  
 \*ACADEMIC ACHIEVEMENT, \*COLLEGE SCIENCE, \*COMPARATIVE ANALYSIS,  
 \*GENERAL EDUCATION, \*INSTRUCTION, \*SCIENTIFIC LITERACY, \*STUDENT  
 PARTICIPATION, \*TEACHING METHODS, DOCTORAL THESES, EFFECTIVE  
 TEACHING, EDUCATIONAL PLANNING, RESEARCH REPORTS, SCIENCE  
 EDUCATION, 1957, ALABAMA STATE COLLEGE
85. SE 002 479 08 08 68 10 83 17 2 00 000 008  
 HAUGHTON, E. AND LOEB, A. L.  
 SYMMETRY - THE CASE HISTORY OF A PROGRAM  
 JOURNAL OF RESEARCH IN SCIENCE TEACHING  
 64 14  
 \*INSTRUCTION, \*PROGRAMED INSTRUCTION, \*PROGRAMED MATERIALS,  
 \*SEQUENTIAL PROGRAMS, \*TEACHING MACHINES, COLLEGE SCIENCE,  
 EVALUATION, RESEARCH REPORTS, TESTS, HARVARD COMMITTEE ON  
 PROGRAMED INSTRUCTION
86. SE 002 267 02 08 68 19 32 17 2 00 000 073  
 HEATH, ROBERT W.  
 COMPARISON OF ACHIEVEMENT IN TWO PHYSICS COURSES  
 THE JOURNAL OF EXPERIMENTAL EDUCATION  
 64 8  
 \*ACADEMIC ACHIEVEMENT, \*INSTRUCTION, \*PHYSICS, \*RESEARCH REPORTS,  
 \*SECONDARY SCHOOL SCIENCE, CONVENTIONAL INSTRUCTION, CURRICULUM,  
 SCIENCE COURSE IMPROVEMENT PROJECT, EDUCATIONAL TESTING SERVICE,  
 PHYSICAL SCIENCE STUDY COMMITTEE, SCIENCE COLLEGE ABILITY TEST,  
 PSSC SPECIAL COMPREHENSIVE PHYSICS EXAMINATION, THURSTONE'S CONCEALED  
 FIGURES TEST
87. SE 002 433 02 14 68 10 81 17 1 00 000 006  
 HEDGES, WILLIAM D. AND MACDOUGALL, MARY A.  
 TEACHING FOURTH GRADE SCIENCE BY MEANS OF PROGRAMED SCIENCE  
 MATERIALS WITH LABORATORY EXPERIENCES PHASE III  
 SCIENCE EDUCATION  
 10 00 65 6  
 \*ACADEMIC ACHIEVEMENT, \*ELEMENTARY SCHOOL SCIENCE, EDUCATIONAL  
 PROGRAM, \*GRADE 4, \*PROGRAMED INSTRUCTION, PROGRAM DESCRIPTION,  
 \*PROGRAM EVALUATION, \*RESEARCH REPORTS, RESEARCH METHODOLOGY,  
 \*STUDENT ATTITUDES, TEACHER INFLUENCE, \*STUDENT INTEREST,  
 SEQUENTIAL TEST OF EDUCATIONAL PROGRESS SCIENCE ACHIEVEMENT  
 TEST, 1964, CALIFORNIA INTEREST INVENTORY, LORGE-THORNDIKE  
 INTELLIGENCE TEST, LABORATORY RESOURCEFULNESS TEST

88. SE 002 736 04 03 68 10 25 30 1 00 000 003  
HEINZ, D. E.  
STUDENT EXPERIMENTS INVOLVING UNKNOWN SOLUBILITY CONSTANTS  
JOURNAL OF CHEMICAL EDUCATION  
02 00 67 2  
\*CHEMISTRY, \*INSTRUCTION, \*LABORATORY EXPERIMENTS, \*MEASUREMENT,  
\*SCIENCE EXPERIMENTS, COLLEGE SCIENCE, SECONDARY SCHOOL SCIENCE,  
SCIENCE ACTIVITIES, SOLUBILITY
89. SE 003 872 07 12 68 10 23 30 1 00 000 003  
HENDERSON, GILES L.  
A TV LECTURE DEMONSTRATION OF OPTICAL ACTIVITY  
JOURNAL OF CHEMICAL EDUCATION  
12 00 67 2  
\*COLLEGE SCIENCE, \*CHEMISTRY, \*LECTURE DEMONSTRATIONS, \*ORGANIC  
CHEMISTRY, \*TEACHING TECHNIQUES, \*UNDERGRADUATE STUDY, EDUCATIONAL  
TELEVISION, INSTRUCTION, OPTICAL ACTIVITY, SCIENCE DEMONSTRATIONS,  
TELEVISION
90. SE 002 439 02 14 68 10 82 20 1 00 000 006  
HENNEBRY, H. M. AND WIEGAND, CATHERINE  
TEAM TEACHING SCIENCE AT UNIVERSITY SCHOOL  
SCIENCE EDUCATION  
04 00 66 2  
\*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEAM TEACHING, \*TEACHING  
METHODS, FACILITIES, PROGRAM DESCRIPTION, UNIVERSITY SCHOOL,  
UNIVERSITY OF WYOMING, LARAMIE, COURSE ORGANIZATION
91. SE 002 383 07 12 68 10 22 17 2 22 000 319  
HOMMAN, GUY B.  
A STUDY OF SEVERAL FACTORS AND THEIR RELATIONSHIP TO ACHIEVEMENT  
IN HIGH SCHOOL CHEMISTRY BY USE OF FACTORIAL DESIGN AND  
COVARIANCE  
UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
61 238  
\*ACHIEVEMENT, \*CONVENTIONAL INSTRUCTION, \*COMPARATIVE ANALYSIS,  
\*INSTRUCTIONAL FILMS, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE,  
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FILMS, MATHEMATICS, RESEARCH REPORTS, SEX DIFFERENCES, ANDERSON  
CHEMISTRY TEST, ACS-NSTA COOPERATIVE EXAMINATION-HIGH SCHOOL  
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92. SE 002 343 04 05 68 02 85 17 1 00 000 006  
 HUFFMIRE, DONALD WYNANT  
 A CRITICAL APPRAISAL OF THE INDEPENDENT STUDY PROJECT IN SCIENCE  
 SCIENCE EDUCATION  
 04 00 65 5  
 \*CURRICULUM DEVELOPMENT, \*PROGRAM EVALUATION, \*INDEPENDENT STUDY,  
 \*PROGRAM DESCRIPTIONS, \*SECONDARY SCHOOL SCIENCE, \*STUDENT PROJECTS,  
 COLLEGE SCIENCE, CURRICULAR ACTIVITIES, EDUCATIONAL  
 PROGRAMS, INSTRUCTION, INDIVIDUAL INSTRUCTION, OBJECTIVES,  
 PROBLEM SOLVING, SCIENTIFIC METHODOLOGY, 1961
93. SE 002 356 08 08 68 10 82 17 2 22 000 319  
 HUMPHREYS, ALAN HALE  
 A CRITICAL ANALYSIS OF THE USE OF LABORATORIES AND CONSULTANTS  
 IN JUNIOR HIGH SCHOOL SCIENCE COURSES  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 62 142  
 \*ACHIEVEMENT, \*INSTRUCTION, \*LABORATORY TRAINING, \*SECONDARY  
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 ACADEMIC ACHIEVEMENT, DOCTORAL THESES, GRADE 7, GRADE 8, RESEARCH  
 REPORTS, SCIENCE ACTIVITIES, TEACHING TECHNIQUES
94. SE 003 165 05 28 68 10 81 17 2 00 000 073  
 HYRAM, GEORGE H.  
 AN EXPERIMENT IN DEVELOPING CRITICAL THINKING IN CHILDREN  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 12 00 57 8  
 \*CRITICAL THINKING, \*INSTRUCTION, \*LOGICAL THINKING, ELEMENTARY  
 SCHOOL STUDENTS, RESEARCH REPORTS, TEACHING PROCEDURES, 1957
95. SE 002 070 07 05 68 10 22 38 2 00 000 003  
 IRVING, JAMES R.  
 A LABORATORY SAFETY ORIENTATION LECTURE FOR THE FIRST CHEMISTRY  
 COURSE  
 JOURNAL OF CHEMICAL EDUCATION  
 03 00 67 6  
 \*CHEMISTRY, \*INSTRUCTION, \*LABORATORY TECHNIQUES, \*LABORATORY  
 SAFETY, \*LABORATORY TRAINING, \*SAFETY EDUCATION, LABORATORY  
 EQUIPMENT, SECONDARY SCHOOL SCIENCE, SAFETY



96. SE 002 386 07 12 68 10 22 17 2 22 000 319  
 JACOBS, LUCY C.  
 THE INFLUENCE OF TEACHING MACHINE PROCEDURES UPON LEARNING IN  
 HIGH SCHOOL CHEMISTRY  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 61 139  
 \*ACHIEVEMENT, \*ACADEMIC ACHIEVEMENT, \*COMPARATIVE ANALYSIS,  
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 \*SECONDARY SCHOOL SCIENCE, \*TEACHING MACHINES, CHEMISTRY,  
 DOCTORAL THESES, PROGRAMED MATERIALS, RESEARCH REPORTS, READING  
 ABILITY, STUDENT ATTITUDES, 1961
97. SE 003 169 03 04 68 10 85 20 1 00 000 045  
 JACOBSON, WILLARD J.  
 SAFETY SCIENCE IN THE ELEMENTARY SCHOOL  
 NATIONAL EDUCATION ASSOCIATION JOURNAL  
 01 00 59 2  
 \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*SAFETY, \*SAFETY  
 EDUCATION, ACCIDENTS, ACIDS, ELECTRICITY
98. SE 002 036 11 13 67 10 72 17 2 22 000 319  
 JOHNS, KENNETH WALTER  
 A COMPARISON OF TWO METHODS OF TEACHING EIGHTH GRADE GENERAL  
 SCIENCE - TRADITIONAL AND STRUCTURED PROBLEM-SOLVING  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 66 176  
 \*ACADEMIC ACHIEVEMENT, \*CRITICAL THINKING, COMPARATIVE ANALYSIS,  
 \*DOCTORAL THESES, \*GENERAL SCIENCE, \*INSTRUCTION, \*RESEARCH  
 REPORTS, PROBLEM SOLVING, RETENTION, REMMER'S ATTITUDE TOWARD  
 ANY SCHOOL SUBJECT SCALE, STANFORD ACHIEVEMENT TEST - SCIENCE,  
 SECONDARY SCHOOL SCIENCE, STUDY SKILLS, SCIENCE ATTITUDES,  
 WATSON-GLASER CRITICAL THINKING APPRAISAL, 1966
99. SE 002 916 03 06 68 10 33 17 1 00 000 002  
 JOSEPH, ALEXANDER  
 PROCEEDINGS - A SEVEN YEAR EXPERIMENT IN PROGRAMMED INSTRUCTION  
 IN FRESHMAN LEVEL PHYSICS  
 AMERICAN JOURNAL OF PHYSICS  
 07 00 67 1  
 \*COLLEGE SCIENCE, \*INSTRUCTIONAL MATERIALS, \*PHYSICS, \*PROGRAMED  
 INSTRUCTION, \*RESEARCH REPORTS, CURRICULUM DEVELOPMENT, 1965

