

ED 302 021

EC 211 818

TITLE Gifted & Talented/Technology/Special Interests.
Proven Exemplary Educational Programs and Practices:
A Collection from the National Diffusion Network
(NDN).

INSTITUTION Michigan State Board of Education, Lansing.

PUB DATE Aug 86

NOTE 53p.; Reprinted with permission from NDN's
"Educational Programs That Work," 12th edition; see
ED 266 134.

PUB TYPE Reference Materials - Directories/Catalogs (132)

EDRS PRICE MF01/PC03 Plus Postage.

DESCRIPTORS *Demonstration Programs; Elementary Secondary
Education; *Gifted; *Student Interests; *Talent;
*Technology; *Validated Programs

ABSTRACT

The booklet contains descriptions of educational programs in the area of gifted and talented, technology, and special interests which have been validated as successful by the Joint Dissemination Review Panel of the U.S. Department of Education. Programs are listed alphabetically and also provided are an index of programs by category and an index of programs by grade levels (for which validation exists). Provided for most programs are the title, the intended audience, a descriptive abstract, training requirements, costs, services, contact person, address, and phone number. Programs deal with such areas as the following: arithmetic, behavior problems, calculator use, career education, competency based education, computer literacy, computer managed instruction, conflict resolution, critical thinking, daily living skills, gaming/simulation, individualized instruction, learning disabilities, mastery learning, money management, parent involvement, problem solving, reading, religious traditions, self-protection, staff development, tutoring, volunteers, work experience programs, and writing (composition).

(DB)

* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *

ED302021

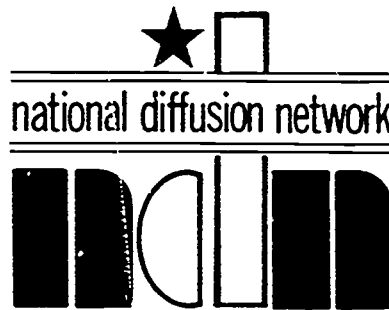
EC

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it
- Minor changes have been made to improve reproduction quality
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Proven Exemplary Educational Programs and Practices:

A Collection from the



Gifted & Talented/Technology/ Special Interests

MICHIGAN STATE BOARD OF EDUCATION

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Wanda
Bazzette

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

2/18/88

Michigan State Board of Education



Norman Otto Stockmeyer, Sr.
President
Westland



Barbara Dumouchelle
Vice President
Grosse Ile



Barbara Roberts Mason
Secretary
Lansing



Dorothy Beardmore
Treasurer
Rochester



Dr. Edmund F. Vandette
NASBE Delegate
Houghton



Carroll M. Hutton
Highland



Cherry Jacobus
East Grand Rapids



Annetta Miller
Huntington Woods

Ex-Officio Members



James J. Blanchard
Governor



Philip E. Runkel
Superintendent of
Public Instruction

INTRODUCTION

The National Diffusion Network facilitates the exchange of information between the developers of successful projects and adopting districts. Many of the projects receive federal funding as Developer Demonstrators to provide teacher training, materials, and technical assistance to those who adopt their programs. Through the State Facilitator Project, the Michigan Department of Education is the principal link between Developer Demonstrators and those adopting new programs. The Department can help in the identification of programs to address current local needs, and in the adoption and implementation process.

The information contained in this booklet presents descriptions of educational programs that have been validated as successful. These projects have been developed in individual school districts throughout the nation, in response to their local needs. The Joint Dissemination Review Panel of the U.S. Department of Education has reviewed and validated the data presented by each project. These programs are available for adoption by other districts.

The following introductory pages contain an alphabetical table of contents, an index of programs by category and an index of programs by grade level(s) for which the programs have been validated. Some programs have been used successfully at other grade levels. This is noted in the abstracts. The Department of Education can assist in adoption of a program only at the grade level(s) for which it has been validated.

For further information about any of these programs, or for assistance in adopting or implementing one of the programs, please feel free to contact Mrs. Patricia Slocum, Michigan State Facilitator, Office of Grants Coordination and Procurement, Michigan Department of Education, Post Office Box 30008, Lansing, Michigan 48909, telephone (517) 373-1806.

June 1986

GIFTED AND TALENTED/TECHNOLOGY/SPECIAL INTERESTS PROJECTS

TABLE OF CONTENTS

	Page
Introduction	i
PROJECT CATEGORIES	iii
PROJECT GRADE LEVELS	vi
Basic Literacy Through Microcomputers	1
Calculator Math	2
CAMEL	3
Classmate 88 Mathematic Computational Skills Program	4
COFFEE (Cooperative Federation for Educational Experiences)	5
Computer Literacy Project	6
Computeronics: Gifted Child Project	7
Computer Utilization in Education (CUE)	8
Critical Analysis and Thinking Skills (CATS)	9
Cupertino Concept: Computer Literacy Project	10
Curriculum for Meeting Modern Problems (The New Model Me)	11
Equality	12
Ethical Issues in Decision Making	13
"Go Metric": A Supplemental Low-cost Metric Curriculum	14
Hear: Human Educational Awareness Resource	14
HOSTS Math: Help One Student To Succeed	15
Individualized Computer Assisted Remedial Reading Program (ICARE)	16
Individualized Prescriptive Arithmetic Skills System (IPASS)	17
Individualized Prescriptive Instructional Management System for Underachievers	18
Individual Progress Program	19
Inservice	20
Institute for Creative Education	21
ISIS: Individual Science Instructional System Dissemination Project	22
KIDS KITS (Kids Interest Discovery Studies Kits)	23
Law Education Goals and Learnings (LEGAL)	24
Merrimack Education Center CAI Project	25
M2C: Math Motivational Centers	26
Positive Alternatives to Student Suspensions (PASS)	27
Project 50/50	28
QUILL: Microcomputer Based Writing Activities	29
RAM: Reading and Micro Management	30
Reading Education Accountability Design: Secondary (READ:S)	31
Religion in Human Culture (RIHC)	32
Research Exchange for Computerized Individualized Program for Education (RECIPE)	33
S.A.G.E.	34
SCAT: Skills for Consumers Applied Today	35
Success Enrichment	36
Success Understanding Mathematics	37
Talents Unlimited	38
TIPS: Teaching Individuals Positive Solution/Teaching Individuals Protective Strategies	39
Title I Mathematics Computer Assisted Instruction (CAI)	40
Utilizing Computers in the Teaching of Secondary Mathematics	41
WWAS: Women in World Area Studies	42

GIFTED AND TALENTED/TECHNOLOGY/SPECIAL INTERESTS PROJECTS

CATEGORIES

	Page
Achievement	20
Arithmetic	17
Art	36
Basic Skills	4, 5, 25, 33
Behavior Problems	11, 20, 27
Calculator Use	2, 3, 4
Career Awareness	12, 14
Career Education	5
Classroom Management	25
Community Law	24
Competency Based Education	20, 31
Computer Assisted Instruction CAI	1, 8, 16, 17, 18, 25, 29, 30, 31, 40, 41
Computer Literacy	1, 6, 7, 10, 28
Computer Managed Instruction CMI	17, 33
Computer Science Education	7, 28
Conflict Resolution	39
Consumer Education	3, 35
Consumer Law	24
Counseling	27
Creative Thinking	21, 34, 36
Criminal Justice	24
Criterion-referenced	17, 26, 31, 37, 42
Critical Thinking	9, 34
Daily Living Skills	35, 39

GIFTED AND TALENTED/TECHNOLOGY/SPECIAL INTERESTS PROJECTS

CATEGORIES

	Page
Diagnostic Teaching	8, 15, 18, 26, 30, 31, 33, 40
Discipline	27, 39
Ethical Issues	13
Gaming/Simulation	14
Gifted	7, 19, 34, 36, 38
Health Education	35
Higher-level Thinking	23, 34
Humanities	32, 42
Individualized Instruction	3, 4, 5, 16, 17, 18, 19, 22, 30, 33
Instructional Modules	31
Interdisciplinary	22
Intervention Strategies	27, 39
Language Arts	29, 36
Laboratory Program	4, 17, 30, 40
Law Related Education	24
Learning Disabilities	33
Learning Resource Centers	23
Mastery Learning	4, 7, 14, 31
Mathematics	2, 3, 4, 15, 17, 37, 40, 41
Metric System	14
Minicourses	22
Money Management	35
Multimedia Materials	23
Multi-talent Development	38

GIFTED AND TALENTED/TECHNOLOGY/SPECIAL INTERESTS PROJECTS

CATEGORIES	Page
Parent Involvement	26, 27, 37
Physical Education	5
Prescriptive Instruction	15, 17, 18, 26, 30, 40
Problem Solving	9, 14, 21, 34, 36, 37
Protective Strategies	39
Reading	1, 31
Religious Traditions	32
Remedial Mathematics	8, 15, 25, 26, 33, 40
Remedial Reading	8, 16, 18, 25, 30, 33
Resource Room Programs	18, 26
School Community Programs	24, 28
Science Education	22
Self Protection	39
Sex-role Stereotyping Reduction	12, 14, 42
Social Studies	11, 32, 42
Staff Development	14, 20
Supplementary Program	4, 11, 14, 17
Talent Development	34, 36, 38
Teaching Skills	20
Tutoring	15
Vocational Education	28
Volunteers	15
Women in World Culture	42
Work Experience Programs	5, 28
Writing (Composition)	9, 29, 36

GIFTED AND TALENTED/TECHNOLOGY/SPECIAL INTERESTS PROJECTS

Grade Levels

	Page
Kindergarten through Twelfth Grade	20
Kindergarten through Sixth Grade	12, 33
Kindergarten through Eighth Grade	10
First Grade through Fifth Grade	34
First Grade through Sixth Grade	23, 38
First Grade and Third Grade	1
Second Grade through Fifth Grade	19
Second Grade through Sixth Grade	15, 37
Second Grade through Eighth Grade	36
Second Grade through Ninth Grade	25
Third Grade through Fifth Grade	29
Third Grade through Sixth Grade	40
Third Grade through Eighth Grade	8
Fourth Grade through Sixth Grade	4, 21
Fourth Grade and Fifth Grade	39
Fourth Grade through Ninth Grade	14
Fifth Grade and Sixth Grade	17
Fifth Grade through Eighth Grade	14
Sixth Grade and Seventh Grade	7
Seventh Grade and Eighth Grade	30
Seventh Grade through Ninth Grade	2
Seventh Grade through Twelfth Grade	5, 18, 24, 27, 28, 31

GIFTED AND TALENTED/TECHNOLOGY/SPECIAL INTERESTS PROJECTS

Grade Levels

	Page
Ninth Grade	6, 26
Ninth Grade and Tenth Grade	3
Ninth Grade through Twelfth Grade	9, 11, 22, 32, 35, 41
Tenth Grade through Twelfth Grade	13, 16
Eleventh Grade	42

BASIC LITERACY THROUGH MICROCOMPUTERS (Keyboard, Reading, and Spelling Skills). A program teaching students to use a microcomputer keyboard in the process of learning to type, read, and spell. Mastery is built into the program.

Audience Approved by JDRP for students grade one and grade three. Supporting data also were gathered from students in grades 2-8.

Description Basic Literacy Through Microcomputers is an instructional program that enhances reading achievement and keyboard skills. The Program uses a phonetic approach to reading, with the microcomputer (or electric typewriter) being an essential component of the instructional process. The computer does not replace the teacher in instructing, but rather provides opportunities for students to master skills through reinforced practice.

Students in grade 1, using the typewriter version of the program, demonstrate reading achievement scores, as measured by the CAT, that are higher than scores of students in a true control group, at a statistically significant level ($p < .01$).

Students in grade 3, using the microcomputer version of the program, demonstrate reading comprehension and speed-and-accuracy scores, as measured by the Gates-MacGinitie Reading Tests, that are higher than scores of students in a non-equivalent control group, at a statistically significant level ($p < .01$). Typewriting and computer usage skills were also statistically significant for the experimental group when compared to the control group. Visual and auditory memory skills improved significantly.

The program works whether one or more computers are available to a class or whether there is a computer lab in the school. Although the teacher teaches some skills, students are independent as they work at the computer.

Requirements A one- or two-day preparatory inservice education program conducted by a Reid Foundation staff person is desirable. The program includes lecture and practice sessions. It would be advantageous to the trainees to have an Apple IIe or IIc computer(s) available. It is desired that data from pre and posttests are sent to the Developer-Demonstrator.

Costs At initial awareness sessions, time is provided without cost, and expenses are negotiated. For the inservice education program, time will be provided without cost, but expenses should be shared. The computer program and materials and a set of four disks sell for \$198. Additional back up disks (in sets of four) can be purchased for \$60. Teacher texts including Teaching Letter Names and Sounds, Teaching New Words Through Phonics, and Eliciting Responses and Teaching Proofing Skills Through Dictation cost \$20. Typing and computer tests are included in the program materials.

Services Awareness materials are available at no cost. Visitors are welcome by appointment at project site and additional sites in other states. Project staff are available to attend out-of-state awareness meetings. Training can be done at project site or at adopter sites. Awareness videotape is available for rental.

Contact *Dr. Ethna R. Reid; 3310 South 2700 East, Salt Lake City, Utah 84109; (801) 486-5083.*

CALCULATOR MATH A supplementary program to improve students' mathematical skills through the use of a consumer-oriented curriculum which incorporates the hand calculator.

Audience Approved by JDRP as a supplementary math program for grades 7 through 9.

Description Calculator Math is a mathematics project which parallels and supplements the 7th-9th grade program. It brings the technology of the hand calculator into the classroom with a proven instructional curriculum. The program teaches students: to use calculators with efficiency and with confidence; to improve their skills in problem solving, rounding off, estimating, and solving consumer word problems; to improve their ability to work with whole numbers, decimals, fractions and percentages.

Students use a calculator and calculator math worksheets one-fifth of their math time (approximately one day a week) for a year.

Project materials include the CALCULATOR MATH binder and task cards.

Binder contents: Teacher's Guide (describes the implementation and management of the program); Student Guide (introduces the student to the calculator and reviews rounding off, estimating, and solving word problems); Work Sheets (five units which supplement the whole number, decimal, fraction, and percentage curriculum).

