OE FORM 6000, 2/60

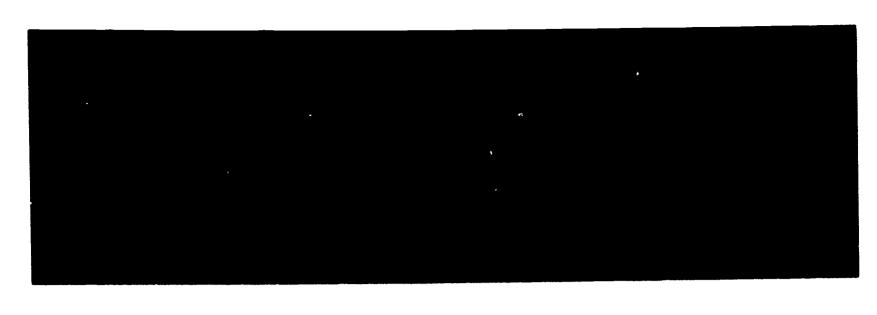
# DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE OFFICE OF EDUCATION

#### **ERIC REPORT RESUME**

ERIC ACC. NO.	7		ERIC R	REPO	RT RESUME			
ED 030 7	12				•		(5)	
CH ACC. NO.	_	PUBL. DATE	ISSUE	1	OCUMENT COPYRIGHTED?	YES T		
AA 000 379		Jul69	RIEDEC69	ŧ	REPRODUCTION RELEASE? EL OF AVAILABILITY	· (2) · (1)		
AUTHOR			TIEDECOA			<u>.e</u>		
TITLE Science Educ Procedures,		Informatio	n Report, Gener	al Bi	bliography Series 21,	Instruct	ional	
SOURCE CODE	INSTITU	JTION (SOURC	ε)					
RUF24927	ERIC Information Analysis Center for Science Education, Columbus, Ohio							
SP. AG. CODE	SPONSO	RING AGENCY			-			
EDRS PRICE 0.50;3.10	CONT	TRACT NO.			GRANT NO.			
REPORT NO.		<del>-</del>			BUREAU NO.			
AVAILABILITY								
JOURNAL CITATION								
DESCRIPTIVE NOTE								
60p.								
DESCRIPTORS		-			<del></del>			
Science; Ins School Scien	structi ice; Te	lon; Physic eacher Educ	al Sciences; Sc ation; *Science	ience Educ	ege Science; Elementa Activities; *Seconda ation; *Mathematics E Mathematics; College	ry		
IDENTIFIERS								
	•							
ABSTRACT	-	<del> </del>			<del> </del>			
science and	mathen	natics educ	ation. The doc	ument	instructional procedus included represent sosition papers, textbo	research		

manuals, speeches, and other types. Citations are categorized in alphabetical order by author, and indicate source, availability, and major ideas of the document. The bibliography updates, but does not replace, bibliography 11 (ED 026 277) and bibliography 1 (ED 015 877). (RH)

GP 0 870-390



## GENERAL BIBLIOGRAPHY SERIES BIBLIOGRAPHY 21

INSTRUCTIONAL PROCEDURES

# U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

# SEIAC/SCIENCE EDUCATION INFORMATION ANALYSIS CENTER

...an information center to organize and disseminate information and materials on science education to teachers, administrators, supervisors, researchers, and the public. A joint project of The Ohio State University and the Educational Resources Information Center of USOE.

# SCIENCE EDUCATION INFORMATION REPORT

# GENERAL BIBLIOGRAPHY SERIES BIBLIOGRAPHY 21

INSTRUCTIONAL PROCEDURES

ERIC Information Analysis Center for Science Education 1460 West Lane Avenue Columbus, Ohio 43210

July, 1969



# BIBLIOGRAPHÝ 21

Tab	ole of Contents	Page
A.	Science Education	1
В.	Mathematics Education	37
c.	Science and Mathematics Education	48
D.	Author Index	50
E.	Unauthored Articles	54



## SCIENCE EDUCATION INFORMATION REPORTS

The Science Education Information Reports are being developed to disseminate information concerning documents analyzed at the ERIC Information Analysis Center for Science Education. The Reports include five types of publications. Bibliographies are being issued to announce most documents processed by the Information Analysis Center for Science Education. These bibliograph categorized by topics and indicate the availability of the documen' the major ideas included in the document. Special Bibliographies are being sped to announce availability of documents in selected interest areas. The bibliographies will list most significant documents that have been published in the interest area. Guides to Resource Literature for Science Teachers are bibliographies that identify references for the professional growth of teachers at all levels of science teaching. This series will include six separate publications. State-of-the-Art Papers will be issued periodically to indicate implications of research for science teaching. Research Reviews will be issued to analyze and synthesize research related to science education over a period of several years.

The Science Education Information Reports will be announced in the SEIAC Newsletter as they become available.

#### GENERAL BIBLIOGRAPHIES

The <u>General Bibliographies</u> are being developed to announce the documents acquired and processed by the ERIC Information Analysis Center for Science Education. The bibliographies will focus on general topics. This bibliography announces most documents related to the topic that were included in the third 2,000 documents processed by this Center. It supplements <u>General Bibliography 1</u> and <u>11</u>. Additional supplements will be issued as documents are processed.

#### USING BIBLIOGRAPHIC CITATIONS

All documents are listed by similar bibliographic citations. A sample citation is explained for your convenience. You will find it helpful to study the explanation of the sample citation before using this bibliography.



#### SAMPLE OF BIBLIOGRAPHIC CITATION

(1) SE 004 904

(2) 3

(3) 10 31 15

(4) HELGESON, STANLEY L.

- (5) LESSON PLANS AND TESTS OF KNOWLEDGE, COMPREHENSION, AND APPLICATION FOR INSTRUCTION IN CONCEPTS OF FORCE, GRADES 2-6
- (6) UNIVERSITY OF WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER
- (7) EDRS
- (8) ED 020 907

MF \$0.25

HC \$2.35

(9) 03 00 68

(10) 45

(11) \*ELEMENTARY SCHOOL SCIENCE, \*FORCES (PHYSICAL), \*INSTRUCTION, \*PHYSICS, \*TEACHING GUIDES, ACADEMIC ACHIEVEMENT, COGNITIVE PROCESSES, CONCEPT FORMATION, EVALUATION, LEARNING, PHYSICAL SCIENCES, TESTS, RESEARCH REPORTS

#### EXPLANATION OF BIBLIOGRAPHIC CITATION

### (1) SE 004 904

This is the Science Education Center's identification number for the document. It serves as the name for the document and provides a way of locating the material.

(2) 3

This field indicates the level of processing of the document.

1--cataloged and indexed

2--cataloged, indexed, and annotated or abstracted

3--announced in Research in Education

#### (3) 10 31 15

Field three is a code for developing bibliographies. By using this code several kinds of bibliographies can be structured by retrieval specialists or by computer programs.

(4) HELGESON, STANLEY L.

The principal author, editor, or organization associated with the writing of the document is listed.

(5) LESSON PLANS AND TESTS OF KNOWLEDGE, COMPREHENSION, AND APPLICATION FOR INSTRUCTION IN CONCEPTS OF FORCE, GRADES 2-6

Title of document.



(6) UNIVERSITY OF WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER
This indicates where the document was obtained by the Center.

#### (7) EDRS

Field seven indicates the source of the document. If the document is available from the ERIC Document Reproduction Service (EDRS) it can be ordered.

(8) ED 020 907 MF \$0.25 HC \$2.35

If a document is announced in <u>Research in Education</u>, the ED number of the document is indicated in this space. If the document is available from EDRS the price of the document is also indicated in this field. MF indicates microfiche and HC indicates hardcopy. This document would cost \$0.25 in microfiche or \$2.35 in hardcopy.

## (9) 03 00 68

This field designates the publication date of the document (March, 1968). The first set of two numerics represents the month; the second, the day of the month; and the third, the year. In most cases the date is obtained from the document. In a few cases, when no date of publication is on the document, the date is estimated based on the best information available in the document.

# (10) 45

Field ten identifies the number of pages in the document. This document contains 45 pages. Use of this field will provide information concerning the length of the document.

(11) \*ELEMENTARY SCHOOL SCIENCE, \*FORCES (PHYSICAL), \*INSTRUCTION, \*PHYSICS, \*TEACHING GUIDES, ACADEMIC ACHIEVEMENT, COGNITIVE PROCESSES, CONCEPT FORMATION, EVALUATION, LEARNING, PHYSICAL SCIENCES, TESTS, RESEARCH REPORTS

This field provides an indication of the ideas included in the document. Each term, such as \*INSTRUCTION, has been selected by an information analyst because the term is important for the identification of the document. Terms marked with an asterisk represent primary ideas in the document; the other terms represent ideas of lesser importance. You can use this information to narrow the number of documents you want to review.



## A. SCIENCE EDUCATION

- 1. SE 005 058
  1 10 23 32
  ADVISORY COUNCIL ON COLLEGE CHEMISTRY
  NEWSLETTER NUMBER 6
  ADVISORY COUNCIL ON COLLEGE CHEMISTRY, PALO ALTO, CALIFORNIA
  11 00 66 8
  \*\*COLLEGE SCIENCE, \*\*CHEMISTRY, \*INSTRUCTION, \*LABORATORY INSTRUCTION, EDUCATIONAL TELEVISION, NEWSLETTERS, SCIENCE COURSES, UNDERGRADUATE STUDY
- 2. SE 005 419

  ALASKA STATE DEPARTMENT OF EDUCATION
  SCIENCE CURRICULUM GUIDELINES, GRADES K-12
  ALASKA STATE DEPARTMENT OF EDUCATION, JUNEAU
  EDRS
  ED 022 711
  MF \$0.50
  HC \$3.95

\*CURRICULUM GUIDES, \*CURRICULUM DEVELOPMENT, \*ELEMENTARY SCHOOL SCIENCE,
\*SECONDARY SCHOOL SCIENCE, COURSE DESCRIPTIONS, COURSE OBJECTIVES, CONCEPTUAL
SCHEMES, TEACHING GUIDES, UNIFIED SCIENCE, STATE DEPARTMENT OF EDUCATION, ALASKA

- 3. SE 005 707 1 10 23 17
  ALPERN, D. K.
  IN PLACE OF RECITATIONS AN EXPERIMENT IN TEACHING
  TEACHERS COLLEGE RECORD
  05 00 66 6
  \*ACADEMIC ACHIEVEMENT, \*COLLEGE SCIENCE, \*CHEMISTRY, \*INDEPENDENT STUDY,
  \*INSTRUCTION, CURRICULUM DEVELOPMENT, EDUCATIONAL PROGRAMS, RESEARCH REPORTS,
  STUDENT ATTITUDES, BROOKLYN COLLEGE, 1966
- 4. SE 004 421 1 1 10 25 30

  ALYEA, HUBERT N.

  TESTED OVERHEAD PROJECTION SERIES

  JOURNAL OF CHEMICAL EDUCATION

  04 00 68 3

  \*CHEMISTRY, \*COLLEGE SCIENCE, \*CARBON COMPOUNDS, \*OVERHEAD PROJECTORS, \*SCIENCE ACTIVITIES, \*SECONDARY SCHOOL SCIENCE, INORGANIC CHEMISTRY, SCIENCE DEMONSTRATIONS, TESTED OVERHEAD PROJECTION SERIES, CARBON



5. SE 004 018 3 10 83 17

ANDERSON, HANS O.

AN ANALYSIS OF A METHOD FOR IMPROVING PROBLEM-SOLVING SKILLS POSSESSED BY COLLEGE STUDENTS PREPARING TO PURSUE SCIENCE TEACHING AS A PROFESSION INDIANA UNIVERSITY, BLOOMINGTON

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 020 123 NOT AVAILABLE FROM EDRS

66 152

\*DOCTORAL THESES, \*INSTRUCTION, \*PROBLEM SOLVING, \*SECONDARY SCHOOL SCIENCE, \*TEACHER EDUCATION, \*TEACHING TECHNIQUES, COLLEGE SCIENCE, RESEARCH REPORTS, WATSON, GLASER CRITICAL THINKING APPRAISAL, 1966, INDIANA UNIVERSITY

6. SE 005 722 2 10 15 30

ANDERSON, LUCIA

MICROBIOLOGY FOR ELEMENTARY GRADES AND JUNIOR HIGH SCHOOL

THE AMERICAN BIOLOGY TEACHER

08 00 68 8

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*MICROBIOLOGY, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE ACTIVITIES, \*RESOURCE MATERIALS, BIOLOGY, BIBLIOGRAPHIES, 1968

7. SE 004 700 1 10 42 38

ANDERSON, ROBERT G.

AN INVESTIGATION OF TIDES - ARE THEY RELATED TO THE MOON?

THE SCIENCE TEACHER

0**4 00 68** 

\*ASTRONOMY, \*EARTH SCIENCE, \*OCEANOLOGY, \*SECONDARY SCHOOL SCIENCE, \*TIDES, INSTRUCTION, TEACHING TECHNIQUES, NATIONAL SCIENCE TEACHERS ASSOCIATION, SCIENCE TEACHER STAR AWARD

8. SE 005 815 1 10 12 30

ANDERSON, RONALD D.

USING THE LABORATORY TO TEACH THE NATURE OF SCIENCE

THE AMERICAN BIOLOGY TEACHER

10 00 68 4

\*BIOLOGY, \*INSTRUCTION, \*LABORATORY ACTIVITIES, \*SCIENCE ACTIVITIES, \*SECONDARY SCHOOL SCIENCE, BIOLOGICAL SCIENCES CURRICULUM STUDY, YELLOW VERSION

9. SE 004 986 2 10 12 15

ANDREWS, TED F.

CHARACTERISTICS OF LIVING THINGS, INSTRUCTIONAL GUIDE, SECOND EXPERIMENTAL

EDITION 1967-1968

EDUCATIONAL RESEARCH COUNCIL OF AMERICA, CLEVELAND, OHIO

67 125

\*BIOLOGICAL SCIENCES, \*SCIENCE ACTIVITIES, \*SECONDARY SCHOOL SCIENCE, \*TEACHING CULDES, CELL THEORY, CURRICULUM DEVELOPMENT, ECOLOGY, HEREDITY, INSTRUCTIONAL MATERIALS, INSTRUCTION, OHIO, 1967

1 10 12 15

ANDREWS, TED F.; AND OTHERS

VARIATION, INSTRUCTIONAL GUIDE, SECOND EXPERIMENTAL EDITION 1967-68 EDUCATIONAL RESEARCH COUNCIL OF AMERICA, CLEVELAND, OHIO

08 00 67 550

\*BIOLOGICAL SCIENCES, \*CURRICULUM DEVELOPMENT, \*SECONDARY SCHOOL SCIENCE, \*TEACHING GUIDES, INSTRUCTIONAL MATERIALS, INSTRUCTION, MAN, SCIENCE ACTIVITIES, VARIATION, 1967

11. SE 005 756 2 10 35 17

APPLEMAN, RONALD EUGENE

A COMPARATIVE STUDY OF THE COGNITIVE EFFECTS OF THE USE OF TAKE HOME LABORATORY MATERIALS ON STUDENT ACHIEVEMENT IN COLLEGE LEVEL PHYSICAL SCIENCE CLASSES OKLAHOMA STATE UNIVERSITY, STILLWATER, OKLAHOMA

67 112

\*ACADEMIC ACHIEVEMENT, \*COLLEGE SCIENCE, \*HOME INSTRUCTION, \*INSTRUCTION, \*PHYSICAL SCIENCES, CONVENTIONAL INSTRUCTION, COMPARATIVE ANALYSIS, DOCTORAL THESES, INSTRUCTIONAL MATERIALS, MATERIAL DEVELOPMENT, RESEARCH REPORTS, STUDENT ATTITUDES, SCIENCE LABORATORIES, 1967

SE 005 467 1 10 22 17

ATWOOD, RONALD K.

12.

CHEMICAL EDUCATION MATERIALS STUDY ACHIEVEMENT AMONG GROUPS CLASSIFIED BY COGNITIVE PREFERENCE SCORES

JOURNAL OF RESEARCH IN SCIENCE TEACHING

68 6

\*ACHIEVEMENT, \*CHEMISTRY, CURRICULUM, INSTRUCTION, SECONDARY SCHOOL SCIENCE, CHEMICAL EDUCATION MATERIALS STUDY, COGNITIVE PREFERENCE EXAMINATION - CHEMISTRY

13. SE 005 995 2 10 12 17

BANDELIER, KENNETH JESSE

COMMUNITY RESOURCES IN TEACHING SECONDARY BIOLOGICAL CONCEPTS IN INDIANA UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

67 149

\*BIOLOGY, \*COMMUNITY RESOURCES, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*STATE SURVEYS, DOCTORAL THESES, RESEARCH REPORTS, INDIANA, 1967

14. SE 004 153 1 10 32 29

BARAVALLE, HERMANN VON

INTRODUCTION TO PHYSICS IN THE WALDORF SCHOOLS WALDORF SCHOOL MONOGRAPHS, ENGLEWOOD, NEW JERSEY

67 44

\*INSTRUCTION, \*PHYSICS, \*PROGRAM DESCRIPTIONS, \*SECONDARY SCHOOL SCIENCE, \*TEACHING METHODS, ACOUSTICS, ART, OPTICS, WALDORF SCHOOLS



10 23 29 1 15. SE 005 840

BARNARD, W. ROBERT

TEACHING AIDS - TELEVISION FOR THE MODERN CHEMISTRY CLASSROOM, PART III JOURNAL OF CHEMICAL EDUCATION

5 11 00 68

\*CHEMISTRY, \*COLLEGE SCIENCE, \*INSTRUCTION, EDUCATIONAL PROGRAMS, INSTRUCTIONAL MATERIALS, SCIENCE LABORATORIES

10 12 17 SE 004 019 16.

BARNES, LEHMAN WILDER

THE NATURE AND EXTENT OF LABORATORY INSTRUCTION IN SELECTED MODERN HIGH SCHOOL BIOLOGY CLASSES

TEXAS UNIVERSITY, AUSTIN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

NOT AVAILABLE FROM EDRS ED 020 124

67

\*BIOLOGY, \*COMPARATIVE ANALYSIS, \*INSTRUCTION, \*LABORATORIES, \*SECONDARY SCHOOL SCIENCE, \*TEACHING METHODS, DOCTORAL THESES, EVALUATION, SCIENCE FACILITIES, SCIENCE ACTIVITIES, RESEARCH REPORTS, BIOLOGICAL SCIENCES CURRICULUM STUDY, PROCESSES OF SCIENCE TEST, 1966

10 42 17 17. SE 064 199

BICAK, LADDIE J.

