

DOCUMENT RESUME

ED 335 156

PS 019 872

TITLE Ungraded Primary Programs: Steps toward  
Developmentally Appropriate Instruction.

INSTITUTION Appalachia Educational Lab., Charleston, W. Va.;  
Kentucky Education Association, Louisville.

SPONS AGENCY Office of Educational Research and Improvement (ED),  
Washington, DC.

PUB DATE Apr 91

CONTRACT RP-91002002

NOTE 100p.

PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC04 Plus Postage.

DESCRIPTORS Case Studies; \*Educational Practices; \*Nongraded  
Instructional Grouping; \*Outcomes of Education;  
\*Primary Education; Program Descriptions; State  
Legislation

IDENTIFIERS Kentucky

ABSTRACT

This volume presents case studies of 10 ungraded primary programs. Also discussed are the obstacles, accomplishments, advantages, and disadvantages of ungraded primary programs experienced by the faculties of these schools; their recommendations for future implementation; and the literature on multi-age grouping and ungraded primary programs. Case studies were used to: (1) illustrate concepts, procedures, and materials being used by schools that had initiated ungraded primary programs; (2) provide contact information for these schools so that other educators could call on them for assistance; and (3) assess commonalities in effective ungraded primary programs. Each case study of an ungraded primary program describes the philosophy and goals, and program background and implementation. Each program's practices regarding grouping and organization, curriculum and instruction, student assessment, and remediation and enrichment, are described. In addition, the teacher's role, the program's progress, parent involvement, and public awareness are discussed. Data on each program's size, students, faculty, and other factors accompany contact information. Readers may seek further information about the programs. A resource section offers descriptions of materials recommended by the programs. A 211-item bibliography on ungraded primary programs is included. Appended materials include a specially developed program description form. (RH)

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

ED335156



# Ungraded Primary Programs:

## Steps Toward Developmentally Appropriate Instruction

A Joint Study by the

Kentucky Education Association  
401 Capitol Avenue  
Frankfort, Kentucky 40601

and

Appalachia Educational Laboratory  
P. O. Box 1348  
Charleston, West Virginia 25325

April 1991

PS 019872

**UNGRADED PRIMARY PROGRAMS:  
STEPS TOWARD DEVELOPMENTALLY APPROPRIATE INSTRUCTION**

**A Joint Study by the**

**Kentucky Education Association  
401 Capitol Avenue  
Frankfort, Kentucky 40601**

**and**

**Appalachia Educational Laboratory  
P. O. Box 1348  
Charleston, West Virginia 25325**

**April 1991**

**Funded by  
Office of Educational Research and Improvement  
U. S. Department of Education  
Washington, D.C.**

The Appalachia Educational Laboratory (AEL), Inc., works with educators in ongoing R & D-based efforts to improve education and educational opportunity. AEL serves as the Regional Educational Laboratory for Kentucky, Tennessee, Virginia, and West Virginia. It also operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL works to improve:

- professional quality,
- curriculum and instruction,
- community support, and
- opportunity for access to quality education by all children.

Information about AEL projects, programs, and services is available by writing or calling AEL, Post Office

Box 1348, Charleston, West Virginia 25325; 800/624-9120 (outside WV), 800/344-6646 (in WV), and 347-0400 (local); 304/347-0487 (FAX number).

This publication is based on work sponsored wholly or in part by the Office of Educational Research and Improvement, U. S. Department of Education, under contract number RP 91002002. Its contents do not necessarily reflect the views of OERI, the Department, or any other agency of the U. S. Government.

**AEL is an Affirmative Action/  
Equal Opportunity Employer.**

## ACKNOWLEDGMENTS

The Kentucky Education Association (KEA) and the Appalachia Educational Laboratory (AEL) wish to thank the following teachers, the KEA-AEL study group on ungraded primary programs, who developed this publication. Their time and efforts in literature review, program description form development, data analysis, telephone interviews, meetings and a conference call, writing, and editing are much appreciated. Their statements should inform future implementers of ungraded primary programs.

Larry Carter, Christian County Schools  
Carol Gilbert, Lewis County Schools  
Ruth Ann Harrell, Mayfield Independent Schools  
Nelva Fitzgerald King, Pulaski County Schools  
Bea Isable, Warren County Schools  
Larry Ooten, Chair, Washington County Schools  
Carolyn Stamper, Franklin County Schools  
Bobbie Stress, Oldham County Schools  
Novena Trimble, Perry County Schools  
Becky Zeller, Jefferson County Schools

Also essential to this publication were the teachers and principals of the schools with ungraded primary programs who responded to the program description form and to interview questions from study group members. Their extra time and efforts, as that of study group members, were voluntary and were contributed enthusiastically. Many provided additional descriptive information beyond that requested. Contact information for each is provided on the appropriate case study.

AEL works with associations to identify topics of interest to teachers so that the resulting study group publications will be of assistance. As in all previous KEA-AEL study groups, the KEA President David Allen and staff were most helpful in identifying the topic, nominating members, facilitating meetings, providing partial participant support, and announcing, printing, and disseminating *Ungraded Primary Programs: Steps Toward Developmentally Appropriate Instruction*. Special thanks go to Sharon Felty-Comer, KEA program director, and to Renee Aniton, KEA assistant program director for human relations. Additional assistance was provided by Carol Kruse and JoAnne Jackson, Kentucky Department of Education (KDE), who provided access to the KDE survey of ungraded primary programs in the state and who linked the study group to additional programs throughout the United States. Their interest in the study was an asset.

Finally, AEL staff who worked to blend the voices of many into one document, those who researched, developed, edited, rewrote, typed, and typeset the final copy, contributed greatly to the quality of this publication. The authors wish to thank the following AEL staff who contributed:

Becky Burns  
Jane Hange  
Mary Farley  
Carolyn Luzader  
Kim Hambrick  
Carla McClure

## EXECUTIVE SUMMARY

Is the education of young children coming full circle? Is developmentally appropriate instruction really a "back to the future" approach? Although the one-room school has declined in numbers throughout the United States since the 1950s, some of the lessons learned in that multiage instructional setting are resurfacing in today's elementary schools. The concept of multigrade, also known as multiage, ungraded, non-graded, or family grouping, is again gaining favor among educators concerned with the strong correlation between retention in grade and subsequent drop-out of growing numbers of students. The ungraded primary class may provide a means of insuring individualized, continuous progress of students during some of the most critical years of their education, from kindergarten through the third grade.

While some schools or school districts have extended continuous progress through the elementary years or even pre-K through grade 12, the formative years of age five through eight are most often the focus of the "new" ungraded primary programs underway in Florida, Kentucky, Louisiana, and Mississippi. But the concept of multiage instruction is not new. It flourished during the 1960s as individually guided education (IGE) and continuous progress classes and schools throughout the United States. Today the practices of these earlier implementations, and of the rare schools that have maintained ungraded primary programs for 10 to 20 years or more, are being closely studied by educators interested in offering developmentally appropriate instruction to the range of students that may often span four years of development in one grade level.

The Kentucky Education Reform Act of 1990 established that each elementary school in the state would begin to implement an ungraded primary pro-

gram during or before the 1992-93 school year (KERA, 1990, p. 66). In response to this mandate and to growing interest and concern among teachers regarding its implementation, KEA and AEL formed a study group of elementary school teachers who sought to link fellow practitioners to ungraded primary program models. Through review of the literature and analysis of survey data from a Kentucky Department of Education survey of all school systems in the state, study group members were able to identify schools with experience in implementing such programs. KEA-AEL study group members developed and disseminated the "KEA-AEL Ungraded Primary Program Description Form," and conducted followup telephone interviews with model program representatives. Through these methods, study group members gathered the basic knowledge and the tips and hints necessary to implement effective multiage ungraded programs.

*Ungraded Primary Programs: Steps Toward Developmentally Appropriate Instruction* presents case studies of 10 ungraded primary programs along with an analysis of the obstacles, accomplishments, advantages, and disadvantages the faculties of these schools experienced; their recommendations for future implementers; and a review of the literature on multiage grouping/ungraded primary programs. A resources section with descriptions of strategies most often cited by respondents is included along with a bibliography on ungraded primary programs. Each case study of an ungraded primary program describes the philosophy/goals, program background and implementation, along with the program's practices regarding grouping/organization, curriculum/instruction, student assessment, and remediation/enrichment. In addition, the teacher's role (including training), program progress to date, and parent involvement/public awareness are described. Demographics on each program's size, students served,

faculty involved, and other factors accompany contact information to enable readers to seek further details.

The authors, all Kentucky teachers soon to be teaching in ungraded primary programs, developed this publication with their colleagues and administrators in mind. Their work provides background information on beginning an ungraded primary program

and connects educators with others experienced in the problems and accomplishments of such programs. *Ungraded Primary Programs: Steps Toward Developmentally Appropriate Instruction* should inform educators everywhere who are interested in the accomplishment most often named by study respondents—success for all students.

# TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS .....	iii
EXECUTIVE SUMMARY .....	v
INTRODUCTION .....	1
Planning the Study .....	1
Conducting the Study .....	2
Purpose .....	3
Help Us Improve This Publication .....	3
RATIONALE .....	5
Effects of Ungraded Instruction .....	5
Obstacles to Ungraded Instructional Organization .....	7
Teaching Strategies .....	7
CASE STUDIES .....	9
Ardmore Elementary School .....	11
The Chance School .....	14
Dixie Elementary School .....	17
Jeffersontown Elementary School .....	20
Lake George Elementary School .....	22
Saffell Street Elementary School .....	25
St. James Catholic School .....	27
Stanton Elementary School .....	29
Townsend Continucus Progress School .....	32
The Wheeler School .....	34
FINDINGS ACROSS PROGRAMS .....	37
Obstacles Overcome in Establishing Ungraded Primary Programs .....	37
Accomplishments Realized from Ungraded Primary Programs .....	37
Advantages and Disadvantages of Ungraded Primary Programs .....	37
Recommendations to Implementers of Ungraded Primary Programs .....	38
BIBLIOGRAPHY .....	39
RESOURCES .....	49
APPENDICES	
Appendix A: Ungraded Primary Program Provisions of the Kentucky Education Reform Act, House Bill 940	
Appendix B: Memorandum from KEA to ad hoc Committee on K-3 Ungraded Primary Program	
Appendix C: KEA-AEL Ungraded Primary Program Description Form	
Appendix D: KEA-AEL Ungraded Primary Programs Study Telephone Interview Guide	

## INTRODUCTION

AEL seeks to provide professional development opportunities to educators by working with their associations. Since 1985, one way that the Classroom Instruction program has assisted associations and individual educators is through the creation of study groups. AEL's purpose for establishing a study group is to assist educators in conducting and using research.

A study group is comprised of educators who are organized to conduct a study on an educational issue and who produce a product that is useful to their colleagues. Associations and AEL jointly select topics for study groups, although the selection of members is handled by the association. AEL staff participate in meetings as members of the study group and usually take a facilitative role. AEL provides a small grant to assist the study group, but the association or individual members often make in-kind contributions that far exceed AEL's grant. AEL provides additional services, such as editing, layout, and typesetting of the final product.

The responsibility for dissemination lies with both AEL and the association. AEL distributes *Ungraded Primary Programs: Steps Toward Developmentally Appropriate Instruction* to educators in Tennessee, Virginia, and West Virginia upon request. The Kentucky Education Association (KEA) publicizes and distributes the publication to Kentucky educators.

### Planning the Study

Since 1985, KEA and AEL have cosponsored study groups of teachers who have investigated such topics as assistance to marginal learners, tips for succeeding in the beginning teacher internship program, and resources for early childhood educators and parents of

their students. The KEA-AEL ungraded primary program study group began with a meeting in July 1990 of the KEA director of programs, the KEA assistant director for human relations, the KEA assistant director for instruction and professional development, and the AEL Classroom Instruction program director to discuss a Kentucky educational priority that would become the topic of a KEA-AEL study group during 1990-91. The ungraded primary program, mandated by the Kentucky Education Reform Act of 1990 for implementation in all elementary schools by the 1992-93 school year (see Appendix A), became the focus of the meeting. KEA staff discussed the mounting interest among members and the new business item on the topic raised at the April 1990 KEA Delegate Assembly. Representatives to the Delegate Assembly directed the association to:

- (1) gather information on ungraded primary programs from the National Education Association (NEA), AEL, and other sources of research;
- (2) compile and disseminate a list of Kentucky sites with teachers' names where ungraded concepts are currently in effect to enable members to communicate with them;
- (3) present information about the ungraded primary school at the KEA Leadership Conference and at each regional conference;
- (4) establish an ad hoc committee of K-4 teachers to review information and recommend guidelines for local implementation including, but not limited to, curriculum; class organization; assessment; the role of early childhood education (ECE); transfer

policies and transition needed for the students return to the graded program; and

- (5) use the information gathered to influence the program and procedures that will be developed by the State Board of Elementary and Secondary Education (1990 KEA New Business Items).

The KEA president, in response to the Delegate Assembly directive, appointed the ad hoc committee on K-3 Ungraded Primary Program and identified this group as the cosponsored KEA-AEL study group for 1990-91 (see Appendix B). The study group met initially in August 1990, discussed the concerns and questions they and their K-3 colleagues were voicing regarding the ungraded primary program mandate, and determined that the group's product would be case studies of model programs in Kentucky and in other states as discussed in the literature.

AEL and KEA staff, in addition to facilitating study group meetings, met with Kentucky Department of Education staff to review data from the department's Ungraded Primary Program Survey of all districts to identify existing programs and to assist in planning the department's Primary Program Institute held in October 1990. The department's goal has been to provide awareness information on model programs that could assist districts in selecting appropriate curriculum, staffing, scheduling, and dealing with other organizational concerns. Since the study group's formation, the department has funded several consortia of districts around the state that are organizing pilot ungraded primary programs. The findings from these sites should assist districts in implementing such programs in 1992-93 and will be shared by the department. However, no one model of an ungraded primary program is mandated by the department. These pilot programs were not established during the development of this document.

## Conducting the Study

The identification of model sites was the primary goal determined by study group members. To that end, they developed the KEA-AEL Ungraded Primary

Program Description Form (see Appendix C) at their initial meeting. With permission, members drew upon the department of education's Ungraded Primary Program Survey, revising questions to become open-ended and adding questions to facilitate more accurate selection of model sites for inclusion in their publication. AEL, KEA, and the department of education staffs cooperated to identify schools in the literature and in the department's survey data where faculties were implementing ungraded primary programs. After typesetting by AEL staff, KEA mailed the description form (return postage paid) to each identified school, followed up with a response-requested-reminder memorandum, mailed the form to additional schools as examples emerged in the literature, and collected all responses.

At their December 1990 meeting, study group members reviewed description form responses and outlined the remaining individual member tasks of item analysis and case study development. Additionally, study group members developed a Telephone Interview Guide (see Appendix D) for use by members to obtain further information from description form respondents at schools selected for case study development.

Working independently, three study group members analyzed and summarized responses to description form questions regarding advantages and disadvantages, accomplishments and obstacles, and recommendations to future implementers of ungraded primary programs. The remaining members conducted telephone interviews and used data from responses to the description form, telephone interviews, and additional print information provided by the study's respondents to develop case studies of the 10 schools.

AEL staff developed the Executive Summary, Introduction, Rationale, and Bibliography sections. Additionally, following peer review of sections by study group members and KEA staff, AEL staff melded all copy to develop a final draft which was reviewed by study group members, the KEA president, and KEA staff involved with the project. AEL staff incorporated suggested revisions, edited and typeset the document, and prepared announcement fliers. Camera-ready masters of the fliers and publication were provided to KEA and to AEL's Resource Center for dissemination.

## Purpose

KEA and AEL expect *Ungraded Primary Programs: Steps Toward Developmentally Appropriate Instruction* to be an early examination of some established ungraded primary programs. As in most surveys, responses were not forthcoming from all schools invited to complete the program description form; and not all schools with such programs could be identified from the literature, the department of education survey, or other means. Consequently, this publication must remain incomplete. As the movement toward multigrade, continuous progress instruction gains momentum, additional programs will be developed. The authors intend this publication to be useful in the development of any

school's ungraded primary program, but caution against attempts to identify the one best way to implement. By offering a variety of models, they hope that readers will glean practices appropriate for their own students and communities.

## Help Us Improve This Publication

Readers are requested to complete the product assessment form included within and to fold, staple, and return it to AEL. Suggestions for revisions to the document and/or similar publications are welcome.

## RATIONALE

A review of the literature indicates an emerging trend toward ungraded organization in early childhood and primary education. For example, the Kentucky Education Reform Act of 1990 (KERA) defines Kentucky's ungraded primary program as "that part of the elementary school program in which children are enrolled from the time they begin school until they are ready to enter the fourth grade" (KERA, 1990, p. 66). The rationale, which emerges from the literature on the ungraded trend in school organization, is to provide a more developmentally appropriate way for teachers to deal with individual differences frequently found among children in the primary grades. The Rationale section in this document outlines the positive affective and cognitive effects of ungraded instruction on young children and discusses obstacles educators may face in organizing and delivering ungraded instruction.

The concept of the ungraded program is not new. It has its roots in the one-room school of the early days of education in the United States. Many schools experimented with ungraded classes in the 1960s, often unsuccessfully. Although the ungraded approach always has been prevalent in rural schools for economic and geographic reasons, it never became an accepted part of the educational mainstream. The ungraded program is defined here as an instructional organization which provides a developmentally appropriate, continuous progress learning environment. Although the Kentucky legislature used the term **ungraded** in defining its mandated primary program, most of the literature reviewed for this study uses the terms **multiage**, **multigrade**, or **mixed-age**. Therefore, these terms will be used interchangeably throughout this rationale.

The concept of ungraded instruction is drawing renewed attention today as a way of curbing ability

tracking and grade retention, two factors a growing number of educators identify as detrimental to young children. Experts also view ungraded units as a way to decrease emphasis on competitive and overly academic instruction in the early school years and to promote developmentally appropriate instructional methods based on hands-on learning, play, and exploration. Numerous policy reports issued during the past few years, including those issued by the National Association for the Education of Young Children (1987), the National Association of State Boards of Education (1989), and the National Association of Elementary School Principals (1990), suggest that developmentally paced learning is a more sound way to address individual differences in young children.

Recent research findings support ungraded grouping, indicating it can provide both cognitive and social benefits for students (e.g., Pratt & Tracy, 1986; Rule, 1983; Milburn, 1981). In response to such research, several state legislatures—including Florida, Kentucky, Louisiana, and Mississippi—have called for implementation of ungraded programs. The Kentucky State Legislature, in its Education Reform Act of 1990, mandated the implementation of ungraded primary programs (K-3) by September 1992 (Appendix A).