Units contain pre/posttests and are adaptable for individual, small group or total class instruction.

Answers and Place Value Charts

180 Task Cards: written and illustrated by students. Cards are color coded and assigned on appropriate work sheets.

Requirements The program can be implemented in a typical math classroom using regular teachers. Materials which must be purchased are the Calculator Math Binder and Task Cards (one set per teacher), and Calculators (approximately one per two students). Calculator Math can be adopted by a single classroom or by several classrooms who may share the materials. A one day training session in the management and implementation of the use of calculators in the CALCULATOR MATH Program, and the development of problem solving skills is required for adoption.

Costs First year installation costs: Approximately \$4.50 per student including purchase of calculators, materials and training. Subsequent year: \$1.50 per student (duplication cost).

Services An NDN funded Developer/Demonstrator Project. Awareness materials are available at no cost. Visitors are welcome at demonstration sites by appointment. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is conducted at project site or adopter site (costs to be negotiated). Implementation and follow-up services are available to the adopter.

Contact Director; Calculator Math Office—400 Mansell Street; Wilson Demonstration Site; SFUSD; San Francisco, CA 94134. Office: (415) 469-5697, School: (415) 239-6200.

CAMEL (Calculator Assisted Mathematics for Everyday Living). A curriculum to increase the computation and application skills of general mathematics students.

Audience Approved by JDRP for 9th and 10th grade general math students.

Description CAMEL is an individualized two-year program for those students who have had little or no success in mathematics. These students usually have computational deficiencies that preclude their mastering many of the "living skills" concepts that are part of everyday life for most people. CAMEL is based on the premise that these students can and will learn these concepts if the amount of computations is reduced. Students in a CAMEL classroom use calculators to perform the computations necessary to learn and apply these concepts. All examples show how the given information is analyzed and entered in the calculator. All example answers are explained and are identified with units or labels where appropriate.

Paper and pencil computations are not excluded by use of the calculator. The program includes eight computations modules that the students must work using paper and pencil if they cannot demonstrate mastery of the skill on a pretest. Paper and pencil computations should take less than 20% of the students' time.

While CAMEL was developed for use in a regular classroom and is primarily used there, the individualized nature of CAMEL makes it appropriate for any group that is highly transient and not well motivated. In the developing district CAMEL is also used in the Juvenile Detention Center, the Alternative School for Disruptive Students, The Center for Emotionally Handicapped or Learning Disabled Student, and The Half-Way House for Young Adults.

Requirements The CAMEL program can be implemented by any math teacher. Teacher-student ratio 1:30. A one-day training session is desirable but not necessary. No special facilities are needed. Each student in the program should have access to a calculator. A set of CAMEL materials is required and consists of eight computational modules, 31 applications modules, and two applications review modules; teacher and manager manuals; complete set of pre- and posttests with answer key. A management system to help the teacher is also part of the program.

Costs One set of calculators (\$9 each) and one set of CAMEL materials (\$450) which can be used by one to five classes per day. Costs of expendable materials vary depending on the number of students involved.

Services CAMEL Resource Staff Project consultants provide technical assistance and training in program implementation. Visitors are welcome to visit a demonstration school. Awareness materials are available.

Contact Whiteford G. Colee, Project CAMEL; P.O. Box 1910; Daytona Beach, FL 32015-1910. (904) 255-6475; Suncom 391-1011.

CLASSMATE 88 MATHEMATIC COMPUTATIONAL SKILLS PROGRAM. A pullout program incorporating technology to improve the basic mathematical computational skills of economically disadvantaged children.

Audience Approved by the JDRP for educationally disadvantaged children in grades 4-6.

Description Classmate 88 is a daily pullout program that uses technology as well as paper and pencil activities, fact cards, and puzzles to provide drill and practice in basic mathematical computational skills. The project treatment is for 32 weeks providing 40 hours of additional supplementary mathematic instruction during the school year. The project is designed to serve children, each using a calculator, in groups of three for fifteen minute sessions daily. Since this is an individualized project, each three students come from the same grade level. The Resource Teacher, working with the classroom teacher, schedules the students into the project so they will not miss the "core" or basic subject areas. The time out of class is during Art, Music, Gym, study periods or recess. Student placement in Project Classmate 88 is determined through a multistep process which begins with the Classroom Teacher and the Resource Teacher. An assessment is made of the child's level of functioning through a combination of placement tests (addition, subtraction, multiplication, division, fractions, and decimals) developed by the South Bend Community School Corporation. The scores on these tests are used to determine placement. The problem for each section within a test are weighted according to the skill level. The number right determines the starting level for the student. As the student works through each program, the aide monitors his/her progress, giving assistance as needed. All work sheets and papers are kept in the student's individual folders. After mastery the student proceeds to the next program. The unique technological feature of the program is the use of a calculator known commercially as Classmate 88. This machine provides practice in computational skills by (1) presenting computational problems appropriate for the child one at a time; (2) providing feedback after the child has worked the problem by the hand and input the answer; (3) noting when the answer is not correct; and (4) summarizing the child's performance on the set of problems. This tape is used by the aide and consultant to monitor progress; also, it may be displayed on a bulletin board or sent home to parents. The Classmate 88 calculator contains seventy (70) handwired programs that have been developed to help children reach the specific computational problems. Note that the calculator does not do the calculation for the child.

Requirements All equipment, materials and strategies used in Classmate 88 can be duplicated. Adopters must purchase Classmate 88, the curriculum guide, and provide a system for ongoing monitoring and support activities. Additional staff using para-professional personnel are necessary for replicating the project. The project has a three-day workshop that has been effective in training aides to use the Classmate 88 machine, the curriculum and teaching techniques. Special materials are not necessary, with the exception of the Classmate 88 calculator, paper tapes and ribbons.

Costs Costs, including personnel, equipment, consumable materials and equipment maintenance average \$175.25 per pupil (N=48) for the installation year and \$127.22 per pupil for subsequent years.

Services Awareness materials are available at no cost. Visitors are welcome by appointment at project site and additional demonstration sites. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated).

Contact James E. Parent; Chapter 1 Department, South Bend Community School Corporation; 635 South Main Street; South Bend, Indiana 46601; (219) 282-4181.

PROJECT COFFEE (COOPERATIVE FEDERATION FOR EDUCATIONAL EXPERIENCES).
A comprehensive instructional and occupational training and counseling program.

Audience Approved by JDRP as an alternative occupational education program in high technology for alienated/disaffected secondary students.

Description Project COFFEE was developed in response to the employment demands of high technology and the increasing number of alienated, disaffected secondary school-age students as a comprehensive instructional program. Project COFFEE has uniquely integrated four components: an academic component that provides relevant (occupational and life-coping) basic skills instruction based on an individualized educational plan; an occupational component that provides hands-on educational experiences in an adult-like high technology work environment while reinforcing basic skills; a counseling component that provides occupational and emotional support utilizing state, regional, and local social service agencies; and a physical education component that offers a program of recreational activities adapted to enable students to develop a sense of self-accomplishment and group cooperation. Each occupational program features job entry skills, job placement skills, shadowing experiences, and a related work-study program. Occupational components include: electronic assembly, data processing, building and grounds maintenance, horticulture/agriculture, and distributive education.

Project COFFEE was developed by a regional cooperative federation of seven school districts and a highly successful partnership with high technology business and industry. This partnership has provided educational assistance in curriculum development, staff training, occupational training materials, equipment acquisition, competency-based assessments, internship experiences, and more. Materials include: program manual, basic skills curriculum guide, guidelines for industry/education linkage, guidelines for inter-agency collaboration/community outreach, procedures manual for development of competency-based assessments, and diagnostic needs assessment survey manual for student survival skills course.

Requirements Support of educators, parents, community, school board, local special service agencies and related business/industries is essential. The project may be adopted by a single school district or by a federation of school districts. The program functions extremely well as a "school within a school"; therefore, no additional building site is required. A realistic work environment with state-of-the-art equipment is required. An effective communication plan with students, parents, educators, local social service agencies, and related business and industry is required.

Costs Cost of replicating the program is approximately \$2,500 to \$3,000 per student or \$45,000 to \$50,000 per training program (15 to 20 students). Effectiveness of the program is greatly enhanced by maximum utilization of existing government-supported social service agencies and industry/education initiatives.

Services Awareness materials are available at no cost. Visitors are welcome at the project site by appointment. Project staff can attend out-of-state awareness meetings (costs to be arranged). Training is available for potential out-of-state adopters at their site or at developer/demonstrator site. Follow-up technical assistance is also available. Materials are available at nominal charge.

Contact *John R. Phillip, Project Director, Jane Garvey, Project Coordinator, Project COFFEE; Oxford High School Annex; Main Street; Oxford, MA 01540. (617) 987-1626 or 1627.*

COMPUTER LITERACY PROJECT. A course of study designed to give all students a working knowledge of computing.

Audience Approved by JDRP for grade 9. This program has also been implemented successfully in other grade levels.

Description The concept of the Computer Literacy Project is based upon the premise that being "Computer Literate" has become a basic skill. Simply stated, this concept is: to give students a basic understanding and minimal working knowledge of most aspects of computers. The concept is essentially the same that schools strive for in basic required courses in science or math; that is, a basic working knowledge of the subject. The terms "science literacy" and "math literacy" could be aptly applied.

The course is organized in such a way as to meet the goals set forth by the concept of developing a minimal level of competency, or literacy.

Computer History—A knowledge of the men, machines, ideas, advantages and disadvantages of past and present computers. The Computing Process—A knowledge of the different means of inputting information, what the computer does with this information and the means of outputting the information. Arithmetic Hierarchy—A knowledge of the correct form of solving an arithmetic equation. Variables and Constants—A knowledge of how the computer stores data and how it labels the storage locations in which the data is placed. Flow charting—A knowledge of flow charting symbols and the logical steps to writing a program. Basic Language—A knowledge of how to write a computer program and use the correct syntax, and how to correct a computer program if it has a mistake. Computer Vocabulary—A knowledge of the words and slang words used to describe and discuss computers. Writing Programs—The ability to apply all of the information which has been learned.

Requirements Provide enough hardware to have one computer for approximately every two students who will be enrolled in a given class at a given time. Have a person to teach the course who is already computer literate. Provide release time and expenses for a one-half day training session for the teacher.

Costs If the school does not already own enough hardware to provide one computer for approximately every two students, funds will need to be allocated to purchase whatever brand the school prefers; approximately \$25.00 dollars for printed materials; the cost of participating in a training session. This is only to cover the expenses of the trainer and will vary depending on the location and number of persons being trained.

Services An NDN funded Developer Demonstrator Project. An NDN Lighthouse Project. Awareness materials are available at no cost. Visitors are welcome at project site any time by appointment. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is also available at adopter sites (costs to be negotiated).

Contact David Woolly, Project Director; Computer Literacy Project; Alma Public Schools; P.O. Box 1018; Alma, AR 72921. (501) 632-4791.

COMPUTERONICS: A course in programming, problem solving, and computer literacy.

Audience Approved by JDRP for gifted and high-achieving students in grades 6 and 7. This program has also been used in other settings with gifted students and with students of a wide range of abilities in grades 5-8.

Description Computeronics is a 35-40 hour course in programming, problem solving, and computer literacy. Computeronics provides students an opportunity to: learn a simple programming language; use computers to solve problems; and see the ways that computers affect their lives. The course consists of two units. "Computers in Society" conveys information about the history of computers, their present and future uses, and computer related careers. The student test, which employs a magazine format, includes articles, photos, ads, and a glossary. Because of the rapid change in technology, this unit is easily augmented through inclusion of current magazine and newspaper materials. "Problem Solving with Computers" teaches students to program using the BASIC computer language. Students use their programming skills in solving word problems. This unit uses a combination of paper and pencil and hands-on activities. This combination allows as many as 10 students to work with a single computer. The materials are not hardware specific and can be easily adapted to a variety of delivery systems.

Both units use a mastery learning approach; each unit objective must be mastered before a student moves on to the next. The management system built into student lesson books, activities, and mastery answer book allows students to move at their own pace. Suggestions for teachers are included in the teacher's guides, which include both facilitative and directive classroom organization.

Most recently, the Computeronics material is being used in many states as a curriculum for teaching newly mandated minimum skills in computer literacy. In addition, the material has been used quite extensively with teacher inservice and adult education classes.

Requirements Adopting teachers need teacher materials and two days of training. Students need course materials and access to a computer. The program has been implemented successfully with Apple, Atari, Commodore Pet, Ohio Scientific Instruments, Radio Shack microcomputers, and with computer terminals. Training costs for the project will depend upon a number of factors such as time and location; and should be negotiated with the project staff.

Costs "Computers in Society" materials include a Teacher Guide for \$7.95; Student Lesson Book, \$4.00; Activity Packet, \$1.40; Parent Report Pad, \$2.10 (one per class); and Mastery Record Pad, \$.70 (one per class). "Problem Solving with Computers" materials include the Teacher Guide, \$12.25; Student Lesson Book, \$5.50; Activity Packet, \$2.75; Sidetrips, \$3.60 (one for every four students); Parent Report Pad, \$3.25 (one per class); and Mastery Record Pad, \$.50 (one per class). The Teacher's Test Manual, \$3.25; Student's Test Packet, \$.65; and Mastery Answer Book \$3.85 (one for every four students) are used for both units.

Services Visitors are welcome by appointment at the project site and designated demonstration sites. Project staff is limited, but efforts will be made to attend awareness meetings. Training is conducted based upon written request of interested adopters. Training sessions can accommodate 25-30 participants. A major effort is being made to provide certified trainers in a number of locations to expedite cost-effective program implementation. Costs for training should be negotiated with the project office. Information on materials and training can be obtained by contacting the project office.

Contact *Diane Johnson, Director; COMPUTERONICS; Leon County Schools; 925-A Miccosukee Road; Tallahassee, FL 32303. (904) 487-1520.*

COMPUTER UTILIZATION IN EDUCATION (CUE). A remedial reading and mathematics program utilizing microcomputers.