100. SE 002 062 09 18 67 02 25 20 1 00 000 003  
 JOURNAL OF CHEMICAL EDUCATION  
 CHEM ED EDITORIALY SPEAKING  
 JOURNAL OF CHEMICAL EDUCATION  
 04 00 67 1  
 ACADEMIC ACHIEVEMENT, \*COLLEGE SCIENCE, \*CURRICULUM, \*INSTRUCTIONAL  
 PROCEDURES, \*SECONDARY SCHOOL SCIENCE, CHEMISTRY, STUDENT  
 CHARACTERISTICS
101. SE 003 650 05 29 68 10 82 17 2 00 000 006  
 KAHN, PAUL  
 AN EXPERIMENTAL STUDY TO DETERMINE THE EFFECT OF A SELECTED  
 PROCEDURE FOR TEACHING THE SCIENTIFIC ATTITUDES TO SEVENTH AND  
 EIGHTH GRADE BOYS THROUGH THE USE OF CURRENT EVENTS IN SCIENCE  
 SCIENCE EDUCATION  
 03 00 62 13  
 \*ATTITUDES, \*GRADE 7, GRADE 8, \*INSTRUCTION, \*MALES, \*SECONDARY  
 SCHOOL SCIENCE, \*SCIENCE EDUCATION, \*SCIENTIFIC ATTITUDES  
 \*TEACHER PROCEDURES, RESEARCH REPORTS, WHAT DO YOU THINK, TEST  
 OF SCIENTIFIC ATTITUDES, PINTNER'S TEST OF GENERAL ABILITY,  
 STANFORD ADVANCED READING TEST, COOPERATIVE SCIENCE TEST
102. SE 003 636 04 30 68 10 12 17 1 00 000 006  
 KASTRINOS, WILLIAM  
 THE RELATIONSHIP OF TWO METHODS OF TEACHING TO THE DEVELOPMENT  
 OF CRITICAL THINKING BY HIGH SCHOOL STUDENTS IN ADVANCED BIOLOGY  
 SCIENCE EDUCATION  
 03 00 64 9  
 \*BIOLOGY, \*CRITICAL THINKING, \*INSTRUCTION, \*PROBLEM SOLVING  
 \*TEACHING METHODS, COMPARATIVE ANALYSIS, RESEARCH REPORTS,  
 SECONDARY SCHOOL SCIENCE, PROBLEM SOLVING TEST, NELSON BIOLOGY  
 TEST, WATSON-GLASER CRITICAL THINKING APPRAISAL, THE KASTRINOS  
 CRITICAL THINKING TEST, 1964
103. SE 002 350 07 12 68 11 82 17 2 22 000 319  
 KERNS, HANAN VICTOR  
 A DESCRIPTIVE STUDY OF THE DEVELOPMENT AND PRESENTATION OF AN  
 IN-SCHOOL TELEVISION PROGRAM FOR THE IN-SERVICE EDUCATION OF  
 JUNIOR HIGH SCHOOL SCIENCE TEACHERS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 62 160  
 \*EDUCATIONAL TELEVISION, \*INSERVICE TEACHER EDUCATION, \*INSTRUCTION,  
 \*TEACHER EDUCATION, \*TELEVISED INSTRUCTION, DOCTORAL THESES, RESEARCH  
 REPORTS, SECONDARY SCHOOL SCIENCE, TEACHING TECHNIQUES, AUBURN UNIVERSITY  
 SCHOOL OF EDUCATION, ALABAMA, 1962

104. SE 002 406 02 14 68 10 86 22 1 00 000 006  
 KERNS, VICTOR  
 THREE APPROACHES TO SCIENCE EDUCATION BY TELEVISION  
 SCIENCE EDUCATION  
 04 00 67 2  
 \*EDUCATIONAL TELEVISION, \*INSTRUCTION, \*INSTRUCTIONAL TELEVISION,  
 ELEMENTARY SCHOOL SCIENCE, PROJECT REPORTS, SECONDARY SCHOOL  
 SCIENCE, TEACHER EDUCATION, ALABAMA
105. SE 002 039 09 12 67 10 82 17 2 22 000 319  
 KLEINMAN, GLADYS SCHATTEN  
 GENERAL SCIENCE TEACHERS' QUESTIONS, PUPIL AND TEACHER BEHAVIORS,  
 AND PUPILS' UNDERSTANDING OF SCIENCE  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 64 133  
 \*CRITICAL THINKING, \*INSTRUCTIONAL PROCEDURES, \*RESEARCH REPORTS,  
 \*SECONDARY SCHOOL SCIENCE, \*TEACHING TECHNIQUES, COMPARATIVE  
 STUDIES, GRADE 7, GRADE 8, SCIENTIFIC ENTERPRISE, TEST ON  
 UNDERSTANDING SCIENCE, 1964
106. SE 002 551 11 06 67 10 13 22 2 51 000 279  
 KRAUSE, JAMES B.  
 AUTOMATED SELF-INSTRUCTION DIRECTIONS FOR THE USE OF THE  
 MICROSCOPE  
 UNITED STATES DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
 07 00 67 80  
 \*BIOLOGY, \*COLLEGE SCIENCE, \*INSTRUCTION, \*MICROSCOPE, \*PROGRAMMED  
 INSTRUCTION, AUDIOTUTORIAL INSTRUCTION, GENERAL EDUCATION,  
 PROJECT REPORTS, SCIENCE ACTIVITIES, 1967, U. S. DEPARTMENT OF  
 HEALTH, EDUCATION, AND WELFARE, UNIVERSITY OF DELAWARE, NEWARK
107. SE 003 418 03 20 68 10 53 17 1 00 000 073  
 LAHTI, ARNOLD M.  
 THE INDUCTIVE-DEDUCTIVE METHOD AND THE PHYSICAL SCIENCE LABORATORY  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 03 00 56 15  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*PHYSICAL SCIENCES, \*PROBLEM  
 SOLVING, \*RESEARCH REPORTS, \*SCIENTIFIC METHODOLOGY, SCIENCE  
 ACTIVITIES, BIBLIOGRAPHIES, DEDUCTIVE METHODS, INDUCTIVE METHODS,  
 TEACHING METHODS, 1955

108. SE 002 971 03 06 68 10 35 38 1 00 000 009  
 LANNI, ROBERT P.  
 SPHERICAL MIRRORS AND THIN LENSES - A GRAPHICAL APPROACH  
 THE PHYSICS TEACHER  
 09 00 67 2  
 \*COLLEGE SCIENCE, \*OPTICS, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE,  
 \*MIRRORS, \*LENSES, INSTRUCTION
109. SE 002 836 04 05 68 10 81 17 1 00 000 006  
 LANSDOWN, BRENDA AND DIETZ, THOMAS S.  
 FREE VERSUS GUIDED EXPERIMENTATION  
 SCIENCE EDUCATION  
 04 00 65 4  
 \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*RESEARCH REPORTS,  
 \*RESEARCH METHODOLOGY, \*SCIENCE EDUCATION, DISCOVERY LEARNING,  
 OPEN-ENDED EXPERIMENTS, TEACHING PROCEDURES, 1962
110. SE 003 552 06 05 68 10 85 20 1 00 000 006  
 LEARY, DANIEL J.  
 IMPLICATIONS OF AUTOMATION FOR THE TEACHING OF SCIENCE  
 SCIENCE EDUCATION  
 10 00 62 9  
 \*INSTRUCTION, \*LEARNING, \*PROGRAMED INSTRUCTION, \*SCIENCE  
 EDUCATION, ABLE STUDENTS, CURRICULUM, EFFECTIVE TEACHING,  
 INSTRUCTIONAL MATERIALS, TECHNOLOGY, CHEMICAL EDUCATION MATERIALS  
 STUDY
111. SE 002 037 11 09 67 10 12 17 2 22 000 319  
 LEWIS, WILLIAM ALTZ  
 AN EVALUATION OF FOUR SELECTED APPROACHES TO TEACHING HIGH  
 SCHOOL BIOLOGY  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 66 115  
 \*ACADEMIC ACHIEVEMENT, \*BIOLOGY, \*CURRICULUM, \*DOCTORAL THESES,  
 \*CONVENTIONAL INSTRUCTION, \*INSTRUCTION, \*RESEARCH REPORTS,  
 \*SECONDARY SCHOOL SCIENCE, CURRICULUM DEVELOPMENT, COMPARATIVE  
 ANALYSIS, BIOLOGICAL SCIENCES CURRICULUM STUDY, 1966, GREEN  
 VERSION (BSCS), BLUE VERSION (BSCS), YELLOW VERSION (BSCS)



112. SE 003 038 02 27 68 10 31 20 1 00 000 002  
 LIPSON, JOSEPH I.  
 PHYSICS LABORATORY LESSONS FOR THE ELEMENTARY SCHOOL  
 AMERICAN JOURNAL OF PHYSICS  
 10 00 65 1  
 \*ELEMENTARY SCHOOL SCIENCE, \*EDUCATIONAL PROGRAMS, \*INDIVIDUAL  
 INSTRUCTION, \*PAPERS, \*PHYSICS, \*PROGRAMED INSTRUCTION, \*SOUND,  
 \*SCIENCE ACTIVITIES, HEAT, LIGHT, MAGNETISM, UNIVERSITY OF  
 PITTSBURGH, PITTSBURGH, PENNSYLVANIA
113. SE 003 897 05 28 68 10 09 17 3 38 000 304  
 LIPSON, JOSEPH I. AND OTHERS  
 THE DEVELOPMENT OF AN ELEMENTARY SCHOOL MATHEMATICS CURRICULUM  
 FOR INDIVIDUALIZED INSTRUCTION  
 UNIVERSITY OF PITTSBURGH, LEARNING R AND D CENTER  
 66 29  
 \*BEHAVIORAL OBJECTIVES, \*CURRICULUM DEVELOPMENT, \*ELEMENTARY  
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 OBJECTIVES, INDIVIDUAL INSTRUCTION, LEARNING, INDIVIDUALLY  
 PRESCRIBED INSTRUCTION, OAKLEAF PROJECT
114. SE 002 925 02 26 68 10 81 37 3 05 000 155  
 LOS ANGELES CITY SCHOOLS  
 THE ART OF QUESTIONING IN SCIENCE - SUMMARY AND IMPLICATIONS  
 LOS ANGELES CITY SCHOOLS, CALIFORNIA  
 67 29  
 \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*INQUIRY, \*QUESTIONING  
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 GUIDES, LOS ANGELES CITY SCHOOLS, LOS ANGELES, CALIFORNIA,  
 BLOOM'S TAXONOMY OF EDUCATIONAL OBJECTIVES
115. SE 002 755 03 19 68 06 23 38 1 00 000 003  
 LOTT, PETER F. AND MILLICH, FRANK  
 TOPICS IN CHEMICAL INSTRUMENTATION - INSTRUMENTATION FOR OSMOMETRY  
 (CONTINUED)  
 JOURNAL OF CHEMICAL EDUCATION  
 04 00 66 11  
 \*COLLEGE SCIENCE, \*CHEMISTRY, \*INSTRUMENTATION, \*LABORATORY  
 TECHNIQUES, \*OSMOMETRY, \*SCIENCE EQUIPMENT, INSTRUCTION, OSMOTIC  
 PRESSURE, MEASUREMENT