Although ungraded classes are an educational reality, and the literature reveals positive effects from this type of instructional organization, little research exists on teacher strategies for delivering instruction in such a setting. However, ungraded grouping brings together practices at the forefront of current educational reform research, including team teaching, cooperative learning, whole language instruction, elimination of grade retention, and reductions in "pull-out" programs for remedial and special education students.

## Effects of Ungraded Instruction

Research indicates no negative effects on social relationships and attitudes for students in ungraded elementary classes. In fact, in terms of affective responses, multigrade students show more positive attitudes than single-grade students with more than 75 percent of the measures used (Miller, 1989, pp. 4-13). Results from several studies reviewed by Miller show positive effects of multigrade classes when measures of student attitude toward self, school, or peers are compared across a range of schools and geographic areas (Pratt & Treacy, 1986; Milburn, 1981; Schrankler, 1976; Schroeder & Nott, 1974). For example, Milburn (1981) found that children of all ages in multigrade classes had more positive attitudes toward school than did their counterparts in traditional grade-level groups. Schrankler (1976) and Milburn (1981) found students in multigrade settings have significantly higher self-concept scores than students in single-grade settings. A trend toward more positive social relations is indicated also (Sherman, 1984; Mycock, 1986; Chance, 1961). Sherman (1984) found that multigrade students felt closer to their multigrade classmates than did single-grade students. Chance (1961) and Mycock (1966) determined that multigrade students had significantly better teacher-child relationships and better social development than single-grade students. These studies indicate that students in ungraded classes tend to have significantly more positive attitudes toward themselves, their peers, and school.

In terms of academic achievement, the data clearly support the multigrade class as a viable, effective organizational alternative to single-grade instruction (Miller, 1989, p. 13). Little or no difference in student achievement in the single-grade or ungraded class was found in the studies. In a study conducted in 1983, Rule found in general that multigrade students scored higher on standardized achievement tests in reading than did single-grade students. Milburn (1981) found little difference in basic skills achievement levels between students in multigrade and grade-level groups, but multigrade classes did score significantly higher on the vocabulary sections of the reading test administered. To account for this, Milburn concluded that teachers in

multigrade classes may place greater emphasis on oral language, or that teachers working in multigrade settings may tend to speak at a level geared to the comprehensive abilities of the older children. In all cases in Milburn's study, children in the youngest age group in the multigrade class scored higher on basic skills tests than their age-mates in single-grade classes. The findings of Milburn's study suggest that multigrade classes may be of special benefit to slow learners. Such children may profit from the tendency to emulate older students. Also, if they are in the same classroom with the same teacher for more than one year, slow learners have more time to assimilate learning in a familiar environment. Furthermore, multigrade grouping enables youngsters to work at different developmental levels without obvious remediation—a situation that can cause emotional, social, or intellectual damage—and without special arrangements for acceleration (Milburn, 1981, pp. 513-514).

A number of other studies indicate that ungraded grouping can provide remedial benefits for at-risk children. For example, it has been established that children are more likely to exhibit prosocial behaviors toward (Whiting, 1983) and offer instruction (Ludeke & Hartup, 1983) to younger peers than to age-mates. Brown and Palincsar (1986) make the point that the cognitive growth stemming from interaction with peers of different levels of cognitive maturity is not simply a result of the less-informed child imitating the more knowledgeable one. The interaction between children leads the less-informed member to internalize new understandings. Along the same lines, Vygotsky (1978) maintains that internalization of new concepts takes place when children interact within the "zone of proximal development, the distance between the actual developmental level and the potential developmental level as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). Slavin (1987) suggests that the discrepancy between what an individual can do with and without assistance can be the basis for cooperative peer efforts that result in cognitive gains, and that children model in collaborating groups behaviors more advanced than those they could perform as individuals. Brown and Reeve (1985) maintain that instruction aimed at a wide range of abilities allows novices to learn at their own rate and to manage various cognitive challenges in the presence

of "experts."

A summary of recent research on grade retention and recommendations for alternatives to present grade retention practices published by the Massachusetts Board of Education includes the following among recommendations for grouping students:

Create multigrade classrooms to increase opportunities for peer tutoring, peer modeling, and cross-age groupings of students, and to allow students to progress at their own rate.

Eliminate current grade structures, and base promotion upon continuous progress towards mastery of a defined set of concepts, skills, and outcomes. Establish flexible standards of competence in the primary grades, recognizing that children learn at varying rates (Massachusetts Board of Education, 1990, p. 17).

## Obstacles to Ungraded Instructional Organization

In view of the advantages to ungraded instruction cited in the literature, the reader may wonder why more school districts have not moved to ungraded organization sooner. One response is **tradition**. Although schools of the 1800's were organized in ungraded classes, with the beginning of the industrial revolution and large scale urban growth, the practice of graded schools was established as the norm for organizing and classifying students. Educators found it easier to manage increased numbers of students by organizing them into grades or age divisions. Other factors, such as the advent of graded textbooks, state supported education, and the demand for trained teachers, have further solidified graded school organization. The graded school system was largely a response to a need for managing large numbers of students rather than an effort to meet individual student needs (Goodlad & Anderson, 1987).

Although the graded school developed as a result of demographics and economics, it has become the predominant way educators and parents think about schools. The expectations created by the norm of

graded schools have become a handicap for educators seeking to initiate multigrade classes (Miller, 1989). Frequently, community understanding and support of ungraded instruction is lacking. Also, most teachers receive training for teaching single-grade classes organized around whole-class instruction and/or small ability-grouped instruction, which are characterized by low student diversity. Different and more complex skills in classroom management and discipline, classroom organization, instructional organization and curriculum, instructional delivery and grouping, self-directed learning, and peer tutoring are needed to deliver instruction successfully in a multigrade class (Miller, 1989). Lack of attention to these skills in teacher education programs is a problem to teachers who are assigned multigrade classes (Miller, 1988; Horn, 1983; Jones, 1987; Bandy & Gleadow, 1980). Too often, the teacher skill deficit and the need to develop community understanding and support of ungraded instruction are overlooked by administrators or policymakers when decisions to implement ungraded organization are made.

## Teaching Strategies

"To maximize the potential benefits and minimize the potential risks of mixed-age groups, specific teaching strategies that may be appropriate for all teachers in all kinds of classes for young children may be of special importance when children are mixed in age" (Katz, Evangelou, & Hartman, 1989, p. 36). Furthermore, the lack of curriculum materials for ungraded approaches compounds the need for special assistance for teachers who will work in ungraded units. Harriet Egertson, administrator of the Nebraska Department of Education's office of child development, suggests that some materials for whole language reading, manipulative math, and technology-based writing are suitable for an ungraded approach (in Cohen, December, 1989).

The National Association of Elementary School Principals (NAESP) (1990) recommended standards by which to judge the quality of early childhood education programs, including the following standard on curriculum and instruction: "The content of the curriculum reflects a balance of all areas of learning, offered in an integrated manner and reflecting the

holistic nature of learning." As quality indicators of this standard, NAESP described effective teaching strategies that regard learning as a process rather than a collection of facts. These strategies included experience-based learning activities, a natural language approach, thematic integration of curriculum content, continuous progress skill development presented in meaningful context, and emphasis on creative expression.

There is no "one right way" to implement an ungraded primary program. Each school is unique and must design a program that fits its own characteristics and needs. However, learning theory tells us that

modeling is one of the first and most essential steps in the learning process. Consequently, the writers of this publication chose to include models of effective ungraded primary programs in the form of case studies. In the case studies that follow in the next section of this publication, practitioners describe strategies for program organization, curriculum, instructional delivery, and student assessment that reflect the recommendations and measures of quality described in the existing literature. Additionally, particular instructional programs that have been found effective in ungraded primary program delivery are described in the Resources section of this document.

## CASE STUDIES

The case study method is consistent with experiential learning, which holds that learning is more likely to occur if the concepts, principles, or relationships learned are anchored in concrete experience. The case study asks, "What happened?" and is descriptive of the processes and structures reported. The purposes of the case studies in this publication are threefold: (1) to illustrate concepts, procedures, and materials being used by schools that have initiated ungraded primary programs; (2) to provide contact information for these schools so that other educators may call on them for

assistance; and (3) to assess commonalities in effective ungraded primary programs. Information in the following case studies is limited to respondents' self-reported data, without observation or verification by study group members, on the KEA-AEL Ungraded Primary Program Description Form and in subsequent telephone interviews. Study group members, KEA, and AEL invite you to expand your knowledge about developmentally appropriate instruction by reading about these programs and then obtaining additional information from the principals and teachers cited.

## Ardmore Elementary School Bellevue, Washington

School type: Public

Community served: Suburban

Student enrollment: 430

Grade levels: Kindergarten through fifth

Age range: 5 through 12 years old

Students enrolled in ungraded primary program: 430

Faculty involved in program: 18 fulltime, 4 parttime

Grades involved: Kindergarten through fifth

Grades and types of faculty/aides involved: K-5 regular education teachers; specialists in art, music, physical education, and guidance; 4 instructional assistants; 1 parttime special education aide; and 1 classroom aide

Pupil-teacher ratio: 26:1

Years of program operation: 23

### Philosophy/Goals

The vision statement for Ardmore Elementary, designed by staff and parents, identifies the most important characteristics that their children should possess:

- Independent lifelong learners with the skills to become healthy, productive adults;
- Confident and secure in their individuality and respectful of the differences in others;
- Responsible citizens with a global perspective;
- Appreciators of aesthetics as an integral part of life; and
- Competent, resourceful, and courageous problem solvers—intellectually, socially, emotionally, and ethically.