Audience Approved for educationally disadvantaged students in grades 3-8.

Description The overall goal of Project CUE is to increase achievement in reading and mathematics through use of the micro-computer as an integral part of the instructional and management processes, coordinating classroom instruction with Title I supplemental services. CUE is a sequentially organized, criterion-referenced reading and mathematics curriculum which can be adapted to incorporate both a state syllabus and local curriculum objectives. Criterion-referenced objectives are correlated with the skills continuum of commercially developed, computer-assisted, instructional programs and other commercial materials. The CUE curriculum includes assessment techniques which may be utilized for the purposes of student diagnosis, placement, and instructional management. The program is designated for a laboratory setting but may be used as an in-class program. Students are scheduled for five 30-minute sessions of remedial instruction per week. Time on the computer will vary depending upon student remedial area(s) and instructional needs. A student is scheduled to use the computer daily for approximately 15 minutes per session, 75 minutes weekly. The student spends remaining instructional time on reinforcement activities or on alternate, related instructional materials. One microcomputer can service 24 target students, based on a six hour day. Planning time is provided for the laboratory staff on a daily basis. Teachers, administrators, support staff, and CUE staff utilize the laboratory to access student records (criterion-test results and computer-managed instruction test results) to monitor and access student progress. These records can be viewed on a terminal or produced as a printout. Keeping the equipment in a laboratory setting allows flexibility in teacher-student scheduling and permits additional classroom coordination in the use and development of microcomputer instructional materials which correlates to the project-developed reading, mathematics, and computer awareness curricula. Using the Iowa Test of Basic Skills (Reading Comprehension and Total Math), gains of project students exceeded the expected gains based on comparisons with the norming sample. The percentage of students scoring below the 34.4 NCE on the Reading Comprehension subtest declines from year to year; 20% of the students achieve a posttest score at or above the 41.9 NCE and no longer need program intervention.

Requirements Project CUE may be implemented at the school or district level. Supervisory personnel, a certified reading teacher and a paraprofessional should participate in training activities. Attendance in a one or two-day workshop is essential to understand the CUE process, determine curricula needs, and gain in microcomputer skills. After program implementation, follow-up visits are made by demonstration staff.

Costs Installation costs vary greatly regarding equipment needs, commercial software purchased, and to what degree of implementation a district desires. As the number of students in the program increases, the cost decreases proportionately. One set of training manuals, materials, and on-site training is provided by the Project; adopters pay own travel and lodging expenses.

Services Visitors are welcomed by appointment. Awareness materials are available at no cost. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is provided at project site (adopter pays its own costs). Training is also conducted at adopter site (costs to be negotiated).

Contact *Carol Heiselman/Director, Christine Gilbert/Demonstrator; Project CUE; Central Square Central School District; Central Square Central School District; Main Street; Central Square, New York 13036. (315) 668-2611, Ext. 265.*

CATS (CRITICAL ANALYSIS AND THINKING SKILLS). CATS is a program which teaches students how to apply critical thinking skills to problems and issues so that they will learn how to make more rational decisions. CATS also teaches students how to write persuasive essays.

Audience CATS has been approved by the JDRP as a program for high school students (grades 9-12) of all ability levels. CATS has been used with students in the lower grades.

Description The GOALS of the CATS Program are: 1) to help students learn and correctly use basic critical thinking skills so that they can analyze issues and problems more effectively; 2) to help students learn and correctly use a decision-making process so they can make more rational decisions; 3) to help students become critical readers so they can decode and encode information more effectively; 4) to help students learn the composing process so they can write persuasive essays of high quality; and 5) to provide a way for gifted students to realize their intellectual and creative potential. CATS projects, which fall into two distinct phases, were developed to provide teachers with a practical and tested way for implementing CATS in the real world of the classroom. PHASE 1 (Defining and Evaluating). Students learn how to precisely define the issue at hand, evaluate the issue (i.e. how to obtain a wide range of relevant information), and then how to prioritize and assess the information for credibility. Students use the CATS six-step, decision-making process to define and evaluate the issue using specially formatted worksheets to complete the process. PHASE 2 (Writing and Revising). Students have on worksheets a highly organized version of the issue from which it is a relatively simple matter to write and revise a persuasive essay. SKILLS. Students learn critical thinking skills and how to apply these skills to issue analysis. These skills include: conceptual analysis, deductive and inductive reasoning, and priority analysis. Students are constantly called upon to analyze and synthesize their thinking. Students function at the evaluation level which most taxonomies identify as the highest of the higher order thinking skills. In addition, students are learning the important skills of critical reading and persuasive essay writing. In order to obtain benefits, students complete five CATS projects per semester. Since CATS is used as another teaching method in place of such things as lecturing and giving quizzes five times per semester, students do not suffer as far as acquisition of course content is concerned. However, with CATS, students gain an extra dimension for their education. CATS has been used in social studies, language arts, and related classes. Other adaptations are in progress at this time. CATS has developed special ADVANCED CATS Projects for the gifted student.

Requirements Teachers receive CATS training in a one-day workshop. During the workshop, teachers complete a CATS Project (small group work) and then learn how to use CATS in their classrooms. Follow-up can be accomplished in several ways; phone, mail, or on-site visit. CATS training requires no special equipment or facilities. CATS staff does need the equivalent chalkboard space of two, large, portable chalkboards.

Costs Costs of a one-day workshop are: trainer=\$200; travel, lodging, meals and other expenses=actual cost; materials=\$35 per teacher. Included in the materials cost is the CATS Instructional Package, MAKING RATIONAL DECISIONS, which is used both for the workshop and for classroom implementation. The instructional package contains a 200-page book and 11 manuals, several of which were written by teachers who have used CATS in their classrooms.

Services CATS staff and trainers certified by CATS can provide a variety of services to educators. Training, except in rare instances, is accomplished at the adopter site. Visitors are welcome at the project site by appointment. CATS staff will conduct awareness sessions anywhere in the U.S. or possessions (cost to be negotiated). Follow-up services as described above are provided (costs to be negotiated).

Contact Terry P. Applegate, or W. Keith Evans; CATS Program; 4988 Kalani Drive; Salt Lake City, UT 84117-6421. (801) 466-9365.

CUPERTINO CONCEPT: Computer Literacy Program. A program teaching computer skills to students in elementary school through junior high school.

Audience Approved by JDRP for students in grades K-8 and as a staff development project.

Description The purpose of the Cupertino Concept is to increase the opportunities for children to become computer literate. Students will understand computers and their applications in the world around them. They will develop skills necessary to communicate with computers and recognize the computer's capabilities and limitations. To accomplish these goals, Cupertino has developed a computer literacy curriculum for grades K-8, developed a management plan for installing computers in schools, provided a sequential staff development model program to train staff and parents, and provided an inventory of instructional software and software selection procedure.

The instructional program for computer literacy is based on a comprehensive curriculum which includes awareness, interaction and programming skills, and objectives for infusing the computer into the core academic areas. Program models include lab and classroom applications in elementary school and junior high school.

A pretest/posttest study with 8th graders and a posttest only study with 5th and 6th graders were conducted using experimental and comparison groups shown to be equivalent on achievement, teacher training and home access to computers. Both studies revealed significantly higher scores ($p < .01$) in computer literacy (using modified versions of the Minnesota Computer Literacy Test) among students completing the courses.

Requirements The elements of replication for this program include management and staff training, equipment and acquisition, software evaluation, acquisition of technical support, curriculum development, and evaluation. The staff development model includes a series of fourteen courses. Adopters can be trained to implement a similar program in a three-day workshop. A more comprehensive two-day workshop is also offered.

Costs Costs will vary depending upon the adopter's level of expertise and the hardware already available. Training at the Cupertino site ranges from \$100-\$600 depending on the workshop selected. Additional materials available include a software inventory, a training manual, the curriculum and related activity guide.

Services Awareness materials are available at no cost. Visitors are welcome on site by appointment. Project staff are available for awareness meetings (cost to be negotiated).

Contact Ms. Barbara Caligiuri; Cupertino Union School District, 1031 Vista Drive, Cupertino, CA 10301; (408) 252-3000 ext. 286.

CURRICULUM FOR MEETING MODERN PROBLEMS (The New Model Me). A curriculum to help students understand the causes and consequences of behavior. Approved by JDRP for all students in grades 9-12. This program has been used as a course in itself, to supplement existing courses, and with units selected as minicourses.

Description The New Model Me is designed to help students deal with available alternatives for solving personal problems and the consequences of these alternatives. It is a positive, preventive approach to the study of human behavior and aggression. The curriculum is flexible, appropriate for all students, and adaptable to student needs in a variety of school settings. It incorporates the "casual" approach to understanding human behavior, which requires that a person look beyond the surface manifestations of an event to consider its possible cause. Affective materials and activities constitute a substantial part of the program. The New Model Me basic texts are: a student book and a teacher manual that incorporates the student book. Units in the books are: Human Behavior, Controls, Real Self, Values, Response, and Change. The bibliography in the teacher manual suggests appropriate supplementary audiovisual materials and books. Key Elements: a nonjudgmental, experiential classroom for discussing topics in the affective domain; incorporation of the casual approach to human behavior in the classroom; attainment of curriculum goals; and the following minimal instruction: initial in-depth instruction in Unit 1, subsequent instruction in portions of Units 2-6, and 45 classroom sessions per year (35-45 minutes per session). NOTE: A five-unit second edition of The New Model Me became available in July, 1983 from Teachers College Press, P.O. Box 1540, Hagerstown, Maryland 21740. For further information contact John R. Rowe at address below.

Contact *John R. Rowe, Project Director; Lakewood Board of Education; 1470 Warren Rd.; Lakewood, OH 44107. (216) 529-4267 or 521-6463.*

Developmental Funding: USOE ESEA Title III

JDRP No. 74-73 (5/29/74)

PROJECT EQUALITY. A project aimed at reducing sex-role stereotyping and expanding students' perceptions of job options open to females and males alike.

Audience Approved by IDRPs for grades K-6.

Description Project Equality proposes to reduce sex-role stereotyping in students with materials designed to counter such stereotypes in occupational and home sex roles. Project-developed materials which may be used independently or in combination provide students with nontraditional sex-role models. All materials are self-contained, easily adapted to a variety of classroom settings, require no additional staffing, and fit within the context of subjects the teacher is already expected to cover. Most require 15-45 minutes' use per day over a two- to three-week period. Activities are simple, interesting, and experiential, making them usable with students of different ability levels. Six Occupational Simulation Packets (\$6.25 each) feature a hands-on career education activity based on the isolated job skill concept. This concept singles out a saleable skill required for a wide variety of jobs and already possessed in some measure by students. As students identify and use the skill in a hands-on simulated work experience, it becomes clear that a skill required for one type of work can often be transferred to another. Discussion questions emphasize these points. The six packets ("Color Discrimination" and "Crawling and Squatting" for grades K-2, "Assembling" and "Creativity" for grades 3-4, and "Measuring" and "Oral Persuasion" for grades 5-6) are sensitive to many kinds of discrimination: illustrations show a mix of races and sexes, and K-2 packets include a discussion of how to use the activities with handicapped children. Packets include lesson plans and a list of required support materials. Kits containing all required support materials are available, ranging in price from \$155-\$375. The *Yellow, Blue and Red Book*, for grades K-6 (\$26), is a large loose-leaf notebook containing many ideas for short-term activities that help teacher and students expand their awareness of sex-role stereotyping and broaden their views of sex roles in the home and appropriate job opportunities for qualified people. Activities in the yellow area take 10-20 minutes to carry out, those in the blue area require 20-40 minutes, and those in the red, more than 40 minutes. *Many Thousand Words—Work Pictures*, for grades K-6 (\$26), is a loose-leaf book containing pictures of women and men, girls and boys in a variety of nonstereotyped work settings; a variety of skills and abilities is depicted. Discussion questions focus on the job skills needed and on whether possession of those skills is limited by sex.

Requirements Staff: district career education director and/or curriculum director, principal, school librarian, and six teachers. Training: one one and one-half day training session; optional one-day follow-up meeting. Total cost for staff development of implementation team and all interested teachers (to a maximum of 60): \$800 plus travel costs for two trainers.

Costs If all materials are used, total cost is \$1,789. Estimated continuation cost is \$75 a year. Materials can be used by all district elementary schools in turn. Assuming 3,000 K-6 students in a district, first year cost of implementing the program is \$.85 per pupil.

Services Awareness materials are available at no cost. Visitors are welcome at project site any time by appointment. Project staff are available to attend out-of-state awareness meetings (travel and per diem must be paid). Training is conducted at project (adopter pays only its own costs). Training is also available at adopter site and at turnkey sites in Bellevue, Washington and Farmington, Utah (all expenses must be paid, including trainers' stipends). Implementation and follow-up services are available to adopters (costs to be negotiated).

Contact John Ross, Director of Federal Programs; Highline School District; 15675 Ambaum Blvd. SW.; Seattle, WA 98166. (206) 433-2454.

Developmental Funding:

USOE ESEA Title III and IV-C and Women's Educational Equity Act Program: IDRPs No. 78-180 (5/25/78)

ETHICAL ISSUES IN DECISION MAKING. A program that uses Kohlberg's theory of cognitive moral development to promote the moral growth of high school students.

Audience Approved by JDRP for students in grades 10-12.

Description This project has used Kohlberg's theory of cognitive moral development to design a high school Ethical Issues course and a governance model for schools. Kohlberg's theory identifies six stages of moral development, which are defined and measured by an individual's ability to reason about moral issues in conflict. Designed as a traditional semester elective, the Ethical Issues course can fit into any high school schedule. Cognitive moral development theory provides the structure and content of the curriculum. Each unit centers on a set of moral issues. Each activity requires class discussion of a moral dilemma involving conflicting rights and duties in a given situation. To expose students to increasingly higher states of moral reasoning, units present increasingly complex dilemmas. Students read plays, novels, short stories, essays, and legal opinions; writing skills are emphasized. Kohlberg's theory is also the basis of the Just Community model for alternative schools, which uses a weekly community meeting to promote cognitive moral development. At these meetings, community and individual issues are discussed, their moral components are explored, rules are voted, and agreements are made on issues of fairness that affect the whole community. Leadership rotates through the community. Decisions of the community meeting are processed and issues are clarified at small group adviser meetings. The Fairness Committee is another important structure of the model. Any teacher or student can bring someone before the committee to settle a grievance or solve the issues of fairness that inevitably arise in a high school. The committee identifies areas and issues within the school where teachers and students can mediate solutions to problems together, and it teaches skills necessary for that process. Many of the governance structures employed by alternative schools have been modified so they can be adapted by conventional high schools.