116. SE 002 957 05 28 68 10 62 17 3 51 000 279  
 MAGAT, PHYLLIS L. AND MILLER, WILFRED H.  
 DEVELOPMENT OF INSTRUCTIONAL MATERIALS FOR A FUSED  
 CHEMISTRY-PHYSICS COURSE (FINAL REPORT)  
 EDRS, NATIONAL CASH REGISTER COMPANY  
 05 00 67 65  
 \*CURRICULUM DEVELOPMENT, \*INSTRUCTION, \*INSTRUCTIONAL MATERIALS  
 \*PHYSICS, \*SCIENCE COURSES, \*SECONDARY SCHOOL SCIENCE, ABLE  
 STUDENTS, CHEMISTRY, CURRICULUM, CURRICULUM GUIDES, FUSED  
 CURRICULUM, SCIENTIFIC LITERACY, SCIENTIFIC CONCEPTS, TEACHING  
 METHOD, TEAM TEACHING, 1967, WILMINGTON, DELAWARE
117. SE 003 262 08 08 68 10 86 17 2 00 000 149  
 MAGER, ROBERT F.  
 ON THE SEQUENCING OF INSTRUCTIONAL CONTENT  
 PSYCHOLOGICAL REPORTS  
 61 10  
 \*INSTRUCTIONAL IMPROVEMENT, \*INDEPENDENT STUDY, \*MOTIVATION,  
 \*SEQUENTIAL LEARNING, ELECTRONICS, \*INSTRUCTION, LEARNING,  
 RESEARCH REPORTS
118. SE 003 703 07 11 68 10 20 17 1 00 000 006  
 MARK, STEVEN J.  
 EXPERIMENTAL STUDY INVOLVING THE COMPARISON OF TWO METHODS OF  
 PERFORMING EXPERIMENTS IN HIGH SCHOOL CHEMISTRY  
 SCIENCE EDUCATION  
 12 00 61 2  
 \*ACHIEVEMENT, \*CHEMISTRY, \*INSTRUCTION, \*LABORATORY EXPERIMENTS,  
 \*SCIENCE EXPERIMENTS, \*SECONDARY SCHOOL SCIENCE, CURRICULUM,  
 RESEARCH REPORTS, SCIENTIFIC METHODOLOGY
119. SE 003 196 04 30 68 10 22 17 2 22 000 319  
 MARK, STEVEN JOSEPH  
 EXPERIMENTAL STUDY INVOLVING THE COMPARISON OF TWO METHODS OF  
 PERFORMING EXPERIMENTS IN HIGH SCHOOL CHEMISTRY  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 58 90  
 \*ACADEMIC ACHIEVEMENT, \*ACADEMIC APTITUDE, \*CHEMISTRY, \*COMPARATIVE  
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 SCIENCE, \*TEACHING METHODS, DOCTORAL THESES, EFFECTIVE TEACHING,  
 PROBLEM SOLVING, RESEARCH REPORTS, CHEMISTRY APTITUDE TEST,  
 COOPERATIVE CHEMISTRY TEST, 1958

120. SE 003 707 03 21 68 10 22 17 1 00 000 006  
 MARIE, SISTER ERNESTINE  
 A COMPARISON OF INDUCTIVE AND DEDUCTIVE METHODS OF TEACHING HIGH SCHOOL CHEMISTRY  
 SCIENCE EDUCATION  
 12 00 61 8  
 \*CHEMISTRY, \*DEDUCTIVE METHODS, \*INDUCTIVE METHODS, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEACHING METHODS, DOCTORAL THESES, LABORATORY INSTRUCTION, RESEARCH REPORTS, TEACHING PROCEDURES, ANDERSON CHEMISTRY TEST, COOPERATIVE CHEMISTRY TEST, OTIS QUICK SCORING MENTAL ABILITY TEST, CALIFORNIA TEST OF MENTAL MATURITY, NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING, 1959
121. SE 002 351 03 06 68 10 81 17 2 22 000 319  
 MATTHEIS, FLOYD ELLIOTT  
 A STUDY OF THE EFFECTS OF TWO DIFFERENT APPROACHES TO LABORATORY EXPERIENCES IN COLLEGE SCIENCE COURSES FOR PROSPECTIVE ELEMENTARY SCHOOL TEACHERS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 62 251  
 \*ACADEMIC ACHIEVEMENT, \*COMPARATIVE ANALYSIS, \*CONVENTIONAL INSTRUCTION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*SCIENCE PROJECTS, \*STUDENT SCIENCE INTERESTS, \*TEACHER EDUCATION, \*TEACHING METHODS, COLLEGE SCIENCE, DOCTORAL THESES, 1962, EAST CAROLINA COLLEGE
122. SE 003 813 05 28 68 10 08 17 3 51 000 279  
 MEUX, MILTON  
 EVALUATIVE TEACHING STRATEGIES IN THE SOCIAL STUDIES (FINAL REPORT)  
 EDRS, NATIONAL CASH REGISTER COMPANY  
 04 00 67 100  
 \*ACADEMIC ACHIEVEMENT, \*ATTITUDES, \*SOCIAL STUDIES, \*SOCIAL PROBLEMS, \*TEACHING METHODS, \*SECONDARY EDUCATION, \*VALUES, \*RESEARCH REPORTS, ACHIEVEMENT, EVALUATION, INSTRUCTION, SOCIAL SCIENCES, STUDENT ATTITUDES, TEACHER EDUCATION, 1967, UTAH, SALT LAKE COUNTY
123. SE 002 567 08 08 68 10 22 29 1 00 000 003  
 MEYERS, EDWARD A. AND OTHERS  
 "BLACKBOARD BY WIRE" AND GRADUATE INSTRUCTION IN CHEMISTRY  
 JOURNAL OF CHEMICAL EDUCATION  
 08 00 67 2  
 \*CHEMISTRY, \*COLLEGE SCIENCE, \*GRADUATE STUDY, \*INSTRUCTION, \*SCIENCE EXPERIMENTS, PHYSICAL CHEMISTRY

124. SE 003 271 07 10 68 10 08 20 1 00 000 430  
 MILLER, JEMIMA AND WESTON, GRACE  
 SLOW LEARNERS IMPROVE IN CRITICAL THINKING  
 SOCIAL EDUCATION  
 10 00 49 3  
 \*CRITICAL THINKING, \*COGNITIVE PROCESSES, \*INSTRUCTION, \*LEARNING,  
 \*PROBLEM SOLVING, \*SLOW LEARNERS, \*SOCIAL STUDIES, \*SCIENTIFIC  
 METHODOLOGY, \*TEACHING TECHNIQUES, GRADE 10, TEST OF CRITICAL  
 THINKING IN THE SOCIAL SCIENCES
125. SE 003 627 06 05 68 10 12 20 1 00 000 006  
 MOHLER, CHARLES W.  
 NEW TECHNIQUES IN TEACHING ABOUT INSECTS  
 SCIENCE EDUCATION  
 02 00 63 4  
 \*BIOLOGY, \*ENTOMOLOGY, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE,  
 BIBLIOGRAPHIES, CLASSIFICATION, TEACHING TECHNIQUES
126. SE 003 849 04 30 68 10 93 17 2 00 000 006  
 MONTEAN, JOHN J.  
 THE DISCUSSION GROUP METHOD IN SCIENCE EDUCATION  
 SCIENCE EDUCATION  
 04 00 61 4  
 \*COLLEGE SCIENCE, \*GROUP DISCUSSION, \*GENERAL EDUCATION,  
 \*INSTRUCTION, \*PROBLEM SOLVING, \*TEACHING METHODS, \*TEACHER ROLE,  
 ACADEMIC ACHIEVEMENT, CRITICAL THINKING, CHEMISTRY, PHYSICAL  
 SCIENCES, 1957
127. SE 002 678 02 21 68 10 23 30 1 00 000 003  
 MORGENTHALER, L. P.  
 A MODULAR SYSTEM FOR TEACHING INSTRUMENTAL CHEMICAL ANALYSIS  
 JOURNAL OF CHEMICAL EDUCATION  
 06 00 67 4  
 \*ANALYTICAL CHEMISTRY, \*COLLEGE SCIENCE, \*CHEMISTRY, \*INSTRUCTION,  
 \*SCIENCE ACTIVITIES, INSTRUMENTAL ANALYSIS, TEACHING PROCEDURES
128. SE 002 919 03 06 68 10 33 20 1 00 000 002  
 MOULD, RICHARD A. AND SWARTZ, CLIFFORD  
 PROCEEDINGS - A COURSE BASED ON GRADE PACED ASSIGNMENTS  
 AMERICAN JOURNAL OF PHYSICS  
 07 00 67 1  
 \*COLLEGE SCIENCE, \*EVALUATION, \*GENERAL EDUCATION, \*INSTRUCTION,  
 \*PHYSICS, SCIENCE COURSES, NEW YORK, STONY BROOK



129. SE 003 263 03 20 68 10 82 17 1 00 000 407  
 NASCA, DON  
 HOW GOOD IS TV FOR TEACHING SCIENCE?  
 AUDIOVISUAL INSTRUCTION  
 11 00 61 2  
 \*AUDIOVISUAL INSTRUCTION, \*INSTRUCTION, \*RESEARCH REPORTS,  
 \*SECONDARY SCHOOL SCIENCE, ACADEMIC ACHIEVEMENT, INSTRUCTIONAL  
 TELEVISION, STUDENT ATTITUDES, TEACHING METHODS, TEACHING  
 PROCEDURES, NEW YORK STATE SCIENCE SURVEY TEST, STANFORD  
 ACHIEVEMENT TEST, 1958
130. SE 003 538 04 30 68 10 81 17 1 00 000 006  
 NEAL, LOUISE A.  
 TECHNIQUES FOR DEVELOPING METHODS OF SCIENTIFIC INQUIRY IN  
 CHILDREN IN GRADES ONE THROUGH SIX  
 SCIENCE EDUCATION  
 10 00 61 7  
 \*ELEMENTARY SCHOOL SCIENCE, \*INQUIRY TRAINING, \*INSTRUCTION,  
 \*PROBLEM SOLVING, \*TEACHING TECHNIQUES, EDUCATIONAL OBJECTIVES,  
 RESEARCH REPORTS, STUDENT INTEREST, 1957
131. SE 003 644 07 11 68 17 81 20 2 00 000 006  
 NELSON, PEARL A. AND KELLEY, GAYLEN B.  
 THE USE OF AUDIOVISUAL MATERIALS IN ELEMENTARY SCHOOL SCIENCE  
 SCIENCE EDUCATION  
 12 00 63 11  
 \*AUDIOVISUAL INSTRUCTION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTIONAL  
 MATERIALS, CURRICULUM, EDUCATIONAL TRENDS, INSTRUCTION, PROBLEM  
 SOLVING, TEACHING MACHINES, TELEVISED INSTRUCTION, ELEMENTARY  
 SCIENCE STUDY PROJECT, EDUCATIONAL SERVICES, INC., AMERICAN  
 ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, NATIONAL DEFENSE  
 EDUCATION ACT
132. SE 003 199 06 05 68 10 22 17 1 22 000 319  
 NEWMAN, EARL NELSON  
 A COMPARISON OF THE EFFECTIVENESS OF THREE TEACHING METHODS IN  
 HIGH SCHOOL BIOLOGY  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 57 84  
 \*BIOLOGY, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEACHING  
 METHODS, ACADEMIC ACHIEVEMENT, COMPARATIVE ANALYSIS, DOCTORAL  
 THESES, RESEARCH REPORTS, 1957, NELSON BIOLOGY TEST