### Program Background/Implementation

Before the school was built, a planning committee for Ardmore drew up the educational specifications. An open-concept school—clusters of four open classrooms in each of the five wings—with multiage groupings and team teaching was part of the plan. The planning committee also designed a program that would nurture and support children in the learning process.

Principal Jill Andrews attributes the strengths of the program to the sharing of classrooms across multiple age groups, an open enrollment policy, and a strong professional staff. She also states: "A strong belief in human equality unites these factors and enhances the educational process."

### Grouping/Organization

Ardmore's open-concept school houses four classes in each cluster. Each cluster contains approximately 100 children in grades Kindergarten through five. Each teacher in the cluster is assigned 26 students with a two- to three-year-age range. Children remain with the same teacher for several years and within the same K-5 cluster. Student placement is determined by the principal and based upon parent requests, teacher assessment, racial and gender balance, and children's individual needs. Teaching assignments are made jointly by the principal and staff.

The primary teachers team teach and exchange students for some subjects. Some teachers put K-5 groups together for social studies. Class schedules are determined by the individual teachers and the schedules vary because of instruction provided by specialists in art, music, physical education, and library.

Teachers make decisions about classroom management. Common instructional practices include problem solving, group goal setting for behavior, lack of competition, an emphasis on helping one another, and positive attitudes.

### Curriculum/Instruction

Ardmore staff routinely use a variety of instructional practices which include: cooperative learning, learning centers, learner capacity paced instruction, computer-assisted instruction, peer tutoring, team teaching, skill sequence levels, integrated thematic units, and whole language instruction. Whole language activities, including the use of individual books rather than basal readers and the process approach to writing instruction; math manipulatives; and computers support the ungraded instructional approach. Basal texts are not used except for occasional references in social studies.

### Student Assessment

No letter grades are given at Ardmore. Instead, informal student assessment is ongoing. Checklists indicating student progress, accompanied by written comments from the teachers, are sent to parents periodically. Parents also receive written comments on their children's progress twice each year at parent-teacher conferences and again at the end of the school year. The district administers standardized math and reading tests to third and fifth grade students, a writing assessment to fifth grade students, and the Metropolitan Achievement Test (MAT) to fourth grade students.

Ardmore staff do not support student retention. Children spend three years in the primary program (grades K through 2).

### Remediation/Enrichment

Remediation and enrichment are provided through individualized instruction. An instructional assistant is assigned to each cluster of four classrooms to work with students who need extra help. Also, a special education teacher rotates throughout the school to provide assistance when needed. A counselor works with students who have behavioral problems in an effort to keep them in their home school.

However, if the behavior problem is severe, a student may be sent to a special district program on a half-day basis.

Although the school district has a gifted program, staff at Ardmore view all children as gifted in some way. Many gifted students remain at Ardmore because they are challenged in the muldage, individualized setting without leaving their social groups. Children who require more intellectual stimulation are able to work with others of similar capabilities.

### Teacher's Role

All teachers at Ardmore teach an ungraded class containing two or three grade levels of students (i.e., K-1-2, 1-2, 2-3-4, 3-4-5, 4-5). The following resources are provided to assist Ardmore teachers: facilities that aid team teaching and flexible grouping, teacher teams, common planning time for teacher teams, parent volunteers, peer coaching/teacher mentors, and opportunities to observe colleagues.

Faculty members plan and conduct staff development sessions on topics identified through staff needs assessments. For example, during the 1989-90 school year, the focus was on report forms and assessment. District inservices are offered in the curricular areas. Teacher growth is continual as teachers practice new strategies in the open-concept school and receive feedback from their colleagues.

### Program Progress to Date

The MAT, a nationally normed achievement test administered statewide each year to fourth grade students, is used for program evaluation along with pupil progress reported on district math and reading tests for grades three and five and a writing assessment for grade five. Individual student progress is assessed informally three times each year. Additionally, a district research project on alternative forms of assessment has yielded information for future program evaluation.

Andrews reports that an effective program to educate parents about the advantages of the ungraded primary program has resulted in improved attitudes of parents and children toward the school. For example, the number of student transfers to other district schools has been significantly reduced, and more than one-fourth of the current student body has transferred to

## **Classroom Instruction Program**

---

Ardmore by choice from other schools in the district.

### **Parent Involvement/Public Awareness**

According to Andrews, educators, students, and their families value the open, family atmosphere, the emphasis on individuality and personal responsibility, the multiage groupings, and the mainstreaming of gifted and special needs children. Parents demonstrate their support by visiting classrooms as both observers and participants. Staff members have demonstrated their commitment to the school's philosophy by enrolling their own children in the program.

Staff members have had the responsibility of explaining to parents and the community what makes Ardmore's program special. "This has challenged staff members to become thoughtful articulators of the school's philosophy," observed Andrews.

### **Contact Information**

Jill Andrews, Principal  
Ardmore Elementary School  
16616 N.E. 32nd Street  
Bellevue, WA 98008  
206/455-6309

## The Chance School Louisville, Kentucky

School type: Private  
Community served: Suburban  
Student enrollment: 224  
Grade levels: Preschool through third  
Age range: 2 through 8 years old  
Students enrolled in ungraded primary program: 44  
Faculty involved: 4 (plus 3 specialists)  
Grade levels involved: First through third  
Grades and types of faculty/aides involved: 4 regular education teachers  
Pupil-teacher ratio: 11:1  
Years of program operation: 12

### Philosophy/Goals

The goal of Chance School's ungraded primary program is to build children's self-esteem. Strong self-esteem is vital to developing positive attitudes about learning and living together in a democratic society. Self-esteem is nurtured daily at Chance School through activities that are appropriate for cognitive, emotional, physical, social, and moral development.

The philosophy statement adopted by staff in 1989 states: "Chance School provides an environment that fosters confidence and respects individual differences. Daily, children discover knowledge through play and sensory experiences that challenge and stimulate learning, thinking, creativity and social interaction. Positive developmental guidance from nurturing adults, both parents and teachers, helps to create a community of learning and discovery."

### Program Background/Implementation

The Chance School's ungraded primary program

was created in 1978 in response to parents' requests. "Parents whose children had been enrolled in Chance's developmental preschool program and kindergarten requested more appropriate, child-centered, hands-on education for their six-, seven-, and eight-year-old children," reported Director Elizabeth Rightmyer.

### Grouping/Organization

Multigrade grouping is used in all subjects. However, grouping is varied and flexible to include one-on-one, small groups, large groups, and independent activities. For instruction and practice, mixed-age and grade level groups alternate during the daily schedule. When assigning students to teachers, the director and teaching team members attempt to maintain a balance in gender, age, and special needs. Parent requests related to grouping are also considered.

When students enter the program, they are assigned a homeroom teacher with whom they remain for three years. Teachers are assigned their groups by the director, in consultation with the teaching team. Two teachers team together to allow flexible grouping of students within the two classes. In keeping with the school's philosophy of educating the "whole child," the self-contained class format is used for most of the day. Three specialists (physical education, library, and music) work with the children weekly. Although the primary program operates on a set daily schedule designed by the school's director, teachers may choose to alter their schedules to meet the needs of the day.

The day is divided into three, one-and-a-half hour blocks: a period for math and learning centers; a period for language (reading skills) and centers; and a period for silent reading and creative writing. Recess and lunch (which are structured to be a "learning time" in the integrated day) separate the time blocks.

### Curriculum/Instruction

The Chance School faculty employ a variety of instructional practices in their ungraded primary program including individualized pacing of lessons, cooperative learning, learning centers, peer tutoring, and team teaching.

The teachers developed their school's curriculum, and they revise it annually to meet the particular needs of the classes. Curricular approaches include integrated thematic units and whole language instruction. However, several basals are available and used by some children during recreational reading. Supplementary materials include math manipulatives, pre-primer readers, games, dictionaries, encyclopedias, maps, gym equipment, science equipment, chart tablets, art supplies, listening stations, and musical instruments.

### Student Assessment

Pupil progress is assessed daily as children read, write, and complete math problems. Teachers also keep work samples and write observations. A progress report is sent to parents three times each year. A frequency grading scale (consistently, usually, sometimes, seldom) is used to evaluate students' skill development in all content areas. Parent conferences are held after each progress report.

Most students spend two to three years in the ungraded primary program and are ready to exit the program at age nine. There is no retention.

### Remediation/Enrichment

Remediation and enrichment are supplied through the regular daily learning experiences designed by the teachers. Children are presented an enriched program, regardless of their achievement or perceived ability. Staff members believe that children learn something from every experience so most of the assignments are open-ended, allowing children of various abilities and ages to complete them. Teachers maintain individually appropriate expectations for each student.

If a student's needs are not being met by the regular program, teachers try new strategies or new programs. Special education teachers, psychologists, and parents are used as resources if students present problems that

are outside the teacher's expertise. "Remediation is not a part of the primary program vocabulary at Chance. As long as children make continuous progress, steadily acquiring skills, they will complete the program on time," states Director Rightmyer.