Requirements Ethical Issues requires one teacher (preferably English or social studies) to be trained at the Institute for Moral Development during July. This introduction enables a person to return to their school and teach as many sections as might be scheduled. A team of persons is preferable, but one individual would suffice. Due to the complex nature of the Just Community School, it would be necessary to send a team of teachers and/or administrators to Harvard to be trained. Typical costs are approximately \$1,000 for tuition, \$500 for room and board, and \$100 for books and materials.

Costs For the Ethical Issues Course, replicators would need the following: two teacher's guides @ \$50 each; 29 student handbooks @ \$10 each; films to accompany the course @ \$300 per semester (note that not all of these are required and some may be locally owned). Staffing costs can be met by reassignment of personnel.

Services Awareness materials are available free to potential replicators, and visitations may be arranged by appointment. Availability of project staff to attend awareness sessions and to provide training services other than at Harvard may be arranged (costs are negotiable).

Contact *Anthony Arenella; Scarsdale Public Schools; 45 Wayside Ln.; Scarsdale, NY 10583. (914) 723-5500, ext. 144 or 147.*

"GO-METRIC": A Supplemental Low-Cost Metric Curriculum. A low-cost metric curriculum that supplements existing programs.

Audience Approved by JDRP for students of all abilities, grades 5-8.

Description The unique design of "Go Metric" provides interested metropolitan and rural school systems, as well as communities, with a model for incorporating metric education into existing instructional programs at minimal additional cost and with no additional personnel.

This innovative program includes an elementary and secondary curriculum for all pupils in the school population and identifies a range of teaching techniques involving the pupils in a variety of hands-on activities using metric equipment. Audio, visuals, and games are also utilized to accommodate the special needs of all students. To provide additional in-depth understanding of metrics, the inservice requires teachers to participate in the same metric exercises that are used in the classroom. The curriculum is arranged so that it does not intrude on an already crowded schedule but enhances metric instruction as teachers integrate it into appropriate instructional areas.

Upon request by school systems implementing the program, trained personnel are available to conduct a 15-hour inservice for school personnel. Content of this inservice includes background in metric measurement, orientation to the curriculum guides, use of metric equipment, and a plan for implementing the program within the regular curriculum.

Contact John E. Roller, Director; "Go Metric" Project; or Roger E. Kruse, Director of Federal Programs; Tulsa Public Schools; 3027 S. New Haven; P.O. Box 45208; Tulsa, OK 74145. (918) 743-3381.

Development Funding: USOE ESEA Titles III and IV-C

JDRP No. 78-195 (8/10/78)

HEAR: Human Educational Awareness Resource. A curriculum infusion model with built-in staff development to increase work options and reduce effects of stereotyping. Approved by JDRP for students of all abilities, grades 4-9. It has been used in other settings with grades 1-3 and 10-12.

Description Project HEAR consists of Primary, Intermediate and Secondary Learning Units, integrated into a student's regular curriculum over a 45-day time span. Learning Units are sequentially organized and designed for use in any existing classroom structure with any discipline; they may be adapted to multiple learning needs. Project HEAR combines reading, writing, verbal, audiovisual, and simulation gaming experiences. Activities are varied and afford students opportunities to work individually and in groups. Project HEAR aims to make students aware of their needs, skills, strengths, aptitudes, and motivations. The program relates a variety of occupational information to the student's self-concept. Emphasis is placed on choosing and examining alternatives in order to make decisions. At the elementary school level, the primary goal of the program is to change students' views about the world of work and to break down occupational stereotypes. At the upper levels, the program aims to increase students' knowledge of the world of work and to align their occupational choices with their occupational interests, aptitudes, and abilities. Project HEAR's curriculum is designed to help students gain insight without judgment of success or failure, to lead students to a successively widening exploration of the world outside themselves, and to teach them decision-making skills and provide skill-building activities. Self-awareness, career awareness, and decision-making are the threads that weave the project's components together.

Contact Joel Geller, Director; Project HEAR; Cogent Associates; 306 Alexander St.; Princeton, NJ 08540. (609) 921-1484.

HOSTS Math: HELP ONE STUDENT TO SUCCEED. A diagnostic/prescriptive/tutorial approach designed for students with remediation needs in the mathematical skills of concept development, computation and application.

Audience Approved by JDRP for math instruction in grades 2-6. It has also been used in other settings with kindergarten, first-grade and junior high students.

Description HOSTS Math is a mastery learning model; however, HOSTS Math's flexibility allows it to be used in a regular classroom as well as in a compensatory setting. Students are carefully placed in a precise sequence of math skills and progress from one skill to the next as mastery is demonstrated. Teachers are provided lesson plans which emphasize the manipulative, representational, symbolic approach to learning. Small group and/or one-to-one tutoring is used to remediate the deficiencies identified by the teacher. Assessment, record keeping, and review of materials are integral parts of the program available in paper and/or computerized format. HOSTS Math has been designated as a LIGHTHOUSE PROJECT by the USDE for its use of computer technology in improving student performance.

A computerized version of HOSTS Math is available.
There is also a HOSTS reading program.

Requirements Teachers participate in three days of inservice training. Aides and tutors are subsequently trained by teachers. No special facilities or staff are needed. The required implementation materials include Teacher Guide, Record Forms, Lesson Plans, the Math Objectives Continuum, Student Worksheets, Criterion Tests, and Answer Sheets for each classroom or resource room. The district must be willing to serve as a demonstration site.

Costs Start-up cost per school is approximately \$6,000-\$7,800. Second year costs are minimal.

Services Awareness materials are available at no cost. Visitors are welcome by appointment at the project site. Project staff are available to attend out-of-state awareness meetings. Training is conducted at project site or at adopter site. Implementation and follow-up services are available to adopters (all costs to be negotiated).

Contact *William E. Gibbons, Executive Director; HOSTS Foundation, 605 N. Divine Road, Vancouver, WA 98661. (206) 694-1790.*

INDIVIDUALIZED COMPUTER ASSISTED REMEDIAL READING PROGRAM (ICARE). A computer-assisted program to provide basic reading instruction.

Audience Approved by JDRP for educationally deprived vocational education students in grades 10-12.

Description This project is an effort to supplement the existing reading program for the high school vocational education student. Through the use of a microcomputer, individualized and small group instruction allows the student to set his/her own learning pace. Each student must spend a 50-minute class period each day involved in this program in lieu of the regular English class. On a rotating basis, a student spends one week in each of the following five areas:

Vocabulary: More than 100 vocabulary programs exist, each of which contain at least 20 words. Words are spelled out letter by letter, and four choices are offered. Students are informed by the computer of correct and incorrect responses, percent score, and a list of the incorrectly defined. Students must complete a minimum of 30 computerized vocabulary programs. A mastery score of 80 is necessary to move on to another program. **Reading:** Students must also complete a minimum of 30 computerized reading programs. There are a total of 190 programs that allow the students or teacher to select number of words per minute. The computer then displays the reading material, followed by 5-10 questions related to the reading. Students are presented with number of correct responses and a percent grade. An 80% mastery rate is requisite for the next program. **Reading & Writing Skills:** Students must complete a minimum of 25 audiovisual reading programs in areas including basic math, English grammar, word usage, and reading and writing skills. **Audio tapes:** Subject matter is graphically displayed accompanied by sound. The vocationally-oriented learning material has companion worksheet(s) that enable students to assimilate the material and respond in writing. Four sets of headphones effect a multiple listening station. Units are available in vocabulary development, reading, comprehension, and basic skills math. A minimum of 10 audio tapes is required. **Paperback books:** A minimum of two paperbound books of the student's choice. More than 100 are available. Rotation among these five areas reduces the boredom and discipline problems. The ability of the microcomputer to repeatedly review materials without making value judgments, tiring, or losing enthusiasm enables the curriculum to be highly effective.

Requirements ICARE can be adopted by a single teacher, a teacher aide, a classroom unit, or by several units. Extensive staff development and training in computer literacy is not a requirement. Many companies (Radio Shack, Apple, IBM) offer free computer literacy training workshops for teachers.

Costs Cost per participant is \$185 for installation, and \$140 for subsequent years, based on 30 students. Costs would be reduced as the number of students increases. Three computer master tape programs have been developed to enable teachers to author their own programs in vocabulary, spelling, speed reading, and comprehension at a cost of \$50 per program or all three programs for \$125.

Services Awareness materials are available at no cost. Visitors are welcome at project site by appointment. Project staff are available for awareness conferences and training (costs to be negotiated). Training workshops are also conducted at project site (costs to be negotiated). Implementation and follow-up services are available to adopters (costs to be negotiated).

Contact Mr. Victor A. Miller, Project ICARE; Blue Mountain School District; Blue Mountain High School; R.D. #1; Schuylkill Haven, PA 17972. (717) 366-0515.

INDIVIDUALIZED PRESCRIPTIVE ARITHMETIC SKILLS SYSTEM (IPASS). A computerized criterion-referenced testing and instructional program in basic mathematical skills utilizing microcomputers.

Audience Approved by JDRP as a supplementary mathematics program for grades 5 and 6. Developed as, and is an ongoing Chapter I program.

Description IPASS was designed to increase the achievement of intermediate grade students in mathematics through the use of advanced technology in the form of microcomputers. IPASS employs microcomputers and specially designed software as an integral part of both instruction and the management of student progress in a compensatory education setting. IPASS is an efficient and highly cost-effective project.

IPASS includes locally developed criterion-referenced tests, instructional and management software, cross-referenced tests, cross-referenced instructional resource file, and guides for teachers and students. IPASS objectives can be used to supplement most mathematics curricula without modification.

IPASS is designed as a "pull-out" program in which the student receives two 30-minute sessions per week. IPASS can be adapted to a classroom or laboratory setting. A teacher or aide using two microcomputers can serve up to 40 students per week. Locally developed instructional materials can be integrated into the remediation process. IPASS is available for R/S TRS-80 models I/III and IV, R/S Color disk (32K) Apple IIe. Cassette version no longer available. Adopted in more than 80 school districts in 17 states. Original funding Chapter I. Evaluation data is available upon request.

Requirements A TRS-80 or Apple IIe microcomputer and printer must be available. A training program is required for school personnel implementing the program. No prior experience with computers is necessary.

Costs A fee of \$250 is charged for the IPASS software, including computer programs, criterion-referenced tests, student profile sheets, instructional resource file, and procedure guides for teachers and students. One copy of these materials is included and permission is given to reproduce any and all of these materials and programs in quantities necessary for the adopting school district.

Services Demo diskette for Model III, IV and color Apple IIe available \$20. Awareness materials available at no cost. Visitors are welcome at any time by appointment. Project IPASS staff members are available to explain and demonstrate IPASS both at in-state and out-of-state awareness meetings (cost to be negotiated). Training is conducted at the project site and is also available at an adopter site (cost to be negotiated). Implementation and follow-up services are available (costs to be negotiated). Telephone hot-line is available to adopter districts at any time during normal hours.

Contact *Robert R. Reynolds, Director; Project IPASS; Pawtucket School Department; Park Place; Pawtucket, RI 02860. (401) 728-2120.*

IPIMS/Reading Center (Individualized Prescriptive Management System for Underachievers in Reading). IPIMS is not a text or a kit, but a model of an organizational structure for implementing a remedial reading center for grades 7-12.

Audience Approved by JDRP for secondary students deficient in reading skills.

Description The Individualized Prescriptive Instructional Management System for Underachievers has a centrally located reading center for grades 7-12. The center is staffed by reading teachers and paraprofessionals as well as student volunteers. Students utilize a wide variety of resources; these materials are color coded into four reading levels. The IPIMS/Reading Center process is as follows:

Students are identified and given a diagnostic reading test. Individual strengths and weaknesses are noted as well as personal interests.

Individual prescriptions are written and implemented.

Student progress is monitored by a criterion-referenced system.

Parents, teachers and students receive periodic progress reports.

As a result of one year of participation in the IPIMS/Reading Center, students in grades 7-12 demonstrated gains significantly above the norms on the Stanford Diagnostic Reading Test. Pre and Post test scores showed that skills grew at a rate of one and one-half years for each year of instruction, a statistically significant rate ($P < .001$).

Requirements A one-day training session is required. Additional follow-up is available. Areas covered by the training include: an in-depth orientation to the total program; overview of components selected for the adoption/adaptation by participating districts; discussion of staff roles; the theoretical and applied aspects of the validated program; alternative installation strategies that might be employed by the district; a comprehensive review of the evaluation design; and a systematic review of all resources to be employed during the replication.

Costs Twenty-five Dollars (\$25.00) for Training Manual. One needed per reading center. All other costs will vary depending on the number of resources currently available in the district, the size of the center and the number of staff members and the student population to be served. Adopting districts will be responsible for the expenses involved in training (Trainer's travel, hotel, and meals).

Services Awareness materials available at no cost. Visitors are welcome at demonstration site by appointment. Project staff is available for awareness sessions (costs to be negotiated).

Contact *Sidney Beckwith, Project Director and Georgia A. Crissy, NDN Trainer, Union Springs Central School District, 27 North Cayuga Street, Union Springs, New York 13160 (315) 252-9309.*

INDIVIDUAL PROGRESS PROGRAM. A complete academic program for gifted students.

Audience Approved by JDRP for students in grades 2-5 who show such an accelerated rate of academic/intellectual growth that their needs cannot be met with grade level teaching and materials.