ACHIEVEMENT IN EIGHTH GRADE SCIENCE BY HETEROGENEOUS AND HOMOGENEOUS CLASSES SCIENCE EDUCATION

02 00 64

\*ACADEMIC ACHIEVEMENT, \*ABILITY GROUPING, \*SECONDARY SCHOOL SCIENCE, COMPARATIVE ANALYSIS, EARTH SCIENCE, GRADE 8, HETEROGENEOUS GROUPING, HOMOGENEOUS GROUPING, METEOROLOGY, RESEARCH REPORTS, 1962

10 31 17 18. SE 004 023

BRUDZYNSKI, ALFRED JOHN

A COMPARATIVE STUDY OF TWO METHODS FOR TEACHING ELECTRICITY AND MAGNETISM WITH FIFTH AND SIXTH GRADE CHILDREN

BOSTON UNIVERSITY, MASSACHUSETTS, SCHOOL OF EDUCATION

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

NOT AVAILABLE FROM EDRS ED 021 708

230

\*ACHIEVEMENT, \*SCIENTIFIC CONCEPTS, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, DOCTORAL THESES, DEDUCTIVE METHODS, ELECTRICITY, GRADE 5, GRADE 6, INDUCTIVE METHODS, LEARNING, MAGNETS, PHYSICAL SCIENCES, RESEARCH REPORTS, RETENTION, TEACHING METHODS, TEACHING TECHNIQUES, MASSACHUSETTS, SALEM, 1966

19. SE 005 225

CALIFORNIA STATE DEPARTMENT OF EDUCATION

BIOLOGICAL PRINCIPLES IN AGRICULTURE - A MANUAL FOR HIGH SCHOOL AGRICULTURE

TEACHERS INTEGRATING BIOLOGICAL PRINCIPLES WITH INSTRUCTION IN AGRICULTURE

CALIFORNIA STATE DEPARTMENT OF EDUCATION, SACRAMENT 0

63

133

\*BIOLOGICAL SCIENCES, \*CURRICULUM, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEACHING GUIDES, AGRICULTURAL EDUCATION, COURSE CONTENT, SCIENCE EXPERIMENTS, 1963

- 20. SE 004 010 1 10 23 38

  CARTER, ROBERT L.

  A FLOW-CHART APPROACH TO POINT GROUP CLASSIFICATION

  JOURNAL OF CHEMICAL EDUCATION

  01 00 68 1

  \*COLLEGE SCIENCE, \*CHEMISTRY, \*INSTRUCTION, CLASSIFICATION, FLOW-CHART APPROACH,

  GROUP THEORY
- 21. SE 005 311 1 10 13 32

  COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES
  CUEBS NEWS, VOLUME 1, NUMBER 1

  COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES
  06 00 65 8

  \*BIOLOGY, \*COLLEGE SCIENCE, \*CURRICULUM, \*INDIVIDUAL INSTRUCTION, \*INSTRUCTION, NEWSLETTERS, SCIENCE COUFSES, SINGLE CONCEPT FILMS, UNDERGRADUATE STUDY, COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES
- 22 SE 005 299 1 10 13 32
  COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES
  CUEBS NEWS, VOLUME 1, NUMBER 5
  COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES
  06 00 66 20
  \*BIOLOGY, \*COLLEGE SCIENCE, \*CURRICULUM, \*INSTRUCTION, \*TEACHER EDUCATION,
  CURRICULUM DEVELOPMENT, EDUCATIONAL PROGRAMS, NEWSLETTERS, SECONDARY SCHOOL
  TEACHERS, COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES
- 23. SE 005 301 1 10 13 32

  COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES
  CUEBS NEWS, VOLUME III, NUMBER 1

  COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES
  10 00 66 8

  \*BIOLOGY, \*COLLEGE SCIENCE, \*CURRICULUM, \*INSTRUCTION, CURRICULUM DEVELOPMENT,
  EDUCATIONAL INNOVATION, GRADUATE STUDY, NEWSLETTERS, UNDERGRADUATE STUDY,
  COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES

24. SE 005 973 1 10 52 17

CLARK, BILLY MAX

AN EXPERIMENT IN CULTIVATING CREATIVE THINKING ABILITIES IN THE CLASSROOM IOWA STATE UNIVERSITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

68 103

\*CREATIVE THINKING, \*INSTRUCTION, \*INQUIRY TRAINING, \*PHYSICAL SCIENCES, \*SECONDARY SCHOOL SCIENCE, \*TEACHING METHODS, ACADEMIC ACHIEVEMENT, ACHIEVEMENT, DOCTORAL THESES, GRADE 8, RESEARCH REPORTS, TEACHING TECHNIQUES, IOWA TEST OF BASIC SKILLS, THINKING CREATIVITY WITH WORDS

25. SE 004 340 1 10 86 20

DARNOWSKI, VINCENT S.

COMPUTER AIDED INSTRUCTION - A TOOL FOR SCIENCE TEACHING IN THE SEVENTIES THE SCIENCE TEACHER

01 00 68

\*AUTOINSTRUCTIONAL AIDS, \*INSTRUCTION, COMPUTER ASSISTED INSTRUCTION, COMPUTERS, EDUCATIONAL RESEARCH, INDIVIDUALIZED INSTRUCTION, TEACHING TECHNIQUES

26. SE 005 116 2 10 91 17

DeROCHE, EDWARD FRANCIS

A STUDY OF THE EFFECTIVENESS OF SELECTED CREATIVE EXERCISES ON CREATIVE THINKING AND THE MASTERY OF A UNIT IN ELEMENTARY SCIENCE

THE UNIVERSITY OF CONNECTICUT

UNIVERSITY MLCROFILMS, ANN ARBOR, MICHIGAN

66 210

\*CREATIVITY, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, ABILITY GROUPING, AEROSPACE TECHNOLOGY, GRADE 6, RESEARCH REPORTS, MINNESOTA TESTS OF CREATIVE THINKING

27. SE 004 025 3 10 72 17

DeVITO, ALFRED

THE CONTRIBUTION OF CERTAIN SCIENCE INVESTIGATIONS TO THE UNDERSTANDING OF THE ELEMENTS OF SCIENTIFIC MODEL BUILDING BY GENERAL SCIENCE STUDENTS ENROLLED IN A THREE-TRACK CURRICULUM

UNIVERSITY OF TEXAS, AUSTIN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 709 NOT AVAILABLE FROM EDRS

66 214

\*ABILITY GROUPING, \*CONCEPT FORMATION, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEACHING PROCEDURES, DOCTORAL THESES, GRADE 8, GENERAL SCIENCE, INSTRUCTIONAL MATERIALS, MODELS, RESEARCH REPORTS, TEACHING METHODS, 1966



28. SE 004 026 3

DUKE, REESE DALE

THE DEVELOPMENT OF NEW SUPPLEMENTARY TEACHING MATERIALS AND AN ANALYSIS OF THEIR POTENTIAL USE IN THE HIGH SCHOOL BIOLOGY CURRICULUM UNIVERSITY OF TEXAS

10 12 17

UNIVERSITY OF MICROFILMS, ANN ARBOR, MICHIGAN

ED 024 561 NOT AVAILABLE FROM EDRS

66 104

\*BIOLOGY, \*INSTRUCTIONAL MATERIALS, \*INSTRUCTION, \*TEACHING TECHNIQUES, AUDIOVISUAL AIDS, DOCTORAL THESES, RESEARCH REPORTS, SECONDARY SCHOOL SCIENCE, BIOLOGICAL SCIENCES CURRICULUM STUDY, PROCESSES OF SCIENCE TEST, DIFFERENTIAL APTITUDE TEST, BIOLOGICAL SCIENCES CUPRICULUM STUDY COMPREHENSIVE FINAL, 1966

29. SE 004 056 3 10 91 17

DYRIL, ODVARD EGIL

AN INVESTIGATION INTO THE DEVELOPMENT OF COMBINATIONAL MECHANISMS CHARACTERISTIC OF FORMAL REASONING, THROUGH EXPERIMENTAL PROBLEM SITUATIONS WITH SIXTH-GRADE STUDENTS

INDIANA UNIVERSITY, BLOOMINGTON

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 722 NOT AVAILABLE FROM EDRS

67 140

\*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING THEORIES, COGNITIVE DEVELOPMENT, DOCTORAL THESES, GRADE 6, NONVERBAL LEARNING, PROBLEM SOLVING, PERFORMANCE TESTS, TEST CONSTRUCTION, VERBAL TESTS, RESEARCH REPORTS, COMBINATORIAL VERBAL, WRITTEN, AND MANIPULATIVE TEST, PIAGET, 1967

30. SE 005 651 1 16 12 17

ENGEN, HAROLD B; AND OTHERS
STUDENT OUTCOMES WITH ROTATION OF TEACHERS IN SECONDARY BIOLOGY
JOURNAL OF RESEARCH IN SCIENCE TEACHING

68 5

\*ACHIEVEMENT, \*BIOLOGY, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, GRADE 8, RESEARCH REPORTS, TEACHING PROCEDURES, TEAM TEACHING, UNIVERSITY OF IOWA LABORATORY SCHOOL, BIOLOGICAL SCIENCES CURRICULUM STUDY, BLUE VERSION, BIOLOGICAL SCIENCES CURRICULUM STUDY COMPREHENSIVE FINAL, NELSON BIOLOGY TEST, READ GENERAL SCIENCE TEST, TEST ON UNDERSTANDING SCIENCE, WATSON-GLASER CRITICAL THINKING APPRAISAL, SILANCE SCALE FOR MEASURING ATTITUDE TOWARD ANY SCHOOL SUBJECT, 1967



10 72 17 3 SE 005 120

ESHLEMAN, WINSTON HULL

A COMPARISON OF PROGRAMED INSTRUCTION WITH CONVENTIONAL METHODS FOR TEACHING TWO UNITS OF EIGHTH GRADE SCIENCE

UNIVERSITY OF ARIZONA

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

NOT AVAILABLE FROM EDRS ED 023 591

\*GENERAL SCIENCE, \*INSTRUCTION, \*PROGRAMED INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, ASTRONOMY, BIOLOGY, COMPARATIVE ANALYSIS, DOCTORAL THESES, GRADE 8, RESEARCH REPORTS, TUCSON, ARIZONA, 1967

10 55 30 32. SE 005 923

ESLER, WILLIAM K.

AN EXERCISE IN THE DEVELOPMENT OF PROCESS SKILLS

SCHOOL SCIENCE AND MATHEMATICS

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*INSTRUCTIONAL MATERIALS, \*PENDULUM, \*PHYSICAL SCIENCES, \*SCIENCE ACTIVITIES, SECONDARY SCHOOL SCIENCE, AAAS PROCESS APPROACH, 1968

10 33 22 2 33. SE 005 965

FOWLER, JOHN M.

PROGRESS REPORT OF THE COMMISSION ON COLLEGE PHYSICS FOR 1966-1968

AMERICAN JOURNAL OF PHYSICS

\*COLLEGE SCIENCE, \*INST.JCTION, \*INSTRUCTIONAL MATERIALS, \*PHYSICS, AUDIOVISUAL AIDS, CURRICULUM DEVELOPMENT, COMPUTER ASSISTED INSTRUCTION, INSTRUCATIONAL FILMS, INSERVICE EDUCATION, NEWSLETTERS, PROGRAMED INSTRUCTION, PHYSICS TEACHERS, TEACHING PROCEDURES, TEACHER EDUCATION, COMMISSION ON COLLEGE PHYSICS, NATIONAL SCIENCE FOUNDATION

10 95 02 1 34. SE 005 956

FRANK, N. H.

PHYSICS AND VOCATIONAL EDUCATION

THE PHYSICS TEACHER

\*COLLEGE SCIENCE, \*INSTRUCTION, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE, \*VOCATIONAL EDUCATION, COMMUNITY COLLEGES, EDUCATIONAL PROBLEMS, MATHEMATICS, SCIENCE ACTIVITIES, SMITH-HUGHES ACT, VOCATIONAL EDUCATION ACT, 1968



35. SE 005 498 1 10 72 17

FRANZ, J. A.

A PROPOSED PLAN FOR TEAM TEACHING OF GENERAL SCIENCE IN THE EIGHTH GRADE IN THE HITHERGREEN MIDDLE SCHOOL, WASHINGTON TOWNSHIP, MONTGOMERY COUNTY, OHIO DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

\*CURRICULUM PLANNING, \*GENERAL SCIENCE, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEAM TEACHING, ADMINISTRATION, GRADE 8, INDEPENDENT STUDY, LARGE GROUP INSTRUCTION, SMALL GROUP INSTRUCTION, HITHERGREEN MIDDLE SCHOOL, MONTGOMERY COUNTY, OHIO, 1966

36. SE 004 719 1 10 15 30

FRASER, W. CLAYTON, SR.

DYNAMIC SYMBIOSIS THROUGH INQUIRY AND DISCOVERY

THE AMERICAN BIOLOGY TEACHER

03 00 68 3

\*BIOLOGY, \*BOTANY, \*ECOLOGY, \*SCIENCE ACTIVITIES, \*SCIENTIFIC CONCEPTS, COLLEGE SCIENCE, INSTRUCTION, SECONDARY SCHOOL SCIENCE

37. SE 004 000 2 10 32 17

FRITZ, JOHN 0.

THE EFFECT ON INSTRUCTION OF THE COMPLEMENTARY USE OF AUDIOVISUAL MEDIA WITH MODIFIED PATTERNS IN THE USE OF THE TEACHING STAFF, NDEA PHYSICS PROJECT PROGRESS REPORT

03 00 62 60

\*PHYSICS, \*SECONDARY SCHOOL SCIENCE, \*INSTRUCTION, AUDIOVISUAL AIDS, ACADEMIC ACHIEVEMENT, CURRICULUM DEVELOPMENT, CLASS ORGANIZATION, INSTRUCTIONAL TELEVISION, LEARNING, RESEARCH REPORTS, TEAM TEACHING, 1960, 1961, 1962

38. SE 004 222 1 10 12 18

GALLENTINE, JERRY L.

BIOLOGICAL DRAWING - OPINION VS. RESEARCH

THE AMERICAN BIOLOGY TEACHER

02 00 68

\*BIOLOGY, \*INSTRUCTION, \*RESEARCH REVIEWS, \*SECONDARY SCHOOL SCIENCE, COLLEGE SCIENCE, DRAWING, LABORATORY MANUALS, SCIENCE ACTIVITIES

39. SE 005 492 2 10 11 17

GARRY, RALPH

AN INVESTIGATION OF CONCEPT DEVELOPMENT IN ELEMENTARY SCHOOL SCIENCE TEACHING BY TELEVISION

BOSTON UNIVERSITY, MASSACHUSETTS

12 00 63 38

\*ELEMENTARY SCHOOL SCIENCE, \*GRADE 5, \*INSTRUCTION, COMPARATIVE ANALYSIS, SCIENTIFIC CONCEPTS, INSTRUCTIONAL MATERIALS, RESEARCH REPORTS, SOCIOECONOMIC INFLUENCES, TELEVISED INSTRUCTION

GASKELL, WILLIAM G.; DROTZ, PAUL E.
TEAM TEACHING IN THE MULTIGRADED CLASSROOM
SCIENCE AND CHILDREN
07 00 68 3
\*CURRICULUM, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*TEAM TEACHING, \*UNGRADED CLASSES. GENERAL SCIENCE, SCIENCE UNITS

41. SE 004 307 2 10 91 11

GEGAL, PETER C.

SCIENCE IN ELEMENTARY EDUCATION

SAN DIEGO STATE COLLEGE, CALIFORNIA

66 451

\*ELEMENTARY SCHOOL SCIENCE, \*EDUCATIONAL OBJECTIVES, \*INSERVICE TEACHER
EDUCATION, \*METHODS COURSES, \*SCIENCE UNITS, \*SCIENCE EQUIPMENT, \*SCIENCE
MATERIALS, \*SCIENCE EDUCATION, \*TEACHER EDUCATION, \*TEACHING METHODS,
AUDIOVISUAL AIDS, BIOLOGY, EARTH SCIENCE, INSTRUCTIONAL MATERIAL, PHYSICS

42. SE 004 262 1 10 86 20

GEISERT, PAUL

A COMPUTER MODEL FOR THE SLOW STUDENT

THE SCIENCE TEACHER

04 00 68 5

\*EDUCATIONAL OBJECTIVES, \*INSTRUCTION, \*SLOW LEARNER, BEHAVIORAL OBJECTIVES,

LEARNING, TEACHING TECHNIQUES

43. SE 004 850 3 10 51 17

GERNE, TIMOTHY A., JR.

A COMPARATIVE STUDY OF TWO TYPES OF SCIENCE TEACHING ON THE COMPETENCE OF SIXTH-GRADE STUDENTS TO UNDERSTAND SELECTED TOPICS IN ELECTRICITY AND MAGNETISM NEW YORK UNIVERSITY, NEW YORK

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 023 581 NOT AVAILABLE FROM EDRS

67 168

**TEXT BOOKS** 

\*COMPARATIVE ANALYSIS, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*PHYSICAL SCIENCES, ACHIEVEMENT, DOCTORAL THESES, ELECTRICITY, GRADE 6, MAGNETS, STUDENT ATTITUDES, TEACHER ATTITUDES, RESEARCH REPORTS, ESSEX ELECTRICAL BOARD, 1967

44. SE 005 189 3 10 73 17

GILMAN, DAVID ALAN

A COMPARISON OF THE EFFECTIVENESS OF FEEDBACK MODES FOR TEACHING SCIENCE CONCEPTS BY MEANS OF COMPUTER-ASSISTED ADJUNCT AUTO-INSTRUCTION PROGRAM

PENNSYLVANIA STATE UNIVERSITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 023 591 NOT AVAILABLE FROM EDRS

67 170

\*COMPUTER ASSISTED INSTRUCTION, \*COLLEGE SCIENCE, \*GENERAL SCIENCE, \*INSTRUCTION, \*PROGRAMED INSTRUCTION, DOCTORAL THESES, EDUCATIONAL PROGRAMS, 1967

45. SE 005 601 3 10 73 17

GILMAN, DAVID ALAN

A COMPARISON OF SEVERAL FEEDBACK METHODS FOR CORRECTING ERRORS BY COMPUTER-ASSISTED INSTRUCTION (PAPER PRESENTED AT THE AMERICAN PSYCHOLOGICAL ASSOCIATION MEETING, AUGUST 30, 1968, SAN FRANCISCO, CALIFORNIA)

INDIANA STATE UNIVERSITY, TERRE HAUTE

08 00 68 16

\*COMPUTER ASSISTED INSTRUCTION, \*COLLEGE SCIENCE, \*GENERAL SCIENCE, \*INSTRUCTION, \*PROGRAMED INSTRUCTION, COMPUTERS, SCIENTIFIC CONCEPTS, 1968

46. SE 004 854 3 10 81 17

GROOMS, HENRIETTA HILL

PUPIL ACHIEVEMENT AND SOCIAL DEVELOPMENT IN INTERMEDIATE GRADE DEPARTMENTAL AND SELF-CONTAINED CLASSROOMS

UNIVERSITY OF GEORGIA, ATHENS

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 748 NOT AVAILABLE FROM EDRS

67 140

\*ACHIEVEMENT, \*SOCIAL DEVELOPMENT, \*SCHOOL ORGANIZATION, ACHIEVEMENT TESTS, DOCTORAL THESES, ELEMENTARY SCHOOL SCIENCE, LANGUAGE ARTS, MATHEMATICS, SOCIAL STUDIES, SCIENCES, SELF-CONTAINED CLASSROOM, RESEARCH REPORTS, THE METROPOLITAN INTERMEDIATE ACHIEVEMENT TESTS, REAL AND IDEAL SELF-CONCEPT SCALES, MANUFEST ANXIETY SCALE, 1967

47. SE 004 911 3 10 13 17

HALL, THOMAS

SOURCE MATERIALS FOR GENERAL AND HUMAN BIOLOGY WASHINGTON UNIVERSITY, ST. LOUIS, MISSOURI

**EDRS** 

ED 020 913 MF \$0.50 HC \$5.00

05 00 68 98

\*BIOLOGICAL SCIENCES, \*COLLEGE SCIENCE, CASE STUDIES (EDUCATION), \*GENERAL EDUCATION, \*INSTRUCTIONAL MATERIALS, TEACHING METHODS, CYTOLOGY, EVOLUTION, HEREDITY, INSTRUCTION, PHYSIOLOGY, RESEARCH REPORTS, 1968

48. SE 005 128 2

HAUGERUD, ALBERT RALPH

THE DEVELOPMENT OF A CONCEPTUAL FRAMEWORK FOR THE CONSTRUCTION OF A MULTI-MEDIA LEARNING LABORATORY AND ITS UTILIZATION FOR ELEMENTARY SCHOOL SCIENCE

10 51 17

UNIVERSITY OF WASHINGTON

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

66 202

\*AUTOINSTRUCTIONAL PROGRAMS, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*PROGRAMED INSTRUCTION, CONCEPT DEVELOPMENT, DOCTORAL THESES, GRADE 6, PHYSICAL SCIENCES, RESEARCH REPORTS, 1966

49. SE 004 196 1 10 23 10

HEAD, J. THOMAS; RUNQUIST, OLAF

TAPE RECORDERS AID INDIVIDUALIZED INSTRUCTION IN CHEMISTRY

THE SCIENCE TEACHER

02 00 68 2

\*AUDIOVISUAL AIDS, \*COLLEGE SCIENCE, \*CHEMISTRY, \*INDIVIDUALIZED INSTRUCTION, \*INSTRUCTION, \*OVERHEAD PROJECTORS

50. SE 004 908 3 10 31 17

HELGESON, STANLEY L.