### Teacher's Role

Chance School offers only one type of primary program (ungraded). Therefore, teacher participation is expected. Primary teachers receive ongoing inservice education through their work with an experienced team teacher. The school arranges staff development as needed, although most staff development is "learning by doing." Other resources provided to teachers include: facilities that enhance team teaching and flexible grouping, teacher teams, common planning time for teams, additional planning time for individual teachers, parent volunteers, teacher mentors, curriculum specialists, and opportunities to observe colleagues. Outside resources available to teachers are: workshops, conferences, professional literature, and community resources.

### Program Progress to Date

Informal program evaluation occurs daily as parents and others visit the school. Evaluation also occurs in several other ways. Chance is accredited by the Southern Association of Colleges and Schools (SACS), and a visiting team from SACS evaluates the school every five years. During the SACS process, teachers, assistants, parents, board members, and administrators review the school's progress and make recommendations for improvement. A self-study is written and goals for improvement are reviewed each year by the school director. Part of the SACS review includes the review of standardized test data. Chance administers the Comprehensive Test of Basic Skills each May to students in kindergarten through third grade.

### Parent Involvement/Public Awareness

Chance School gains educator and parent support by following the guidelines for developmentally appropriate practice designed by the National Association for the Education of Young Children. Teachers who demonstrate their willingness to develop appropriate curriculum are selected for the program.

The monthly school newsletter, two annual schoolwide parent meetings, topical parenting seminars, and parent conferences are used as vehicles to educate parents about how young children learn and why developmental education is effective.

The program is communicated to the public each year when Chance holds its Fall Festival, which is open to the public and is designed to exhibit Chance's creative, child-centered approach to early childhood education. Although Chance strives for media coverage of unique classroom events, the staff feel their

primary marketing tool is word of mouth. "Parents report being delighted with the cognitive, physical, and social/emotional development of their children, and they tell their friends," observed Rightmyer.

### Contact Information

Elizabeth Campbell Rightmyer, Director  
The Chance School  
4200 Lime Kiln Lane  
Louisville, KY 40222  
502/425-6904

## Dixie Elementary School Lexington, Kentucky

School type: Public

Community served: Suburban

Student enrollment: 525

Grade levels: Kindergarten through fifth

Age range: 5 to 11 years old

Students enrolled in ungraded primary program: 525

Faculty involved in program: 35

Grades involved in program: Kindergarten through fifth

Grades and types of faculty/aides involved: All faculty members and 11 aides (five fulltime and six parttime for three hours per day)

Pupil-teacher ratio: 24:1

Years of program operation: 25

### Philosophy/Goals

The goals of Dixie Elementary School reflect the goals for excellence established by Fayette County Public Schools:

- To develop a positive attitude toward learning in each child;
- To foster self-esteem and self-reliance through academic accomplishment;
- To provide for each child an individualized educational program suited to his/her needs;
- To provide for each child the opportunity to progress at his/her own pace;
- To encourage development of the total child, which includes social, emotional, physical, and academic development;

- To foster development of independence and self-discipline in each child;
- To develop a classroom environment conducive to learning for each child;
- To provide successful school experiences for each child;
- To provide opportunities for each parent to be involved with their child's education; and
- To provide trained staff prepared to implement a variety of instructional approaches and curricula.

### Program Background/Implementation

The ungraded primary program began at Dixie Elementary in 1965 when Fayette County Schools received a federal grant to develop an innovative program of instruction. The principal at Dixie received training in ungraded instruction from Dr. John Goodlad at the University of California at Los Angeles. The following summer, consultants worked with Dixie teachers in developing the ungraded program. Program implementation began during the 1966-67 school year, and the consultants returned to act as "trouble shooters" in refining and further developing the program. In subsequent years, Dixie teachers with prior training in the ungraded program trained new teachers employed at the school. The result was teams of teachers with adequate training to implement and continue the development of an ungraded primary program.

### Grouping/Organization

Dixie's ungraded primary program uses multiage, heterogeneous groups with subgroupings of one to ten

students based on skill mastery levels for all subjects. Flexibility in grouping occurs as students are assessed in an ongoing process and are regrouped according to academic needs and rates of learning. Multiage groups include students in the six-, seven-, and eight-year-old range and students in the nine- and ten-year-old range. Teachers are assigned to teams of four classroom teachers and one support teacher for each multiage group of 96 children.

Organizational strategies employed at Dixie include flexible group sizes, a nonretention policy, and flexible program entry/exit procedures. The ungraded program is flexible enough to allow five-year-olds to work in the primary group with six-, seven-, and eight-year-olds, and for eight-year-olds to work in the intermediate group with nine- and ten-year-olds. Students may also work above or below grade level within their age group.

A typical daily schedule at Dixie provides a three-hour language arts block and three, one-hour instructional blocks for math, science/social studies, and special activities (physical education, music, library, guidance, art, health, and creative writing—one or two times each week), plus 45 minutes for lunch and recess. All students are scheduled in the computer lab twice weekly during reading and math time. Multiage grouping is used in language arts and math. During the other instructional blocks, students are grouped by age.

### Curriculum/Instruction

Dixie staff use Assertive Discipline techniques for classroom management. For students with severe behavior problems, Fayette County Schools provides the SAFE program (Suspension and Failure Eliminated). The principal may place students with the SAFE teacher in a designated out-of-class setting within the school where students' behavior is closely monitored and evaluated before they may be returned to the regular classroom.

Instructional practices used frequently by teachers include Montessori methods, cooperative learning, peer tutoring, learning centers, team teaching, and skill sequencing levels. Individualized pacing of lessons and computer-assisted instruction are also employed.

Teachers incorporate ungraded, multilevel Mastery Learning curricular materials in the program.

Other curricular approaches include integrated thematic units and whole language instruction with sequenced skill instruction. Staff members continually seek alternative approaches that better accommodate individual children's needs and learning styles. For example, basal texts, trade books, the "Great Books" program, Montessori materials, and a data-based curriculum for language arts and math are used.

### Student Assessment

Measurement of pupil progress at Dixie Elementary is an ongoing, daily process. New students entering the program are given an individual assessment to determine their mastery of skills and appropriate placement. Dixie uses a grading system based on students' ability levels to report pupil progress. An individual educational plan in language arts is developed for each student and uses the term **mastery** to denote progress on skill levels. Pupil progress is reported to parents every six weeks, at which time individual conferences are held with all parents.

Principal Keller addresses the school's promotion/retention policy with the following explanation: "Parents, with input from staff, determine if a child needs an extra year or half-year in the ungraded program." Most students complete the kindergarten through fifth level ungraded program in six years.

### Remediation/Enrichment

A collaborative model provides for all support services to be delivered in the regular classroom. This model includes all remediation programs, special education, and QUEST—a program for gifted students.

### Teacher's Role

Teacher participation in the ungraded program at Dixie is required, and special training for teachers is ongoing. For the past three years, teachers have received training in Montessori methods. During the 1990-91 school year, the principal and several teachers on staff conducted staff development sessions on the philosophy and components of the ungraded program for other school faculties preparing to implement an ungraded primary program.

Resources provided to teachers at Dixie include

## **Classroom Instruction Program**

---

teacher teams, parent volunteers, peer coaching, teacher mentors, building team leaders, teacher assistants, Montessori training, and a curriculum specialist. Common planning time for teacher teams and opportunities to observe colleagues expand the resources for teachers. Also, the physical plant enhances team teaching and flexible grouping.

Teachers are assigned by the principal to complexes of four classrooms. Within each complex teachers are responsible for instruction in language arts, math, science, and social studies. Special teachers provide instruction in physical education, music, art, library, guidance, and computer lab.

### **Program Progress to Date**

Evaluation of the ungraded program at Dixie has occurred "on a small scale," according to the principal, by curriculum specialists from Fayette County Schools and faculty from the University of Kentucky. However, "the measure of success of the ungraded primary program will be the degree to which each child can be successful in school and the problem of school dropouts can be reduced," states Keller.

"The difference made by an ungraded primary program, which recognizes and capitalizes on students' individuality, is evidenced by the change in the attitudes of children, who now want to be in school, by the atmosphere of the school itself, and by parental support," concludes Keller.

### **Parent Involvement/Public Awareness**

Staff at Dixie Elementary communicate information concerning the ungraded program to parents and the public throughout the school year. Parents and the public are invited to informational meetings and to visit the school. Additionally, parent-teacher conferences are held every six weeks.

Members of the PTA coordinate a volunteer program for all parents.

### **Contact Information**

Linda Keller, Principal  
Dixie Elementary School  
1940 Eastland Parkway  
Lexington, KY 40505  
606/299-9211

## Jeffersontown Elementary School Louisville, Kentucky

School type: Public  
Community served: Suburban  
Student enrollment: 700  
Grade levels: Preschool through fifth  
Age range: 3 to 11 years old  
Students enrolled in ungraded primary program: 150  
Faculty involved in program: 7  
Grades involved in program: Kindergarten through third  
Grades and types of faculty/aides involved: K-3 regular education, learning disabled (LD) students, and multiple handicapped (MH) students  
Pupil-teacher ratio: 24:1  
Years of program operation: 1; in 1991-1992, the entire school will be involved in multiage grouping.