Description The IPP model is for gifted students in grades 2-5 who are in the top 2% as measured by academic/intellectual tests. The program accelerates students through a basic skills core curriculum at a level commensurate with their own ability. This curriculum integrates all disciplines under the "umbrella" of the social studies, and crosses all age and grade levels. A theme is applied to the curriculum, which rotates every three years. Five manuals have been developed for use with the program: one for a general program description; three for curriculum—one for each year of the cycle; and one describing the use of affective measures in the program. Within these manuals are lists of all texts and additional curriculum resources used by the staff. When students enter the program, they are diagnosed for level of proficiency in the areas of reading/language arts and mathematics. Once students have been tested for individual levels of competency, they are grouped for instruction within each classroom according to the appropriate level. Diagnosis is continued by testing at intervals throughout the year in order to monitor mastery of basic skills and ascertain strengths and weaknesses. Scheduling is arranged so that students may move between classrooms in order to work with their intellectual peers in each academic area. In addition, an enrichment component, which focuses on foreign language, art, the media, folk dance, and computer basics, operates on a six-week rotating schedule. Management tools help teachers maintain student schedules and assist the students' time management. In addition to academic achievement, it is expected that each child will complete independent projects in areas of interest. A structured format is provided for the younger grades, while the older students have a more open-ended structure. The community functions as a primary resource for all of the disciplines; resources are either brought into the classroom or students are taken out into the field. Activities in interpersonal skills, self-awareness, and communications are part of the curriculum manuals.

Requirements The Individual Progress Program can be adopted by one or more classrooms in a district. Implementation of the IPP involves a two to six-day workshop for the adopting district staff, workshop length depending on the knowledge base of the adopting team. Consultants will assist staff with planning and adaptation of their existing curriculum materials to the IPP model.

Costs The manuals are designed to provide the program model, including assessment, scheduling, curriculum outlines, and samples of lesson plans and units. The staff and classroom costs are baseline and the textual and resource materials specified by the district are utilized within the classroom. Thus the need for additional materials is reduced. First year cost to a district is usually \$5,465. This reflects release time and substitutes. The fee for trainer is negotiable, based on the number of days requested for inservice and amount of materials needed.

Services Visitors are welcome at demonstration site by appointment. Project staff are available for awareness sessions (costs to be shared) and training sessions (costs are negotiable). A one day follow-up is available and would be negotiated into the cost of the training session.

Contact *Dr. Wendy Roedell, Individual Progress Program Dissemination Project, Educational Service District No. 21, 1410 South 200th Street, Seattle, WA 98148. (206) 248-4961.*

Project INSERVICE (formerly Positive Attitudes Toward Learning (PATL)) is a comprehensive teacher inservice training program which directly links the enhancement of teaching skills through classroom based inservice training to significant improvement in student academic achievement. The teaching skills are addressed to many of the findings of the effective schools research.

Audience Approved by JDRP for K-12 students as a means to improve school climate, school effectiveness, and student achievement and attitude.

Description Project INSERVICE identified 15 teaching competencies which have proven effective in enhancing student learning. Change occurs through the use of classroom based inservice training kits. Four interrelated kits were developed. Each kit contains four to six of the competencies. Learning activities are designed to assist the teacher in fine tuning their use of each of the competencies. Project INSERVICE is implemented in the classroom by each participating teacher. A fellow teacher or other school person functions as Kit Advisor and facilitator. Activities facilitated by the Kit Advisor include small group discussions, classroom activities, and the provision of feedback to the teacher in completing a kit. Kit Advisors, minimum two per building, are trained to assist teachers working through the kits. Kit completion requires 20 hours of teacher time over a three or four month period. Completion of all four kits requires approximately two years.

PROCESSES OF LEARNING KIT provides the teacher with techniques for eliciting high order thinking and for alternative teaching strategies which promote greater use of thinking abilities. CLASSROOM COMMUNICATION AND MANAGEMENT KIT provides a Communication Model developed around the concepts of warmth, respectful treatment, and clearly defined limits of behavior including moderately high positive expectations. Students learn decision making as well as responsibility for their own behavior. ACTIVE INVOLVEMENT KIT provides a mechanism for direct involvement in learning activities resulting in a more positive attitude toward self and school. Time on task is enhanced through classroom group discussion, small group learning and other learning activities. INDIVIDUALIZED INSTRUCTION KIT provides instruction in developing objectives. Learning activities are identified for each objective, designed to assist the student in developing the skill or behavior called for in the objective. At this time 2,000 schools have implemented Project INSERVICE. Data indicates a significant improvement in each of the following areas as a result of Project implementation: reading, vocabulary, comprehension, verbal skills, respect for school and learning, teacher gratification and satisfaction, self esteem.

Requirements Two to four days of training are provided for persons selected as inservice specialists or Kit Advisors. Each Kit Advisor can then work with 7-10 fellow teachers, if they can be released from approximately 10% of their duties. Follow-up after six months to one year is recommended.

Costs Start-up cost is \$500 plus \$12 for each teacher to be trained. Operational costs consist of stipends for inservice specialists. Training costs for Kit Advisors includes travel cost and per diem for one trainer plus \$100 per day.

Services Awareness materials are available at no cost. Visitors are welcome by appointment at project and demonstration sites. Project staff are available to attend out-of-state awareness demonstrations and to provide training. Follow-up services are available to adopters.

Contact *John D. Zirges, Ph.D, Director, or Charles Pelan, Inservice Specialist, Bethalto Unit #8 Schools; 322 E. Central; Bethalto, IL 62010. (618) 377-7213.*

INSTITUTE FOR CREATIVE EDUCATION. A sequentially ordered curriculum that teaches a creative problem-solving process using tasks linked to a wide variety of subject areas.

Audience Approved by JDRP for heterogeneously grouped, whole classroom use, grades 4-6. Used extensively for gifted and talented programs. Full curriculum available (K-12).

Description Institute for Creative Education activity is based on the belief that creative problem solving is essential to a quality learning experience. The project-developed curriculum teaches a process that helps students develop abilities to solve current and future problems. Creativity is considered a thinking activity that results in an original solution to a problem or situation. The project's goal has been to develop students' abilities to respond creatively to problems or tasks with fluent, flexible, original and elaborate answers.

Unique to this program are the sequentially ordered activities or lessons that teach the process of creative problem solving in an order clearly understandable by students and teachers. The students become decision makers and the teacher facilitates their thinking.

Another feature of this program is a two-day teacher training component. During this training (for an estimated audience of 25), teachers learn the format of the curriculum and the basic elements contributing to reinforcement, consciousness raising, and productive thinking (actual tasks to be performed). Following training, teachers are given the curriculum and asked to use the program lessons or activities once a week. Teachers are directed to use the lessons in sequence so that students will easily understand the process, ultimately reaching the higher-level activities in which problems or tasks are more complicated. These higher-level activities are linked to academic principles and require that students create new or unique solutions that work; a finished product is also a requirement of higher-level activities.

The Institute for Creative Education has prepared several manuals to help adopters. These include an evaluation manual to help adopters and an administrative manual with the necessary information for smooth implementation and project management. The Institute staff is available for consultations. Follow-up services, such as teacher observations, conferences, demonstration lessons, lesson development, and evaluation assistance, are highly recommended.

Requirements The Institute curriculum can be implemented in schools of any size and composition provided that teachers are trained in Institute concepts. It can be used by whole classrooms or cross-grade groupings and in large or small group settings. A group of 25 teachers is ideal for training (two days). The entire adopting staff and an administrator should attend a 1-1/2 hour awareness session before training. The only materials required (for curriculum and project administration) are supplied at cost, approximately \$50 per teacher for curriculum, \$15 for training manual.

Costs Teacher training is the main expense. One Institute staff member will administer two days of training. If done on release time, the cost of substitutes must be met by the adopter. No additional staff or equipment are needed. Minimum upkeep (involving only such consumables as paper, pencils, craft materials, wood, etc.) is needed after initial implementation.

Services Awareness materials are available at no cost. Visitors are welcome any time by appointment at project site and additional demonstration sites in and out of state. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is conducted at project site (all expenses must be paid, including consultation fee to be negotiated; cost of materials, \$60-\$65 per teacher; plus trainer stipend). Training is also available at adopter site (travel and per diem must be paid). These services are highly recommended for quality adoptions. Follow-up services are also available to an adopter.

Contact Ms. Verne Kelly, Director; and Monica Steinberg, Coordinator; Institute for Creative Education; Education Information and Resource Center; Box 209; Route 4, Delsea Dr.; Sewell, NJ 08080. (609) 228-6000.

ISIS: Individualized Science Instructional System Dissemination Project. An interdisciplinary, modular science program preparing non science oriented students to understand practical, real-world, science-related problems.

Audience Approved by the JDRP for science students of all abilities, grades 9-12. The program has also been used in grades 7-8 and in health, social science, and physical education courses.

Description The program consists of 52 short, independent minicourses (34 of which currently have JDRP approval). The courses cover a broad range of topics of practical significance; they are intended to help students meet the diverse needs of today's world. Since the minicourses are independent, they can be used separately or grouped to form year-long courses in life science, general science, physical science, health, and environment science. Individual minicourses cover topics related to health, physical education, ecology, and social science as well as the traditional science areas. An accompanying teacher's manual can assist teachers in using individualized, small-group, or whole-class teaching methods.

Each minicourse is based on 15-20 learner objectives that were drafted at the beginning of the six-year development period by a panel of science educators, scientists, classroom teachers, parents and students. A minicourse is normally completed by a student in three to four weeks (15-20 class periods). For every minicourse there is a test in two forms, and several minicourses have ancillary items such as cassette tapes, instructional games, atlases, maps, and wall charts. The reading level of the minicourses averages grade 8 as verified by the Fry Readability Graph. Remedial material on basic skills is also available.

Each minicourse, its accompanying test items, and all ancillary materials were reviewed for their science content at every stage of development and testing by at least two scholars considered to be experts in the content discipline. The materials were also reviewed by a panel from the National Congress of Parents and Teachers, who judged them for bias and appropriate treatment of sensitive issues. Trial editions and revisions of the minicourses were used by more than 250 teachers with over 25,000 students in 750+ classrooms in 10 states. The schools were in urban, suburban, and rural areas and included a spectrum of racial and socioeconomic populations.

Requirements ISIS can be implemented in a variety of ways. A single minicourse can be used by a single student or an entire class, multiple classes can use one set of minicourses. The per-pupil cost for full-year installation compares favorably with single-textbook-based programs. Most ISIS materials are nonconsumable, so recurring costs are minimal.

Costs Costs vary depending on the minicourses chosen and the quantities requested. Since minicourse activities are usually completed in class, multiple classes can use one set of minicourses. The per-pupil cost for full-year installation compares favorably with single textbook-based program. Most ISIS materials are nonconsumable, so recurring costs are minimal.

Services Awareness materials are available at no cost. Visitors are welcome any time by appointment at project site and additional demonstration sites in home state and out of state. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is conducted *only* at adopter site (all expenses must be paid). Implementation and follow-up services are available to adopters (all expenses must be paid).

Contact Ernest Burkman, Director; ISIS Dissemination Project; ESC, Inc.; PO Box 3792; Tallahassee, FL 32315. (904) 386-3176.

KIDS KITS (KIDS INTEREST DISCOVERY STUDIES KITS). A program to generate active, self-directed learning and higher levels of thinking, using organized sets of multimedia materials on topics of student interest.

Audience Approved by JDRP for students of all abilities, grades 1-6.

Description KIDS KITS is a multimedia approach to gifted and talented education, special education, regular classroom instruction, and library media center activities. Based on a school-wide survey of student interest, kits such as Indians, Astronomy, and the Human Body are developed by the library media staff and teachers. Kits contain books, filmstrips, tapes, models, study prints, etc., suitable for all grade levels, a variety of learning modalities, and a range of abilities. Integration of resources into KIDS KITS allows for immediate hands-on use of a variety of materials. There are four phases of student involvement: exploration, in-depth study, application, and sharing of information. Exploration allows students to become aware of topics of interest and resources available. During in-depth study, students ask and answer research questions by listening, viewing, reading, and writing. Students apply the information they have learned by creating a product or preparing a presentation. Student products include study prints, transparencies, tapes, models, photographs, or filmstrips. Products also may be added to the kits. Students are encouraged to share their learning with families, classmates, teachers, and students from other classes through product displays, presentations, and informal discussions. KIDS KITS is adaptable to any scheduling pattern and to any type of school organization, such as self-contained, open space, teaming, or departmentalized. Individuals, pairs of students, small groups, or large groups can use the kits in the library media center or in classrooms. Structured activities are guided by library staff or teachers. **Program Effectiveness:** Interview data collected at the developmental site and at two adoption sites (one rural and one suburban) indicated that with increased kit use students demonstrate; (a) greater specificity, complexity, and multiplicity in their descriptions of the purpose of their learning activities; (b) more awareness and use of learning resources; and (c) a greater number of applications of the information gained. At the developmental site, where students had participated for one to three years, results were significant at the .001 level. At the adoption sites, after six months, the significant levels varied from .02 to .007.

Requirements Staff at the adopting school develop 8-10 kits. The school identifies a staff member to serve as the program coordinator—usually the library media specialist/aide or a teacher. The coordinator or coordinating team receives one day of training in kit materials selection, program operation, and evaluation. Classroom teachers receive two to four hours of inservice training in how to use KIDS KITS to supplement their instructional program. Library media staff and/or teachers train students in the use of KIDS KITS, operation of audiovisual equipment, and production methods.

Costs A wide variety of commercially available multimedia materials is used to compile the kits. Much of this material is already found in most schools. Costs vary considerably, depending on the amount of new materials purchased. Most schools already have appropriate audiovisual equipment. Materials available for purchase from the KIDS KITS project include Program Manuals (1 required per school), Activity Cards (optional), and Discovery Cards (research questions; optional).

Services Awareness materials are available at no cost. Visitors are welcome any time by appointment at the project site. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is conducted at adopter site (costs to be negotiated). Implementation and follow-up services are available to adopters (costs to be negotiated).

Contact Jo Ann C. Petersen; *Warder Elementary School; 7840 Carr Drive; Arvada, Co. 80005. (303) 423-1227.*

LAW EDUCATION GOALS AND LEARNINGS (LEGAL). A comprehensive law-related curriculum program designed to promote student understanding of the criminal justice system and of the civil justice system (particularly as it relates to consumers).