THE RELATIONSHIPS BETWEEN CONCEPTS OF FORCE ATTAINED AND MATURITY AS INDICATED BY GRADE LEVELS

UNIVERSITY OF WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER

ED 020 910 MF \$0.25 HC \$2.85

03 00 68 55

\*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, \*PHYSICAL SCIENCES, COGNITIVE PROCESSES, FORCES (PHYSICAL), SCIENTIFIC CONCEPTS, ACADEMIC ACHIEVEMENT, PHYSICS, SCIENCE CONCEPT LEARNING PROJECT, RESEARCH REPORTS

51. SE 004 904 3 10 31 15

HELGESON, STANLEY L.

LESSON PLANS AND TESTS OF KNOWLEDGE, COMPREHENSION, AND APPLICATION FOR INSTRUCTION IN CONCEPTS OF FORCE, GRADES 2-6 UNIVERSITY OF WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER

UNIVERSITY OF WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER EDRS

ED 020 907 MF \$0.25 HC \$2.35

03 00 68 45

\*ELEMENTARY SCHOOL SCIENCE, \*FORCES (PHYSICAL), \*INSTRUCTION, \*PHYSICS, \*TEACHING GUIDES, ACADEMIC ACHIEVEMENT, COGNITIVE PROCESSES, CONCEPT FORMATION, EVALUATION, LEARNING, PHYSICAL SCIENCES, TESTS, RESEARCH REPORTS, SCIENCE CONCEPT LEARNING PROJECT



52. SE 004 395 1 10 33 17

HENKEL, E. THOMAS

UNDERGRADUATE PHYSICS INSTRUCTION AND CRITICAL THINKING ABILITY JOURNAL OF RESEARCH FOR SCIENCE TEACHING

68 6

\*COLLEGE SCIENCE, \*CRITICAL THINKING, \*INSTRUCTION, \*LEARNING, \*PHYSICS, BIBLIOGRAPHIES, RESEARCH REPORTS, UNDERGRADUATE STUDY, PHYSICAL SCIENCE STUDY COMMITTEE, WATSON-GLASER CRITICAL THINKING APPRAISAL, AMERICAN COUNCIL ON EDUCATION

53. SE 005 967 1 10 33 22

IVANY, J. W. GEORGE; PARLETT, MALCOLM R.

THE DIVERGENT LABORATORY

AMERICAN JOURNAL OF PHYSICS

11 00 68

\*COLLEGE SCIENCE, \*INSTRUCTION, \*LABORATORY EXPERIMENTS, \*PHYSICS, LABORATORY PROCEDURES, UNDERGRADUATE STUDY, COMMISSION ON COLLEGE PHYSICS

54. SE 004 028 2 10 22 17

JEFFREY, JACK CASSELL

IDENTIFICATION OF OBJECTIVES OF THE CHEMISTRY LABORATORY AND DEVELOPMENT OF MEANS FOR MEASURING STUDENT ACHIEVEMENT OF SOME OF THESE OBJECTIVES TEXAS UNIVERSITY, AUSTIN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

65 194

\*CHEMISTRY, \*COURSE OBJECTIVES, \*COLLEGE SCIENCE, \*EVALUATION, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, AUDIOVISUAL AIDS, ACHIEVEMENT, DOCTORAL THESES, INDIVIDUAL INSTRUCTION, LABORATORY TECHNIQUES, LABORATORY EXPERIMENTS, RESEARCH REPORTS, SCIENCE COURSE IMPROVEMENT PROJECT, TEACHING METHODS, TESTS, TEACHING TECHNIQUES, CHEMICAL BOND APPROACH PROJECT, CHEMICAL EDUCATION MATERIALS STUDY, 1965

55. SE 004 224 1 10 12 20

JENSEN, LaMONT

A DESCRIPTION OF TEAM TEACHING AT ROY HIGH SCHOOL

THE AMERICAN BIOLOGY TEACHER

02 00 68 5

\*BIOLOGY, \*EDUCATIONAL PROGRAMS, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEAM TEACHING, INSTRUCTIONAL AIDS, PROGRAM DESCRIPTIONS, TEACHING PROCEDURES, BIOLOGICAL SCIENCES CURRICULUM STUDY, ROY HIGH SCHOOL, ROY, UTAH



56. SE 004 317 2 10 72 17

JERKINS, KENNETH FRANCIS AN EXPLORATORY STUDY OF LEARNING AND RETENTION IN GENERAL SCIENCE CLASSES UTILIZING THE MPATI TELECAST COURSE "INVESTIGATING THE WORLD OF SCIENCE" PURDUE UNIVERSITY, LAFAYETTE, INDIANA

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*ACHIEVEMENT, \*AUDIOVISUAL INSTRUCTION, \*GENERAL SCIENCE, \*INSTRUCTION, \*LEARNING, \*RETENTION, \*SECONDARY SCHOOL SCIENCE, \*TELEVISED INSTRUCTION, GRADE 7, GRADE 8, GRADE 9, RESEARCH REPORTS, TEACHER ATTITUDES, VISUAL AIDS, PURDUE UNIVERSITY, 1964

57. SE 004 029 3 10 51 17

JOHNSON, MERVIN LEROY

A DETERMINATION OF AEROSPACE PRINCIPLES DESIRABLE FOR INCLUSION IN FIFTH OR SIXTH GRADE SCIENCE PROGRAMS

COLORADO STATE SCIENCE, GREELEY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 710 NOT AVAILABLE FROM EDRS

66 226

\*AEROSPACE TECHNOLOGY, \*CURRICULUM, \*COURSE CONTENT, \*ELEMENTARY SCHOOL SCIENCE, CURRICULUM DEVELOPMENT, GRADE 5, GRADE 6, INSTRUCTION, RESEARCH REPORTS

58. SE 004 430 1 10 12 17

JUNGWIRTH, E.

TEACHING FOR 'UNDERSTANDING OF SCIENCE"

JOURNAL OF BIOLOGICAL EDUCATION

02 00 68 13

\*ACHIEVEMENT, \*BIOLOGY, \*CURRICULUM, \*SCIENTIFIC ENTERPRISE, \*SECONDARY SCHOOL SCIENCE, EVALUATION, EDUCATIONAL OBJECTIVES, GRADE 9, GRADE 10, RESEARCH REPORTS, SCIENCE CONCEPTS, STUDENT ACHIEVEMENT, TEACHER BACKGROUND, BIOLOGICAL SCIENCES CURRICULUM STUDY, YELLOW VERSION, TEST ON UNDERSTANDING SCIENCE, ISRAEL

59. SE 004 030 3 10 12 17

KELLOUGH, RICHARD D.

AN EXPERIMENT IN THE TEACHING OF BIOLOGY TO SLOW LEARNERS IN HIGH SCHOOL OREGON STATE UNIVERSITY, CORVALLIS

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 711 NOT AVAILABLE FROM EDRS

67 170

\*BIOLOGY, \*INSTRUCTION, \*LEARNING, \*SECONDARY SCHOOL SCIENCE, \*SLOW LEARNERS, ATTITUDES, DOCTORAL THESES, PERCEPTION, STUDENT INTERESTS, SEX DIFFERENCES, SELF CONCEPT, TEACHING METHODS, TEACHING PROCEDURES, RESEARCH REPORTS, CALIFORNIA TEST OF PERSONALITY, NELSON BIOLOGY TEST, 1967 60. SE 004 280 1 10 32 20

KNOOP, LOWELL

HIGH SCHOOL PHYSICS BY AUDIO-TUTORIAL MODE

THE PHYSICS TEACHER

02 00 68 2

\*AUTOINSTRUCTIONAL AIDS, \*INSTRUCTIONAL MATERIALS, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE, AUDIOVISUAL AIDS, AUDIOTAPES, \*CURRICULUM, EDUCATIONAL PROGRAMS, INSTRUCTION, SINGLE CONCEPT FILMS, TEACHING TECHNIQUES, PHYSICAL SCIENCE STUDY COMMITTEE

61. SE 004 032 3 10 12 17

KOCHENDORFER, LEONARD

A COMPARATIVE STUDY OF THE CLASSROOM PRACTICES AND TEACHING RATIONALE OF HIGH SCHOOL BIOLOGY TEACHERS USING DIFFERENT CURRICULUM MATERIALS TEXAS UNIVERSITY, AUSTIN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 020 125 NOT AVAILABLE FROM EDRS

66 104

\*BIOLOGY, \*EVALUATION, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEACHER CHARACTERISTICS, DOCTORAL THESES, TEACHER EVALUATION, BIOLOGICAL SCIENCES CURRICULUM STUDY, BIOLOGY CLASSROOM ACTIVITY CHECKLIST, 1966

62. SE 005 470 1 10 01 17

KOLB, JOHN R.

EFFECTS OF RELATING MATHEMATICS TO SCIENCE INSTRUCTION ON THE ACQUISITION OF QUANTITATIVE SCIENCE BEHAVIORS

JOURNAL OF RESEARCH IN SCIENCE TEACHING

68 9

\*BEHAVIORAL OBJECTIVES, \*COGNITIVE DEVELOPMENT, \*INSTRUCTION, \*ELEMENTARY SCHOOL SCIENCE, \*ELEMENTARY SCHOOL MATHEMATICS, GRADE 5, RESEARCH REPORTS, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, SCIENCE - A PROCESS APPROACH

62. SE 005 577 1 10 12 20

KRAMER, L. M. J.

CHOOSING SYSTEMS OF TEACHING BIOLOGY

BIOLOGY AND HUMAN AFFAIRS

68 9

\*BIOLOGY, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEACHING METHODS, INTERNATIONAL EDUCATION, ENGLAND



10 13 17 3 SE 004 860

KUHN, DAVID JOHN

A STUDY OF VARYING MODES OF TOPICAL PRESENTATION IN ELEMENTARY COLLEGE BIOLOGY TO DETERMINE THE EFFECT OF ADVANCE ORGANIZERS IN KNOWLEDGE ACQUISITION AND RETENTION

PURDUE UNIVERSITY, LAFAYETTE, INDIANA

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

NOT AVAILABLE FROM EDRS ED 021 749

205

67 \*BIOLOGICAL SCIENCES, \*COGNITIVE DEVELOPMENT, \*COLLEGE SCIENCE, COGNITIVE PROCESSES, DOCTORAL THESES, FEMALES, INSTRUCTION, LEARNING, TEACHING TECHNIQUES, RESEARCH REPORTS, PURDUE UNIVERSITY, 1967

10 72-15 SE 005 420 65.

LISTON, ROBERT H.

SENIOR HIGH SCHOOL SCIENCE CURRICULUM GUIDELINES

DUVAL COUNTY BOARD OF PUBLIC INSTRUCTION, JACKSONVILLE, FLORIDA **EDRS** 

HC \$9.75 MF \$0.75 ED 023 604

193 66

\*CURRICULUM DEVELOPMENT, \*COURSE DESCRIPTIONS, \*CURRICULUM GUIDES, \*SECONDARY SCHOOL SCIENCE, BIOLOGY, CHEMISTRY, COURSE OBJECTIVES, COURSE ORGANIZATION, GRADE 10, GRADE 11, GRADE 12, INSTRUCTION, PHYSICS, TEACHING GUIDES, BOARD OF PUBLIC INSTRUCTION, FLORIDA, DUVAL COUNTY, 1966

10 12 29 1 66. SE 004 223

LOZANOFF, PAUL

SPECIALIZED TEACHING - A PROGRESS REPORT

THE AMERICAN BIOLOGY TEACHER

02 00 68

5 \*BIOLOGY, \*EDUCATIONAL PROGRAMS, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, ADVANCED PROGRAMS, COLLEGE PREPARATION, CURRICULUM DEVELOPMENT, PROGRAM DESCRIPTIONS, SCIENCE EQUIPMENT, TEAM TEACHING

10 71 17 3 67. SE 005 641

MacDOUGAIL, MARY ANN

THE TEACHING OF UPPER ELEMENTARY SCHOOL SCIENCE USING PROGRAMED MATERIALS COUPLED WITH STUDENT PERFORMED EXPERIMENTS

UNIVERSITY OF VIRGINIA, CHARLOTTESVILLE

**EDRS** 

HC \$4.55 MF \$0.50 ED 023 613

89 08 00 68

\*ACHIEVEMENT, \*ELEMENTARY SCHOOL SCIENCE, \*INDIVIDUALIZED INSTRUCTION, \*PROGRAMED INSTRUCTION, \*TEACHER EDUCATION, CURRICULUM, GRADE 4, GRADE 5, GRADE 6, INSTRUCTIONAL MATERIALS, INSERVICE EDUCATION, LORGE-THORNDIKE INTELLIGENCE TEST, SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS SCIENCE ACHIEVEMENT TEST

68. SE 005 080 1 10 04 11

MASSEY, NORMAN B.

PATTERNS FOR THE TEACHING OF SCIENCE

MACMILLAN COMPANY OF CANADA LIMITED, TORONTO

**65 257** 

\*INSTRUCTIONAL MATERIALS, \*SCIENCE EDUCATION, \*SCIENCE ACTIVITIES, \*TEACHER EDUCATION, AUDIOVISUAL AIDS, INSTRUCTION, TEACHING TECHNIQUES, TEXTBOOKS, 1965

69. SE 005 146 1 10 86 17

MATHIAS, ORAL BOYD

AN EXAMINATION OF THE EVOLUTION OF THE FIRST TWO LAWS OF THERMODYNAMICS UNIVERSITY OF MISSOURI, KANSAS CITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

62 176

\*DOCTORAL THESES, \*HISTORICAL APPROACH, \*INSTRUCTION, \*PHYSICAL SCIENCES, \*SCIENCE EDUCATION, \*TEACHING METHODS, RESEARCH REPORTS, SCIENCE HISTORY, THERMODYNAMICS, 1962

70. SE 004 034 3 10 23 17

McADA, HARLEEN

A MULTI-MEDIA APPROACH TO CHEMISTRY LABORATORY INSTRUCTION UNIVERSITY OF TEXAS, AUSTIN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 712 NOT AVAILABLE FROM EDRS

66 168

\*CHEMISTRY, \*COLLEGE SCIENCE, \*INSTRUCTION, AUDIOVISUAL AIDS, CRITICAL THINKING, DOCTORAL THESES, LABORATORY TECHNIQUES, LABORATORY EXPERIMENTS, RESEARCH REPORTS, TEACHING TECHNIQUES, TEACHING METHODS, UNDERGRADUATE STUDY, 1966

71. SE 005 693 1 10 33 29

McCORD, WILLIAM M.

LABORATORY ARRANGEMENT IN A NEW PERSPECTIVE

AMERICAN JOURNAL OF PHYSICS

10 00 68 5

\*COLLEGE SCIENCE, \*CURRICULUM DEVELOPMENT, \*PHYSICS, \*SCIENCE LABORATORIES, EDUCATIONAL PROGRAMS, INDIVIDUALIZED INSTRUCTION, JUNIOR COLLEGES, PROGRAM DESCRIPTIONS, SCIENCE FACILITIES

72. SE 004 035 3 10 82 17

McFEE, EVAN EARL

THE RELATIVE MERITS OF TWO METHODOLOGIES OF TEACHING THE METRIC SYSTEM TO SEVENTH GRADE SCIENCE STUDENTS

INDIANA UNIVERSITY, BLOOMINGTON

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 713 NOT AVAILABLE FROM EDRS

**67** 113

\*ACHIEVEMENT, \*INSTRUCTION, \*MATHEMATICS, \*MEASUREMENT, \*SECONDARY SCHOOL SCIENCE, DOCTORAL THESES, GENERAL SCIENCE, GRADE 7, PROBLEM SOLVING, SEX DIFFERENCES, TEACHING TECHNIQUES, TEACHING METHODS, RESEARCH REPORTS, 1967

10 86 17 73. SE 005 153

CHANGES IN THE VERBAL INTERACTION PATTERNS OF SECONDARY SCIENCE STUDENT TEACHERS McLEOD, RICHARD J. WHO HAVE HAD TRAINING IN INTERACTION ANALYSIS AND THE RELATIONSHIP OF THESE CHANGES TO THE VERBAL INTERACTION OF THEIR COOPERATING TEACHERS CORNELL UNIVERSITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*INTERACTION PROCESS ANALYSIS, \*STUDENT TEACHERS, \*SCIENCE TEACHERS, \*TEACHER EDUCATION, DOCTORAL THESES, INSTRUCTION, RESEARCH REPORTS, SECONDARY SCHOOL SCIENCE, VERBAL COMMUNICATIONS

10 15 30 74. SE 004 717

MEYER, DELBERT E.