133. SE 003 429 03 20 68 19 72 17 1 00 000 073  
 NORTON, DANIEL P.  
 THE RELATIONSHIP OF STUDY HABITS AND OTHER MEASURES TO  
 ACHIEVEMENT IN NINTH GRADE GENERAL SCIENCE  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 03 00 59 7  
 \*ACADEMIC ACHIEVEMENT, \*GENERAL SCIENCE, \*INSTRUCTION, \*RESEARCH  
 REPORTS, \*STUDY HABITS, \*STUDENT CHARACTERISTICS, EVALUATION,  
 GRADE 9, INTELLIGENCE, READING ABILITY, COOPERATIVE GENERAL  
 SCIENCE TEST, DIFFERENTIAL APTITUDE TESTS, 1957
134. SE 003 200 04 30 68 10 13 17 2 22 000 319  
 NOVAK, JOSEPH D.  
 A COMPARISON OF TWO METHODS OF TEACHING A COLLEGE GENERAL  
 BOTANY COURSE  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 58 186  
 \*BOTANY, \*COMPARATIVE ANALYSIS, \*COLLEGE SCIENCE, \*CONVENTIONAL  
 INSTRUCTION, \*PROBLEM SOLVING, \*SCIENTIFIC ATTITUDES, \*STUDENT  
 PROJECTS, \*TEACHING METHODS, BIOLOGY, DOCTORAL THESES,  
 INDIVIDUAL DIFFERENCES, RESEARCH REPORTS, UNIVERSITY OF MINNESOTA,  
 1958
135. SE 003 164 05 29 68 10 13 17 1 00 000 073  
 NOVAK, JOSEPH D.  
 AN EXPERIMENTAL COMPARISON OF A CONVENTIONAL AND A PROJECT CENTERED  
 METHOD OF TEACHING A COLLEGE GENERAL BOTANY COURSE  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 03 00 58 14  
 \*ACADEMIC ACHIEVEMENT, \*BOTANY, \*COLLEGE SCIENCE, \*COMPARATIVE  
 ANALYSIS, \*INSTRUCTION, \*PROBLEM SOLVING, \*SCIENTIFIC ATTITUDES,  
 \*TEACHING METHODS, BIOLOGY, EFFECTIVE TEACHING, RESEARCH REPORTS,  
 STUDENT PROJECTS, 1957
136. SE 003 202 06 05 68 10 32 17 2 22 000 319  
 O'CONNOR, TERENCE THOMAS  
 THE PROBLEM SOLVING PROCESSES OF HIGH SCHOOL STUDENTS IN PHYSICS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 59 300  
 \*INSTRUCTION, \*PHYSICS, \*PROBLEM SOLVING, \*SECONDARY SCHOOL  
 SCIENCE, DOCTORAL THESES, INTELLIGENCE QUOTIENT, MATHEMATICS,  
 RESEARCH REPORTS, TEACHING PROCEDURES, 1959

137. SE 003 247 07 10 68 10 12 17 1 00 000 073  
 OLIVER, MONTAGUE  
 THE EFFICIENCY OF THREE METHODS OF TEACHING HIGH SCHOOL BIOLOGY  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 65 7  
 \*ACHIEVEMENT, \*ACADEMIC ACHIEVEMENT, \*BIOLOGY, \*INSTRUCTION,  
 \*TEACHING METHODS, \*SECONDARY SCHOOL SCIENCE, CURRICULUM, RESEARCH  
 REPORTS, LEARNING, 1961
138. SE 003 426 05 29 68 10 13 17 1 00 000 073  
 OLSON, KENNETH V.  
 AN EXPERIMENTAL EVALUATION OF A STUDENT-CENTERED METHOD AND A  
 TEACHER-CENTERED METHOD OF BIOLOGICAL SCIENCE INSTRUCTION FOR  
 GENERAL EDUCATION OF COLLEGE STUDENTS  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 03 00 59 5  
 \*BIOLOGICAL SCIENCES, \*COLLEGE SCIENCE, \*COMPARATIVE ANALYSIS,  
 \*GENERAL EDUCATION, \*INSTRUCTION, \*TEACHING METHODS, EDUCATIONAL  
 OBJECTIVES, RESEARCH REPORTS, COOPERATIVE BIOLOGY TEST, ABILITY  
 TO THINK SCIENTIFICALLY, 1956
139. SE 003 558 03 20 68 10 13 17 1 00 000 006  
 OLSON, KENNETH V.  
 EXPERIMENTAL EVALUATION OF A STUDENT-CENTERED METHOD AND A  
 TEACHER-CENTERED METHOD OF BIOLOGICAL SCIENCE INSTRUCTION FOR  
 GENERAL EDUCATION OF COLLEGE STUDENTS  
 SCIENCE EDUCATION  
 10 00 62 6  
 \*BIOLOGY, \*COLLEGE SCIENCE, \*EVALUATION, \*GENERAL EDUCATION,  
 \*INSTRUCTION, \*RESEARCH REPORTS, \*TEACHING METHODS, 1960,  
 NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING
140. SE 003 421 03 20 68 11 91 17 3 22 000 319  
 OSHIMA, EUGENE AKIO  
 CHANGES IN ATTITUDES TOWARD SCIENCE AND CONFIDENCE IN TEACHING  
 SCIENCE OF PROSPECTIVE ELEMENTARY TEACHERS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 07 00 66 95  
 \*ACADEMIC ACHIEVEMENT, \*ELEMENTARY SCHOOL SCIENCE, \*METHODS  
 COURSES, \*TEACHER EDUCATION, UNDERGRADUATE STUDY, BIOLOGY,  
 COMPARATIVE ANALYSIS, DOCTORAL THESES, EDUCATIONAL OBJECTIVES,  
 FEMALES, INSTRUCTION, PHYSICAL SCIENCES, SCIENCE ACTIVITIES,  
 SCIENTIFIC LITERACY, STUDENT BEHAVIOR, STUDENT TEACHING, TEACHING  
 METHODS, TEACHER ATTITUDES, TEACHER CHARACTERISTICS, RESEARCH  
 REPORTS, 1966, OKLAHOMA STATE UNIVERSITY, STILLWATER, DUTTON  
 SCIENCE ATTITUDE SCALE, EVANS CONFIDENCE SCALE, READ GENERAL  
 SCIENCE TEST

141. SE 002 353 03 21 68 10 32 17 2 22 000 319  
 PACKARD, HARRY BROWN  
 THE DESIGN AND ANALYSIS OF LABORATORY EXPERIENCES FOR HIGH SCHOOL PHYSICS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 62 345  
 \*INSTRUCTION, \*LABORATORY EQUIPMENT, \*PROBLEM SOLVING, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE EXPERIMENTS, \*SCIENTIFIC CONCEPTS, DOCTORAL THESES, DEDUCTIVE METHODS, INDUCTIVE METHODS, PHYSICS RESEARCH REPORTS, SCIENCE ACTIVITIES, 1962
142. SE 002 516 09 22 67 10 15 30 1 00 000 007  
 PADDOCK, ELTON F.  
 MENDEL COULD, YOUR STUDENTS CAN  
 THE SCIENCE TEACHER  
 02 00 66 4  
 \*BIOLOGY, \*BOTANY, \*GENETICS, \*SCIENCE ACTIVITIES, COLLEGE SCIENCE, LABORATORY TECHNIQUES, SECONDARY SCHOOL SCIENCE, SEED GERMINATION
143. SE 005 574 03 04 68 10 23 30 1 00 000 003  
 PARDUE, HARRY L. AND OTHERS  
 QUANTITATIVE GAS CHROMATOGRAPHY - AN EXPERIMENT  
 JOURNAL OF CHEMICAL EDUCATION  
 11 00 67 4  
 \*COLLEGE SCIENCE, \*CHEMISTRY, \*GAS CHROMATOGRAPHY, \*INSTRUCTION, \*QUANTITATIVE ANALYSIS, \*SCIENCE ACTIVITIES
144. SE 003 658 08 08 68 10 32 17 2 00 000 006  
 PELLA, MILTON O. AND OTHERS  
 THE USE OF THE WHITE FILMS IN THE TEACHING OF PHYSICS  
 SCIENCE EDUCATION  
 02 00 62 16  
 \*ACADEMIC ACHIEVEMENT, \*CURRICULUM DEVELOPMENT, \*EDUCATIONAL PROGRAMS, \*FILMED COURSES, \*INSTRUCTION, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE, AUDIOVISUAL AIDS, TELEVISION, TELEVISED INSTRUCTION, RESEARCH REPORTS, TEACHER CHARACTERISTICS, OHIO SCHOLARSHIP EVERY PUPIL TEST, WISCONSIN FINAL PHYSICS TEST



145. SE 003 642 04 30 68 10 11 20 1 00 000 006  
 PERKINS, WILLIAM D.  
 THE FIELD STUDY AS A TECHNIQUE IN ELEMENTARY SCHOOL SCIENCE  
 SCIENCE EDUCATION  
 12 00 63 5  
 \*EARTH SCIENCE, \*ELEMENTARY SCHOOL SCIENCE, \*FIELD TECHNIQUES,  
 \*INSTRUCTION, \*TEACHING TECHNIQUES
146. SE 003 203 06 05 68 10 93 17 2 22 000 319  
 PERLMAN, JAMES S.  
 HISTORICAL VERSUS CONTEMPORARY PROBLEM-SOLVING USE OF THE COLLEGE  
 PHYSICAL SCIENCE LABORATORY PERIOD FOR GENERAL EDUCATION  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 52 179  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*LABORATORY TRAINING, \*PROBLEM  
 SOLVING, \*TEACHING METHODS, ASTRONOMY, COMPARATIVE ANALYSIS,  
 CHEMISTRY, DOCTORAL THESES, GENERAL EDUCATION, PHYSICAL SCIENCES,  
 PHYSICS, RESEARCH REPORTS, 1952
147. SE 002 554 08 08 68 10 32 15 2 00 000 211  
 PHYSICAL SCIENCE STUDY COMMITTEE  
 PHYSICS ADVANCED TOPICS SUPPLEMENT, TEACHER'S GUIDE  
 D. C. HEATH AND COMPANY  
 66 80  
 \*ADVANCED PROGRAMS, \*INSTRUCTION, \*MATHEMATICAL APPLICATIONS,  
 \*PHYSICS, \*PROBLEM SOLVING, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE  
 EXPERIMENTS, \*TEACHING TECHNIQUES, \*TEACHING GUIDES, SCIENCE  
 ACTIVITIES, PHYSICAL SCIENCE STUDY COMMITTEE
148. SE 002 528 08 08 68 10 32 15 1 00 000 211  
 PHYSICAL SCIENCE STUDY COMMITTEE  
 PHYSICS - TEACHER'S RESOURCE BOOK AND GUIDE, PART I  
 D. C. HEATH AND COMPANY  
 65 170  
 \*INSTRUCTION, \*MATHEMATICAL APPLICATIONS, \*PHYSICS, \*PROBLEM  
 SOLVING, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE EXPERIMENTS,  
 \*TEACHING TECHNIQUES, SCIENCE ACTIVITIES, \*TEACHING GUIDES,  
 PHYSICAL SCIENCE STUDY COMMITTEE