Audience Approved by the JDRP for secondary-level students, grades 7-12.

Description Using the LEGAL curriculum program, students have the opportunity to become more knowledgeable about the legal system and to apply their knowledge in problem-solving situations. The program enables students to develop decision-making strategies while utilizing behaviors compatible with the legal codes of contemporary society. The LEGAL program includes components for student instruction and teacher inservice training. Project materials provide guidelines for community research and support for a wide range of classroom instructional activities. For grades 7-9 (the LEGAL Jr. program), the curriculum materials consist of two detailed instructional guides (Criminal Justice and Consumer Law); a workbook (in student and teacher editions) containing 10 field experiences and 10 alternative classroom activities (with five sound filmstrips); teacher implementation and resource guides; program assessment instruments; and a support manual for managers (with administrative guidelines) to aid in program implementation. For grades 10-12 (the LEGAL Sr. program), the curriculum materials consist of two detailed instructional guides (American Justice System and Community Law); a workbook (in student and teacher editions) containing four law resource units; a workbook for students that contains guidelines for the community law research project (with three sound filmstrips); teacher implementation and resource guides; program assessment instruments; and a support manual for managers (with administrative guidelines).

LEGAL inservice training for teachers provides a means through which appropriate instructional strategies can be developed, community resources can be identified, and program implementation procedures can be facilitated.

Requirements Adoption can take place at the junior and/or senior high school level. The program at each level may be implemented as a semester or full-year course of study or be incorporated into existing courses of study. Teachers implementing the program (or trainer who may conduct staff training in the adopting district or a combination of both) should participate in a two-day training session and/or review the self-instructional module (prepared for teachers who wish to independently implement the LEGAL program). Each teacher will need a complete set of LEGAL curriculum products.

Costs The total start-up costs for the LEGAL Jr. program are approximately \$235. If student materials are used in a consumable manner, replacement costs are \$2.50 per workbook. The total start-up costs for the LEGAL Sr. program are approximately \$285. If student materials are used in a consumable manner, replacement costs are \$3 per workbook and \$2 per community source book. The cost of training workshops held at adopter site (travel and materials) may be shared among the NDN Facilitator, adopter, and LEGAL.

Services Awareness materials are available at no cost. Visitors are welcome to visit the program site. If travel expenses are provided, LEGAL project staff are available to attend out-of-state awareness meetings. No consultant fee is required. Training may be provided at either the project site or adopter site (cost of expenses, travel, and materials covered by the adopter). If training is conducted at the project site, no expenses for workshop facilities will be incurred by the adopter. Follow-up (technical assistance and monitoring) will be provided upon request (adopter pays expenses).

Contact *Ron Cold, Coordinator; LEGAL; Dade County Public Schools; 1450 N.E. Second Ave. (Room 933); Miami, FL 33132. (305) 376-1951.*

MERRIMACK EDUCATION CENTER CAI PROJECT. A computer-assisted instructional program to augment the basic skill areas of reading and mathematics.

Audience Approved by JDRP for compensatory education students, grades 2-9.

Description This project provides individualized, structured, and sequenced drill and practice and tutorial services for students in Chapter I classrooms. As part of a comprehensive system, the program combines commercially available courseware with supportive organizational arrangements including staff training, materials, hardware and software maintenance, learning environment management, and technical assistance.

Based upon each student's measured strengths and weaknesses, teachers place him/her in the appropriate instructional level. Daily, all eligible students receive 30 minutes of individually tailored basic skills remedial instruction. Materials for instruction have been organized in a series of age/grade curriculum strands that are available in both computer-assisted instruction (CAI) and paper-and-pencil form. Two-thirds of class time is spent in small group or tutorial sessions with the teacher. The remaining third is spent interacting with the CAI system. Information is presented to each student in small chunks. Depending on what type of response a student makes, the computer takes an appropriate step—for a correct response, reinforcement and new material; for an incorrect response, a tutorial with additional practice. The teacher can assign the student a special drill for remediation when necessary. The computer management system keeps track of each student's progress, and generates reports for use by teacher and administrators. Procedures have been adapted to serve a multi-school district delivery system, and a management technical assistance system exists to guide implementation of the program as a supplement to the regular program. The technology activities have been identified as an NDN Technology Lighthouse Center. In addition to the JDRP approved program, visitors to the project site participate in applications of the uses of computers in education, as outlined in the following components: teacher/administrator training; software/courseware training; hardware and cooperative purchasing; data base management, and comprehensive planning. Computer literacy seminars are offered to school districts and software is available for preview.

Requirements Adopter would install a cluster of eight terminals, a central processing unit, and a printer in a computer laboratory setting (single classroom is adequate). Classroom teachers can use the system with very little training. The programs of Lighthouse can also be adopted as individual components (e.g. Computer Concepts software and Computer Applications Planning).

Costs Host computer services 96 terminals (12 clusters of eight terminals). Each cluster services 240-300 students during the normal school week. Cost is turnkey except for telephone connection which varies with installation site. Cost includes training, technical assistance, full maintenance, lease-purchasing of equipment, insurance, evaluation assistance, all courseware, stand-by terminal tests, etc. A cost effective version using a Sony microcomputer is also available. Lighthouse applications feature Apple, IBM and other major equipment for student classroom use.

Services Awareness materials (including evaluation report) available. Visitations and training opportunities scheduled weekly. Project staff available to attend awareness meetings in states (costs to be shared). Training done at adopter site as well as project site. A Computer Applications Planning Guidebook is available for \$9.75 and Computer Concepts software can be made available separate from training.

Contact *Richard Lavin, Ed.D, Director; Merrimack Education Center Computer-Assisted Instruction Program; 101 Mill Road; Chelmsford, MA 01824. (617) 256-3985.*

M2C: MATH MOTIVATIONAL CENTERS. A pull-out program that provides intensive remedial instruction.

Audience Approved by JDRP for students in grade 9.

Description In each Math Center, which is set up to operate separately from the math classrooms, are located state-of-the-art materials for instruction in basic math skills. The M2C instructional management system provides for diagnosis, through criterion-referenced pretests, of each student's strengths and weaknesses in specific skills. Prescriptions guide the teacher and students to appropriate learning materials which are available in several modes. The management system has been designed to increase actual time on task to the maximum possible in each class period. Mastery of each instructional unit is measured by criterion-referenced posttests. A simplified recordkeeping system is used to document each student's progress through his or her own curriculum path. The component skills of mathematics have been tagged with 239 separate learning tasks and a series of matched math action applications. Each student has a folder in which all of the numbered tasks and applications appropriate to the level of study are listed with check-off boxes. As the student completes a unit, and passes the test that goes with it, the progress can be recorded on the folder to allow the student to identify the exact skills mastered and the progress being registered. The units also include a concordance of textbooks, workbooks and coded materials for study to master the indexed skills. The materials are cross-referenced to levels, lesson number and page number for each skill.

Each Math Center is under the direction of an instructor who works with the students and reports their progress to the regular math teacher. Skill diagnosis and determination of individual needs are first determined by the regular math class teacher. Computer-assisted instruction is also a part of the center. The terminals are not only important in providing motivation for the student, they also provide the opportunity to become literate in the use of computers, a skill becoming more and more essential in the modern world. Parents are involved as both tutors and learners at the Math Centers. The program is currently expanding the opportunities for participation in the Centers. Students are able to drop in as their schedule permits to work on their own and work with fellow students in peer tutoring.

Requirements Center can be established per teachers' manual directions; however, six visitations and workshop recommended.

Costs Estimated cost to implement a Center other than computer hardware is \$500 per Center, which includes teacher's manual, computer software, and training. (This does not include travel to training site). Please note, M2C Center can be established without the computer component. (See description.)

Services Visitors welcome at project site by appointment. Training will be given at workshops. Time and place for workshops will be sent upon request. Brochures are also available upon request.

Contact *Carolyn Rosenfield and Raymond Senes; 105 Main Street; Norwalk, CT 06852. (203) 847-0481. Ext. 266 and 258.*

POSITIVE ALTERNATIVES TO STUDENT SUSPENSIONS (PASS): A program that provides intervention strategies designed to prevent or minimize nonproductive social behavior in secondary students.

Description Major activities of the PASS program include individual and group consultations that assist school faculties in developing techniques for dealing effectively with teenage students, affective education and personal development programs for students and teachers, time-out rooms managed by a teacher or paraprofessional where students talk out problems and complete academic assignments, individuals and group counseling for students experiencing serious interpersonal confrontations, and counseling for parents. "Staff Development for a Positive School" and "Communication Activities in the Regular Classroom" help students and teachers get to know and appreciate each other. "Student's School Survival Course" and "Home Survival Course" help students with problems learn how to interact more effectively within their school and home environments.

Contact *John C. Kackley, Supervisor/Consultant, or Ralph E. Bailey, Ph.D., Director; Project PASS; Pupil Personnel Services Demonstration Project; Euclid Center; 1015 Tenth Avenue North; St. Petersburg, FL 33705. (813) 823-6696, ext. 45.*

Developmental Funding: USOE ESEA Title III

JDRP No. 74-116 (12/6/74)

PROJECT 50/50: A computer technology curriculum for secondary school students.

Audience Approved by JDRP for secondary school students.

Description Project 50/50 is a computer technology program designed to assist secondary school students in gaining computer application skills while increasing their levels of social functioning and academic achievement. The project was developed and implemented as an education/industry partnership and has as its target population, ethnic minorities, females and disadvantaged youth.

The uniqueness of the program is found in its comprehensive approach. The curriculum focuses on computer applications and consists of four components:

- *COMPUTER AS A SUBJECT covers current and future computer applications, history, terminology, and robotics.

- *COMPUTER AS A TOOL introduces programming in LOGO and BASIC languages and the use of graphics and word processing software.

- *COMPUTER AS A CAREER focuses on tech-based careers and job opportunities, job search techniques, interviewing skills and inter-personal relations.

- *COMPUTER AS A METAPHOR includes exercises in orienteering, and uses map and compass skills in relation to programming a computer.

When a school adopts Project 50/50, a network with local businesses is either begun or enhanced; teachers are trained; collaboration between schools is encouraged; and a curriculum is established. In contrast to comparison groups, Project 50/50 students have demonstrated significantly greater acquisition of computer skills (as measured by the Computer Skills Test), self-esteem (as measured by the Tennessee Self-Concept Scale), and interest in math, science and technology (as evidenced by student schedules), based on a one-year intervention period. Following a four-year plateau of achievement scores for math, reading and language, Project 50/50 students demonstrated significant gains compared to a norm group.

Requirements Adopting school district should provide five days of training for the computer novice and three days of training for the computer experienced teaching staff. One desk-top microcomputer and a printer are needed for every two students.

Costs Cost for replication is \$150 per pupil (n=100). Costs include an administrator to coordinate and supervise all program activities, and teacher and trainer preparation expenses.

Services Awareness materials are available at no cost. Visitors are welcome by appointment. Project staff is available for out-of-state awareness workshops (cost to be negotiated). Training is available for potential adopters at their home site or at the Oxford site, if more convenient. Excellent training materials are available for teachers and students.

Contact *Deborah J. Miles, NDN Coordinator; French River Teacher Center; North Oxford, MA 01537, (617) 987-1626.*

QUILL: Microcomputer-Based Writing Activities

Audience Approved by JDRP for all students in grades 3-5

Description QUILL is a microcomputer-based writing program that provides students with software tools for planning, composing, revising, storing, retrieving and printing written text. QUILL also provides teachers with training and assistance to integrate the software into classroom writing instruction and writing in content areas. The primary purpose of QUILL is to provide students with motivating writing activities in a structured, computer-based format, which allows for flexibility in addressing student ability and interest. Additionally, QUILL offers students use of "real life" microcomputer tools, such as a text editor and message system. Finally, QUILL provides teachers with tools to supplement and expand language arts and writing instruction, especially in the areas of expository and persuasive writing.

Intermediate level elementary students (grades 3-5) have significantly improved ($p < .05$) the quality of their expository writing, as measured by pre and post writing samples in comparison with a matched control group.

Requirements At least one computer system per class (Apple with 64K, two drives, 80 column display, green screen monitor, and printer). Computer lab setting is acceptable. No additional staff is required. A local facilitator should be designated from existing personnel.

Costs Staff training and implementation assistance, and purchase of software and hardware are the primary costs. Training (3 days) and on-site assistance (2 days) costs approximately \$2000. The software package from a commercial publisher costs \$150 per teacher. Additional materials (disks, paper, etc.) cost approximately \$125 per teacher. Hardware costs will vary depending upon equipment already available to the adopter.

Services Visitors are welcome at demonstration sites located throughout the country. Awareness materials are available at no cost. Project staff is available for presentation and training on a limited basis (cost to be negotiated).

Contact Denise Blumenthal or David Zacchei, The NETWORK Inc., 290 South Main Street, Andover, Massachusetts 01810 (617) 470-1080.

RAM: READING AND MICRO MANAGEMENT. A program of developmental/corrective reading instruction in a laboratory setting.

Audience Approved by JDRP for 7th and 8th grade students.

Description The goal of the RAM Reading Lab is to provide the necessary instruction and materials to develop the reading skills of students who have skill deficiencies, and to provide enrichment where needed. This success-oriented program is conducted in a lab setting with an informal atmosphere, yet is highly structured. Students are divided into heterogeneous groups, and rotate into the lab from a subject class on alternate weeks. The lab is comprised of ten learning centers that offer a wide selection of activities using various learning modalities. The work is leveled according to students' reading abilities, which range from non-reader to past high school level. The centers focus on reading comprehension, writing, structural analysis, vocabulary, self-esteem, listening, research, literary skills, recreational reading and computers. A diagnostic/prescriptive approach to teaching assures each student of individualized instruction. The skills and focus are determined for each student using the McGraw-Hill's Prescriptive Reading Inventory, as a measurement tool of reading abilities. Students with like deficiencies are skill-grouped. The computers provide reinforcement, extension and enrichment experiences.