A TECHNIQUE OF BRINGING LIVING ECOLOGICAL SYSTEMS INTO THE LABORATORY THE AMERICAN BIOLOGY TEACHER

\*BIOLOGY, \*ECOLOGY, \*INSTRUCTION, \*LABORATORY PROCEDURES, \*SCIENCE ACTIVITIES COLLEGE SCIENCE, SECONDARY SCHOOL SCIENCE

10 43 38 75. SE 004 670 MILLER, BARRY B.; FELDMAN, RODNEY M. AN INTEGRATED APPROACH TO TEACHING HISTORICAL GEOLOGY LABORATORIES JOURNAL OF GEOLOGICAL EDUCATION \*COLLEGE SCIENCE, \*GEOLOGY, \*INSTRUCTIONAL MATLRIALS, \*TEACHING PROCEDURES, LABORATORY EXPERIMENTS, MAPS, STUDENT ATTITUDES, KENT STATE UNIVERSITY, OHIO

10 23 17 2 76. SE 004 322

MILNE, JAMES LAWRENCE AN EXPERIMENT IN THE IMPROVEMENT OF INSTRUCTION IN CHEMISTRY 101 AT WASHINGTON STATE COLLEGE

WASHINGTON STATE UNIVERSITY, PULLMAN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*ACHIEVEMENT, \*COLLEGE SCIENCE, \*CHEMISTRY, \*INSTRUCTION, \*PROGRAMED MATERIALS, COGNITIVE PROCESSES, DOCTORAL THESES, PROBLEM SOLVING, RESEARCH REPORTS, UNDERGRADUATE STUDY, WASHINGTON STATE UNIVERSITY, 1965

10 12 17 1 77. SE 005 287 MORRIS, MARTIN L.

BIOLOGY FOR THE GENERAL STUDENT

HIGH POINTS

\*CURRICULUM DEVELOPMENT, \*BIOLOGY, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, ABILITY GROUPING, ATTITUDES, COURSE DESCRIPTIONS, GENERAL EDUCATION, LOW ACHIEVERS, RESEARCH REPORTS



78. SE 005 603 10 13 20 NANNEY, DAVID L.

SOME ISSUES IN BIOLOGY TEACHING

BIOSCIENCE

02 00 68

\*BIOLOGY, \*COURSE CONTENT, \*COLLEGE SCIENCE, \*EDUCATIONAL OBJECTIVES. \*INSTRUCTION, CURRICULUM, EDUCATIONAL CHANGE, INDIVIDUAL DIFFERENCES. COMMITTEE ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES, 1968

79. SE 005 289 1 10 72 17

NASCA, DON

SCIENCE RECALL AND CLOSED CIRCUIT TELEVISION INSTRUCTION JOURNAL OF EDUCATION RESEARCH

10 00 65 4

\*CLOSED CIRCUIT TELEVISION, \*EDUCATIONAL TELEVISION, \*GENERAL SCIENCE, RESEARCH REPORTS, \*INSTRUCTION

80. SE 005 282 1 10 12 29

NATALI, V. F.

BIOLOGY INSTRUCTION - PROBLEMS OF GENETICS IN THE SECONDARY SCHOOL COURSE SOVIET EDUCATION

65 7

\*BIOLOGY, \*CURRICULUM, \*SECONDARY SCHOOL SCIENCE, COURSE DESCRIPTIONS, CELL THEORY, GENETICS, GRADE 9, INTERNATIONAL EDUCATION, RUSSIA

. 10 81 20 81. SE 004 201

NELSON, PEARL A.; KELLEY, GAYLEN B.

SOME COMMON PROBLEMS IN THE USE OF AUDIO-VISUAL MATERIALS SCIENCE EDUCATION

02 00 64 5

\*AUDIOVISUAL MATERIALS, \*BIBLIOGRAPHIES, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, EDUCATIONAL TELEVISION, FILMS, FILMSTRIPS, MATERIALS EVALUATION, TEACHING MACHINES

82. SE 004 668 1 10 11 30

NEUBERGER, HAROLD T.

A CLOSED SYSTEM FOR NATURAL SELECTION

SCIENCE AND CHILDREN

05 00 68

\*EVOLUTION, \*ELEMENTARY SCHOOL SCIENCE, \*SCIF.CE ACTIVITIES, BIOLOGY, INSTRUCTION, RESOURCE MATERIALS, SECONDARY SCHOOL SCIENCE SCIENCE EXPERIMENTS, SCIENCE CURRICULUM IMPROVEMENT STUDY



83. SE 005 921 1 10 86 20

NEWTON, DAVID E.

THE DISHONESTY OF INQUIRY TEACHING

SCHOOL SCIENCE AND MATHEMATICS

12 00 68 4

\*DISCOVERY LEARNING, \*INSTRUCTION, \*INDUCTIVE METHODS, \*SECONDARY SCHOOL SCIENCE, \*TEACHING METHODS, DEDUCTIVE METHODS, ELEMENTARY SCHOOL SCIENCE, EDUCATIONAL OBJECTIVES, INQUIRY SKILLS, INQUIRY TRAINING

4. SE 004 288 2 10 32 17

NOAL, M. F.; WINGET, L.

STAFF UTILIZATION STUDIES HELP UTAH EDUCATORS - THE PHYSICS FILM PROJECT NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS BULLETIN

59 12

\*INSTRUCTION, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE, \*TEACHING METHODS, ACHIEVEMENT, FILMS, RESEARCH REPORTS, HARVEY WHITE PHYSICS FILMS

85. SE 005 552 1 10 85 20

NOVAK, JOSEPH D.

THE ROLE OF CONCEPTS IN SCIENCE TEACHING PURDUE UNIVERSITY, LAFAYETTE, INDIANA REPRINT FROM ANALYSES OF CONCEPT LEARNING PUBLISHED BY ACADEMIC PRESS, INC., NEW YORK, NEW YORK

66 16

\*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, \*SECONDARY SCHOOL SCIENCE, SCIENTIFIC CONCEPTS, BLOOM'S TAXONOMY OF EDUCATIONAL OBJECTIVES - COGNITIVE DOMAIN, PROGRESSIVE EDUCATION ASSOCIATION COMMISSION ON SECONDARY SCHOOL CURRICULUM, INTERNATIONAL ENCYCLOPEDIA OF UNIFIED SCIENCE, 1966

86. SE 004 691 1 10 91 17

O'TOOLE, RAYMOND J.

A REVIEW OF ATTEMPTS TO INDIVIDUALIZE ELEMENTARY SCHOOL SCIENCE SCHOOL SCIENCE AND MATHEMATICS

05 00 68 6

\*INDIVIDUAL INSTRUCTION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*RESEARCH REVIEWS, AUDIOVISUAL AIDS, AUTOINSTRUCTIONAL METHODS, AUTOINSTRUCTIONAL AIDS, MULTIMEDIA INSTRUCTION, SCIENCE MATERIALS, SCIENTIFIC ATTITUDES, SCIENTIFIC CONCEPTS



87. SE 004 037

3

10 91 17

O'TOOLE, RAYMOND JOSEPH

A STUDY TO DETERMINE WHETHER FIFTH GRADE CHILDREN CAN LEARN CERTAIN SELECTED PROBLEM SOLVING ABILITIES THROUGH INDIVIDUALIZED INSTRUCTION COLORADO STATE COLLEGE, GREELEY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 714 NOT AVAILABLE FROM EDRS

> 66 166

\*ACHIEVEMENT, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*INDIVIDUAL INSTRUCTION, DOCTORAL THESES, GRADE 5, GROUP INSTRUCTION, PROBLEM SOLVING, RESEARCH REPORTS, SELF CONCEPT, STUDENT SCIENCE INTERESTS, SCIENCE TEACHERS, SCIENCE COURSE IMPROVEMENT PROJECT, TEACHING METHODS, TEACHING TECHNIQUES, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. SCIENCE - A PROCESS APPROACH, TODAY'S BASIC SCIENCE, STANFORD SCIENCE ACHIEVEMENT TEST, 1966

88. SE 005 646

1

10 12 17

PARAKH, JAL S.

A STUDY OF TEACHER-PUPIL INTERACTION IN HIGH SCHOOL CLASSES, PART II, DESCRIPTION AND ANALYSIS

JOURNAL OF RESEARCH IN SCIENCE TEF THING

68

\*BIOLOGY, \*INTERACTION PROCESS ANALYSIS, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, LEARNING, RESEARCH REPORTS, STUDENT CHARACTERISTICS, STUDENT BEHAVIOR, TEACHER BEHAVIOR, TEACHER CHARACTERISTICS, FLANDERS INTERACTION ANALYSIS SYSTEM, 1967

89. SE 005 713

10 12 20

PEABODY, FRANK R.; WIEGAND, HENRY D.

INITIATING A MICROBIOLOGY PROGRAM IN HIGH SCHOOL BIOLOGY

THE AMERICAN BIOLOGY TEACHER

08 00 68

3 \*CURRICULUM DEVELOPMENT, \*INSTRUCTION, \*LABORATORY EXPERIMENTS, \*MICROBIOLOGY, \*SECONDARY SCHOOL SCIENCE, BIOLOGY, LABORATORY TECHNIQUES, SCIENCE ACTIVITIES, SAFETY

90. SE 005 465

20 01 17

PELLA, MILTON O.; ZIEGLER, ROBERT E.

USE OF MECHANICAL MODELS IN TEACHING THEORETICAL CONCEPTS JOURNAL OF RESEARCH IN SCIENCE TEACHING

\*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*PHYSICAL SCIENCES, GRADE 4, GRADE 5, GRADE 6, KINETIC MOLECULAR THEORY, MODELS, RESEARCH REPORTS, SCIENTIFIC CONCEPTS, TEACHING MODELS, 1967



1 10 11 20

91. SE 005 825 PERKES, V. A.

AN INQUIRY INTO PLANT RESPONSES

3

SCIENCE AND CHILDREN

11 00 68

\*BOTANY, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LABORATORY EXPERIMENTS,

\*SCIENCE ACTIVITIES, BIOLOGY, PAPERS

92. SE 004 038 3 10 23 17

PETRIE, GRACE G.

TEACHING EXPECTED BEHAVIORS OF SCIENCE INQUIRY SKILLS - THE EFFECTIVENESS OF

THE TEACHING APPROACH IN COLLEGE CHEMISTRY

NEW YORK UNIVERSITY, NEW YORK

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 175 NOT AVAILABLE FROM EDRS

67 95

\*CHEMISTRY, \*COLLEGE SCIENCE, \*CRITICAL THINKING, \*INSTRUCTION, \*PROBLEM SOLVING, COGNITIVE DEVELOPMENT, DOCTORAL THESES, TEACHING PROCEDURES, RESEARCH REPORTS, 1967

93. SE 004 039 3 10 91 17

PHILLIPS, DARRELL GORDON

AN INVESTIGATION OF POSSIBLE HIERARCHICAL DEPENDENCY OF FOUR PIAGET-TYPE TASKS UNDER TWO METHODS OF PRESENTATION TO THIRD-, FIFTH-, AND SEVENTH-GRADE CHILDREN FLORIDA STATE UNIVERSITY, TALLAHASSEE

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 022 667 NOT AVAILABLE FROM EDRS

67 63

\*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, DOCTORAL THESES, GRADE 3, GRADE 5, GRADE 7, PROBLEM SOLVING, SEQUENTIAL LEARNING, RESEARCH REPORTS, PIAGET, 1967

94. SE 005 023 2 10 91 15

PILTZ, ALBERT; SUND, ROBERT

CREATIVE TEACHING OF SCIENCE IN THE ELEMENTARY SCHOOL

ALLYN AND BACON, INC., BOSTON, MASSACHUSETTS

68 217

\*CREATIVITY, \*CURRICULUM DEVELOPMENT, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, AUDIOVISUAL AIDS, CREATIVE TEACHING, PROGRAM DESCRIPTIONS, SCIENCE ACTIVITIES, SCIENCE EXPERIMENTS, TEACHING TECHNIQUES, TEACHING METHODS



10 21 15

SE 005 479 95.

RASMUSSEN, FRED A.

MAN'S EFFECT ON THE ENVIRONMENT, INSTRUCTIONAL GUIDE EDUCATIONAL RESEARCH COUNCIL OF AMERICA, CLEVELAND, OHIO

\*BIOLOGICAL SCIENCES, \*CURRICULUM DEVELOPMENT, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*TEACHING GUIDES, CONSERVATION, INSTRUCTIONAL MATERIALS, POLLUTION, SCIENCE ACTIVITIES, SCIENCE COURSE IMPROVEMENT PROJECT, 1968

SE 004 040 96.

10 01 17

RAUN, CHESTER E.

THE INTERACTION BETWEEN CURRICULUM VARIABLES AND SELECTED CLASSROOM STUDENT CHARACTERISTICS

UNIVERSITY OF TEXAS, AUSTIN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

NOT AVAILABLE FROM EDRS ED 022 668

> 67 119

\*CURRICULUM, \*ELEMENTARY SCHOOL SCIENCE, \*INQUIRY TRAINING, \*PROBLEM SOLVING, \*STUDENT CHARACTERISTICS, ACHIEVEMENT, BEHAVIOR, COGNITIVE PROCESSES, DOCTORAL THESES, GRADE 4, GRADE 5, GRADE 6, PREDICTION, RESEARCH REPORTS, SCIENCE COURSE IMPROVEMENT PROJECT, STUDENT BEHAVIOR, SEX DIFFERENCES, STUDENT ATTITUDES, SCIENCE - A PROCESS APPROACH, 1967

SE 005 657 97.

10 81 17

RAUN, CHESTER E.; BUTTS, DAVID P.

THE RELATIONSHIP BETWEEN THE STRATEGIES OF INQUIRY IN SCIENCE AND STUDENT COGNTIVE AND AFFECTIVE BEHAVIORAL CHANGE JOURNAL OF RESEARCH IN SCIENCE TEACHING

\*BEHAVIOR CHANGE, \*COGNITIVE DEVELOPMENT, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, GRADE 4, GRADE 5, GRADE 6, INQUIRY TRAINING, RESEARCH REPORTS, STUDENT ATTITUDES, STEP SCIENCE TEST, TAB SCIENCE TEST, GUILFORD FACTOR-RHYMES TEST, GUILFORD FACTOR-COMMON SITUATIONS TEST, GUILFORD FACTOR-SHORT WORDS TEST, METROPOLITAN ACHIEVEMENT TEST, 1967

SE 005 321 98.

10 81 17

RAUN, CHESTER E.; BUTTS, DAVID P.

THE RELATIONSHIP BETWEEN THE STRATEGIES OF INQUIRY IN SCIENCE AND STUDENT COGNITIVE AND AFFECTIVE BEHAVIORAL CHANGE UNIVERSITY OF TEXAS, AUSTIN, SCIENCE EDUCATION CENTER EDRS

HC \$1.30 MF \$0.25 ED 024 595

66

\*BEHAVIOR CHANGE, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*STUDENT CHARACTERISTICS, ATTITUDES, ACHIEVEMENT, COGNITIVE DEVELOPMENT, DIVERGENT THINKING, GRADE 4, GRADE 5, GRADE 6, INTELLIGENCE, LEARNING, PROBLEM SOLVING, SCIENCE COURSE IMPROVEMENT PROJECT, SCIENCE - A PROCESS APPROACH, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, UNITED STATES OFFICE OF EDUCATION, 1968



10 81 17 SE 005 488

READ. WILLIAM F.

SCIENCE WITH ACADEMICALLY TALENTED SIXTH GRADERS (PAPER PRESENTED AT THE NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING)

LEXINGTON PUBLIC SCHOOLS, MASSACHUSETTS

99.

100.

12

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, \*PROBLEM SOLVING, ABLE STUDENTS, CREATIVITY, GRADE 6, RESEARCH REPORTS, FISKE ELEMENTARY SCHOOL, LEXINGTON, MASSACHUSETTS

SE 004 138

10 81 11

RENNER, JOHN W.; RAGAN, WILLIAM B.

TEACHING SCIENCE IN THE ELEMENTARY SCHOOL

UNIVERSITY OF OKLAHOMA, NORMAN

HARPER AND ROW PUBLISHERS, NEW YORK, NEW YORK

360

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*TEACHER EDUCATION, \*TEACHING TECHNIQUES, CRITICAL THINKING, EVALUATION, INQUIRY TRAINING, INSTRUCTIONAL MATERIALS, SCIENCE ACTIVITIES, TEXTBOOKS, 1968

SE 004 069 101.

2

10 91 17

RICHARDSON, EVAN C.

PROPOSALS FOR IMPROVEMENT OF SCIENCE TEACHING IN NEW JERSEY ELEMENTARY SCHOOLS RUTGERS UNIVERSITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

60

\*CURRICULUM, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*STATE SURVEYS, \*SCIENCE TEACHING, DOCTORAL THESES, EDUCATIONAL OBJECTIVES, PROGRAM PROPOSALS, RESEARCH REPORTS, TEACHER EDUCATION, 1960, NEW JERSEY

102. SE 005 823

1

10 91 29

RIGGSBY, DUTCHIE S.

WOULD YOU BELIEVE? SCIENCE FICTION

SCIENCE AND CHILDREN

11 00 68

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*MOTIVATION, \*READING SKILLS, \*SCIENCE FICTION, GRADE 6, SCIENCE ACTIVITIES

103. SE 005 758

10 81 17

ROOS, ANNE DUNCAN

A CONTENT ANALYSIS OF PUBLISHED AND ORIGINAL VERSE SUITABLE FOR PRIMARY GRADE SCIENCE

TEMPLE UNIVERSITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*POETRY, \*TEACHING PROCEDURES, DOCTORAL THESES, LITERATURE, MOTIVATION, PRIMARY GRADES, 1967



10 23 20 SE 004 702 104. ROSE, RICHARD W.; GROVER, C. WILLIS

DETERMINING IONIC EQUILIBRIA - THE SOLUTION OF PROBLEMS INVOLVING IONIC

EQUILIBRIA IN AQUEOUS SOLUTION

THE SCIENCE TEACHER

04 00 68

\*CHEMISTRY, \*COLLEGE SCIENCE, \*INSTRUCTION, \*PHYSICAL SCIENCES, CALCULATION, EQUILIBRIUM, IONS, PHYSICAL CHEMISTRY

10 11 17 2 105. SE 004 323

RUSH, ORVILLE FINDLEY

THE DEVELOPMENT OF SCIENTIFIC CONCEPTS OF LIVING AND NON-LIVING AMONG

PRESCHOOL CHILDREN

NORTH CAROLINA UNIVERSITY, CHAPEL HILL

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

246

\*BIOLOGY, \*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*LEARNING, DOCTORAL THESES, INSTRUCTION, NURSERY SCHOOLS, PRESCHOOL CHILDREN, RESEARCH REPORTS,

1964, SCIENTIFIC CONCEPTS

10 22 17 SE 005 500 106.

SAMOLIS, ALEXANDER MICHAEL

SUGGESTED IMPROVEMENTS IN THE CONTENT AND METHODOLOGY OF THE TRADITIONAL HIGH SCHOOL CHEMISTRY LABORATORY

DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

07 00 67 \*CURRICULUM DEVELOPMENT, \*CHEMISTRY, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*LABORATORY PROCEDURES, ADMINISTRATION, CURRICULUM PLANNING, COURSE CONTENT, EDUCATIONAL OBJECTIVES, CHEMICAL BOND APPROACH, CHEMICAL EDUCATION MATERIALS STUDY, 1967

10 15 20 1 SE 005 725 107.

SCARPINO, PASQUALE V.

RESPONSIBILITIES OF TEACHERS IN THE MICROBIOLOGY LABORATORY

THE AMERICAN BIOLOGY TEACHER

08 00 68 \*BIOLOGY, \*INSTRUCTION, \*LABORATORY SAFETY, \*MICROBIOLOGY, COLLEGE SCIENCE, LABORATORY TECHNIQUES, PATHOLOGY, RESOURCE MATERIALS, SECONDARY SCHOOL SCIENCE, SCIENCE LABORATORIES

10 85 11 SE 004 161 108.