149. SE 002 527 08 08 68 10 32 15 2 00 000 211  
 PHYSICAL SCIENCE STUDY COMMITTEE  
 PHYSICS - TEACHER'S RESOURCE BOOK AND GUIDE, PART II  
 D. C. HEATH AND COMPANY
- 65 175  
 \*INSTRUCTION, \*MATHEMATICAL APPLICATIONS, \*PHYSICS, \*PROBLEM SOLVING, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE EXPERIMENTS, \*TEACHING TECHNIQUES, \*TEACHING GUIDES, SCIENCE ACTIVITIES, PHYSICAL SCIENCE STUDY COMMITTEE
150. SE 002 526 08 08 68 10 32 15 2 00 000 211  
 PHYSICAL SCIENCE STUDY COMMITTEE  
 PHYSICS - TEACHER'S RESOURCE BOOK AND GUIDE, PART III  
 D. C. HEATH AND COMPANY
- 66 175  
 \*INSTRUCTION, \*MATHEMATICAL APPLICATIONS, \*PHYSICS, \*PROBLEM SOLVING, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE EXPERIMENTS, \*TEACHING GUIDES, SCIENCE ACTIVITIES, TEACHING TECHNIQUES, PHYSICAL SCIENCE STUDY COMMITTEE
151. SE 002 525 08 08 68 10 32 15 2 00 000 211  
 PHYSICAL SCIENCE STUDY COMMITTEE  
 PHYSICS - TEACHER'S RESOURCE BOOK AND GUIDE, PART IV  
 D. C. HEATH AND COMPANY
- 66 175  
 \*INSTRUCTION, \*MATHEMATICAL APPLICATIONS, \*PHYSICS, \*PROBLEM SOLVING, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE EXPERIMENTS, \*TEACHING GUIDES, SCIENCE ACTIVITIES, PHYSICAL SCIENCE STUDY COMMITTEE
152. SE 003 204 06 05 68 10 96 17 2 22 000 319  
 PINGS, VERN M.  
 AN ATTITUDE OF SCIENCE FOR EDUCATION - A STUDY OF EPISTEMOLOGICAL ASPECTS OF MODERN PHYSICS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN
- 59 227  
 \*COGNITIVE DEVELOPMENT, \*INSTRUCTION, \*PHYSICS, \*TEACHING METHODS, \*SCIENTIFIC ENTERPRISE, COLLEGE SCIENCE, DOCTORAL THESES EDUCATIONAL OBJECTIVES, INQUIRY, RESEARCH, RESEARCH REPORTS, SCIENCE EDUCATION, SECONDARY SCHOOL SCIENCE, 1959

153. SE 003 540 03 20 68 10 92 17 1 00 000 006  
 POPHAM, W. JAMES AND SADNAVITCH, JOSEPH M.  
 FILMED SCIENCE COURSES IN THE PUBLIC SCHOOLS - AN EXPERIMENTAL  
 APPRAISAL  
 SCIENCE EDUCATION  
 10 00 61 9  
 \*CHEMISTRY, \*FILMS, \*INSTRUCTION, \*PHYSICS, \*RESEARCH REPORTS,  
 \*SECONDARY SCHOOL SCIENCE, ACADEMIC ACHIEVEMENT, COURSE  
 EVALUATION, EVALUATION, STUDENT ATTITUDES, TEACHING PROCEDURES,  
 UNITED STATES OFFICE OF EDUCATION, NATIONAL ASSOCIATION FOR  
 RESEARCH IN SCIENCE TEACHING, A SCALE FOR MEASURING ATTITUDE  
 TOWARD ANY SCHOOL SUBJECT, COOPERATIVE PHYSICS TEST, COOPERATIVE  
 CHEMISTRY TEST, THURSTONE INTEREST SCHEDULE, WISCONSIN PHYSICS  
 FILM EVALUATION PROJECT, 1960
154. SE 003 207 06 05 68 10 53 17 2 22 000 319  
 RAFTER, CHRISTOPHER D.  
 A COMPARISON OF THE RELATIVE EFFECTIVENESS OF TWO METHODS OF  
 TEACHING A COURSE IN PHYSICAL SCIENCE TO SOPHOMORE COLLEGE  
 STUDENTS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 56 304  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*PHYSICAL SCIENCES, \*PROBLEM  
 SOLVING, \*TEACHING METHODS, COMPARATIVE ANALYSIS, DOCTORAL THESES,  
 RESEARCH REPORTS, UNDERGRADUATE STUDY, 1956
155. SE 002 675 08 08 68 10 23 20 1 00 000 003  
 RECHNITZ, GARRY A.  
 ANALYTICAL CHEMISTRY - A KINETIC VIEWPOINT - A NEW APPROACH TO  
 UNDERGRADUATE INSTRUCTION  
 JOURNAL OF CHEMICAL EDUCATION  
 06 00 67 3  
 \*ANALYTICAL CHEMISTRY, \*CHEMISTRY, \*CURRICULUM, \*INSTRUCTION,  
 \*SCIENCE COURSES, CURRICULUM DEVELOPMENT, COURSE CONTENT, HIGHER  
 EDUCATION, TEACHING PROCEDURES
156. SE 002 259 02 07 68 10 13 20 1 00 000 365  
 RICARD, JACK  
 A TOOL FOR INDEPENDENT STUDY IN BIOLOGY  
 IMPROVING COLLEGE AND UNIVERSITY TEACHING  
 65 2  
 \*BIOLOGY, \*COLLEGE SCIENCE, \*INSTRUCTION, \*INDEPENDENT STUDY,  
 \*STUDENT PROJECTS, \*TEACHING METHODS, CURRICULUM DEVELOPMENT,  
 SECONDARY SCHOOL SCIENCE, STUDENT EVALUATION, TEACHER ROLE,  
 SACRAMENTO CITY COLLEGE

157. SE 003 391 03 07 68 10 53 20 1 00 000 197  
 RICHARD, BENJAMIN H. AND SUNDELIUS, HAROLD W.  
 TEACHING INTRODUCTORY GEOLOGY TO A BLIND PERSON  
 JOURNAL OF GEOLOGICAL EDUCATION  
 10 00 67 2  
 \*BLIND STUDENTS, \*COLLEGE SCIENCE, \*GEOLOGY, \*INSTRUCTION,  
 \*INSTRUCTIONAL MATERIAL, ACADEMIC ACHIEVEMENT, PHYSICAL SCIENCES
158. SE 002 357 08 06 68 10 23 17 2 22 000 319  
 RIGGS, VIRGIL MAYNARD  
 A COMPARISON OF TWO METHODS OF TEACHING COLLEGE GENERAL CHEMISTRY  
 LABORATORY  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 61 174  
 \*ACHIEVEMENT, \*CHEMISTRY, \*INSTRUCTION, \*LABORATORY TRAINING,  
 \*LABORATORY PROCEDURES, \*PROBLEM SOLVING, COLLEGE SCIENCE,  
 COMPARATIVE ANALYSIS, DOCTORAL THESES, LABORATORY MANUALS,  
 RESEARCH REPORTS, SCIENCE ACTIVITIES, TEACHING TECHNIQUES,  
 AMERICAN CHEMICAL SOCIETY COOPERATIVE EXAMINATIONS IN GENERAL  
 CHEMISTRY, OKLAHOMA STATE UNIVERSITY, 1961
159. SE 003 454 07 11 68 10 33 30 1 00 000 002  
 ROBINSON, BEROL L.  
 SOME EXPERIMENTS ON STATISTICAL DISTRIBUTIONS USING A  
 MULTICHANNEL ANALYZER  
 AMERICAN JOURNAL OF PHYSICS  
 06 00 65 3  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*PHYSICS, \*SCIENCE EQUIPMENT,  
 \*SCIENCE EXPERIMENTS, PHYSICAL SCIENCES, UNDERGRADUATE STUDY,  
 MULTICHANNEL ANALYZER
160. SE 003 626 03 21 68 10 53 17 1 00 000 006  
 ROBINSON, JACK H.  
 EFFECTS OF TEACHING WITH SCIENCE ARTICLES  
 SCIENCE EDUCATION  
 02 00 63 11  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*INSTRUCTIONAL MATERIALS,  
 \*PHYSICAL SCIENCES, \*RESEARCH REPORTS, ACADEMIC ACHIEVEMENT,  
 ATTITUDES, BIBLIOGRAPHIES, CHEMISTRY, GENERAL SCIENCE, GEOLOGY,  
 PROBLEM SOLVING, STUDENT CHARACTERISTICS, STUDENT SCIENCE  
 INTERESTS, STUDENT ATTITUDES, UNDERGRADUATE STUDY, 1957, SCIENCE  
 REASONING TEST, SCIENCE UNDERSTANDING QUESTIONNAIRE, INTEREST IN  
 SCIENCE ARTICLES



161. SE 003 141 03 04 68 10 25 20 1 00 000 101  
 ROGERS, CHARLES F.  
 THE MATHEMATICS OF ELEMENTARY CHEMICAL CALCULATIONS  
 THE MATHEMATICS TEACHER  
 39 6  
 \*CHEMISTRY, \*CHEMICAL CALCULATIONS, \*COLLEGE SCIENCE, \*INSTRUCTION,  
 \*MATHEMATICS, \*SECONDARY SCHOOL SCIENCE, \*STOICHIOMETRY,  
 AMERICAN CHEMICAL SOCIETY, PAPERS
162. SE 003 427 03 20 68 10 55 17 1 00 000 073  
 ROMANO, LOUISE  
 THE ROLE OF 16 MILLIMETER MOTION PICTURES AND PROJECTED STILL  
 PICTURES IN SCIENCE UNIT VOCABULARY LEARNING AT GRADES 5, 6, AND 7  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 09 00 56 10  
 \*AUDIOVISUAL INSTRUCTION, \*ACADEMIC ACHIEVEMENT, \*ELEMENTARY  
 SCHOOL SCIENCE, \*INSTRUCTION, \*PHYSICAL SCIENCE, \*SECONDARY SCHOOL  
 SCIENCE, GRADE 5, GRADE 6, GRADE 7, RESEARCH REPORTS, VOCABULARY,  
 1956
163. SE 003 211 03 04 68 11 83 17 2 22 000 319  
 RUCKER, MARION  
 AN EXPLORATORY STUDY OF THE EFFECTIVENESS OF TEACHING-FELLOW  
 TRAINING PROGRAMS IN SELECTED DEPARTMENTS OF THE COLLEGE OF  
 LITERATURE, SCIENCE, AND THE ARTS OF THE UNIVERSITY OF MICHIGAN  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 63 282  
 \*COLLEGE PROGRAMS, \*COLLEGE SCIENCE, \*GRADUATE STUDY, \*INSTRUCTION,  
 \*LANGUAGE ARTS, \*TEACHER EDUCATION, \*TEACHING PROCEDURES, COLLEGES,  
 DOCTORAL THESES, PROGRAM EVALUATION, RESEARCH REPORTS, SCIENCE,  
 1963, UNIVERSITY OF MICHIGAN, PURDUE INSTRUCTOR PERFORMANCE  
 INDICATOR, TEACHING-FELLOW TRAINING PROGRAMS
164. SE 003 013 02 27 68 10 33 20 1 00 000 002  
 RUDDICK, JAMES J.  
 INSTRUCTIONAL USES OF THE COMPUTER, POTENTIAL WELL PROBLEMS  
 AMERICAN JOURNAL OF PHYSICS  
 04 00 67 1  
 \*COLLEGE SCIENCE, \*COMPUTERS, \*INSTRUCTION, \*PAPERS, \*PHYSICS,  
 ACADEMIC ACHIEVEMENT, COMPUTER-ASSISTED INSTRUCTION, \*QUANTUM  
 THEORY