### Philosophy/Goals

The philosophy of this program is multifaceted. The overall goal reported by school staff is success for children. Without a sense of personal success, children limit their own growth. In order to create a safe environment in which children feel free to take risks that stretch their personal growth potential, staff believe and incorporate into their classrooms the following principles:

- Teachers act as a team, making joint decisions and including students in decisionmaking whenever possible.
- Children must be intellectually engaged in an experience-rich environment where they take an active role in the learning process.
- Reading and writing affect every aspect of learning. Therefore, teachers need to emphasize the processes of writing and reading and to

encourage children to become lifetime readers, writers, and critical thinkers.

- Within the multiage classroom, children learn to work with others of varying ages and backgrounds. This diversity produces an environment that stimulates thinking, academic growth, and prosocial behavior.
- Parents should be continually informed of their children's progress. Parents' involvement in school activities and assistance with learning activities at home should be encouraged.

### Program Background/Implementation

Seven teachers on the faculty who were interested in developing an ungraded approach initiated the program. To prepare for implementation, this team of four core teachers, two exceptional child educators, and one kindergarten teacher attended inservice programs offered by their school district and read materials related to ungraded programs and developmentally appropriate curriculum.

### Grouping/Organization

Multiage grouping is used for all subjects. Students are randomly placed in the program and remain with the team from kindergarten through third grade.

Teachers on the team schedule students and make teaching assignments. Teachers specialize in particular subject areas of their choosing, but all teachers on the team plan together to integrate themes throughout the curriculum.

Positive Assertive Discipline techniques are employed in the program. Rules and consequences of misbehavior are determined by the core teachers. In general, the teachers report decreased discipline problems.

### Curriculum/Instruction

Teachers in the ungraded primary unit at Jefferson-town use a variety of approaches, including integrated thematic units and whole language instruction. Instruction in all subjects follows a multilevel, ungraded format.

A literature-based approach, utilizing trade books, replaces a basal reading program. The SUCCESS writing program is employed to enhance language development. Math, science, and social studies instruction incorporates manipulatives and other hands-on materials such as "Box It, Bag It Math," "LOGO," "SUM," "TOPS" (see Resource Section for a description of these programs), calculators, learning centers, and experiments.

### Student Assessment

Pupil progress is measured through teacher observation and portfolios of daily work. Work in the students' portfolios is dated and kept for the entire time students are with the team so progress can be noted. Pupil progress is reported to parents through parent-teacher conferences, report cards, and a child's checklist. Traditional letter grades are not used. Instead, a marking system of ✓+, ✓, ✓- indicates each child's level of success and confidence. Additionally, cumulative, holistic checklists in math, reading, writing, social studies, and science provide more detailed information on each child's strengths and weaknesses.

Academic, social, and emotional development are the factors that determine promotion or retention. Children are promoted to the fourth grade when they attain the appropriate developmental levels. Most students require four years to complete the ungraded primary program.

### Remediation/Enrichment

Jeffersontown provides learning disabled (LD) and multiple handicapped (MH) services as well as Reading Recovery for 25 students in the ungraded program. The LD and MH resource teachers work with their students in the regular classroom as part of the teaching team. Extra assistance is also provided by parents, teachers, and student teachers. Progress and growth have been evident in LD and MH students since the ungraded program was implemented.

Teachers on the ungraded team develop individualized programs for gifted children. The literature-

based reading program is adapted for gifted children in that more advanced books and activities are made available. Also, the LOGO writing program allows flexibility for different abilities. Learning centers with materials developed for various ability levels provide acceleration in math.

Parents of gifted students have indicated pleasure with their children's progress in the ungraded program.

### Teacher's Role

Since teachers volunteered to develop and implement the ungraded program and chose their area of speciality within the program, interest is high. Training for the team has included inservice courses and professional reading on the ungraded approach and classes as well as inservice courses in the various content specialty areas. Common planning time for teaching teams is provided, and additional planning time is allowed for individual teachers.

### Program Progress to Date

Teachers on the ungraded team meet weekly to discuss and evaluate the program. They report a positive change in students' self-esteem and attitude toward school. The principal also observes and evaluates the program regularly. "Representatives from the Jefferson County Board of Education, including the superintendent, have visited the multage program and have complimented what they observed," reports Principal Foley.

### Parent Involvement/Public Awareness

The teachers at Jeffersontown Elementary held two orientation meetings to explain the program to parents. They also send monthly newsletters and hold individual parent-teacher conferences whenever questions arise.

Bennett notes, "Parent involvement is most helpful in the ungraded program." Several parent volunteers assist children in all subject areas.

### Contact Information

Larry Foley, Principal  
Susan Bennett, Teacher  
Jeffersontown Elementary School  
3610 Cedarwood Way  
Louisville, KY 40299  
502/473-8274

## Lake George Elementary School Lake George, New York

School type: Public  
Community served: Rural  
Student enrollment: 580  
Grade levels: Kindergarten through sixth  
Age range: 5 through 13 years old  
Students enrolled in ungraded program: 580  
Faculty involved in program: 40  
Grades involved in program: Kindergarten through sixth  
Grades and types of faculty/aides involved: 27 regular education teachers, 1 counselor, 1 library/media specialist, 11 subject area specialists, and 12 aides (11 fulltime, 1 parttime)  
Pupil-teacher ratio: 25:1, grades 1 through 6; 17:1, kindergarten  
Years of program operation: 14

### Philosophy/Goals

The philosophy at Lake George Elementary School is based on the premise that children learn best by working at their own ability levels. Whenever possible, students move through the curriculum without regard to age or grade level barriers. Students do not compete with and are not compared to other students, but they do compete with their own measured abilities and achievements.

The school's goal is to provide an environment that will allow students to become successful learners, to enjoy learning, and to develop abilities that promote responsible decisionmaking appropriate to their particular stage of development. Although staff expect students to be prepared in all academic areas, they place major emphasis on assisting students to experi-

ence success and to acquire self-confidence, self-direction, and independence. Building respect and trust between staff and students is a basic principle at Lake George. However, the school environment is not permissive or undisciplined. When necessary, students receive a high degree of teacher direction.

### Program Background/Implementation

Lake George implemented a continuous progress primary program in 1968, and the school has been ungraded since 1970. Staff members indicate no desire to change, but to continue to work on program modification and improvement.

The mayor of Lake George, New York, Robert M. Blais, recently described the school in these words:

"The teachers of Lake George are afforded a great deal of responsibility and given ample room to be creative and exercise their talents. The students are not allowed to escape their duties and responsibilities. Parents are not only invited but are persuaded to come and take part in the activities of the school. The school has exerted pressure on the teachers to teach, the students to learn, and the parents to participate."

### Grouping/Organization

To facilitate the learning process in a child-centered way, staff at Lake George take advantage of three important educational concepts: team teaching, multi-age grouping, and family grouping. Teams of two or three teachers work together to determine students' progress, to develop the best approaches for solving instructional problems, and to divide teaching assignments according to the abilities, interests, and

## Classroom Instruction Program

---

strengths of each team member. Teaching teams for students in grades one through six employ multiage grouping of 6-7-8, 8-9-10, and 10-11-12 year olds. Three teams comprise a cluster, which contains students ages 6 through 13. Kindergarten students are housed in a separate cluster with a team of five teachers. After completing kindergarten, students are heterogeneously assigned to one of the three 6-13 clusters. Each student will spend two or, if necessary, three years with a teaching team. Students may also be assigned a teaching team or cluster by the choice of the parent."

The program organization is supported by a physical facility that contains classrooms with portable partitions to accommodate various instructional groupings. The building also contains a music room with accompanying practice rooms, an art area, library, gymnasium, cafeteria, auditorium, and self-contained areas for special education and remedial education.

### Curriculum/Instruction

Instruction in reading, spelling, and math at Lake George is based on a carefully sequenced curriculum that is constantly modified to meet student needs. Basal texts are used in math, reading, and spelling. However, many teachers are moving away from the use of basals and are implementing whole language activities in language arts instruction. Mastery Learning with computer management of math, whole language instruction, hands-on science, process writing, and the integration of art, music, health, and physical education with the regular classroom curriculum contribute to the program's effectiveness. Learning centers, peer tutoring, cooperative learning, integrated thematic units, and math manipulatives are also used by teachers.

### Student Assessment

At Lake George student progress is measured daily through a variety of methods, depending on the subject and content. No letter grades are given, but skill development progress reports are given to parents three times yearly. The terms **satisfactory** and **needs improvement** are used to report progress at the student's achievement level. To measure student effort, the progress report contains the terms, **excellent**, **sat-**

**isfactory**, and **needs improvement**. Parent-teacher conferences or parent-teacher-student conferences are held at the conclusion of the first report period. The school obtains 99 or 100 percent conferences during this period. Additional conferences are scheduled for the remainder of the school year on an "as needed" basis. At the end of the school year, results from the McGraw-Hill Comprehensive Test of Basic Skills are provided for the parents who wish to compare their children's progress with that of other students, using local and national norms.

Students complete a yearly questionnaire that measures their attitude toward the school. According to the principal, "The results continue to indicate that most students feel quite positive about the school and about their relationships with friends and with teachers."

To determine retention or promotion, staff examine the social, emotional, and academic progress of each student. Most students complete the kindergarten through sixth grade program in seven years. Approximately 20 percent of the students require eight years to complete the program, and rarely does a student complete the program in fewer than seven years.