SCHWAB, JOSEPH J.; BRANDWEIN, PAUL F.

THE TEACHING OF SCIENCE

HARVARD UNIVERSITY PRESS, CAMBRIDGE, MASSACHUSETTS

62 150

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE TEACHING, QUESTIONING TECHNIQUES, TEACHING TECHNIQUES, TEACHING PROCEDURES, THE INGLIS LECTURE, THE BURTON LECTURE



109. SE 005 571 1 10 51 15

SCIENCE CURRICULUM IMPROVEMENT STUDY

RELATIVITY, TEACHER'S GUIDE

SCIENCE CURRICULUM IMPROVEMENT STUDY, BERKELEY, CALIFORNIA

D. C. HEATH AND COMPANY, BOSTON, MASSACHUSETTS

68 88

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTIONAL MATERIALS, \*INSTRUCTION, \*PHYSICAL SCIENCES, \*SCIENCE ACTIVITIES, \*TEACHING GUIDES, RELATIVITY, SCIENCE CURRICULUM IMPROVEMENT STUDY, NATIONAL SCIENCE FOUNDATION, 1968

110. SE 005 172

2

10 73 17

SHELL, WILLIAM B.

THE DIFFERENTIAL EFFECT OF INTERIM TESTING IN THE USE OF AN AUTO-INSTRUCTIONAL PROGRAM IN AN AREA OF GENERAL SCIENCE

UNIVERSITY OF MICROFILMS, ANN ARBOR, MICHIGAN

66 85

\*COLLEGE SCIENCE, \*INSTRUCTION, \*INDIVIDUAL INSTRUCTION, \*PROGRAMED INSTRUCTION, ACHIEVEMENT, CHEMISTRY, DOCTORAL THESES, PHYSICAL SCIENCES, TEACHER EDUCATION, STEP SCIENCE TEST, NELSON-DENNY READING TEST

111. SE 005 817

1

10 12 29

SHUBECK, PAUL P.

THE USE OF SEMINAR REPORTS IN A HIGH SCHOOL BIOLOGY INSTITUTE FOR HIGH SCHOOL STUDENTS

THE AMERICAN BIOLOGY TEACHER

10 00 68

\*BIOLOGY, \*INSTRUCTION, \*PROGRAM DESCRIPTIONS, \*STUDENT SEMINAR, \*SECONDARY SCHOOL SCIENCE, \*ECOLOGY, ENTOMOLOGY, EVOLUTION, GENETICS, PARASITOLOGY, SCIENCE INSTITUTES, PINGRY SCHOOL ECOLOGY INSTITUTE, 1968

112. SE 004 426

1

10 23 20

SILBERMAN, ROBERT; McCONNELL, JAMES

A LABORATORY COURSE FOR ORGANIC CHEMISTRY

JOURNAL OF CHEMICAL EDUCATION

04 00 68

2

\*COLLEGE SCIENCE, \*CHEMISTRY, \*INSTRUCTION, \*ORGANIC CHEMISTRY, COURSE DESCRIPTIONS, COURSE CONTENT, LABORATORY, PHYSICAL SCIENCES, STATE UNIVERSITY OF NEW YORK, CORTLAND

113. SE 005 882

2

10 86 20

SKINNER, B. F.

TEACHING SCIENCE IN HIGH SCHOOL - WHAT IS WRONG? (PRESENTED AT THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE MEETING, DECEMBER, 1967) HARVARD UNIVERSITY, CAMBRIDGE, MASSACHUSETTS

67 11

\*EDUCATIONAL METHODS, \*INSTRUCTION, \*LEARNING, \*PROGRAMED INSTRUCTION, \*SCIENCE EDUCATION, EDUCATIONAL THEORY, EDUCATIONAL RESEARCH, SECONDARY SCHOOL SCIENCE, TEACHER EDUCATION, TEACHER CHARACTERISTICS



10 82 20 114. SE 04 730

TEACHING SCIENCE IN HIGH SCHOOL - WHAT IS WRONG? (PAPER PRESENTED AT THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE MEETING, DECEMBER, 1967)

MF \$0.25 HC \$0.65 ED 020 140

11 \*DISCOVERY LEARNING, \*INSTRUCTION, \*LEARNING, \*PROGRAMED INSTRUCTION, \*REINFORGEMENT, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE EDUCATION, AUDIOVISUAL AIDS, EDUCATIONAL PROBLEMS, SCIENTIFIC MANPOWER, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

10 93 17 1 115. SE 005 595

AN EVALUATION OF THE EFFECTIVENESS OF TELEVISION INSTRUCTION AT MIDWESTERN **UNIVERS ITY** 

JOURNAL OF EDUCATIONAL RESEARCH

\*COLLEGE SCIENCE, \*COLLEGE MATHEMATICS, \*INSTRUCTION, \*MATHEMATICS, \*TELEVISED INSTRUCTION, BOTANY, EVALUATION, RESEARCH REPORTS, MIDWESTERN UNIVERSITY, WICHITA FALLS, TEXAS, 1968

10 91 17 1 116. SE 004 205

A COMPARISON OF TELEVIEWING AND NON-TELEVIEWING CHILDREN'S EXPLANATIONS OF NATURAL PHENOMENA

SCIENCE EDUCATION

\*CHILD DEVELOPMENT, \*ELEMENTARY SCHOOL SCIENCE, \*ENVIRONMENTAL INFLUENCES, \*HOME INFLUENCES, \*INSTRUCTION, \*LEARNING, \*NATURAL PHENOMENA, \*TELEVISION, \*SCIENTIFIC CONCEPTS, COMPARATIVE ANALYSIS, CONCEPT FORMATION, RESEARCH REPORTS, STUDENT CHARACTERISTICS

10 52 17 1 117. SE 005 174

THE EFFECTIVENESS OF A PROCEDURE FOR TEACHING QUANTITATIVE PHYSICAL SCIENCE SMITH, ROY EMERSON IN GRADES SIX THROUGH EIGHT WHICH EMPLOYS A CONCEPT SCHEME INVOLVING DIMENSIONAL DESCRIPTION COUPLED WITH UNIT OPERATOR ANALYSIS (VOLUMES : AND 11) THE OHIO STATE UNIVERSITY, COLUMBUS

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*CURRICULUM DEVELOPMENT, \*INSTRUCTION, \*INSTRUCTIONAL MATERIALS, \*PHYSICAL SCIENCES, \*SECONDARY SCHOOL SCIENCE, DOCTORAL THESES, GRADE 6, GRADE 7, GRADE 8, RESEARCH REPORTS, SCIENCE COURSES



118. SE 005 495 1 10 32 17

SNIDER, RAY M.

A PROJECT TO STUDY THE NATURE OF PHYSICS TEACHING USING THE FLANDERS METHOD OF INTERACTION ANALYSIS (PAPER PRESENTED AT NATIONAL ASSOCIATION FOR RESEARCH IN SCIENCE TEACHING MEETING, FEBRUARY 19, 1966)

NEW YORK STATE UNIVERSITY, NEW PALTZ

02 00 66 25

\*INTERACTION PROCESS ANALYSIS, \*INSTRUCTION, \*PHYSICS, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE TEACHING, RESEARCH REPORTS, NEW YORK STATE REGENTS PHYSICS COURSE, FLANDERS SYSTEM OF INTERACTION ANALYSIS, TEST ON UNDERSTANDING SCIENCE, REGENTS PHYSICS EXAMINATION, EFFECTIVE TEACHING

119. SE 004 044 3 10 01 17

SNOBLE, JOSEPH JERRY

STATUS AND TRENDS OF ELEMENTARY SCHOOL SCIENCE IN IOWA PUBLIC SCHOOLS, 1963-1966 UNIVERSITY OF IOWA, IOWA CITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 717 NOT AVAILABLE FROM EDRS

67 311

\*CURRICULUM, \*CURRICULUM EVALUATION, DOCTORAL THESES, ELEMENTARY SCHOOL SCIENCE, ELEMENTARY SCHOOL TEACHERS, INSTRUCTION, INSTRUCTIONAL MATERIALS, PROGRAM EVALUATION, SCHOOL SURVEYS, SCIENCE FACILITIES, RESEARCH REPORTS, IOWA, 1963, 1964, 1965, 1966

SE 005 376 1 10 33 17

SNOW, RICHARD E.; AND OTHERS

INDIVIDUAL DIFFERENCES AND INSTRUCTIONAL FILM EFFECTS

JOURNAL OF EDUCATIONAL PSYCHOLOGY

65 11

\*ATTITUDES, \*COLLEGE SCIENCE, \*INDIVIDUAL DIFFERENCES, \*INSTRUCTION, \*PHYSICS, AUDIOVISUAL AIDS, INSTRUCTIONAL FILMS, RESEARCH REPORTS, SCIENTIFIC ATTITUDES

121. SE 004 910 3 10 11 17

STAUSS, NYLES G.

AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN CONCEPT ATTAINMENT AND LEVEL

UNIVERSITY OF WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER EDRS

ED 020 192 MF \$0.50 HC \$3.95

02 00 68 77

\*CELL THEORY, \*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, ACADEMIC AHIEVEMENT, BIOLOGICAL SCIENCES, CURRICULUM PLANNING, COGNITIVE TESTS, RESEARCH REPORTS, SCIENTIFIC CONCEPTS, SCIENCE CONCEPT LEARNING PROJECT



120.

10 11 17 2 122. SE 004 078

AN INVESTIGATION INTO THE RELATIONSHIP BETWEEN CONCEPT ATTAINMENT AND LEVEL OF MATURITY

UNIVERSITY OF WISCONSIN, MADISON

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*ACHIEVEMENT, \*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, ACHIEVEMENT TESTS, BIOLOGY, COGNITIVE DEVELOPMENT, DOCTORAL THESES, INSTRUCTIONAL MATERIALS, MATURATION, MULTIPLE CHOICE TESTS, RESEARCH REPORTS, TEXTBOOK CONTENT, TESTS, 1967

1.0 91 17 SE 004 071 123.

A STUDY OF THE EFFECTIVENESS OF TWO METHODS OF TEACHING SCIENCE IN GRADES FOUR, FIVE, AND SIX

BOSTON UNIVERSITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*ACHIEVEMENT, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*TEACHING METHODS, DEMONSTRATIONS, INSERVICE EDUCATION, LECTURE, LABORATORIES, STUDENT ATTITUDES, STUDENT INTEREST, TEACHER EDUCATION

10 18 29 1 124. SE 004 891

THE DEVELOPMENTAL APPROACH OF PLACET AND ITS IMPLICATIONS FOR SCIENCE IN THE STENDLER. CELIA ELEMENTARY SCHOOLS

THE MACMILLAN COMPANY, NEW YORK, NEW YORK

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, \*SCIENCE EDUCATION, CONCEPT DEVELOPMENT, COGNITIVE PROCESSES, CURRICULUM PLANNING, PROBLEM SOLVING, PLAGET

10 13 17 2 125. SE 005 999

A DETERMINATION OF THE EFFECTIVENESS OF THE CRITICAL ANALYSIS OF SCIENTIFIC AMERICAN PAPERS IN BIOLOGICAL SCIENCE AT THE COLLEGE LEVEL NEW YORK UNIVERSITY, NEW YORK

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*ACADEMIC ACHIEVEMENT, \*BIOLOGY, \*COLLEGE SCIENCE, \*INSTRUCTION, \*INSTRUCTIONAL MATERIALS, CRITICAL THINKING, DOCTORAL THESES, REFERENCE MATERIALS, RESEARCH REPORTS, STUDENT SCIENCE INTERESTS, SCIENTIFIC AMERICAN, NELSON BIOLOGY TEST, WATSON-GLASER CRITICAL THINKING APPRAISAL, KUDER PREFERENCE RECORD, 1968



126. SE 005 177 1 10 86 17

STROM, WILLIAM DEAN

A COMPARISON OF TEACHING METHODS OF ANIMAL SCIENCE TO OLDER 4-H CLUB BOYS AND GIRLS

OKLAHOMA STATE UNIVERSITY, STILLWATER

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

66 81

\*AFTER SCHOOL ACTIVITIES, \*ANIMAL SCIENCE, \*INSTRUCTION, SCIENCE ACTIVITIES, \*YOUTH CLUBS, AGRICULTURAL EDUCATION, PROGRAM EVALUATION, SCIENCE EDUCATION, STUDENT PROJECTS, TEACHING METHODS, 4-H CLUBS

127. SE 004 013 2 10 25 20

STRONG, LAURENCE E.

PROVOCATIVE OPINION

JOURNAL OF CHEMICAL EDUCATION

3

01 00 68

128.

\*CHEMISTRY, \*COLLEGE SCIENCE, \*INSTRUCTION, \*SCIENTIFIC CONCEPTS, \*SECONDARY SCHOOL SCIENCE, ATOMIC STRUCTURE, LEARNING, MOLECULES

SE 004 048 3 10 33 17

STROPE, MARVIN BERNARD

A COMPARISON OF FACTUAL AND CONCEPTUAL TEACHING IN INTRODUCTORY COLLEGE ASTRONOMY

UTAH STATE UNIVERSITY, LOGAN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 718 NOT AVAILABLE FROM EDRS

66 81

\*ASTRONOMY, \*COLLEGE SCIENCE, \*CONCEPT FORMATION, \*INSTRUCTION, \*TEACHING PROCEDURES, DOCTORAL THESES, PHYSICAL SCIENCES, SCIENTIFIC CONCEPTS, STUDENT ATTITUDES, SEX DIFFERENCES, TEACHING METHODS, TEST ON UNDERSTANDING SCIENCE, TEST ON ASTRONOMY FACTS, TEST ON ASTRONOMY CONCEPTS, RESEARCH REPORTS, 1966

15

129. SE 005 077 2 10 01 15

SUND, ROBERT B.; AND OTHERS

ELEMENTARY SCIENCE TEACHING ACTIVITIES, A DISCOVERY LABORATORY APPROACH CHARLES E. MERRILL BOOKS, INC., COLUMBUS, OHIO

67 191

\*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTIONAL MATERIALS, \*TEACHING PROCEDURES, BIOLOGICAL SCIENCES, COGNITIVE DEVELOPMENT, DISCOVERY LEARNING, INSERVICE TEACHER EDUCATION, PHYSICAL SCIENCES, SCIENCE EXPERIMENTS, TEACHING METHODS, TEACHING TECHNIQUES

10 71 17 1 130. SE 005 178

SWAN, MALCOLM D.

AN EXPLORATORY STUDY OF SCIENCE ACHIEVEMENT AS IT RELATES TO SCIENCE CURRICULA AND PROGRAMS AT THE SIXTH-GRADE LEVEL IN MONTANA PUBLIC SCHOOLS UNIVERSITY OF MONTANA, MISSOULA

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*ACHIEVEMENT, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, ATTITUDES, GRADE 6, PROGRAM DESCRIPTIONS, RESEARCH REPORTS, TEACHING TECHNIQUES, TEACHER ATTITUDES, MONTANA, METROPOLITAN ADVANCED SCIENCE TEST, 1965

10 61 15 SE 005 323 131.

TAYLOR, PAUL H.; AND OTHERS

SCIENCE GRADE K-6

NORTH CAROLINA STATE DEPARTMENT OF PUBLIC INSTRUCTION, RALEIGH EDRS

MF \$1.00 HC \$10.25 ED 022 708

03 00 68

\*CURRICULUM ( . . S, \*ELEMENTARY SCHOOL SCIENCE, \*PROGRAM DESCRIPTIONS, \*TEACHING GUIDES, CONCEPTUAL SCHEMES, SCIENCE ACTIVITIES, TEACHING TECHNIQUES, TEACHING PROCEDURES

10 12 17 2 SE 004 076 132.

TRIEZENBERG, HENRY J.

THE RELATIVE EFFECTIVENESS OF THREE LEVELS OF ABSTRACTION REPRESENTING THE CONCEPTUAL SCHEME OF EQUILIBRIUM AS AN ADVANCE ORGANIZER IN TEACHING UNIVERSITY OF WISCONSIN, MADISON

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

67

\*CONCEPT FORMATION, \*ECOLOGY, \*GRADE 7, \*GRADE 9, \*INSTRUCTION, \*LEARNING, \*SECONDARY SCHOOL SCIENCE, \*SCIENTIFIC CONCEPTS, \*TEACHING METHODS, BIOLOGICAL SCIENCES, DOCTORAL THESES, RESEARCH REPORTS, STUDENT ATTITUDES, TELEVISED INSTRUCTION, 1967

10 12 17 133. SE 004 907

TRIEZENBERG, HENRY J.

THE USE OF AN ADVANCE ORGANIZER IN TEACHING SELECTED CONCEPTS OF ECOLOGICAL

UNIVERSITY OF WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER **EDRS** 

MF \$0.25 HC \$2.65 ED 020 909

51 02 00 68

\*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, ACADEMIC ACHIEVEMENT, BIOLOGICAL SCIENCES, COGNITIVE DEVELOPMENT, COMPARATIVE ANALYSIS, ECOLOGY, GRADE 7, GRADE 9, RETENTION, TELEVISED INSTRUCTION, TEACHING TECHNIQUES, SCIENCE CONCEPT LEARNING PROJECT

134. SE 005 652 1 10 22 17

TRINKLEIN, LLOYD A.

COMPARATIVE EFFECTIVENESS OF SHOWING EXCERPTS AND FULL LENGTH FILM IN CHEMISTRY JOURNAL OF RESEARCH IN SCIENCE TEACHING

68 4

\*ACADEMIC ACHIEVEMENT, \*CHEMISTRY, \*FILMS, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, RESEARCH REPORTS, CHEMICAL EDUCATION MATERIALS STUDY, BROMINE-ELEMENT FROM THE SEA, 1967

135. SE 005 991

1

10 12 17

TROOST, CORNELIUS J.

AN ANALYSIS OF FACTORS INFLUENCING THE TEACHING OF EVOLUTION IN THE SECONDARY SCHOOLS OF INDIANA

INDIANA UNIVERSITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

66 141

\*BIOLOGY, \*COURSE CONTENT, \*EVOLUTION, \*SECONDARY SCHOOL SCIENCE, DOCTORAL THESES, CONTENT SELECTION, RESEARCH REPORTS, SURVEYS, INDIANA

136. SE 004 387

1

10 21 17

TROOST, CORNELIUS J.

TEACHING OF EVOLUTION IN THE SECONDARY SCHOOLS OF INDIANA JOURNAL OF RESEARCH IN SCIENCE TEACHING

68

3

\*EVOLUTION, \*SECONDARY SCHOOL SCIENCE, \*STATE SURVEYS, BIOLOGY, COURSE CONTENT, INSTRUCTION, RESEARCH REPORTS, INDIANA, 1966

137. SE 005 526

1

10 83 29

VAROSS IEAU

THE USE OF CLOSED-CIRCUIT TELEVISION AND SCIENTIFIC FILMS FOR UNIVERSITY TEACHING IN THE NETHERLANDS

IMPACT OF SCIENCE ON SOCIETY

12

68

\*CLOSED CIRCUIT TELEVISION, \*COLLEGE SCIENCE, \*FOREIGN COUNTRIES, \*FILMS, \*INSTRUCTION, EDUCATIONAL TELEVISION, HIGHER EDUCATION, PROGRAM DESCRIPTIONS, RESEARCH OPPORTUNITIES, 1968, NETHERLANDS, INTERNATIONAL SCIENTIFIC FILM ASSOCIATION

138. SE 004 906

3

10 21 17

VOELKER, ALAN M.