165. SE 002 137 02 07 68 10 23 29 1 00 000 003  
 RUNQUIST, OLAF  
 PROGRAMMED LABORATORY  
 JOURNAL OF CHEMICAL EDUCATION  
 07 00 67 1  
 \*COLLEGE SCIENCE, \*CHEMISTRY, \*INSTRUCTION, \*ORGANIC CHEMISTRY,  
 \*PROGRAMMED INSTRUCTION, \*AUTOINSTRUCTIONAL PROGRAMS, AUDIOVISUAL  
 INSTRUCTION, PROGRAM DESCRIPTIONS, HAMLINE UNIVERSITY
166. SE 002 915 03 21 68 10 33 20 1 00 000 002  
 RUSSELL, ALLAN M.  
 PROCEEDINGS - CONTINUOUS FEEDBACK OF STUDENT RESPONSE TO LECTURES  
 AND DEMONSTRATIONS  
 AMERICAN JOURNAL OF PHYSICS  
 07 00 67 1  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*PHYSICS, EDUCATIONAL FACILITIES,  
 LABORATORY FACILITIES, SCIENCE FACILITIES
167. SE 003 659 08 12 68 10 22 17 1 00 000 006  
 SADNAVITCH, J. M. AND OTHERS  
 RETENTION VALUE OF FILMED SCIENCE COURSES  
 SCIENCE EDUCATION  
 02 00 62 6  
 \*AUDIOVISUAL AIDS, \*CHEMISTRY, \*INSTRUCTION, \*LEARNING, \*PHYSICS,  
 \*RETENTION, \*RESEARCH REPORTS, \*SECONDARY SCHOOL SCIENCE, FILMS,  
 UNITED STATES OFFICE OF EDUCATION, COOPERATIVE CHEMISTRY TEST
168. SE 002 392 07 22 68 10 93 17 2 22 000 319  
 SANDLER, BARNEY  
 A COMPARISON OF AN INTEGRATED COURSE IN COLLEGE PHYSICS AND  
 MATHEMATICS OF THE SEMESTER DURATION WITH SEPARATE COURSES IN  
 THE TWO SUBJECTS IN A TWO YEAR COMMUNITY COLLEGE  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 61 114  
 \*ACHIEVEMENT, \*ACADEMIC ACHIEVEMENT, \*CURRICULUM, \*COMPARATIVE  
 ANALYSIS, \*INTEGRATED CURRICULUM, \*MATHEMATICS, \*PHYSICS,  
 COLLEGE SCIENCE, DOCTORAL THESES, INSTRUCTION, MATHEMATICAL  
 CONCEPTS, PROBLEM SOLVING, RESEARCH REPORTS, SCIENTIFIC CONCEPTS,  
 SCIENTIFIC PRINCIPLES, NEW YORK CITY COMMUNITY COLLEGE OF APPLIED  
 ARTS AND SCIENCES, 1961

169. SE 003 213 04 30 68 10 23 17 2 22 000 319  
 SCHELLER, FRED, JR.  
 A COMPARATIVE STUDY OF THE DIFFERENCES IN STUDENT ATTITUDES  
 TOWARD HISTORY AND CHEMISTRY TELEVISION COURSES  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 59 144  
 \*CHEMISTRY, \*COLLEGE SCIENCE, \*INSTRUCTIONAL TELEVISION,  
 \*INSTRUCTION, \*STUDENT ATTITUDES, AUDIOVISUAL AIDS, RESEARCH  
 REPORTS, TELEVISED INSTRUCTION, TELEVISION, OREGON, 1959
170. SE 002 913 03 06 68 10 33 20 1 00 000 002  
 SCHEY, HARRY M.  
 PROCEEDINGS - NEW POSSIBILITIES FOR COMPUTER GENERATED FILMS  
 AMERICAN JOURNAL OF PHYSICS  
 07 00 67 1  
 \*COLLEGE SCIENCE, \*COMPUTER-ASSISTED INSTRUCTION, \*INSTRUCTION,  
 \*PHYSICS, AUDIOVISUAL AIDS, FILMS, INSTRUCTIONAL MATERIALS
171. SE 002 623 04 18 68 12 33 19 1 00 000 002  
 SCHIFF, L. I.  
 SOME THOUGHTS ON CLASSROOM TEACHING  
 AMERICAN JOURNAL OF PHYSICS  
 06 00 66 4  
 \*COLLEGE SCIENCE, \*SCIENCE EDUCATION HISTORY, \*INSTRUCTION,  
 \*PHYSICS, \*SCIENCE EDUCATION, \*TEACHER CHARACTERISTICS, AWARDS,  
 OERSTED MEDALIST, AMERICAN ASSOCIATION OF PHYSICS TEACHERS
172. SE 002 358 03 06 68 10 81 17 2 22 000 319  
 SCHNIPPERS, JOHN VERNON  
 AN INVESTIGATION OF THE PROBLEM METHOD OF INSTRUCTION IN SIXTH  
 GRADE SCIENCE CLASSES  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 62 303  
 \*ELEMENTARY SCHOOL SCIENCE, \*GRADE 6, \*INSTRUCTION, \*INSTRUCTIONAL  
 MATERIALS, \*PROBLEM SOLVING, \*TEACHING METHODS, DOCTORAL THESES,  
 RESEARCH REPORTS, TEACHER ATTITUDES, 1962

- 173 SE 003 527 07 11 68 10 33 17 1 00 000 190  
 SCHRAG, PHILIP G. AND HOLLAND, JAMES G.  
 TEACHING MACHINES AND PROGRAMED INSTRUCTION OF A PSSC FILM INTO  
 A PROGRAM  
 AUDIOVISUAL COMMUNICATION REVIEW  
 07 00 60 5  
 \*BIBLIOGRAPHIES, \*COLLEGE SCIENCE, \*FILMS, \*INSTRUCTION, \*PHYSICS,  
 \*PROGRAMED INSTRUCTION, \*RESEARCH REPORTS, \*TEACHING MACHINES,  
 NATIONAL DEFENSE EDUCATION ACT, TITLE VII, HARVARD COMMITTEE ON  
 PROGRAMED INSTRUCTION, CARNEGIE CORPORATION, PHYSICAL SCIENCE  
 STUDY COMMITTEE, 1960
174. SE 003 214 06 03 68 10 72 17 2 22 000 319  
 SCHULMAN, MILTON  
 THE EFFECT OF LEARNING OF TWO TYPES OF FILM INTRODUCTIONS IN NINTH  
 GRADE GENERAL SCIENCE  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 59 138  
 \*ACADEMIC ACHIEVEMENT, \*AUDIOVISUAL AIDS, \*FILMS, \*GENERAL SCIENCE,  
 \*GRADE 9, \*INSTRUCTION, \*TEACHING TECHNIQUES, DOCTORAL THESES,  
 MOTIVATION, RESEARCH REPORTS, 1959
175. SE 003 007 02 27 68 10 33 30 1 00 000 002  
 SCHULTZ, SHELDON  
 USE OF LECTURE-LABORATORY EXPERIMENTS - 1. MOTION UNDER CONSTANT  
 ACCELERATION  
 AMERICAN JOURNAL OF PHYSICS  
 05 00 67 1  
 \*ACCELERATED MOTIONS, \*COLLEGE SCIENCE, \*INSTRUCTION, \*MOTION,  
 \*PHYSICS, \*SCIENCE ACTIVITIES, \*SCIENCE EXPERIMENTS, MECHANICS
176. SE 003 528 07 11 68 10 32 17 1 00 000 190  
 SCOTT, DONALD T.  
 TEACHING HIGH SCHOOL PHYSICS THROUGH THE USE OF FILMS  
 AUDIOVISUAL COMMUNICATION REVIEW  
 07 00 60 2  
 \*FILMS, \*INSTRUCTION, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE,  
 CURRICULUM, EVALUATION, RESEARCH REPORTS, TEACHING PROCEDURES,  
 HARVEY WHITE PHYSICS FILMS, WISCONSIN PHYSICS FILM EVALUATION  
 PROJECT, 1956



177. SE 002 361 02 14 68 09 12 17 2 22 000 319  
SETTLAGE, JOHN HENRY  
BASIC UNDERSTANDINGS AND SUGGESTIONS FOR TEACHING CERTAIN  
ECOLOGICAL ASPECTS OF BIOLOGY IN THE JUNIOR HIGH SCHOOL  
UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

62 175

\*BIOLOGY, \*CONCEPT FORMATION, \*ECOLOGY, \*EDUCATIONAL OBJECTIVES,  
\*JUNIOR HIGH SCHOOLS, \*RESEARCH REPORTS, \*SECONDARY SCHOOL  
SCIENCE, \*SCIENTIFIC CONCEPTS, \*TEACHING PROCEDURES, CRITICAL  
THINKING, CONSERVATION, DOCTORAL THESES, SCIENTIFIC LITERACY,  
1962

178. SE 002 552 10 10 67 10 73 17 3 51 000 279  
SHELL, WILLIAM B. AND TRIPP, JOHN D.  
THE DIFFERENTIAL EFFECT OF INTERIM TESTING IN THE USE OF AN  
AUTO-INSTRUCTIONAL PROGRAM IN AN AREA OF GENERAL SCIENCE FOR  
TEACHERS  
UNITED STATES DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

08 00 67 48

\*ACADEMIC ACHIEVEMENT, \*COLLEGE SCIENCE, \*EVALUATION, \*GENERAL  
SCIENCE, \*INSTRUCTIONAL PROCEDURES, \*PROGRAMED INSTRUCTION,  
ATOMIC STRUCTURE, CHEMICAL BONDING, LEARNING, RETENTION, TEACHER  
EDUCATION, TESTING, AUBURN UNIVERSITY, AUBURN (ALABAMA), 1967,  
SEQUENTIAL TEST OF EDUCATIONAL PROGRESS, NELSON-DENNY READING  
TEST

179. SE 002 800 09 18 68 04 73 17 1 51 000 280  
SHELL, WILLIAM B. AND TRIPP, JOHN D.  
THE DIFFERENTIAL EFFECT OF INTERIM TESTING IN THE USE OF AN  
AUTO-INSTRUCTIONAL PROGRAM IN AN AREA OF GENERAL SCIENCE  
FOR TEACHERS - SUMMARY REPORT  
U. S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, OFFICE OF  
EDUCATION

08 00 67 4

\*ACADEMIC ACHIEVEMENT, \*COLLEGE SCIENCE, \*EVALUATION,  
\*EDUCATIONAL MEDIA, \*GENERAL SCIENCE, INSTRUCTION,  
\*PROGRAMED INSTRUCTION, \*RETENTION, STUDENT CHARACTERISTICS,  
TEACHER EDUCATION, TESTING

180. SE 003 665 07 11 68 13 53 17 1 00 000 006  
SHOCKLEY, JAMES T.  
BEHAVIORAL RIGIDITY IN RELATION TO STUDENT SUCCESS IN COLLEGE  
PHYSICAL SCIENCE

SCIENCE EDUCATION

02 00 62 4

\*ACADEMIC ACHIEVEMENT, \*BEHAVIORAL RIGIDITY, \*MENTAL RIGIDITY, \*COLLEGE  
SCIENCE, \*INSTRUCTION, \*LEARNING, \*PHYSICAL SCIENCES, \*STUDENT ADJUSTMENT,  
\*STUDENT BEHAVIOR, \*STUDENT CHARACTERISTICS, COLLEGE STUDENTS, GENERAL  
SCIENCE, PHYSICS, RESEARCH REPORTS, 1962, DUNNING PHYSICS TEST, SNADER  
GENERAL MATHEMATICS TEST, WATSON-GLASER CRITICAL THINKING APPRAISAL,  
SCALE TEST OF BEHAVIORAL RIGIDITY