### Remediation/Enrichment

Teacher aides, the language arts coordinator, remedial reading teacher, resource teachers and/or teacher of gifted students provide remediation and enrichment. Remedial reading (Chapter 1) and enrichment are generally pull-out programs. Teacher aides and resource teachers use both pull-out and in-class instruction. Curriculum is directed by the regular classroom teacher and is congruent with classroom instruction. The school's gifted program is directed at pools of youngsters rather than at just the three or four percent of identified students. Special programs for art, music, computer, and sports, as well as activities for gifted students are provided during a one-hour extension of the school day.

### Teacher's Role

Mary Sullivan, music instructor at Lake George, noted: "In our school the individual teacher understands that there are high expectations for above-

average performance, not by any edict from the administrator, but by the hard work and above-average performance of their peers."

Teachers are required to participate in the ungraded program since there are no alternatives offered at the school. Inservice training is ongoing. For example, most faculty meetings are designed as workshop sessions. Additional staff development days are included in the school calendar, during which time teaching teams present learning activities for their peers.

Teachers at Lake George are actively involved in shared decisionmaking. The Educational Cabinet is composed of elected team coordinators of each of the four clusters; elected representative of the special education/remediation teams; representative of the teachers of art, music, physical education, and health; and is under the leadership of the elementary school principal. Individual teaching teams monitor the results of the annual standardized tests, student questionnaire, and parent survey and build goals and objectives around their identified weaknesses. They provide feedback on the effectiveness of faculty and inservice meetings and assess the performances of the elementary principal, psychologist, administrator/coordinator of the High Potential Program, educational communications director, librarian, speech therapist, reading teacher, elementary counselor, language arts coordinator, and teacher aides, as well as substitute teachers. Teachers may also develop their own method of professional evaluation for the purpose of self-improvement. Staff members are a part of the interviewing teams for the selection of new teachers, aides, principal, and superintendent.

### Program Progress to Date

The program at Lake George is evaluated yearly by a student attitude questionnaire, parent surveys, standardized test results, and statewide testing. Results are presented to the school board and the public. Principal

Bob Ross reports, "All tests indicate our students are doing well. The Educational Cabinet and teaching teams constantly review the identified goals and objectives for the school year.

Ross adds the following comments on his school's accomplishments: "Working at appropriate learning levels has helped youngsters feel successful. We have fewer discipline problems because youngsters do not feel frustrated. We have forced ourselves to fit programs to students rather than students to programs."

### Parent Involvement/Public Awareness

Lake George makes many efforts to communicate with and involve its community. "A key to this strategy," says Ross, "is direct communication. This is accomplished through person-to-person contacts with parents, parent-teacher-student conferences, handbooks about the school distributed to parents and students, an annual parent survey, a monthly newsletter that contains a tear-out section for parent comments, and the staff's active involvement in the PTA. Between 80 and 92 percent of the parents return the school's annual Parent Survey."

Parents participate in the school's instructional program in the following ways: participating on field trips, serving as homeroom mothers, coaching academic teams, volunteering in the classrooms and library, helping their children at home through using "Parent Involvement Pages" sent home by teachers, and participating in the "Parents as Reading Partners" program. Additionally, parents serve on the school's Gifted and Talented Committee, Progress Report Committee, and committees for the selection and hiring of superintendents and principals.

### Contact Information

Robert J. Ross, Principal  
Lake George Elementary School  
Lake George, NY 12845  
518/668-5714

## Saffell Street Elementary School Lawrenceburg, Kentucky

School type: Public  
Community served: Rural  
Student enrollment: 620  
Grade levels: Preschool through second  
Age range: 4 through 8 years old  
Students enrolled in ungraded primary program: 620  
Faculty involved in program: 37  
Grades involved in program: Preschool through second  
Grades and types of faculty/aides involved: 37 early childhood teachers and 11 aides  
Pupil-teacher ratio: 24:1  
Years of program operation: 2

### Philosophy/Goals

The philosophy of Saffell Street School, as described by Principal Max Workman, supports a "hands-on, experience-based" educational program. Current programs at Saffell Street emphasize active learning and each student's ability to succeed. Individual differences among students are recognized and celebrated.

### Program Background/Implementation

The new program at Saffell Street was initiated when teachers expressed an interest in developing curriculum and instruction that would implement a hands-on, experience-based philosophy. The principal encouraged and assisted teachers to visit schools where innovative programs were being used. A gradual shift from basal texts and skills progression began as teachers received training in new experience-based programs at the Regional Training Center and ob-

served colleagues in other schools using these methods.

Teacher participation in the ungraded primary program is voluntary, and training is available for teachers who wish to develop new instructional methods. For example, teachers of kindergarten, first grade, and special education and their aides received training in the High Scope curriculum. Some teachers have received training in each of the following programs: SUCCESS, "Box It, Bag It Math," Writing to Read, and Teaching and Learning by Computer.

Resources provided to teachers at Saffell Street include teacher teams, parent volunteers, certified teacher tutors, and a facility that enhances team teaching for the second grade.

### Grouping/Organization

All students at Saffell Street are involved in the ungraded primary program. Students in preschool through grade one are randomly assigned by the principal to self-contained, multiage classrooms and remain with the assigned teacher for one year. Grouping varies from teacher to teacher, and there is flexibility in grouping as teachers move students from group to group within the classroom setting. The collaborative teaching model is used to provide special services within the regular classroom. Second grade students are assigned to a four-teacher team.

Teachers are assigned to their groups through normal staffing procedures. Central office staff, principals, and teachers are involved in a screening process that employs a perceiver inventory.

### Curriculum/Instruction

Curricular approaches currently in use include

integrated thematic units, whole language instruction, and individually guided education. The curriculum has been modified as new programs have been implemented.

The High Scope early childhood curriculum with emphasis on active learning is used with four-year-olds, kindergarten students, and in a supplemental manner with first and second graders. Most of the second grade classes and some of the first grade classes use the SUCCESS curriculum for language arts. Whole Language from the Wright Group is used in one first grade classroom. "Box It, Bag It Math" is used in kindergarten, first, and second grade. Basal texts for reading, math, social studies, and science are used by teachers in varying degrees. Students also receive instruction in the Talents Unlimited program from the Kentucky Department of Education staff.

Instructional practices frequently employed by teachers include learning centers, computer-assisted instruction, learner capacity paced instruction, and peer tutoring. Teachers are presently receiving training in cooperative learning.

The Assertive Discipline technique of classroom management has been used for the past five years.

### Student Assessment

Pupil progress at Saffell Street is measured by a letter grading system and is reported to parents every six weeks. However, in the 1991-92 school year, teachers plan to change the reporting system to a narrative description of pupil progress. Teachers also report to parents informally as needed.

A parent-teacher conference day allows time for individual conferences with parents of all students. Also, parent volunteers serving their children's classes can observe ongoing progress in the classroom setting.

Promotion or retention in the program is based on student maturity and skill acquisition. Conferencing between parent and school staff members occurs before a decision is made. Most students complete the program (preschool, kindergarten, first grade, second grade) in four years.

### Remediation/Enrichment

The collaborative teaching model allows special education, speech, and remediation services to be

provided in the regular classroom. All remediation programs use in-class assistance methods. Students with severe and profound problems may be placed for two months in a classroom setting containing three or four pupils, a special teacher, and an aide.

### Teacher's Role

The Saffell Street ungraded primary program was teacher-initiated. Teachers determine which instructional programs and curricula they wish to utilize and are given opportunities for training and observation in these methods. Additionally, teachers participate in individual, hour-long conferences with parents of prospective students in an extensive screening program each June. During the conferences, teachers provide information on the philosophy and programs at Saffell Street School.

### Program Progress to Date

Informal assessment of program progress at Saffell Street is ongoing and involves teachers, administrators, and parents.

At the district level, a recently formed committee continues to evaluate programs in the district and will establish districtwide goals that identify the most effective programs for Anderson County students.

In the words of Workman, "The smiles on the faces of the children at our school are evidence that the changes we have implemented have made a difference for students."

### Parent Involvement/Public Awareness

In addition to the information provided in conferences, monthly literature is distributed to parents, and program information is shared at PTA meetings. Parent volunteers in the classrooms also communicate positive information and help gain support for the ungraded primary program.

### Contact Information

Max Workman, Principal  
Saffell Street Elementary School  
Lawrenceburg, KY 40342  
502/839-7368

## St. James Catholic School Louisville, Kentucky

School type: Parochial

Type of community served: Urban

Student enrollment: 141

Grade levels: Kindergarten through eighth grade

Age range: 5 through 9 years old (in primary program)

Students enrolled in ungraded primary program: 61

Faculty involved in program: 3

Grade levels involved: Kindergarten through third

Grades and types of faculty/aides involved: 3 certified primary teachers; 1 aide

Pupil-teacher ratio: 20:1

Years of program operation: 1

### Philosophy/Goals

St. James School is committed to providing an educational foundation and community experience based on Gospel values. In the K-3 program, staff seek to promote mastery of basic skills, as well as the skills of communication, decisionmaking, problem solving, and creative expression. Each student is challenged to become responsible, self-motivated, and self-disciplined. Goals for each child include the development of a sense of self-worth, a spirit of discovery and inquiry, and an enthusiasm for lifelong learning. Students are prepared to be respectful, caring citizens of the world, who are able to celebrate individuality, to encourage the building of community, and to use their gifts and the earth's resources wisely. In the early years, children grow and change rapidly, advancing through successive stages of development and progressing in their own special ways. At St. James, teachers strive to meet the needs of children at their individual stages of development and to nurture children so that they become confident, self-assured members of a larger society.