THE RELATIVE EFFECTIVENESS OF TWO METHODS OF INSTRUCTION IN TEACHING THE CLASSIFICATIONAL CONCEPTS OF PHYSICAL AND CHEMICAL CHANGE TO ELEMENTARY SCHOOL CHILDREN

UNIVERSITY OF WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER EDRS

ED 020 908 MF \$0.25 HC \$2.35

02 00 68 45

\*CHEMISTRY, \*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, CHEMISTRY, CONCEPT TEACHING, COGNITIVE DEVELOPMENT, RESEARCH REPORTS, SCIENCE CONEPT, LEARNING PROJECT, TEACHING TECHNIQUES

10 32 17 1 139. SE 005 992

VOGEL, RICHARD FRANK

AN ANALYSIS OF THE COMPARATIVE EFFECTIVENESS OF COMMON METHODS USED IN TEACHING ELECTRICITY ON THE JUNIOR HIGH SCHOOL LEVEL

TEXAS A & M UNIVERSITY

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

68

\*INSTRUCTION, \*INDUSTRIAL ARTS, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE ACTIVITIES, COURSE EVALUATION, CURRICULUM DEVELOPMENT, DOCTORAL THESES, ELECTRICITY, GENERAL SCIENCE, PHYSICS, RESEARCH REPORTS, TEACHING METHODS, TEACHING PROCEDURES

10 72 17 3 140. SE 005 183

WACHS, STANLEY RICHARD

AN EVALUATION OF A METHOD OF STUDY OF SCIENCE SOURCE PAPERS BY JUNIOR HIGH SCHOOL STUDENTS AS A MEANS OF DEVELOPING THEIR UNDERSTANDING OF THE NATURE OF SCIENCE AND SCIENTISTS

NEW YORK UNIVERSITY, NEW YORK

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

NOT AVAILABLE FROM EDRS ED 025 418

66

\*ACADEMIC ACHIEVEMENT, \*GENERAL SCIENCE, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, \*SCIENTIFIC ENTERPRISE, DOCTORAL THESES, GRADE 7, SCIENTIFIC ATTITUDES, TEST ON UNDERSTANDING SCIENCE

10 22 22 141. SE 005 690

WALTON, GEORGE

A SMALL PROJECT RESEARCH PROPOSAL IN SECONDARY SCHOOL SCIENCE EDUCATION WESTERN NEW MEXICO UNIVERSITY, SILVER CITY

MF \$1.50 HC \$19.65 ED 023 614

391 08 00 68

\*CHEMISTRY, \*CURRICULUM DEVELOPMENT, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, ACHIEVEMENT, COURSE DESCRIPTIONS, LOW ACHIEVERS, SCIENCE COURSES, RESEARCH REPORTS, NEW MEXICO

10 92 38 1 142. SE 004 701

WEAVER, ELBERT C.

ENVIRONMENTAL POLLUTION EXPERIMENTS

THE SCIENCE TEACHER

4 04 00 68

\*INSTRUCTIONAL MATERIALS, \*LABORATORY EXPERIMENTS, \*POLLUTION, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE ACTIVITIES, ATMOSPHERIC SCIENCE, CHEMISTRY, LABORATORY PROCEDURES, PUBLIC HEALTH



SE 004 394 1 10 52 17

WELLIVER, PAUL W.

143.

145.

TELEVISION INSTRUCTION AND THE ATTAINMENT OF OBJECTIVES FOR A NINTH GRADE PHYSICAL SCIENCE COURSE

JOURNAL OF RESEARCH IN SCIENCE TEACHING

68 8

\*EDUCATIONAL OBJECTIVES, \*EDUCATIONAL TELEVISION, \*INSTRUCTION, \*PHYSICAL SCIENCES, \*SECONDARY SCHOOL SCIENCE, EDUCATIONAL RESEARCH, GRADE 9, PROBLEM SOLVING, RESEARCH METHODOLOGY, RESEARCH REPORTS, SOCIOECONOMIC INFLUENCES, TEACHING TECHNIQUES, SCIENCE COURSES, TELEVISION, NORTH CAROLINA, TEST ON UNDERSTANDING SCIENCE, SEQUENTIAL TEST OF EDUCATIONAL PROGRESS, THURSTONE INTEREST INVENTORY, 1965

144. SE 004 052 3 10 72 17

WILLIAMS, CHARLES FENTON

A NEW APPROACH FOR TEACHING THE HISTORY AND DEVELOPMENT OF SCIENTIFIC CONCEPTS IN JUNIOR HIGH SCHOOL SCIENCE

UNIVERSITY OF TEXAS, AUSTIN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 720 NOT AVAILABLE FROM EDRS

67 130

\*ATTITUDES, \*SECONDARY SCHOOL SCIENCE, \*SCIENCE HISTORY, \*SCIENTIFIC CONCEPTS, ATTITUDE TESTS, CONCEPT FORMATION, DOCTORAL THESES, GENERAL SCIENCE, GRADE 8, PHYSIOLOGY, STUDENT INTERESTS, STUDENT ATTITUDES, TEACHING METHODS, TEACHING PROCEDURES, RESEARCH REPORTS, 1967

SE 004 053 3 10 91 17

WILSON, JOHN HAROLD

DIFFERENCES BETWEEN THE INQUIRY-DISCOVERY AND THE TRADITIONAL APPROACHES TO TEACHING SCIENCE IN ELEMENTARY SCHOOLS

UNIVERSITY OF OKLAHOMA, NORMAN

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

ED 021 721 NOT AVAILABLE FROM EDRS

67 101

\*CURRICULUM DEVELOPMENT, \*ELEMENTARY SCHOOL TEACHER, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*TEACHER EDUCATION, COGNITIVE DEVELOPMENT, CRITICAL THINKING, INQUIRY TRAINING, INSERVICE TEACHER EDUCATION, QUESTIONING TECHNIQUES, SCIENCE COURSE IMPROVEMENT PROJECT, TEACHER CHARACTERISTICS, TEACHING METHODS, TEACHING PROCEDURES, RESEARCH REPORTS, SCIENCE CURRICULUM IMPROVEMENT STUDY, 1967

146. SE 004 765 1 10 93 17

WING, RICHARD L.

SIMULATION AS A METHOD OF INSTRUCTION IN SCIENCE EDUCATION

THE SCIENCE TEACHER

05 00 68 2

\*COMPUTERS, \*COLLEGE SCIENCE, \*INSTRUCTION, \*SIMULATION, \*SECONDARY SCHOOL SCIENCE, BIOLOGY, CHEMISTRY, PHYSICS, SAGE

10 52 17 1 147. SE 005 886

YAGER, ROBERT E. CRITICAL THINKING AND REFERENCE MATERIALS IN THE PHYSICAL SCIENCE CLASSROOM

SCHOOL SCIENCE AND MATHEMATICS

\*ACHIEVEMENT, \*CRITICAL THINKING, \*INSTRUCTIONAL MATERIALS, \*MULTIMEDIA INSTRUCTION, \*PHYSICAL SCIENCES, \*SECONDARY SCHOOL SCIENCE, CHEMISTRY, COMPARATIVE ANALYSIS, PHYSICS, RESEARCH REPORTS, SCIENTIFIC ENTERPRISE, PROUSE SUBJECT PREFERENCE SURVEY, WATSON-GLASER CRITICAL THINKING APPRAISAL, TEST ON UNDERSTANDING SCIENCE

10 95 20 1 148. SE 005 668

YOUDEN, W. J.

CHANCE, UNCERTAINTY, AND TRUTH IN SCIENCE

THE SCIENCE TEACHER

11 00 68

\*DATA ANALYSIS, \*INSTRUCTION, \*SCIENCE EXPERIMENTS, \*STATISTICS, ESSAYS, MATHEMATICS, RESEARCH DESIGN

10 81 17 1 149. SE 004 326

ZEPP, GEORGE DANIEL

THE IMPROVEMENT OF READING AND READING STUDY SKILLS IN GRADES SEVEN AND EIGHT THROUGH ENGLISH, HISTORY, GEOGRAPHY, AND SCIENCE

MARYLAND UNIVERSITY, COLLEGE PARK

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

\*INSTRUCTION, \*READING INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, ACHIEVEMENT, CURRICULUM DEVELOPMENT, DOCTORAL THESES, ENGLISH, GRADE 7, GRADE 8, GEOGRAPHY, HISTORY, INSERVICE TEACHER EDUCATION, RESEARCH REPORTS, READING SKILLS, READING IMPROVEMENT, TEACHING TECHNIQUES, TEACHER EDUCATION, 1963

10 21 17 150. SE 004 054

ZIEGLER, ROBERT E.

THE RELATIVE EFFECTIVENESS OF THE USE OF STATIC AND DYNAMIC MECHANICAL MODELS IN TEACHING ELEMENTARY SCHOOL CHILDREN THE THEORETICAL CONCEPT - THE PARTICLE NATURE OF MATTER

UNIVERSITY OF WISCONSIN, MADISON

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

**EDRS** 

NOT AVAILABLE FROM EDRS ED 022 670

> 145 67

\*CONCEPT FORMATION, \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*LEARNING, \*PHYSICAL SCIENCES, COGNITIVE DEVELOPMENT, DOCTORAL THESES, INDIVIDUAL INSTRUCTION, MATTER, PROBLEM SOLVING, SCIENTIFIC CONCEPTS, TEACHING METHODS, RESEARCH REPORTS, PIAGET



151. SE 005 658 1 10 53 17

ZINGARO, JOSEPH S.; COLLETTE, ALFRED T.
A STATISTICA: COMPARISON BETWEEN INDUCTIVE AND TRADITIONAL LABORATORIES IN COLLEGE PHYSICAL SCIENCE

JOURNAL OF RESEARCH IN SCIENCE TEACHING

68 7

\*COLLEGE SCIENCE, \*CRITICAL THINKING, \*INSTRUCTION, \*PHYSICAL SCIENCES, INDUCTIVE METHODS, LABORATORY TECHNIQUES, LABORATORY PROCEDURES, RESEARCH REPORTS, SCIENTIFIC CONCEPTS, WATSON-GLASER CRITICAL THINKING APPRAISAL, TEST ON UNDERSTAND SCIENCE, 1967

152. SE 004 005 1 10 23 02 EDITORIALLY SPEAKING - THE HERESY OF BELIEF JOURNAL OF CHEMICAL EDUCATION

01 00 68 1

\*COLLEGE SCIENCE, \*CHEMISTRY, \*ESSAYS, \*EDITORIAL, \*INSTRUCTION, \*SCIENTIFIC CONCEPTS, MODELS

- 1 10 33 06
  PROCEEDINGS OF THE AMERICAN ASSOCIATION OF PHYSICS TEACHERS. SUMMER MEETING AT
  THE UNIVERSITY OF WISCONSIN, MADISON, WISCONSIN, 18-20, JUNE, 1964
  AMERICAN JOURNAL OF PHYSICS
  01 00 65 6
  \*COLLEGE SCIENCE, \*CONFERENCE PROCEEDINGS, \*PHYSICS, \*PROFESSIONAL ASSOCIATIONS,
  CURRICULUM, EDUCATIONAL PROGRAMS, GENERAL EDUCATION, INSTRUCTION, PHYSICAL
  SCIENCES, SCIENCE LABORATORIES, SCIENCE EQUIPMENT, AMERICAN ASSOCIATION OF
  PHYSICS TEACHERS, 1964
- 1 10 42 38
  A SIMPLE AND EFFICIENT WAY TO TEACH SPECTROSCOPY
  JOURNAL OF GEOLOGICAL EDUCATION
  04 00 68 3
  \*EARTH SCIENCE, \*INSTRUCTION, \*LABORATORY EXPERIMENTS, \*SPECTROSCOPY, \*SCIENCE EQUIPMENT, ASTRONOMY, CHEMISTRY, GEOLOGY, SECONDARY SCHOOL SCIENCE, SCIENCE ACTIVITIES
- 1.55. SE 004 204 1 10 51 17
  TEACHING FOURTH GRADE SCIENCE BY MEANS OF PROGRAMMED SCIENCE MATERIALS WITH LABORATORY EXPERIENCES
  SCIENCE EDUCATION
  02 00 64 13
  \*ELEMENTARY SCHOOL SCIENCE, \*INSTRUCTION, \*PROGRAMED INSTRUCTION, \*TEACHING PROCEDURES, ACADEMIC ACHIEVEMENT, COMPARATIVE ANALYSIS, GRADE 4, PROGRAMED

MATERIALS, PHYSICAL SCIENCES, RESEARCH REPORTS, 1964

## B. MATHEMATICS EDUCATION

1. SE 005 195 3 10 09 17

BASSLER, OTTO C.

COMPARISON OF TWO TEACHING TECHNIQUES IN ELEMENTARY SCHOOL MATHEMATICS
GEORGE PEABODY COLLEGE FOR TEACHERS, NASHVILLE, TENNESSEE

EDRS
ED 023 595 MF \$0.25 HC \$2.75
07 00 68 53

\*ARITHMETIC, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*MATHEMATICS,
\*PROGRAMED INSTRUCTION, COMPARATIVE ANALYSIS, FUNDAMENTAL CONCEPTS, GRADE 4,
GRADE 6, GRADE 8, TEACHING PROCEDURES, 1960

2. SE 004 844

BEAMISH, ERIC EDWARD

A SHORT STUDY FILM FOR TEACHING THE SOLUTION OF SIMPLE PROBLEMS IN

MULTIPLICATION USING THE C AND D SCALES OF THE SLIDE RULE

COLUMBIA UNIVERSITY, NEW YORK, NEW YORK

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

EDRS

ED 025 407

NOT AVAILABLE FROM EDRS

67

140

\*INSTRUCTIONAL FILMS, \*INSTRUCTIONAL MATERIALS, \*MATHEMATICS, INSTRUCTION, MULTIPLICATION, SINGLE CONCEPT FILMS

- 3. SE 005 682 1 10 09 31

  BEBERMAN, MAX

  IMPROVING HIGH SCHOOL MATHEMATICS TEACHING

  EDUCATIONAL LEADERSHIP

  12 00 59 6

  \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, ALGEBRA, CURRICULUM,

  GRADE 9, UNIVERSITY OF ILLINOIS COMMITTEE ON SCHOOL MATHEMATICS
- 4. SE 005 685 1 10 09 15

  BRAUNFELD, PETER; AND OTHERS
  A NEW UICSM APPROACH TO FRACTIONS FOR THE JUNIOR HIGH SCHOOL
  THE MATHEMATICS TEACHER
  03 00 67 7
  \*FRACTIONS, \*INSTRUCTION, \*MATHEMATICS, \*MATHEMATICAL MODELS, \*SECONDARY SCHOOL
  MATHEMATICS, ARITHMETIC, GRÂDE 7, UNIVERSITY OF ILLINOIS COMMITTEE ON SCHOOL
  MATHEMATICS



5. SE 005 686 1 10 09 15

BRAUNFELD, PETER; WOLFE, MARTIN

FRACTIONS FOR LOW ACHIEVERS

THE ARITHMETIC TEACHER

12 00 66

\*ARITHMETIC, \*FRACTIONS, \*INSTRUCTION, \*LOW ACHIEVERS, \*MATHEMATICS, \*SECONDAR, SCHOOL MATHEMATICS, GRADE 7, GRADE 8

6. SE 005 687 1 10 09 17

BROWN, O. ROBERT

USING A PROGRAMMED TEXT TO PROVIDE AN EFFICIENT AND THOROUGH TREATMENT OF SOLID GEOMETRY UNDER FLEXIBLE CLASSROOM PROCEDURES

THE MATHEMATICS TEACHER

05 00 67 12

\*ACHIEVEMENT, \*INSTRUCTION, \*MATHEMATICS, \*PROGRAMED INSTRUCTION, \*SECONDARY SCHOOL MATHEMATICS, \*SOLID GEOMETRY, RESEARCH REPORTS, UNIVERSITY OF ILLINOIS COMMITTEE ON SCHOOL MATHEMATICS, 1967

7. SE 005 193 3 10 09 17

BROWNELL, WILLIAM A.; AND GTHERS

ARITHMETICAL COMPUTATION - COMPETENCE AFTER THREE YEARS OF LEARNING UNDER DIFFERING INSTRUCTIONAL PROGRAMS

UNIVERSITY OF CALIFORNIA AT BERKELEY

**EDRS** 

ED 022 703 MF \$1.00 HC \$12.85

06 00 68 255

\*ARITHMETIC, \*COMPARATIVE ANALYSIS, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, ACHIEVEMENT, LEARNING, MATHEMATICS, TEACHING TECHNIQUES, RESEARCH REPORTS, SCOTLAND

8. SE 005 515 1 10 09 31

CHIBA, SISTER MARY GERTRUDE

THE USE OF VECTORS IN TEACHING GEOMETRY AT THE TWELFTH GRADE LEVEL DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

**12** 00 **6**6 2

\*GEOMETRY, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, \*TEACHING PROCEDURES, COURSE CONTENT, CURRICULUM, CURRICULUM DEVELOPMENT, GRADE 12

9. SE 005 918 1 10 09 17

DART, THOMAS M.; HICKS, RANDALL C.

TOPIC SEQUENCING IN A COLLEGE MATHEMATICS COURSE FOR NON-SCIENTIFIC MAJORS SCHOOL SCIENCE AND MATHEMATICS

12 00 68 4

\*ACADEMIC ACHIEVEMENT, \*COLLEGE MATHEMATICS, \*INSTRUCTION, \*MATHEMATICS, ACHIEVEMENT, COURSE CONTENT, CURRICULUM, GENERAL EDUCATION, SEQUENTIAL APPROACH



10. SE 004 622

HAGAN, ANASTASIA M. AN ANALYSIS OF THE RELATIONSHIP OF SCHEDULED CLASS TIME AND ACHIEVEMENT UNDER TWO METHODS OF INSTRUCTION

ARLINGTON HIGH SCHOOL, PENNSYLVANIA

J6 00 67

\*ACHIEVEMENT, \*INSTRUCTION, \*PROGRAMED INSTRUCTION, \*SECONDARY SCHOOL MATHEMATICS, ACADEMIC ACHIEVEMENT, ALGEBRA, COMPARATIVE ANALYSIS, GRADE 9, INDEPENDENT STUDY, MATHEMATICS, PROGRAMED MATERIALS, RESEARCH REPORTS

10 09 20

11. SE 005 670

HENDRIX, GERTRUDE

LEARNING BY DISCOVERY THE MATHEMATICS TEACHER

05 00 61

\*CLASSROOM TECHNIQUES, \*DISCOVERY PROCESSES, \*INSTRUCTION, \*MATHEMATICS, \*MATHEMATICS EDUCATION, \*TEACHING TECHNIQUES, DISCOVERY LEARNING, LEARNING **PROCESSES** 

10 09 20 1 12. SE 005 671

1

HENDRIX, GERTRUDE

THE PSYCHOLOGICAL APPEAL OF DEDUCTIVE PROOF

THE MATHEMATICS TEACHER

11 00 61

\*DEDUCTIVE METHODS, \*INSTRUCTION, \*LEARNING, \*MATHEMATICS, GEOMETRY, LEARNING PROCESSES, TEACHING PROCEDURES

10 09 20 1 SE 005 672 13.