The RAM program includes a one-day staff development component. Topics include: instructional materials, individualized instructional techniques, motivation strategies, use of computers in language arts and promoting students' positive self-concept.

Requirements Staff must be committed to a child-centered, diagnostic/prescriptive approach to teaching, and be willing to utilize learning centers and small group instructional techniques. RAM is suited for adoption by a whole school or district. Individual components of the program can be adapted for use in any class or lab. Depending on available resources, the lab can be staffed by a teacher or an aide. A one-day staff inservice is recommended for adopting schools.

Costs Costs will depend on the needs and resources of the school. If computer equipment must be purchased, the cost per pupil is \$21.00. The program uses a wide variety of commercially available materials already found in most classrooms. Staffing depends largely on the needs and resources of the school or district.

Services Awareness materials are available at no cost. Visitors are welcome at project site by appointment. Project staff are available to attend out-of-state awareness meetings and training sessions, with costs to be negotiated. Training is also available at the project site.

Contact *Barbara Clark, Demonstration Reading Program; Sierra Jr. High School, 3017 Center Street; Bakersfield, CA 93306. (805) 323-4838.*

Developmental Funding:

JDRP No. 83-39 (3/29/83)

READING EDUCATION ACCOUNTABILITY DESIGN: SECONDARY (READ:S)

Audience Approved for students, grades 7-12.

Description Through the use of teacher-developed instructional modules and/or computer-assisted lesson designs, this program emphasizes student mastery of a hierarchy of 60, adult-level reading skills. Project READ:S teachers instruct/reinforce essential reading skills on a daily basis by delivering the content of their subject matter courses in the formats of Project READ:S lesson-design modules. The program integrates four components: instructional, which emphasizes direct skills instruction by language arts/English teachers; reinforcement, which provides for mastery of the priority reading skills in all content-areas; in-service, which focuses on both the content and processes of instructional delivery; and, a computer-assisted component for schools utilizing computer technology in management and instruction.

Teachers receive a minimum of three days of in-service training in the construction, application, and evaluation of teaching/learning modules. Using the results of a criterion-referenced test, teachers are able to determine individual reading skill proficiencies and/or deficiencies. The language arts teacher then structures his/her curriculum for instruction. In addition, content-area teachers use the test's scope and sequence to construct teaching/learning modules in vocabulary, comprehension, and study skills. Students are required to successfully complete a minimum of one vocabulary, one comprehension, and one study skills module in each unit of instruction. It is the cumulative effect of using reading skills in each academic discipline that is the thrust of this program.

Coeur d'Alene's eighth grade reading achievement test scores jumped from the 48th percentile to the 80th percentile in a three year period of using Project READ:S.

Requirements A three day preadoption in-service workshop is necessary. Project aides are helpful but not essential for replication of this project.

Costs Cost for replicating Project READ:S will vary according to the location of the adopting site, the number of personnel to be trained, and the number of students to be served. Three days of trainer's time, plus travel and per diem. Training manual, \$25. Optional computer packages are \$75 per set. The complete computer component is \$140.

Services Awareness materials are available at no cost. Visitors are welcome at the project site. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is provided at project site (adopter pays own costs). Training is conducted out of state (exemplary project staff costs must be paid). Project staff can attend out-of-state conferences (expenses must be paid).

Contact Mrs. Lynn Dennis, Project Director; Coeur d'Alene School District No. 271, 311 N. 10th Street, Coeur d'Alene, Idaho 83814. (208) 664-8241.

RELIGION IN HUMAN CULTURE (RIHC). A social studies program about religious traditions and topics.

Audience Approved by JDRP for students of all abilities, grades 9-12.

Description Religion in Human Culture (RIHC) is a semester-length, elective social studies course about religion for high school students. It consists of six instructional units which may be implemented wholly or in part. These include a unit on religious expression and five separate units on the Hindu, Buddhist, Judaic, Christian, and Islamic traditions. RIHC is a program for learning about religions and is intended to help students acquire greater awareness, understanding, and appreciation of religious diversity. The curriculum content is consistent with United States Supreme Court decisions that public schools shall neither teach nor practice religion but may teach about religion as it affects human history and culture. The overall objectives for the Religion in Human Culture series fall within four categories established by the National Council for the Social Studies Curriculum Guidelines.

Religion in Human Culture exposes students to religious diversity; develops attitudes of understanding and respect for the beliefs and practices of others; centers on the study of religions as part of the social studies curriculum; furnishes a total teaching package about the major religions of the world; follows an easy-to-use, lesson-by-lesson format; and emphasizes inquiry strategies, a developmental process, and substantive content.

Requirements Acquisition of the RIHC materials and their use in a high school classroom for one semester, implementation/teacher-training workshop of one to three days depending on adopter needs, and implementation monitoring or follow-up for one year are required.

Costs Complete set of materials for all six curriculum units, \$320. For each unit there is a teacher guide, a student reader, filmstrips and guides, cassettes, and blackline masters. Additional student readers for each unit, approximately \$2.50. Individual units may be purchased separately. Individual items from each unit may also be purchased separately. Travel and per diem for teacher training are negotiable.

Services Awareness materials are available at no cost. Visitors are welcome at project site any time by appointment. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is conducted at project site (costs to be negotiated). Training is also available at adopter site (costs to be negotiated). Implementation and follow-up services are available to adopters (costs to be negotiated).

Contact *Wes Bodin and Lee Smith, Co-Directors; World Religions Curriculum Development Center; St. Louis Park Schools; ISD #283; 6425 W. 33rd St.; Minneapolis, MN 55426. (612) 925-4300.*

Developmental Funding: USOE ESEA Titles III and IV-C JDRP No. 79-32 (7/12/79)

PROJECT RECIPE (Research Exchange for Computerized Individualized Programs of Education). An instructional management system to increase I.E.P. objective attainment K-6 using a micro-computer based recordkeeping system.

Audience Approved for SLD students in grades K-6. Curriculum materials and computerized management system of objectives for reporting purposes have implications for elementary basic skill instruction with regular classroom students.

Description The RECIPE instructional management system provides banks of instructional objectives in the basic skill areas of Reading, Writing, and Mathematics organized into learning maps which provide the special education teacher with an organizational pattern for planning instruction. Banks of objectives are also provided for the areas of Foundation (pre-reading), Articulation, Socialization, and Motor Skills. The objectives are accompanied by two forms of a criterion-referenced assessment system and a listing of over 2,400 instructional strategies correlated to each objective by number. Student Activity Books and Audio Tapes are available for 25 of the basic skill learning maps with which the target population displayed the most difficulty. Teacher Guides and Answer Books are provided for the Student Activity Books. Additional planning materials, Parent Guides, and a student reward system are built into the RECIPE material package and delivery system process.

Micro-computers are employed as the vehicle for storing student demographic data, creating I.E.P.'s and implementation plans, tracking student progress, and generating I.E.P.'s and Progress Reports in compliance with Federal Guidelines. Teachers interested in using RECIPE must undergo a 2-day inservice training session which includes the use of the micro-computer management portion. Student and program data are stored on floppy diskettes and RECIPE provides a detailed User's Guide for ease of computer interaction.

Requirements The RECIPE instructional management system may be implemented in a variety of educational settings ranging from a single classroom setting with one teacher and up to 30 students to a district level with multiple teachers and students. Data is managed by micro-computers in all settings. Training in the use of RECIPE instructional materials, processes, and micro-computer program uses is required. No additional staff are required for program implementation.

Costs Replication costs will vary based on the number of teachers and students for one classroom (one teacher serving 30 students); approximate cost for program installation and training is \$61.69 per student per year. Based on usage in at least two classrooms with 60 students, installation cost per student drops to \$31.00 per student per year. Micro-computer hardware costs are not figured into replication costs. Continuation costs for RECIPE are estimated to be \$18.50 per year, per student. Complete price listing is available.

Services Limited amounts of awareness materials are available at no cost. As a Lighthouse Project, RECIPE welcomes visitors to the project site any time by appointment for demonstrations and observations. Project staff are available to attend out-of-state awareness meetings on a limited basis, and training is available at both the project site and adopter sites (price to be negotiated). Implementation and follow-up services are available to adopters (price to be negotiated).

Contact Sanders Bell, Director; Project RECIPE; or Priscilla Cady, Training Specialist; Project RECIPE; 4747 S. Tamiami Trail; Sarasota, Florida 33581. (813) 953-5000, ext. 141 or (813) 924-5800.

SAGE—A program designed to improve academic achievement by providing a differentiated specialized curriculum for gifted and talented elementary students.

Audience Approved by JDRP for academically/intellectually gifted and talented students grades 1-5.

Description The objectives of the program are to develop higher order and critical thinking skills and to improve academic achievement by providing a differentiated specialized curriculum for academically/intellectually gifted and talented elementary school students. The regular school curriculum is extended based on a three-fold model incorporating thinking skill development, mini-study units and independent study. Activities presented in the thinking skills development portion of the curriculum: stimulate and challenge students to think and to perform at higher levels of thinking; assist in the development of critical, inductive, deductive, and creative thinking skills; and present specific instruction in areas of information gathering, organizing and using resource materials. Mini-study units, extensions of the basic curriculum, are interdisciplinary in nature, and incorporate thinking skill activities in broad topic areas. The third segment of the SAGE core curriculum is independent study, which allows students to extend and to enrich their knowledge of interest/content areas.

Students participating in the program performed at significantly ($p < .05$) higher levels in higher order thinking skills, when compared to a non-participating comparison group, as measured by either the Ross Test or Higher Cognitive Processes (grades 4 and 5) or the Test of Cognitive Skills (grades 1-3). Similar gains were achieved on the Comprehensive Tests of Basic Skills, Form U and the Cornell Critical Thinking Test, Level X.

Requirements Depending upon the needs and resources of the interested parties, any model or combination of models (Separate Class, Resource Facility, Consultant Teacher) may be implemented. A two-day training program is required, as well as the purchase of the Project SAGE Teacher Training Manual.

Costs SAGE program materials are \$105 per set. Training fees are \$150 full day, \$75 one-half day. An annotated listing of commercial materials which augment the program is available to adopters for \$4.50.

Services Awareness materials are available at no cost. Project staff are available for awareness, training and follow-up. Implementation and follow-up services are available. Visitors are welcome to the project site by appointment.

Contact *Sandra Cymerman, Disseminator or Diane Modest, Director; Project SAGE; Barbieri School, Framingham Public Schools; Dudley Road; Framingham, MA 01701. (617) 872-4253 or 3546.*

PROJECT SCAT: Skills for Consumers Applied Today. A consumer education program in health and money management for high school students. Approved by JDRP for students in grades 9-12.

Description Each of the two one-semester courses developed by this project is designed to acquaint students with basic elements of our economic system and to help them to acquire the skills, concepts, and knowledge required to function as informed and wise consumers. Each course addresses six topics. "Health and the Consumer" deals with a balanced diet, food additives, food shopping, medical care, personal grooming, and product safety; "Money Management and the Consumer," with basic economic skills, budgeting, banking, credit, insurance, and taxes. Each topic is treated in a separate student Packaged Activities for Learning (PAL) booklet. Each student booklet is accompanied by a teacher PAL. Instructional materials for the 12 units include student booklets, teacher guides, and classroom aids. Student PALs, illustrated with project-developed cartoon-type characters, follow a uniform format, which consists of an introduction, vocabulary, content, and subjective and objective review questions. Teacher PALs contain content outlines; behavioral objectives; activities and suggested resources; instructional aids, including tests, activity sheets, film guides, and transparency masters; and answer keys. The project has also developed student competency tests for both courses, unit tests, transparency sets, and a teacher training manual that outlines course purposes and implementation possibilities.

Contact *W. M. Ausherman, Director of Planning and Evaluation; Project SCAT; Osceola County School District; P.O. Box 1948; 401 N. Church; Kissimmee, FL 32741. (305) 847-3147.*

Developmental Funding: USOE ESEA Title IV-C

JDRP No. 80-45 (12/23/80)

PROJECT SUCCESS ENRICHMENT: A program to enrich the education of intellectually and creatively gifted students.

Audience Approved by JDRP for gifted and talented students, grades 2-8.

Description Special enrichment activities are provided for students in grades 2-8 with exceptionally high ability in the areas of language arts and art. Students are grouped in enrichment classes of 15 or fewer students per section. (This can also be accomplished within a regular classroom setting). Enrichment classes meet 2 hours per week. The participants are not relieved of their regular classroom assignments although if the pullout model is used, they are excused from regular classroom attendance to participate in the program.

Enrichment centers are supplied with project curriculum materials, equipment and staff. Lessons are presented in a hierarchical sequence from skill awareness through skill acquisition, skill mastery, skill application, to skill transfer. At the skill application level, elaboration, originality, divergent thinking, and problem solving are stressed.

The language arts curriculum includes (1) Imagery (similes, metaphors, and personification), (2) Vocabulary (descriptive adjectives and word expansion), (3) Sentences (order, types), (4) Literature (Newberry Award winners, Literary Analysis), and (5) Form: (organization, editing, theme). Upon mastery of these topics, Learners study in-depth, various types of poetry and short story writing and transfer their literary knowledge to a variety of integrated projects. Both oral and written communication skills are stressed through various teaching strategies. The curriculum is embodied in six packets (four years of instruction): Introductory, short story, poetry, drafting and editing, literature books and projects, and evaluation.

The art curriculum emphasizes drawing, painting, and clay work. After completing skill awareness and skill acquisition activities, students embark on individual projects.

Requirements Implementation requirements include: Identification of instructors; instructors and principal participate in one-day inservice; identification of students; acquisition of curriculum; pre-testing; instruction; two-day follow-up (principal); and post testing.

Costs Adopters pay travel and per diem costs for one trainer. Twenty-thirty persons can be accommodated in one training session. Adopters purchase training and curriculum manual for \$100. At least one manual per school is required. One manual per instruction is desirable.

Services Visitors are welcome at any of our demonstration sites by appointment. Project staff are available for awareness and training sessions and for follow-up and evaluation services. Interested schools may make application for these services. Applications are available upon request. Project brochures and secondary awareness materials are available upon request.