181. SE 003 067 02 27 68 10 92 29 1 00 000 007  
 SIMENDINGER, ELIZABETH A.  
 TEAM TEACHING IN SCIENCE  
 THE SCIENCE TEACHER  
 10 00 67 3  
 \*CURRICULUM DEVELOPMENT, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE,  
 \*SCIENCE FACILITIES, \*TEAM TEACHING, BIOLOGY, CHEMISTRY, EARTH  
 SCIENCE, GENERAL SCIENCE, PHYSICS, PROGRAM DESCRIPTION,  
 NATIONAL SCIENCE FOUNDATION, INTRODUCTORY PHYSICAL SCIENCES, EARTH  
 SCIENCE CURRICULUM PROJECT
182. SE 003 217 03 07 68 10 72 17 2 22 000 319  
 SIMENDINGER, ELIZABETH ANNE  
 THE ABILITY TO IDENTIFY AND EVALUATE ASSUMPTIONS IN EIGHTH GRADE  
 GENERAL SCIENCE - A COMPARISON OF THE EFFECTIVENESS OF TWO TEACHING  
 METHODS ON THE DEVELOPMENT OF THE ABILITY TO IDENTIFY AND . . . . .  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 55 275  
 \*COMPARATIVE ANALYSIS, \*EFFECTIVE TEACHING, \*GRADE 8, \*GENERAL  
 SCIENCE, \*INSTRUCTION, \*PROBLEM SOLVING, \*STUDENT PARTICIPATION,  
 \*TEACHING METHODS, CRITICAL THINKING, DOCTORAL THESES, FEMALES,  
 MALES, RESEARCH REPORTS, SCIENTIFIC LITERACY, 1955
183. SE 002 048 11 06 67 10 51 17 2 22 000 319  
 SMITH, BILLY ARTHUR  
 AN EXPERIMENTAL COMPARISON OF TWO TECHNIQUES (PLANETARIUM  
 LECTURE-DEMONSTRATION AND CLASSROOM LECTURE-DEMONSTRATION)  
 OF TEACHING SELECTED ASTRONOMICAL CONCEPTS TO SIXTH GRADE STUDENTS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 66 123  
 \*ASTRONOMY, \*COMPARATIVE ANALYSIS, \*ELEMENTARY SCHOOL SCIENCE,  
 \*LECTURE DEMONSTRATION, \*PLANETARIUMS, \*TEACHING TECHNIQUES,  
 ACADEMIC ACHIEVEMENT, DISSERTATIONS, GRADE 6, INSTRUCTION,  
 PHYSICAL SCIENCES, ARIZONA STATE UNIVERSITY, PHOENIX, ARIZONA,  
 1966
184. SE 003 614 07 11 68 10 81 20 2 00 000 006  
 SMITH, EUGENE H.  
 AN ANALYSIS OF SOME PROMINENT VIEWPOINTS ON TEACHING ELEMENTARY  
 SCHOOL SCIENCE  
 SCIENCE EDUCATION  
 03 00 63 6  
 \*EDUCATIONAL OBJECTIVES, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION,  
 \*OBJECTIVES, \*TEXTBOOKS, \*TEACHING METHODS, COURSE CONTENT,  
 PROGRAM CONTENT

185. SE 002 638 03 06 68 10 33 20 1 00 000 002  
 SMITH, PAUL A.  
 TEACHING DIRAC NOTATION AND RELATIONS AMONG SYSTEMS OF UNITS  
 AMERICAN JOURNAL OF PHYSICS  
 06 00 66 5  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*PHYSICS, \*QUANTUM MECHANICS,  
 DIRAC NOTATION
186. SE 002 080 09 14 67 10 23 29 1 00 000 003  
 STAFFORD, F. E. AND OTHERS  
 A COMBINED PHYSICAL - ANALYTICAL - INORGANIC LABORATORY  
 JOURNAL OF CHEMICAL EDUCATION  
 03 00 67 2  
 \*CHEMISTRY, \*COLLEGE SCIENCE, \*LABORATORIES, \*LABORATORY  
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 ACTIVITIES, ANALYTICAL CHEMISTRY, INORGANIC CHEMISTRY, LABORATORY  
 EQUIPMENT, PHYSICAL CHEMISTRY, SCIENCE EQUIPMENT, NORTHWESTERN  
 UNIVERSITY
187. SE 002 046 11 20 67 10 12 17 2 22 000 319  
 STARLING, JOHN TULL  
 INTEGRATING BIOLOGICAL PRINCIPLES WITH INSTRUCTION IN VOCATIONAL  
 AGRICULTURE  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 64 153  
 \*AGRICULTURE, \*BIOLOGY, \*INSTRUCTION, \*RESEARCH REPORTS,  
 \*SECONDARY SCHOOL SCIENCE, \*SCIENTIFIC PRINCIPLES, \*VOCATIONAL  
 AGRICULTURE, COMPARATIVE ANALYSIS, CONVENTIONAL INSTRUCTION,  
 DOCTORAL THESES, STUDENT INTEREST, SCIENTIFIC CONCEPTS, OHIO, 1964
188. SE 002 101 11 20 67 10 81 20 1 00 000 197  
 STRASSER, BEN B.  
 POSING PRODUCTIVE QUESTIONS  
 SCIENCE AND CHILDREN  
 04 00 67 1  
 \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*PROBLEM SOLVING,  
 \*QUESTIONING TECHNIQUES, \*STUDENT ACTIVITIES, \*TEACHING  
 TECHNIQUES, EDUCATIONAL OBJECTIVES, GENERAL SCIENCE

189. SE 003 023 02 27 68 10 33 38 1 00 000 002  
 STUMPF, F. B.  
 WAYS TO IMPROVE UNDERGRADUATE-LABORATORY REPORT WRITING  
 AMERICAN JOURNAL OF PHYSICS  
 11 00 65 2  
 \*COLLEGE SCIENCE, \*INSTRUCTION, \*LABORATORY REPORTS, \*PHYSICS,  
 \*TECHNICAL WRITING, UNDERGRADUATE STUDY
190. SE 003 711 08 12 68 10 93 11 2 00 000 206  
 SUND, ROBERT B. AND TROWBRIDGE, LESLI W.  
 TEACHING SCIENCE BY INQUIRY IN THE SECONDARY SCHOOL  
 CHARLES E. MERRILL BOOKS  
 67 357  
 \*EVALUATION, \*INQUIRY TRAINING, \*INSTRUCTIONAL MATERIALS, \*LESSON  
 PLANS, \*LABORATORY TRAINING, \*MATHEMATICS, \*METHODS COURSES,  
 \*PROFESSIONAL TRAINING, \*SECONDARY SCHOOL SCIENCE, \*STUDENT  
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 INSTRUCTION, PROBLEM SOLVING, PROGRAMED INSTRUCTION, SCIENCE  
 EQUIPMENT, TEST CONSTRUCTION, PHYSICAL SCIENCE STUDY COMMITTEE,  
 CHEMICAL BOND APPROACH, CHEMICAL EDUCATION MATERIALS STUDY,  
 BIOLOGICAL SCIENCES CURRICULUM STUDY, EARTH SCIENCE CURRICULUM  
 PROJECT, SCHOOL SCIENCE CURRICULUM PROJECT, EDUCATIONAL SERVICES,  
 INC., HARVARD PROJECT PHYSICS, INTRODUCTORY PHYSICAL SCIENCE
191. SE 003 628 07 11 68 11 12 17 2 00 000 006  
 SUTMAN, FRANK X.  
 CRITERIA FOR A SPECIAL METHODS COURSE IN BIOLOGICAL SCIENCE  
 EDUCATION FOR NEW JERSEY SECONDARY SCHOOL SCIENCE TEACHERS  
 SCIENCE EDUCATION  
 02 00 63 8  
 \*BIOLOGY, \*COURSE CONTENT, \*METHODS COURSES, \*SECONDARY SCHOOL  
 SCIENCE, \*TEACHER EDUCATION, COLLEGE TEACHERS, CURRICULUM  
 EVALUATION, RESEARCH REPORTS, SCIENCE EDUCATION, SECONDARY SCHOOL  
 TEACHERS, NEW JERSEY
192. SE 003 722 06 06 68 10 09 17 3 51 000 279  
 SUTTON, JOSEPH T.  
 INDIVIDUALIZING JUNIOR HIGH SCHOOL MATHEMATICS INSTRUCTION,  
 FINAL REPORT  
 EDRS, NATIONAL CASH REGISTER COMPANY  
 08 00 67 62  
 \*INSTRUCTION, \*INDIVIDUAL INSTRUCTION, \*MATHEMATICS, \*SECONDARY  
 SCHOOL MATHEMATICS, CONVENTIONAL INSTRUCTION, EVALUATION, GRADE 7,  
 PROGRAM EVALUATION, VOLUSIA COUNTY. FLORIDA



193. SE 003 560 03 21 68 10 13 17 1 00 000 006  
 SYROCKI, B. JOHN AND WALLIN, RUSSELL S.  
 A TWO-YEAR STUDY OF TEACHING HUMAN BIOLOGY VIA TELEVISION  
 SCIENCE EDUCATION  
 10 00 62 6  
 \*BIOLOGY, \*COLLEGE SCIENCE, \*INSTRUCTIONAL TELEVISION, \*INSTRUCTION,  
 ACADEMIC ACHIEVEMENT, HUMAN BIOLOGY, RESEARCH REPORTS, TELEVISION,  
 1957
194. SE 002 730 03 19 68 10 23 38 1 00 000 003  
 TABBUTT, FREDERICK D.  
 THE USE OF ANALOG COMPUTERS FOR TEACHING CHEMISTRY  
 JOURNAL OF CHEMICAL EDUCATION  
 02 00 67 6  
 \*COMPUTER-ASSISTED INSTRUCTION, \*COLLEGE SCIENCE, \*CHEMISTRY  
 \*INSTRUCTION, \*PHYSICAL CHEMISTRY, ANALOG COMPUTERS, COMPUTERS
195. SE 002 394 07 22 68 10 32 17 2 22 000 319  
 TAFFEL, ALEXANDER  
 AN EVALUATION OF A TEAM METHOD OF TEACHING HIGH SCHOOL PHYSICS TO  
 ACADEMICALLY TALENTED STUDENTS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 61 118  
 \*ACHIEVEMENT, \*ABLE STUDENTS, \*CONVENTIONAL INSTRUCTION,  
 \*INSTRUCTION, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE, \*STUDENT  
 ATTITUDES, \*TEAM TEACHING, COMPARATIVE ANALYSIS, DOCTORAL THESES,  
 EVALUATION, RESEARCH REPORTS, TEACHING METHODS, DUNNING PHYSICS  
 TEST, NEW YORK STATE REGENTS EXAMINATION, BRONX HIGH SCHOOL OF  
 SCIENCE
196. SE 002 096 09 06 67 10 43 17 1 00 000 197  
 TANNER, WILLIAM F.  
 THE "SCRAMBLED BOOK" IN FRESHMAN GEOLOGY  
 JOURNAL OF GEOLOGICAL EDUCATION  
 04 00 67 2  
 \*COLLEGE SCIENCE, \*GEOLOGY, \*INSTRUCTION, \*INSTRUCTIONAL MATERIALS,  
 \*RESEARCH REPORTS, EARTH SCIENCE, PROGRAMED INSTRUCTION