HENDRIX, GERTRUDE

VARIABLE PARADOX - A DIALOG IN ONE ACT

SCHOOL SCIENCE AND MATHEMATICS

\*ALGEBRA, "INSTRUCTION, \*MATHEMATICS, \*STUDENT PARTICIPATION, \*TEACHING PROCEDURES

10 09 17 1 14. SE 005 517

HERSCHL, JOSEPH R. THE ACADEMIC EFFECTIVENESS OF THE OVERHEAD PROJECTOR AS A TEACHING DEVICE IN ALGEBRA I AT ANDREW W. MELLON JUNIOR HIGH SCHOOL, MOUNT LEBANON, PENNSYLVANIA DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

07 00 67 \*AUDIOVISUAL AIDS, \*ALGEBRA, \*ACHIEVEMENT, \*MATHEMATTCS, \*SECONDARY SCHOOL MATHEMATICS, ACADEMIC ACHIEVEMENT, COMPARATIVE ANALYSIS, INSTRUCTION, MECHANICAL TEACHING AIDS, OVERHEAD PROJECTORS

15. SE 005 518

1

10 09 17

HERSHBERGER, FLOYD

A COMPARATIVE EVALUATION OF AN ALGEBRA I SMSG AND CONVENTIONAL COURSE FOR PENN HIGH SCHOOL, MISHAWAKA, INDIANA DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

08 00 64 2

\*ALGEBRA, \*COMPARATIVE ANALYSIS, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, TEACHING PROCEDURES, SCHOOL MATHEMATICS STUDY GROUP

l6. SE 005 520

1

10 09 31

HETTINGER, SISTER JEAN MARIE

THE USE OF PROGRAMED MATERIALS TO SUPPLEMENT THE CLASS "ORK IN THE TEACHING OF A FIRST COURSE IN MODERN ALGEBRA

DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

08 00 66 2

\*ALGEBRA, \*INSTRUCTION, \*MATHEMATICS, \*PROGRAMED MATERIALS, \*PROGRAMED INSTRUCTION, \*SECONDARY SCHOOL MATHEMATICS, CURRICULUM DEVELOPMENT, CURRICULUM, MODERN MATHEMATICS, MATERIAL DEVELOPMENT, PROBLEM SOLVING

17. SE 005 540

1

10 09 22

HOHN, FRANZ

TEACHING CREATIVITY IN MATHEMATICS

THE ARITHMETIC TEACHER

03 00 61

10

\*CREATIVITY, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*MATHEMATICS, DISCOVERY PROCESSES, FUNDAMENTAL CONCEPTS, NUMBER CONCEPTS, UNIVERSITY OF ILLINOIS ARITHMETIC PROJECT

18. SE 004 939

3

10 09 17

KLEIN, GEORGE

INVESTIGATIONS ON THE FEASIBILITY OF SOME EXTENSIONS OF SCHOOL ARITHMETIC UNIVERSITY OF CHICAGO

**EDRS** 

ED 024 572 MF \$0.25 HC \$1.00

05 00 68 18

\*ARITHMETIC, \*CURRICULUM, \*ELEMENTARY SCIOOL MATHEMATICS, \*INSTRUCTION, FRACTIONS, MATHEMATICS, RESEARCH REPORTS, UNIVERSITY OF CHICAGO, ILLINOIS, 1968

19. SE 004 283

1

10 09 20

LIPSON, JOSEPH I.

TRANSFER GENERALIZATION IN INDIVIDUALLY PRESCRIBED INSTRUCTION PITTS BURGH UNIVERSITY, PENNSYLVANIA, LEARNING RESEARCH AND DEVELOPMENT CENTER 02 00 66 13

\*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*LEARNING, \*MATHEMATICS, \*TRANSFER, ARITHMETIC, BEHAVIORAL OBJECTIVES, CURRICULUM, GEOMETRY, INDIVIDUALIZED INSTRUCTION, UNIVERSITY OF PITTS BURGH, 1966



10 09 17 1

20. SE 005 871

MADDEN. J. VINCENT

AN EXPERIMENTAL STUDY OF STUDENT ACHIEVEMENT IN GENERAL MATHEMATICS IN RELATION

SCHOOL SCIENCE AND MATHEMATICS

10 00 68

4 \*ACHIEVEMENT, \*CLASS SIZE, \*INSTRUCTION, \*SECONDARY SCHOOL MATHEMATICS, \*TEAM TEACHING, GRADE 9, MATHEMATICS, SEX DIFFERENCES, CONTEMPORARY MATHEMATICS TEST, THE IOWA TESTS OF EDUCATIONAL DEVELOPMENT

21. SE 005 521

10 09 17

MALERICH, SISTER M. ANTONE

PLANS FOR THE IMPLEMENTATION OF THE ENRICHMENT OF NINTH AND TENTH GRADE MATHEMATICS IN CATHEDRAL HIGH SCHOOL, ST. CLOUD, MINNESOTA DAYTON UNIVERSITY, OHIO, SCHOOL OF EPUCATION

\*CURRICULUM DEVELOPMENT, \*INSTRUCTION, \*MATHEMATICS, \*PROGRAM IMPROVEMENT, \*SECONDARY SCHOOL MATHEMATICS, ALGEBRA, CHEMISTRY, CURRICULUM, GRADE 9, GRADE 10, PHYSICS, ST. CLOUD, MINNESOTA

22. SE 005 502

10 09 22

MARRINAN, EDWARD L.

A DESCRIPTION OF THE TEACHING OF MODERN MATHEMATICS THROUGH PROGRAMED INSTRUCTION ON THE NINTH GRADE LEVEL AT DAYTON CHAMINADE HIGH SCHOOL, DAYTON, OHIO DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION \*CURRICULUM, \*INSTRUCTION, \*MATHEMATICS, \*PROGRAMED INSTRUCTION, \*SECONDARY

SCHOOL MATHEMATICS, GRADE 9, MODERN MATHEMATICS, RESEARCH REPORTS, TEAM TEACHING, DAYTON, OHIO

SE 005 867 23.

1

, 10 09 31

MONTGOMERY, JAMES

THE USE OF CLOSED CIRCUIT TELEVISION IN TEACHING JUNIOR HIGH MATHEMATICS SCHOOL SCIENCE AND MATHEMATICS

11 00 68

3

\*EDUCATIONAL TELEVISION, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, \*TELEVISED INSTRUCTION, CURRICULUM, GRADE 7, RESEARCH REPORTS, TEACHER EDUCATION, 1967



24. SE 004 525 1 10 09 20

MOORE, OMAR K.

ON RESPONSIVE ENVIRONMENTS

UNIVERSITY OF PITTSBURGH, PENNSYLVANIA, LEARNING RESEARCH AND DEVELOPMENT CENTER 04 00 67 10

\*EDUCATIONAL PROGRAMS, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*LEARNING, \*MATHEMATICS, \*RESEARCH, INNOVATION, PROGRAM IMPROVEMENT

25. SE 005 865 1 10 09 17

MOORE, WILLIAM J.; CAIN, RALPH W.

THE NEW MATHEMATICS AND LOGICAL REASONING AND CREATIVE THINKING ABILITIES SCHOOL SCIENCE AND MATHEMATICS

11 00 68 4

\*CREATIVE THINKING, \*INSTRUCTION, \*LOGICAL THINKING, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, ALGEBRA, CURRICULUM, DISCOVERY LEARNING, RESEARCH REPORTS

26. SE 005 983 1 fo 09 17

NABORS, CECIL THOMAS

THE EFFECT OF INDIVIDUALIZED VERBAL PROBLEM ASSIGNMENTS ON THE MATHEMATICAL ACHIEVEMENT OF FIFTH-GRADE STUDENTS

UNIVERSITY OF HOUSTON

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

68 128

\*ACHIEVEMENT, \*ARITHMETIC, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, GRADE 5, INDIVIDUAL INSTRUCTION, MATHEMATICS

27. SE 005 408 3 10 09 16

NEW YORK CITY DEPARTMENT OF EDUCATION

MATHEMATICS, EIGHTH YEAR, PART I

NEW YORK CITY BOARD OF EDUCATION, BROOKLYN

**EDRS** 

ED 023 599 MF \$0.75 HARDCOPY NOT AVAILABLE

68 159

\*ARITHMETIC, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, \*TF 'CHING GUIDES, ALGEBRA, COURSE CONTENT, CURRICULUM, GEOMETRY, GRADE 8, MATHEMATICAL CONCEPTS, NUMBER CONCEPTS

28. SE 005 541 1 10 09 22

PAGE, DAVID A.

ARITHMETIC WITH FRAMES

THE ARITHMETIC TEACHER

04 00 57 14

\*ARITHMETIC, \*ELEMENTARY SCHOOL MATHEMATICS. \*INSTRUCTION, \*LEARNING, \*MATHEMATICS, CURRICULUM, CURRICULUM DEVELOPMENT, MATHEMATICAL CONCEPTS, NULBER CONCEPTS, TEACHER EDUCATION, UNIVERSITY OF ILLINGIS ARITHMETIC PROJECT, CARNEGIE CORPORATION, NATIONAL SCIENCE FOUNDATION, 1960

10 09 17 29. SE 004 869

PLATT, JOHN LEWIS

THE EFFECT OF THE USE OF MATHEMATICAL LOGIC IN HIGH SCHOOL GEOMETRY - AN EXPERIMENTAL STUDY

COLORADO STATE COLLEGE

UNIVERSITY MICROFILMS, ANN ARBOR, MICHIGAN

NOT AVAILABLE FROM EDRS ED 024 568

67

\*ACADEMIC ACHIEVEMENT, \*GEOMETRY, \*INSTRUCTION, \*SECONDARY SCHOOL MATHEMATICS, ACHIEVEMENT, DOCTORAL THESES, LOGIC, TEACHING PROCEDURES

10 09 17 30. SE 005 582

RICHARDSON, JESSE O.

TEACHING MATHEMATICS THROUGH THE USE OF A TIME-SHARED COMPUTER MASSACHUSETTS STATE DEPARTMENT OF EDUCATION, BOSTON

MF \$1.00 HC \$11.30 ED 023 606

224 08 00 68

\*COMPUTER ORIENTED PROGRAMS, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, COMPUTERS, CURRICULUM DEVELOPMENT, PROGRAM DEVELOPMENT

10 09 17 31. SE 005 507

ROOKS, SISTER MARY MICHAELETTE

A DESCRIPTION OF ORIGINALLY-DESIGNED INSTRUMENTS AND ACCOMPANYING LESSON PLANS TO BE USED IN A LABORATORY APPROACH IN TEACHING MATHEMATICS AT NOTRE DAME ACADEMY, TOLEDO, OHIO

DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

12 00 67 \*ALGEBRA, \*CURRICULUM PLANNING, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, EDUCATIONAL PLANNING, GEOMETRY, GRADE 11, GRADE 12, LESSON PLANS, MECHANICAL TEACHING AIDS, RESEARCH REPORTS, SOLID GEOMETRY, TRIGONOMETRY, TEACHING PROCEDURES, TOLEDO, OHIO

10 09 20 32. SE 005 674

SANDERS, WALTER J.; DENNIS, J. RICHARD CONGRUENCE GEOMETRY FOR JUNIOR HIGH SCHOOL

THE MATHEMATICS TEACHER

16 04 00 68

\*GEOMETRY, \*GEOMETRIC CONCEPTS, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, CLASSROOM MATERIALS, DEDUCTIVE METHODS, TEACHING TECHNIQUES, NATIONAL SCIENCE FOUNDATION, UNIVERSITY OF ILLINOIS COMMITTEE ON SCHOOL MATHEMATICS, 1968

33. SE 004 190 3 10 09 17

SCANDURA, JOSEPH M.

TEACHING COLLEGE STUDENTS HOW TO LEARN MATHEMATICS

OFFICE OF EDUCATION, WASHINGTON, D. C., BUREAU OF EDUCATION EDRS

ED 017 465 MF \$0.50 HC \$5.15

67 101

\*COLLEGE MATHEMATICS, \*DISCOVERY LEARNING, \*INSTRUCTION, \*MATHEMATICS, \*TEACHING METHODS, LEARNING, PROGRAMED INSTRUCTION, PROGRAMED MATERIALS, TRANSFER OF TRAINING, RESEARCH REPORTS, UNIVERSITY OF PENNSYLVANIA, 1967

34. SE 005 869 1 10 12 17

SCHUCK, ROBERT F.

THE COMPARATIVE EFFECTS OF THE BSCS CURRICULA UPON STUDENTS EXPOSED TO INSTRUCTIONAL STRATEGIES INCORPORATING SET INDUCTION PROCEDURES SCHOOL SCIENCE AND MATHEMATICS

10 00 68 9

\*ACHIEVEMENT, \*BIOLOGY, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, COMPARATIVE ANALYSIS, GRADE 9, RESEARCH REPORTS, SET INDUCTION, BIOLOGICAL SCIENCES CURRICULUM STUDY

35. SE 005 899 2 10 09 17

SHAH, SAIR ALI

AN EXPERIMENT - REACTIONS OF SOME CHILDREN

UNIVERSITY OF WEST INDIES, TRINIDAD, WEST INDIES

12 00 67 65

\*ELFMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*MATHEMATICAL CONCEPTS, CURRICULUM DEVELOPMENT, LEARNING, MATHEMATICS, RESEARCH REPORTS

36. SE 005 512 1 10 09 17

SILER, SISTER PHILIP

A STUDY OF THE COMPARATIVE VALUE OF THE TRADITIONAL APPROACH AND THE MODERN APPROACH IN ESTABLISHING COMPREHENSION OF MATHEMATICAL CONCEPTS AT THE SIXTH GRADE LEVEL

DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

08 00 66 2

\*CONCEPT FORMATION, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*MATHEMATICS, \*TEACHING PROCEDURES, ARITHMETIC, ACADEMIC PERFORMANCE, ACHIEVEMENT, COMPARATIVE ANALYSIS, GRADE 6, MATHEMATICAL CONCEPTS, MODERN MATHEMATICS, RESEARCH REPORTS, STUDENT ATTITUDES, TEACHING

37. SE 005 509 1 10 09 17

SNEIDER, SISTER MARY JOETTA

A COMPARATIVE STUDY OF TWO METHODS OF TEACHING MODERN ALGEBRA I AT SAINT MARY'S HIGH SCHOOL, SANDUSKY, OHIO

DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

07 00 67 3

\*ALGEBRA, \*INSTRUCTION, \*MATHEMATICS, \*PROGRAMED INSTRUCTION, \*SECONDARY SCHOOL MATHEMATICS, \*TEACHING PROCEDURES, COMPARATIVE ANALYSIS, CURRICULUM, CURRICULUM DEVELOPMENT, GRADE 9, INDIVIDUALIZED INSTRUCTION, RESEARCH REPORTS, SANDUSKY, OHIO



10 09 31 38. SE 005 513

STAFFORD, SISTER ELLEN MARIE

A PROPOSED METHOD OF SUPPLEMENTING THE MATHEMATICS PROGRAM IN THE JUNIOR HIGH SCHOOL BY THE USE OF MANIPULATIVE AND VISUAL AIDS DAYTON UNIVERSITY, OHIO, SCHOOL OF EDUCATION

\*AUDIOVISUAL AIDS, \*INSTRUCTION, \*MATHEMATICS, \*OVERHEAD PROJECTORS, \*SECONDARY SCHOOL MATHEMATICS, GRADE 7, GRADE 8, MECHANICAL TEACHING AIDS, MODERN MATHEMATICS, TEACHING PROCEDURES

10 09 29 39. SE 005 202

SUPPES, PATRICK

THE COMPUTER AND EXCELLENCE

SATURDAY REVIEW

01 14 67

\*COMPUTER ASSISTED INSTRUCTION, \*COMPUTERS, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*MATHEMATICS, \*PROGRAM DESCRIPTIONS, ARITHMETIC, CURRICULUM, GEOMETRY, MATHEMATICAL LOGIC, PROBLEM SOLVING

10 09 18 SE 004 728 40.

SUPPES, PATRICK

SOME THEORETICAL MODELS FOR MATHEMATICS LEARNING JOURNAL OF RESEARCH AND DEVELOPMENT IN EDUCATION

> 67 22

\*CURRICULUM, \*INSTRUCTION, \*LEARNING, \*MATHEMATICAL MODELS, ARITHMETIC, GEOMETRY, LEARNING THEORIES, LEARNING DIFFICULTIES, MATHEMATICS, RESEARCH REVIEWS, VISUAL PERCEPTION

10 95 29 1 41. SE 005 201

SUPPES, PATRICK

THE TEACHER AND COMPUTER-ASSISTED INSTRUCTION

NATIONAL EDUCATION ASSOCIATION JOURNAL

3 \*COMPUTERS, \*COMPUTER ASSISTED INSTRUCTION, \*INSTRUCTION, \*MATHEMATICS, EDUCATIONAL PROBLEMS, INDIVIDUALIZED PROGRAMS, PROGRAM DESCRIPTIONS, TEACHING, TEACHER ROLE

10 09 20 1 SE 005 221 42.

SUPPES, PATRICK

THE USES OF COMPUTERS IN EDUCATION

SCIENTIFIC AMERICAN

13 09 00 66

\*CURRICULUM DEVELOPMENT, \*COMPUTERS, \*COMPUTER ASSISTED INSTRUCTION, \*INSTRUCTION, \*LEARNING, ARITHMETIC, EDUCATIONAL PROBLEMS, MATHEMATICS

43. SE 005 217 1 10 09 17

SUPPES, PATRICK; GROEN, GUY

SOME COUNTING MODELS FOR FIRST-GRADE PERFORMANCE DATA ON SIMPLE ADDITION FACTS (IN J. M. SCANDURA, ED., "RESEARCH IN MATHEMATICS EDUCATION," WASHINGTON, D. C., NCTM, 1967, 35-43)

RESEARCH IN MATHEMATICS EDUCATION

67 8

\*ARITHMETIC, \*ELEMENTARY SCHOOL MATHEMATICS, \*FUNDAMENTAL OPERATIONS, \*INSTRUCTION, \*LEARNING, GRADE 1, MATHEMATICS, MATHEMATICAL MODELS

44. SE 005 214 1 10 09 20

SUPPES, PATRICK

TOMORROW'S EDUCATION - COMPUTER-BASED INSTRUCTION IN THE ELEMENTARY SCHOOL EDUCATION AGE

66

\*CURRICULUM, \*COMPUTER ASSISTED INSTRUCTION, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, \*MATHEMATICS, CURRICULUM DEVELOPMENT, INDIVIDUAL INSTRUCTION, LEARNING

45. SE 005 677 1 10 09 20

SZABO, STEVEN

SEVERAL WAYS OF TRANSLATING A CONDITIONAL SENTENCE - A DIALOGUE THE MATHEMATICS TEACHER

01 00 68

\*INSTRUCTION, \*MATHEMATICS, \*MATHEMATICAL LOGIC, \*MATHEMATICAL LINGUISTICS, \*SECONDARY SCHOOL MATHEMATICS, ALGEBRA

46. SE 005 675 1 10 09 20

SZABO, STEVEN

AN APPROACH TO EUCLIDEAN GEOMETRY THROUGH VECTORS

THE MATHEMATICS TEACHER

08 00 66 18

\*GEOMETRY, \*GEOMETRIC CONCEPTS, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, TEACHING TECHNIQUES

47. SE 005 679 1 10 09 20

VAUGHN, HERBERT E.