Contact *Carolyn Gaab-Bronson, Project Success Enrichment; 7249 Capitol Blvd. S.; Tumwater, Washington 98501. Phone (206) 352-0922.*

SUCCESS UNDERSTANDING MATHEMATICS (SUM) formerly Title I Compensatory Mathematics Program. A comprehensive mathematics program which uses concrete objects and questioning techniques to develop understanding.

Audience Approved by JDRP for grades 2-6. The program also has components in use with grade 1.

Description The program was designed to increase the level of mathematics achievement of children who were achieving below the level expected. The project materials and teaching techniques are appropriate, however, with students of all ability levels. Direct instruction is emphasized to facilitate student interaction in their development of concepts. Teaching strategies described in project manuals are based on Jean Piaget's research about the way children learn mathematics, specifically elementary school children's difficulty with abstract thought and their consequent need for concrete materials. Teachers guide students to develop mathematics concepts as students move objects to solve problems. Computational algorithms are developed through objects to solve problems. Drill follows but does not precede understanding.

Some unique characteristics of Success Understanding Mathematics include: (1) Program materials can be used with any commercial text. (2) Planning for instruction is matched to student needs. (3) Objectives for mathematical skills include a problem-solving strand. (4) Criterion-referenced tests for the objectives and recordkeeping materials are available. (5) Parent involvement and an on-going inservice program provide support for teachers.

Chapter 1 students have made proven advances measured by the mathematics batteries of the Metropolitan Achievement Test and the Iowa Test of Basic Skills. Mean Annual gains scores have ranged from 6.6 NCE's (Normal Curve Equivalency) to 13.0 NCE's.

Requirements The program may be implemented by a teacher, school, supplementary program, or an entire district. Adopters will be invited to visit a demonstration site, to name a local project coordinator/contact person, to provide release time for teachers and administrators to participate in 2 days of pre-service training, to ensure that the key elements including the teaching strategies and on-going inservice will be implemented, to evaluate student achievement, and to provide information about the adoption.

Costs Costs per adopting teacher include \$41.50 for initial purchase of project publications and \$285 for the non-recurring purchase of commercial teaching supplies, many of which may already be available in the adopting district. Funds to purchase norm-referenced tests and release time for teachers to attend inservice meetings should also be budgeted.

Services Awareness materials are available at no cost. Project publications are furnished to adopters at no cost. Visitors are welcome anytime by appointment at the project site. Project staff are available to attend awareness meetings. Training is available at project site or adopter site. (Costs to be negotiated.) Two days pre-service training is required. Two days implementation training scheduled two to four months later and a one day on-site follow-up visit at year end are strongly recommended. (Costs to be negotiated.)

Contact *Kathleen Bullington, Project Director; Success Understanding Mathematics, Des Moines Public Schools; Rm 113, 2430 East University, Des Moines, IA 50317. (515) 265-4554.*

TALENTS UNLIMITED. A structured attempt to apply a multiple-talent theory approach to the regular classroom situation.

Audience Approved by JDRP for grades 1-6.

Description Talents Unlimited is designed to help teachers recognize and nurture multiple talents in children of varying ability levels, including talents in the areas of productive thinking, communication, forecasting, decision making, and planning, as well as in the academic areas. The program is a structured attempt to implement and evaluate at the elementary classroom level the multiple-talent theory as defined by Dr. Calvin Taylor; it is based on sound educational and psychological research in learning. Replicable models for teacher training, student instruction, and evaluation have been developed. The program can operate within any organizational pattern.

The Talents Unlimited process model focuses on regular classroom instructional programs, not on gifted programs per se.

Requirements Adopting schools are given permission to replicate the three program models: teacher training, student instruction, and evaluation.

Costs Costs include travel, lodging and food for consultant. Two days of training are required for classroom implementation. Materials are \$75.00 per LEA for a basic set; \$50.00 optional for additional teaching materials.

Services Awareness materials are available at no cost. Visitors are welcome at project site on the first Monday and Tuesday of every month. Project staff are available to attend out-of-state awareness meetings (travel and per diem to be negotiated). Training is conducted at project site (adopter pays only its own costs). Training is also available at adopter site (all expenses to be negotiated). Implementation and follow-up services are available to adopters (all expenses to be negotiated).

Contact *Florence Keplogle; Talents Unlimited; 1107 Arlington St.; Mobile, AL 36605. (205) 690-8060.*

TIPS: Teaching Individuals Positive Solutions/Teaching Individuals Protective Strategies. A structured approach to teaching young people how to positively resolve conflict, to resist crime, and to protect themselves and their property.

Audience Approved by JDRP for fourth- and fifth-graders. Curriculum has been developed for use in grades K-8.

Description This program was initiated by a request from the Director of the Federal Bureau of Investigation to translate the concept of crime resistance into an educational program. TIPS is a ten-week intervention program aimed at both the perpetrators and victims of crimes. The basic assumption of the program is that increased knowledge about crime resistance concepts will lead to more positive attitudes toward them and subsequently to improved behavior in dealing with them. The goals of the program are to promote and maintain positive student attitudes and behavior, while teaching students to responsibly insure the safety and welfare of themselves and others.

Each grade-level curriculum is contained in a single manual that includes instructions for use, teacher information, reproducible student worksheets, and suggested supplementary information. Concepts presented are appropriate to the skill and reading level of each grade with more sophisticated materials added each year. Topical areas include positive conflict resolution; respect for rules, laws and authority; responsibility; and strategies in crime resistance. TIPS can be taught as a mini-course, a supplement to existing courses, an interdisciplinary unit, and as a focus for small-group discussion. Specific math, reading, and language arts skills are delineated for each lesson. Teacher-guided discussion is supplemented by student activities such as decision making, role playing, creative writing, vocabulary development, graphing, mapping and decoding.

Requirements Project TIPS can be replicated by an individual teacher, a school, or an entire district. One day of staff training, monitoring of implementation, and evaluation of impact are required for adoption. There are no additional facility, equipment, or personnel requirements.

Costs Teacher booklets with student worksheets cost \$5; training costs are negotiable; reproduction of student worksheets as desired.

Services Awareness materials are available at no cost. Visitors are welcome by appointment at project site. Project staff are available to attend out-of-state awareness meetings. Training may be at project or adopter site. Implementation and follow-up services are available to adopters. All costs to be negotiated.

Contact Loreli Damron; Project TIPS; Jefferson Annex; Fourth Street NW; Charlottesville, VA 22901. (804) 293-5179.

TITLE I MATHEMATICS COMPUTER ASSISTED INSTRUCTION (CAI). A diagnostic/prescriptive pull-out mathematics program with students receiving 10 minutes of daily concentrated drill on CAI.

Audience Approved by JDRP as a mathematics program for Title I students in grades 3-6.

Description Lafayette Parish had an effective diagnostic-prescriptive mathematics ESEA Title I pull-out program. In order to increase growth in mathematics, computer-assisted instruction was added to an already effective math program. The program is operated with close coordination of math-lab instruction and daily CAI drill. The CAI program adjusts instructions to the level of the students and provides immediate feedback to the student. The CAI program provides daily, weekly, and monthly descriptions of progress and areas of difficulty which the classroom teacher can use to correct specific conceptual misunderstandings. Classroom instruction is imperative in providing conceptual understanding and remediation. Daily CAI drill provides the practice which Title I students especially need. This particular program was operated with 40 minutes a day of mathematics laboratory time and 10 minutes of CAI. The particular program was devised by Computer Curriculum Corporation of Palo Alto, California.

The addition of CAI instruction produces significantly superior achievement when compared to standard mathematics laboratory instruction.

Requirements Math Lab-CAI can be adopted to supplement any regular program if 200 students are enrolled. Two to three days of inservice training are necessary. The project used Computer Curriculum Corporation Programs from Palo Alto, California. Correlation between your project and CAI must be established.

Costs In addition to your regular program, the added dimension of Computer Assisted Instruction costs approximately \$200 per student if at least 200 students are enrolled. As the number of students in the program increases the cost decreases proportionately. Since installation costs occur only in the first year courses or purposes, the number of students can be reduced.

Services Awareness materials are available. Visitors are welcome at project site anytime by appointment. Project staff are available to attend out-of-state awareness meetings (costs to be negotiated). Training is conducted at project site (costs to be negotiated). Training is also available at adopter site (cost to be negotiated). Implementation and follow-up services are available to adopters (costs to be negotiated).

Contact *Mr. Marion J. Cortez, Supervisor; Federally Supported Programs; Lafayette Parish School Board; P.O. Drawer 2158; Lafayette, LA 70502. (318) 232-2620, EXT. 307.*

UTILIZING COMPUTERS IN TEACHING SECONDARY MATHEMATICS. Asbury Park (N.J.) program of microcomputer-based instructional materials and techniques to improve mathematics skills.

Audience Approved by JDRP for students of all skill levels, grades 9-12; this program has also been successfully used in grades 7-8 and 13-14.

Description This project's goal is to improve mathematics skills through the use of microcomputer-based instructional materials and techniques. The project's package consists of two teachers' manuals and six disks containing approximately 80 computer programs which encompass six areas of secondary level mathematics—Algebra I & II, Geometry, Trigonometry, Calculus and Applied Mathematics. While some programs are tutorial in nature, others are drill and practice or simulations using graphics. The programs can easily be integrated into any traditional math curriculum without the need to hire any additional staff.

A typical approach to implementing the project materials is to introduce the topic of study using traditional methods of instruction. Students are then instructed to access the specific computer programs designed to apply the concept or skill and obtain detailed explanations and instructions as to how to proceed with independent investigations utilizing the information provided. During this time, the teacher serves as a resource person providing individualized assistance. A follow-up discussion is held at the end of the class period and work is assigned from the text or from a worksheet generated from the computer program.

Requirements No additional or special staff is necessary to replicate the project. Approximately four hours of training are required. Request a "turn key" or Certified Trainer for each state implementing the project.

Costs A fee of \$150 is charged for the teachers' manuals and computer programs; Consortium cost \$450. For further information contact project staff listed below.

Services Awareness materials are available upon request. Implementation and follow-up services available to adopters.

Contact *Judy F. Smith, Director or Christine W. Pery, Disseminator/Trainer, Asbury Park Board of Education, 1506 Park Avenue, Asbury Park, New Jersey 07712 (201) 776-2619 or 774-3412.*

WWAS: Women in World Area Studies. Four two- to four-week units for high school students on the roles, status, and symbolic representations of women in world culture.

Audience Approved by JDRP for students in grade 11.

Description This project has developed seven units about the roles, status, and symbolic representations of women in Russia, the Middle East, India, Latin America, Africa, Europe and China. Each unit can be taught within a two- to four-week period, and two units can be taught in one semester. Content is organized by a conceptual framework that associates women's roles, status, and symbolic representations with six cultural universals: economics, politics, religion, social organization, esthetics, and education. The units link women's status in a society to economic and political factors, roles to social and educational factors, and symbolic representations to esthetic forms and religion. Each unit is a self-contained instructional package consisting of a student book, a teacher guide, a sound-filmstrip and guide, student worksheets, an annotated bibliography, and criterion-referenced instruments for measuring students' general and specific learning outcomes.

Student books, which range in length from 90 to 200 pages, relate the concept of cultural diversity to women's roles and status. Each book contains readings, case studies, graphic information, primary source materials, and a bibliography to promote individual student research. Each teacher guide contains an introductory essay on women in the particular culture, teaching objectives, suggested teaching methods and activities, and an overview of the unit. Project-developed instructional materials accommodate a variety of teaching styles. Content is new, but method and activities are those with which teachers are familiar. For each unit a sound-filmstrip summarizes major themes. The project also has developed masters for overhead projection. Student worksheets, which may be reproduced as needed, present exercises referenced to the student book and the teacher guide.

Requirements For each unit desired, enough books must be purchased for every student. WWAS suggests that at least two units be used. The program is a flexible one that provides a manual on using WWAS materials. Adopting districts should plan for a one-day teacher training workshop before adoption to introduce WWAS materials. A follow-up half-day workshop at the end of the first unit is desirable to address curriculum problems.

Costs Student books can be purchased through WWAS at a special 25% discount for 10 or more copies of the same title (each of the twelve published books is \$6.95). Teacher guides (\$1.25) and an extensive manual on teaching woman's history cross-culturally (\$10) are suggested for each adopting school district.

Services Awareness materials are available. Visitors are welcome at the WWAS offices. Training is conducted at the WWAS offices or adopting sites (costs to be negotiated). Testing materials and follow-up services are available (costs to be negotiated). Microcomputer programs are being written for each student book.

Contact *Marjorie Bingham or Susan Gross, Co-Directors; Women in World Area Studies; St. Louis Park Schools; 6425 W. 33rd St.; St. Louis Park, MN. 55426. (612) 925-3632.*

**Published by
The Michigan State Board of Education**

**Phillip E. Runkel
Superintendent of Public Instruction**

**Office of Grants Coordination and Procurement
Daniel W. Schultz, Acting Director**

**Patricia Slocum, Supervisor
Grants Administration**

**Walter Worthy, Education Specialist
Office of Grants Coordination and Procurement**

For Further Information Contact:

**Mrs. Patricia Slocum
Michigan State Facilitator
Michigan Department of Education
Box 30008
Lansing, Michigan 48909
(517) 373-1806**

August, 1986

Reprinted with permission from

national diffusion network

**South West Incorporated
1120 Delaware Ave
Longmont CO 80501**

**TWELFTH
EDITION
1986**

MICHIGAN STATE BOARD OF EDUCATION

STATEMENT OF ASSURANCE OF COMPLIANCE WITH FEDERAL LAW

The Michigan State Board of Education complies with all Federal laws and regulations prohibiting discrimination and with all requirements and regulations of the U.S. Department of Education. It is the policy of the Michigan State Board of Education that no person on the basis of race, color, religion, national origin or ancestry, age, sex, marital status or handicap shall be discriminated against, excluded from participation in, denied the benefits of or otherwise be subjected to discrimination in any program or activity for which it is responsible or for which it receives financial assistance from the U.S. Department of Education.