197. SE 002 365 07 12 68 10 92 17 2 22 000 319  
 TATARA, WALTER THOMAS  
 THE EFFECT OF A SUPPLEMENTARY READING PROGRAM OF SELECTED FICTION  
 ABOUT THE SCIENTIST ON SENIOR HIGH SCHOOL STUDENTS  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 62 263  
 \*ATTITUDES, \*DICTION, \*INSTRUCTION, \*STUDENT ATTITUDES, \*SECONDARY  
 SCHOOL SCIENCE, \*SCIENTIFIC ATTITUDES, DOCTORAL THESES, RESEARCH  
 REPORTS, READING MATERIALS, IMAGE OF THE SCIENTIST AMONG HIGH  
 SCHOOL STUDENTS, 1962
198. SE 003 299 08 08 68 08 23 17 1 00 000 073  
 THELEN, HERBERT A.  
 A METHODOLOGICAL STUDY OF THE LEARNING OF CHEMICAL CONCEPTS AND  
 OF CERTAIN ABILITIES TO THINK CRITICALLY IN FRESHMAN CHEMISTRY  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 09 00 44 12  
 \*CONCEPT FORMATION, \*COGNITIVE PROCESSES, \*COLLEGE SCIENCE,  
 \*CHEMISTRY, \*INSTRUCTION, \*LEARNING, \*PHYSICAL SCIENCES,  
 \*UNDERGRADUATE STUDY, CRITICAL THINKING, DOCTORAL THESES,  
 EFFECTIVE TEACHING, RESEARCH REPORTS, SCIENCE ACTIVITIES,  
 TEACHING TECHNIQUES, COOPERATIVE ENGLISH TEST, COOPERATIVE  
 ALGEBRA TEST, COOPERATIVE ARITHMETIC TESTS, IOWA CHEMISTRY  
 TRAINING TEST, IOWA CHEMISTRY APTITUDE TEST
199. SE 002 395 08 08 68 10 12 17 2 22 000 319  
 THELEN, LEVERNE J.  
 FACTS AND CONCEPTS OF CHEMISTRY OF IMPORTANCE FOR INTRODUCTORY  
 HIGH SCHOOL BIOLOGY  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 61 241  
 \*BIOLOGY, \*BIOLOGY INSTRUCTION, \*INSTRUCTION, \*SECONDARY SCHOOL  
 SCIENCE, \*SCIENTIFIC CONCEPTS, \*SCIENTIFIC PRINCIPLES, CHEMISTRY,  
 DOCTORAL THESES, EVALUATION, RESEARCH REPORTS, 1961
200. SE 002 051 07 05 68 10 72 17 2 22 000 319  
 THEOFANIS, JOHN C.  
 AN EXPERIMENTAL INVESTIGATION OF TWO METHODS OF PROGRAMING THE  
 PRINCIPLES OF MAGNETISM AND ELECTRO-MAGNETISM - A COMPARISON OF TWO  
 METHODS OF PROGRAMED INSTRUCTION OF A UNIT IN MAGNETISM AND . . . .  
 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 64 106  
 \*ACHIEVEMENT, \*ACADEMIC ACHIEVEMENT, \*COMPARATIVE ANALYSIS,  
 \*CONCEPT FORMATION, \*GRADE 8, \*INSTRUCTION, \*MAGNETS, \*PHYSICS,  
 \*PROGRAMED INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEACHING,  
 METHODS, DOCTORAL THESES, DEDUCTIVE METHODS, INDUCTIVE METHODS,  
 PROGRAMED MATERIALS, RESEARCH REPORTS, 1964

201. SE 003 251 05 28 68 10 93 17 1 00 000 021  
TUCKMAN, JACOB AND ETKIN, WILLIAM  
THE RELATIONSHIP BETWEEN SCIENCE PROFICIENCY AND TRAINING AMONG  
LIBERAL ARTS GRADUATES  
JOURNAL OF EDUCATIONAL RESEARCH  
03 00 61 3  
\*ACADEMIC ACHIEVEMENT, \*COLLEGE SCIENCE, \*INSTRUCTION, \*RESEARCH  
REPORTS, ASTRONOMY, BIOLOGY, CHEMISTRY, EDUCATIONAL OBJECTIVES,  
GEOLOGY, PHYSICS, TEACHING TECHNIQUES, 1961
202. SE 003 501 06 11 68 06 33 20 2 00 000 002  
VANDER SLUIS, K. L. AND OTHERS  
A SIMPLIFIED CONSTRUCTION OF A HELIUM-NEON VISIBLE LASER  
AMERICAN JOURNAL OF PHYSICS  
03 00 65 16  
\*COLLEGE SCIENCE, \*PHYSICAL SCIENCES, OPTICS, PHYSICS, SCIENCE  
EQUIPMENT, ATOMIC ENERGY COMMISSION, LASERS
203. SE 002 842 04 05 68 10 92 29 1 00 000 006  
VERDUIN, JOHN R.  
PUPIL-TEACHER PLANNING IN HIGH SCHOOL SCIENCE  
SCIENCE EDUCATION  
04 00 65 6  
\*CURRICULUM DEVELOPMENT, \*PROGRAM EVALUATION, \*INSTRUCTION  
\*PHYSICAL SCIENCES, \*PROGRAM DESCRIPTIONS, \*PLANNING, \*STUDENT  
PROJECTS, \*TEACHING METHODS, CURRICULAR ACTIVITIES,  
INDEPENDENT STUDY, INDIVIDUAL INSTRUCTION, SECONDARY SCHOOL  
SCIENCE, TEACHING TECHNIQUES
204. SE 002 280 04 30 68 18 81 11 2 00 000 170  
VESSEL, M. F.  
ELEMENTARY SCHOOL SCIENCE TEACHING  
THE CENTER FOR APPLIED RESEARCH IN EDUCATION  
63 119  
\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*TEACHER EDUCATION,  
CURRICULUM, CURRICULUM PLANNING, EDUCATIONAL OBJECTIVES,  
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SOLVING, SCIENCE FACILITIES, SCIENCE EDUCATION HISTORY, SCIENCE  
EQUIPMENT, TEACHING METHODS, TEXTBOOKS

205. SE 002 754 04 03 68 10 25 38 1 00 000 003  
 WAGNER, FRANK S., JR.  
 LETTERS  
 JOURNAL OF CHEMICAL EDUCATION  
 02 00 66 1  
 \*ACCIDENT PREVENTION, \*CHEMISTRY, \*LABORATORY EXPERIMENTS, \*SAFETY,  
 COLLEGE SCIENCE, LABORATORY SAFETY, SECONDARY SCHOOL SCIENCE,  
 SCIENCE ACTIVITIES, NITROBENZENE
206. SE 003 430 03 04 68 10 53 17 1 00 000 073  
 WARD, JOHN N.  
 GROUP-STUDY VERSUS LECTURE-DEMONSTRATION METHOD IN PHYSICAL  
 SCIENCE INSTRUCTION FOR GENERAL EDUCATION COLLEGE STUDENTS  
 JOURNAL OF EXPERIMENTAL EDUCATION  
 03 00 56 15  
 \*COLLEGE SCIENCE, \*DOCTORAL THESES, \*GROUP STUDY, \*INSTRUCTION,  
 \*LECTURES, \*PHYSICAL SCIENCES, \*RESEARCH REPORTS, \*SCIENCE  
 DEMONSTRATIONS, GENERAL EDUCATION, MICHIGAN STATE UNIVERSITY
207. SE 000 009 09 18 68 10 52 17 1 33 000 200  
 WELLIVER, PAUL W.  
 THE EFFECT OF TELEVISION INSTRUCTION ON THE ATTAINMENT OF  
 THE OBJECTIVES OF A NEW STATE-ADOPTED NINTH GRADE PHYSICAL  
 SCIENCE COURSE DURING ITS INTRODUCTORY YEAR  
 DEPARTMENT OF PUBLIC INSTRUCTION, RALEIGH, NORTH CAROLINA  
 66 8  
 \*EDUCATIONAL TELEVISION, \*GRADE 9, \*PHYSICAL SCIENCE,  
 \*SECONDARY SCHOOLS, CURRICULUM, INSTRUCTION, SCIENCE  
 EDUCATION, TELEVISION, NORTH CAROLINA, GUILDFORD COUNTY,  
 SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS, TEST ON  
 UNDERSTANDING SCIENCE, 1957, 1964, 1965
208. SE 001 125 08 21 58 10 23 50 2 09 000 229  
 WESTMEYER, PAUL E. AND MCADA, HARLEEN W.  
 STUDENT CHOICE IN THE CHEMISTRY LABORATORY (PRESENTED  
 AT AMERICAN CHEMICAL SOCIETY MEETING)  
 FLORIDA STATE UNIVERSITY, TALLAHASSEE  
 06 00 66 8  
 \*COLLEGE SCIENCE, \*CHEMISTRY, LABORATORIES, \*SCIENCE  
 ACTIVITIES, COURSE REVISION, INSTRUCTION, INDIVIDUAL  
 INSTRUCTION, RESEARCH REPORTS, UNIVERSITY OF TEXAS



209. SE 002 637 02 20 68 10 33 30 2 00 000 002  
 WHITE, HARVEY E. AND OTHERS  
 QUANTITATIVE DEMONSTRATION EXHIBITS AND A NEW LOW-COST PHYSICS  
 LABORATORY  
 AMERICAN JOURNAL OF PHYSICS  
 08 00 66 4  
 \*COLLEGE SCIENCE, \*SCIENCE EXHIBITS, \*INSTRUCTION, \*PHYSICS,  
 \*SECONDARY SCHOOL SCIENCE, \*SCIENCE ACTIVITIES, \*SCIENCE  
 EQUIPMENT, \*SCIENCE DEMONSTRATIONS, \*INDIVIDUAL INSTRUCTION,  
 UNITED STATES OFFICE OF EDUCATION, ALFRED P. SLOAN FOUNDATION,  
 LAWRENCE HALL OF SCIENCE, UNIVERSITY OF CALIFORNIA, BERKELEY
210. SE 002 868 04 18 68 23 95 20 2 00 000 006  
 WINTHROP, HENRY  
 TEACHING THE HISTORY OF SCIENCE - SOME SUGGESTED INNOVATIONS IN  
 METHOD  
 SCIENCE EDUCATION  
 12 00 65 13  
 \*BIBLIOGRAPHIES, \*COLLEGE SCIENCE, \*COURSE DESCRIPTIONS,  
 \*CURRICULUM, \*SCIENCE HISTORY, \*INSTRUCTION, EDUCATIONAL  
 OBJECTIVES, SCIENCE COURSES
211. SE 003 420 06 10 68 10 93 18 2 00 000 021  
 WISE, HAROLD E.  
 A REVIEW OF RECENT RESEARCH REPORTS IN SCIENCE EDUCATION WITH  
 IMPLICATIONS FOR TEACHING AT THE JUNIOR COLLEGE LEVEL  
 JOURNAL OF EDUCATIONAL RESEARCH  
 01 00 50 15  
 \*ABILITY IDENTIFICATION, \*EDUCATIONAL OBJECTIVES, \*GENERAL  
 EDUCATION, \*JUNIOR COLLEGES, \*RESEARCH REVIEWS, \*SCIENCE EDUCATION,  
 \*TEACHING METHODS, ATTITUDE DEVELOPMENT, BIOLOGY, COURSE  
 ORGANIZATION, CHEMISTRY, HIGHER EDUCATION, INSTRUCTION, PHYSICS,  
 RETENTION STUDIES
212. SE 002 397 08 12 68 12 81 17 2 22 000 319  
 WISHART, ALLINGTON P.  
 THE RELATIONSHIP OF SELECTED TEACHER FACTORS TO THE CHARACTER AND  
 THE SCOPE OF SCIENCE TEACHING PROGRAMS IN SELF-CONTAINED ELEMENTARY  
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 UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN  
 61 236  
 \*ACADEMIC EDUCATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION,  
 \*PERSONALITY, \*PROFESSIONAL EDUCATION, \*TEACHER CHARACTERISTICS,  
 \*TEACHER EDUCATION, ANXIETY, CHILD DEVELOPMENT, DOCTORAL THESES,  
 RESEARCH REPORTS, TEACHER EXPERIENCE, TEACHING PROCEDURES,  
 SEQUENTIAL TEST OF EDUCATIONAL PROGRESS, CHILD DEVELOPMENT AND  
 EDUCATIONAL PSYCHOLOGY TEST, 16 PERSONS FACTOR QUESTIONNAIRE, 1961

213. SE 002 431 02 14 68 10 86 20 1 00 000 006  
 WOLINSKY, GLORIA F.  
 SCIENCE EDUCATION AND THE SEVERELY HANDICAPPED CHILD  
 SCIENCE EDUCATION  
 10 00 65 5  
 AUDIOVISUAL AIDS, CURRICULUM PLANNING, ELEMENTARY SCHOOL  
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