AN ILLUSTRATION OF THE USE OF VECTOR METHODS IN GEOMETRY

THE MATHEMATICS TEACHER

12 00 65

\*GEOMETRY, \*INSTRUCTION, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, INSTRUCTIONAL MATERIALS, VECTORS



10 09 20 1 SE 005 678

ARITHMETIC WITH FRAMES THE ARITHMETIC TEACHER

04 00 57

\*ARITHMETIC, \*ELEMENTARY SCHOOL MATHEMATICS, \*INSTRUCTION, CURRICULUM, TEACHING PROCEDURES, TEACHING TECHNIQUES, UNIVERSITY OF ILLINOIS COMMITTEE ON SCHOOL MATHEMATICS, 1963

10 09 17 SE 003 948 49.

COMPUTER ASSISTED MATHEMATICS INSTRUCTION

CONNECTICUT STATE DEPARTMENT OF EDUCATION, HARTFOLD

**EDRS** 

48.

MF \$0.25 HC \$1.85 ED 018 364

35 66

\*COMPUTER ASSISTED INSTRUCTION, \*CURRICULUM DEVELOPMENT, \*MATHEMATICS, \*SECONDARY SCHOOL MATHEMATICS, COMPUTERS, RESEARCH REPORTS, TEACHER EDUCATION

10 09 31 3 50. SE 005 330

NEW TRENDS IN MATHEMATICS TEACHING, VOLUME I UNITED NATIONS EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANIZATION, PARIS, FRANCE UNESCO PUBLICATIONS, NEW YORK, NEW YORK

NOT AVAILABLE FROM EDRS ED 023 59?

> 438 66

\*EDUCATIONAL TRENDS, \*INTERNATIONAL EDUCATION, \*INSTRUCTIONAL PROGRAMS, \*MATHEMATICS, \*MATHEMATICS EDUCATION, ALGEBRA, BIOLOGY, CHEMISTRY, GEOMETRY, INSTRUCTION, PHYSICS, SECONDARY SCHOOL MATHEMATICS, TEACHING METHODS, UNITED NATIONS EDUCATIONAL SCIENTIFIC AND CULTURAL ORGANIZATION

10 09 22 3 51. SE 004 627

TEACHERS EVALUATE PROGRAMMED INSTRUCTION, A SURVEY OF ATTITUDES AND PROBLEMS CANADIAN TEACHERS' FEDERATION, OTTAWA, ONTARIO

EDRS

MF \$0.50 HC \$3.30 ED 021 735

64 03 00 66

\*CURRICULUM, \*EVALUATION, \*INSTRUCTION, \*PROGRAMED INSTRUCTION, LEARNING, MATHEMATICS, PROGRAM EFFECTIVENESS, RESEARCH, TEACHER EDUCATION



## C. SCIENCE AND MATHEMATICS EDUCATION

1. SE 004 001

3

10 86 18

GLASER, ROBERT

CONCEPT LEARNING AND CONCEPT TEACHING. (REPRINT OF A CHAPTER TO APPEAR IN R. GAGNE, RESEARCH APPROACHES TO SCHOOL SUBJECT LEARNING, TO BE PUBLISHED BY F. E. PEACOCK PUBLISHERS, 1968)

PITTS BURGH UNIVERSITY, PENNSYLVANIA, LEARNING RESEARCH AND DEVELOPMENT CENTER ED 016 626 NOT AVAILABLE FROM EDRS

\*BIBLIOGRAPHIES, \*CONCEPT FORMATION, \*CONCEPT TEACHING, \*INSTRUCTION, \*LEARNING, \*RESEARCH REVIEWS, EDUCATIONAL PSYCHOLOGY, RESEARCH, VERBAL LEARNING

2. SE 004 496

1

10 68 17

JUDD, WILSON A.

THE EFFECTS OF TASK CHARACTERISTICS ON RESPONSE LATENCY AND LATENCY TRENDS DURING LEARNING AND OVER LEARNING

UNIVERSITY PITTS BURGH, PENNSYLVANIA, LEARNING RESEARCH AND DEVELOPMENT CENTER 03 00 68 88

\*INDIVIDUALIZED INSTRUCTION, \*INSTRUCTION, \*LEARNING, COMPUTER ASSISTED INSTRUCTION, RESEARCH REPORTS, PROGRAMED INSTRUCTION

3. SE 004 909

3

10 09 17

QUILLING, MARY; AND OTHERS

RESEARCH AND DEVELOPMENT ACTIVITIES IN R & D UNITS OF TWO ELEMENTARY SCHOOLS OF MILWAUKEE, WISCONSIN 1966-1967

UNIVERSITY WISCONSIN, MADISON, RESEARCH AND DEVELOPMENT CENTER

**EDRS** 

ED 020 911

MF \$0.25

HC \$1.25

03 00 68

23

\*CONCEPT FORMATION, \*ELEMENTARY EDUCATION, \*INSTRUCTION, \*MATHEMATICS, \*TEACHING METHODS, ARITHMETIC, EDUCATIONAL PROGRAMS, INDIVIDUAL INSTRUCTION, RESEARCH AND DEVELOPMENT CENTERS, SCIENTIFIC CONCEPTS, COGNITIVE DEVELOPMENT, CLOSED CIRCUIT TELEVISION, GRADE 1, GRADE 4, GRADE 5, GRADE 6, LEARNING, TEACHING PROCEDURES, RESEARCH REPORTS, WISCONSIN RESEARCH AND DEVELOPMENT CENTER, COOPERATIVE PRIMARY TEST IN MATHEMATICS

4. SE 005 917

1

10 95 19

RAMSEY, IRVIN L.

SCIENCE AND MATHEMATICS IN TODAY'S SCHOOLS

SCHOOL SCIENCE AND MATHEMATICS

12 00 68 8

\*ELEMENTARY SCIENCE, \*INSTRUCTION, \*MOTIVATION, \*MATHEMATICS, STUDENT INTERESTS, SECONDARY SCHOOL SCIENCE, SCIENTIFIC LITERACY, SOCIOECONOMIC INFLUENCES, TECHNOLOGY



10 85 30 3

5. SE 004 300 RAZIK, TAHER A. BIBLIOGRAPHY OF CREATIVITY STUDIES AND RELATED AREAS NEW YORK UNIVERSITY PRESS, BUFFALO, NEW YORK NOT AVAILABLE FROM EDRS ED 017 475

451 65 \*BIBLIOGRAPHIES, \*CREATIVITY, \*DISCOVERY PROCESSES, \*ENVIRONMENTAL INFLUENCES, \*HEREDITY, \*MOTIVATION, \*PROBLEM SOLVING, \*RESEARCH METHODOLOGY, \*SCIENCES, \*TESTS, ABILITY IDENTIFICATION, ACADEMIC ACHIEVEMENT, ELEMENTARY EDUCATION,

HIGHER EDUCATION, LEARNING, MATHEMATICS, INSTRUCTION, SECONDARY EDUCATION, SOCIOECONOMIC INFLUENCES

10 95 03 6. SE 004 119 SCIENCE EDUCATION INFORMATION REPORT, BIBLIOGRAPHY 1, INSTRUCTIONAL PROCEDURES ERIC INFORMATION ANALYSIS CENTER FOR SCIENCE EDUCATION, COLUMBUS, OHIO **EDRS** HC \$3.30 MF \$0.50 ED 015 877

64 12 00 67 \*ELEMENTARY SCHOOL SCIENCE, \*MATHEMATICS EDUCATION, \*INSTRUCTION, \*SECONDARY SCHOOL SCIENCE, ACADEMIC ACHIEVEMENT, AUDIOVISUAL AIDS, BIOLOGY, CHEMISTRY, COLLEGE SCIENCE, CRITICAL THINKING, FILMS, GENERAL EDUCATION, PHYSICAL SCIENCES, PHYSICS, PROBLEM SOLVING, PROGRAMED INSTRUCTION, TEACHER EDUCATION, TEACHING METHODS, EARTH SCIENCES, GENERAL SCIENCE, SCIENCE ACTIVITIES

## D. AUTHOR INDEX

Authors or organizations responsible for documents are listed alphabetically. The document number of each publication listed is entered after the name of the author or organization. The letter indicates the section of the bibliography and the numeral represents the document number in that section.

ADVISORY COUNCIL ON COLLEGE CHEMISTRY (A1)

ALASKA STATE DEPARTMENT OF EDUCATION (A2)

ALPERN, D. K. (A3)

ALYEA, HUBERT N. (A4)

ANDERSON, HANS O. (A5)

ANDERSON, LUCIA (A6)

ANDERSON, ROBERT G. (A7)

ANDERSON, RONALD D. (A8)

ANDREWS, TED F. (A9)

ANDREWS, TED F.; AND OTHERS (A10)

APPLEMAN, ROWALD EUGENE (A11)

ATWOOD, RONALD K. (A12)

BANDELIER, KENNETH JESSE (A13)

BARAVALLE, HERMANN VON (A14)

BARNARD, W. ROBERT (A15)

BARNES, LEHMAN WILDER (A16)

BASSLER, OTTO C. (B1)

BEAMISH, ERIC EDWARD (B2)

BEBERMAN, MAX (B3)

BICAK, LADDIE J. (A17)

BRAUNFELD, PETER; AND OTHERS (B4) BRAUNFELD, PETER; WOLFE, MARTIN (B5)

BROWN, O. ROBERT (B6)

BROWNELL, WILLIAM A.; AND OTHERS (B7)

BRUDZYNSKI, ALFRED JOHN (A18)

CALIFORNIA STATE DEPARTMENT OF EDUCATION (A19)

CARTER, ROBERT L. (A20)

CHIBA, SISTER MARY GERTRUDE (B8)

CLARK, BILLY MAX (A24)

COMMISSION ON UNDERGRADUATE EDUCATION IN THE BIOLOGICAL SCIENCES (A21, A22, A23)

DARNOWSKI, VINCENT S. (A25)

DART, THOMAS M.; HICKS, RANDALL C. (B9)

Deroche, EDWARD FRANCIS (A26)

DeVITO, ALFRED (A27)

DUKE, REESE DALE (A28)

DYRIL, ODVARD EGIL (A29)

ENGEN, HAROLD B.; AND OTHERS (A30)

ESHLEMAN, WINSTON HULL (A31)

ESLER, WILLIAM K. (A32)



FOWLER, JOHN M. (A33)

FRANK, N. H. (A34)

FRANZ, J. A. (A35)

FRASER, W. CLAYTON, JR. (A36)

FRITZ, JOHN O. (A37)

GALLENTINE, JERRY L. (A'3)

GARRY, RALPH (A39)

GASKELL, WILLIAM G.; DROTZ, PAUL E. (A40)

GEGAL, PETER C. (A41)

GEISERT, PAUL (A42)

GERNE, TIMOTHY A., JR. (A43)

GILMAN, DAVID ALAN (A44, A45)

GLASER, ROBERT (C1)

GROOMS, HENRIETTA HILL (A46)

HAGAN, ANASTASIA M. (B10)

HALL, THOMAS (A47)

HAUGERUD, ALBERT RALPH (A48)

HEAD, J. THOMAS;

RUNQUIST, OLAF (A49)

HELGESON, STANLEY L. (A50, A51)

HENDRIX, GERTRUDE (B11, B12, B13)

HENKEL, E. THOMAS (A52)

HERSCHL, JOSEPH R. (B14)

HERSHBERGER, FLOYD (B15)

HETTINGER, SISTER JEAN MARIE (B16)

HOHN, FRANZ (B17)

IVANY, J. W. GEORGE;
PARLETT, MALCOLM R. (A53)

JEFFREY, JACK CASSELL (A54)

JENSEN, LaMONT (A55)

JERKINS, KENNETH FRANCIS (A56)

JOHNSON, MERVIN LEROY (A57)

JUDD, WILSON A. (C2)

JUNGWIRTH, E. (A58)

KELLOUGH, RICHARD D. (A59)

KLEIN, GEORGE (B18)

KNOOP, LOWELL (A60)

KOCHENDORFER, LEONARD (A61)

KOLB, JOHN R. (A62)

KRAMER, L. M. J. (A63)

KUHN, DAVID JOHN (A64)

LIPSON, JOSEPH I. (B19)

LISTON, ROBERT H. (A65)

LOZANOFF, PAUL (A66)

MacDOUGALL, MARY ANN (A67)

MADDEN, J. VINCENT (B20)

MALERICH, SISTER M. ANTONE (B21)

MARRINAN, EDWARD L. (B22)

MASSEY, NORMAN B. (A68)

MATHIAS, ORAL BOYD (A69)

McADA, HARLEEN (A70)

McCORD, WILLIAM M. (A71)



McFEE, EVAN EARL (A72)

McLEOD, RICHARD J. (A73)

MEYER, DELBERT E. (A74)

MILLER, BARRY B.;

FELDMAN, RODNEY M. (A75)

MILNE, JAMES LAWRENCE (A76)

MONTGOMERY, JAMES (B23)

MOORE, OMAR K. (B24)

MOORE, WILLIAM J.; CAIN, RALPH W. (B25)

MORRIS, MARTIN L. (A77)

NABORS, CECIL THOMAS (B26)

NANNEY, DAVID L. (A78)

NASCA, DON (A79)

NATALI, V. F. (A80)

NELSON, PEARL A.;

KELLEY, GAYLEN B. (A81)

NEUBERGER, HAROLD T. (A82)

NEWTON, DAVID E. (A83)

NEW YORK CITY DEPARTMENT

OF EDUCATION (B27)

NOAL, M. F.;

WINGET, L. (A84)

NOVAK, JOSEPH D. (A85)

O'TOOLE, RAYMOND JOSEPH (A86, A87)

PAGE, DAVID A. (B28)

PARAKH, JAL S. (A88)

PEABODY, FRANK R.;

WEIGAND, HENRY D. (A89)

PELLA, MILTON O.; ZIEGLER, ROBERT E. (A90)

PERKES, V. A. (A91)

PETRIE, GRACE G. (A92)

PHILLIPS, DARRELL GORDON (A93)

PILTZ, ALBERT;

SUND, ROBERT (A94)

PLATT, JOHN LEWIS (B29)

QUILLING, MARY;

AND OTHERS (C3)

RAMSEY, IRVIN L. (C4)

RASMUSSEN, FRED A. (A95)

RAUN, CHESTER E. (A96)

RAUN, CHESTER E.;

BUTTS, DAVID P. (A97, A98)

RAZIK, TAHER A. (C5)

READ, WILLIAM F. (A99)

RENNER, JOHN W.;

RAGAN, WILLIAM B. (A100)

RICHARDSON, EVAN C. (A101)

RICHARDSON, JESSE O. (B30)

RIGGSBY, DUTCHIE S. (A102)

ROOKS, SISTER MARY

MICHAELETTE (B31)

ROOS, ANNE DUNCAN (A103)

ROSE, RICHARD W.;

GROVER, C. WILLIS (A104)

RUSH, ORVILLE FINDLEY (A105)

SAMOLIS, ALEXANDER MICHAEL (A106)



SANDERS, WALTER J.; DENNIS, J. RICHARD (B32)

SCANDURA, JOSEPH M. (B33)

SCARPINO, PASQUALE V. (A107)

SCHUCK, ROBERT F. (B34)

SCHWAB, JOSEPH J.;

BRANDWEIN, PAUL F. (A108)

SCIENCE CURRICULUM

IMPROVEMENT STUDY (A109)

SHAH, SAIR ALI (B35)

SHELL. WILLIAM B. (A110)

SHUBECK, PAUL P. (A111)

SILBERMAN, ROBERT;

McCONNELL, JAMES (A112)

SILER, SISTER PHILIP (B36)

SKINNER, B. F. (A113, A114)

SMITH, DOYLE D. (A115)

SMITH, TRANK (A116)

SMITH, ROY EMERSON (A117)

SNEIDER, SISTER MARY JOETTA (B37)

SNIDER, RAY M. (A118)

SNOBLE, JOSEPH JERRY (A119)

SNOW, RICHARD W.;

AND OTHERS (A120)

STAFFORD, SISTER ELLEN MARIE (B38)

STAUSS, NYLES G. (A121, A122)

STEFANIAK, EDWARD W. (A123)

STENDLER, CELIA (A124)

STOCK, MURRAY (A125)

STROM, WILLIAM DEAN (A126)

STRONG, LAURENCE E. (A127)

STROPE, MARVIN BERNARD (A128)

SUND, ROBERT B.;
AND OTHERS (A129)

SUPPES, PATRICK (B39, B40,

B41, B42, B44)

SUPPES, PATRICK;

GROEN, GUY (B43)

SWAN, MALCOLM D. (A130)

SZABO, STEVEN (B45, B46)

TAYLOR, PAUL H.;

AND OTHERS (A131)

TRIEZENBERG, HENRY J. (A132, A133)

TRINKLEIN, LLOYD A. (A134)

TROOST, CORNELIUS J. (A135, A136)

VAROSSIEAU (A137)

VAUGH, HERBERT E. (B47)

VOELKER, ALAN M. (A138)

VOGEL, RICHARD FRANK (A139)

WACHS, STANLEY RICHARD (A140)

WALTON, GEORGE (A141)

WEAVER, ELBERT C. (A 142)

WELLIVER, PAUL W. (A143)

WILLIAMS, CHARLES FENTON (A144)

WILSON, JOHN HAPOLD (A145)

WING, RICHARD L. (A146)

YAGER, ROBERT E. (A147)

YOUDEN, W. J. (A148)

ZEPP, GEORGE DANIEL (A149)

ZIEGLER, ROBERT E. (A150)

ZINGARO, JOSEPH S.; COLLETTE, ALFRED T. (A151)

## E. UNAUTHORED ARTICLES

ARITHMETIC WITH FRAMES (B48)

COMPUTER ASSISTED MATHEMATICS INSTRUCTION (B49)

EDITORIALLY SPEAKING - THE HERESY OF BELIEF (A152)

NEW TRENDS IN MATHEMATICS TEACHING, VOLUME I (B50)

PROCEEDINGS OF THE AMERICAN ASSOCIATION OF PHYSICS TEACHERS SUMMER MEETING AT THE UNIVERSITY OF WISCONSIN, MADISON, WISCONSIN, 18-20, JUNE, 1964 (A153)

SCIENCE EDUCATION INFORMATION REPORT, BIBLIOGRAPHY 1, INSTRUCTIONAL PROCEDURES (C6)

A SIMPLE AND EFFICIENT WAY TO TEACH SPECTROSCOPY (A154)

TEACHERS EVALUATE PROGRAMMED INSTRUCTION, A SURVEY OF ATTITUDES AND PROBLEMS (B51)

TEACHING FOURTH GRADE SCIENCE BY MEANS OF PROGRAMMED SCIENCE MATERIALS WITH LABORATORY EXPERIENCE (A155)



L,