Goals for the St. James ungraded primary program address spiritual, social/emotional, cognitive, and physical development.

### Program Background/Implementation

St. James was selected by the Kentucky Office of Catholic Schools to pilot the ungraded primary program. Teachers volunteered to pilot the program and received appropriate training. An educational consultant and a planning consultant from the central office assisted the teaching team in organizing the program. Elizabeth Rightmyer, director of the Chance School, also provided training. Primary team teachers attended summer workshops on whole language techniques and "Box It, Bag It Math," and they visited several schools that were using an ungraded format. Through these experiences, the teachers and planners were better prepared to design an ungraded primary program appropriate for their school.

### Grouping/Organization

Grouping at St. James is heterogeneous, multiage, and flexible. The teaching team assigns students to groups based upon space availability and matches teacher expertise and interest with student needs.

Scheduling is done weekly by teachers and principal cooperatively and is based on unit and skill needs. Staff plan for students to remain with a teacher or team of teachers for more than one year.

### Curriculum/Instruction

St. James primary teachers use a variety of instructional practices including individualized pacing of lessons, cooperative learning, learning centers, and team teaching. Curricular approaches include integrated thematic units and whole language instruction. The former curriculum has been modified to allow for continuous progress within the skills continuum. A

basal text is used as a supplement to the reading program, and SUCCESS reading and writing are used in language arts. Mathematics instruction is supplemented with "Box It, Bag It Math" and Miquon Individualized Math Lab. Learning centers, computer instruction, Drop Everything and Read (DEAR), and group times are also part of the instructional day.

### Student Assessment

Pupil progress is measured in the following ways: weekly contact/progress reports, parent/teacher/student conferences each trimester, and a summary of student progress report each trimester. On the student progress report each trimester, attainment of skills in each content area is indicated by S (satisfactory), W (working on), or N (needs help).

The teaching team and the child's parents jointly assess the needs of the "whole child" and determine retention or promotion. The average number of years students require to complete the primary program is four.

### Remediation/Enrichment

Remediation and enrichment are provided as natural components of individualized instruction. Separate programs are not available for remedial or gifted instruction, or behavior control. However, an on-call educational consultant is available to assist the teaching team in designing appropriate instruction to meet these needs. The team also provides in-class assistance methods with the support of the educational consultant.

### Teacher's Role

Teacher participation in the ungraded program at St. James was voluntary for the pilot. Teachers received appropriate training and then designed their own program. The planning process involved four steps: team members shared information on topics such as curriculum, parent awareness, and student assessment; team members discussed each topic; team members developed a plan for sharing information with others in the school/district; and team members devised an initial strategy for preparation to implement ungraded primary programs within the school/district.

During the school year, the following resources are provided to teachers in the primary program: facilities that enhance team teaching and flexible grouping,

teacher teams, common planning time for team members, parent volunteers, a curriculum specialist or other district-provided assistance, and the opportunity to observe colleagues.

Aides are used to supervise large groups of children to provide teacher planning time during DEAR time, snack, and lunch. They also help individual students with specific skills as needed.

### Program Progress to Date

The program at St. James is evaluated qualitatively and quantitatively. The qualitative measures include parental assessment, teacher satisfaction, and student involvement. Quantitative measures include pre- and posttesting with the Comprehensive Test of Basic Skills, Form 4, a norm-referenced test. Staff from the district curriculum department, local school team, and members of the local school board also evaluate the program. The results of their evaluations are communicated and their recommendations are used at parent meetings and school board meetings. The program is also evaluated by parents and students at the end of the first semester. "During the program's first semester, only two of the parents surveyed expressed dissatisfaction," according to Janet Leitner.

### Parent Involvement/Public Awareness

"Parent volunteers, who help students and teachers in a variety of ways, are a vital part of the ungraded program at St. James," states Leitner.

The public is informed about the program through the media and public relations.

Educator support for the program is accomplished through site visits, word of mouth, updates at district principals' meetings, Think Tanks, Educational Advisory Council meetings, and information shared at the Academy of Catholic Educators.

As a result of positive feedback from students, teachers, and parents at St. James, the Office of Catholic Schools plans to expand the program to other schools in the 1991-92 school year.

### Contact Information

Janet Leitner, Educational Consultant  
Office of Catholic Schools  
1516 Hepburn Avenue  
Louisville, KY 40204  
502/585-4158

## Stanton Elementary School Stanton, Kentucky

School type: Public  
Community served: Rural  
Student enrollment: 470  
Grade levels: Kindergarten through fifth  
Age range: 5 through 11 years old  
Students enrolled in ungraded primary program: 245  
Faculty involved in program: 12  
Grades involved in program: Kindergarten through third  
Grades and types of faculty/aides involved: Regular education teachers grades 1 through 3, physical education, music, and library resource teachers, counselor, Chapter 1 aides  
Pupil-teacher ratio: 25:1 in primary  
Years of program operation: 1

### Philosophy/Goals

The goal of Stanton Elementary's ungraded primary program is high level achievement, within a secure environment, for all children. The school has a large number of at-risk students, and multiage grouping with children remaining with the same teacher for more than one year is viewed by the staff as a way to provide greater stability.

### Program Background/Implementation

Stanton initiated an ungraded primary program to address serious equity issues. Achievement test scores indicated that economically disadvantaged students were not achieving at a level consistent with staff goals. The staff view heterogeneous grouping and cooperative learning as strategies within the ungraded primary program to alleviate this problem.

Staff preparation began six years ago when the school moved to a noncompetitive program without traditional letter grades and has included training in the following methods: hands-on science activities, math manipulatives, cooperative learning strategies, and the writing process. The decision to implement multiage grouping came as a result of teacher training in the writing process. Teachers realized that student writing was not developing simultaneously with other skills, and teachers began to see students progressing at different rates regardless of age.

Teachers at Stanton worked during the summer, prior to implementation in the 1990-91 school year, to group children according to a matrix design that included many factors such as socioeconomic and achievement levels. Teachers spent time brainstorming obstacles and routes to overcome them—the biggest obstacle being parental support. To surmount this obstacle, teachers made home visits to explain the ungraded program to parents, and held a schoolwide picnic for parents, staff, and students. On the day of the picnic, parents met first with individual teachers for a question and answer session about multiage grouping in the classroom.

### Grouping/Organization

Students are grouped in multiage classes with consideration for a balance in socioeconomic levels, gender, achievement levels, and other social factors within each class. Cooperative learning groups are flexible so children change groups as their needs dictate.

Multiage heterogeneous grouping is used for science, social studies, art, music, physical education, library, lunch, and recess. The modified Joplin Plan (cross-grade grouping of students by achievement

levels) is used for reading and math.

Teachers at Stanton work in self-selected teams to assure proper student placement within instructional groups. Students are randomly assigned to homerooms, and teachers are assigned by the principal to departmental instructional groups based on their stated preferences. Beginning in the 1990-91 school year, students may remain with the same homeroom teacher for up to three years.

Teachers' daily instructional schedules vary to accommodate student needs. However, reading instruction is commonly scheduled.

### Curriculum/Instruction

Efforts are underway to develop appropriate curriculum materials and thematic teaching units. Stanton has used a process-oriented approach to instruction for many years, but now greater attention is being given to integrating subjects. Basal texts are used with increased emphasis on whole language experiences and a literature-based approach. Teachers also use manipulative materials, cooperative learning techniques, learning centers, computer assisted instruction, peer tutoring, and student-initiated assignments.

Principal Juanita King offered this observation on how instructional practice affects classroom management: "Cooperative learning or peer tutoring creates a noncompetitive environment throughout the school, and as a result, the school atmosphere has a spirit of cooperation."

Kelly Ann Marcum, the teacher respondent, agreed and added: "Children are intent on helping each other, the competition seems to be gone, and self-esteem among at-risk students seems to be higher. The risk of failure is diminished."

### Student Assessment

Assessment of pupil progress is ongoing. Teachers use skill mastery checklists without letter grades and portfolios containing dated examples of achievement, particularly writing samples, to report pupil progress to parents. King explained one problem with these forms of assessment: "Reporting to parents has been the greatest obstacle, and the teachers are using several methods to assure parent understanding."

Stanton has a nonretention/nonpromotion policy and flexible entry/exit within the ungraded primary program. Three years is the average time students need to complete the program.

### Remediation/Enrichment

Remediation is provided within the developmental program, but special pull-out classes are utilized for children who need behavioral control assistance. Chapter 1 aides assist with remediation, and an all-day kindergarten is offered for at-risk students. Stanton offers a self-contained classroom for special education students and Step-Leap, a pull-out program, is provided for gifted students.

### Teacher's Role

Teacher participation in the ungraded primary program is voluntary, and teaming is not required.

"Lead teachers" on staff, who have knowledge and expertise in a particular area, assume responsibility for staff development, which has been directed toward answering teachers' questions in areas such as cooperative learning, curriculum models, whole language, manipulative math, and activity-oriented science instruction.

The following resources also are provided to support instruction in the ungraded primary program: teacher teams, common planning time, parent volunteers, school-based teacher assistance, and opportunities to observe colleagues.

### Program Progress to Date

Teachers and principal conduct an ongoing assessment of program strengths and weaknesses. Parent comments and concerns provide feedback for program evaluation that is incorporated into staff planning sessions.

In regard to program evaluation, King states: "There are so many aspects to ungraded primary and multiage grouping that are not easily assessed by conventional standards such as testing." In her view, validation of program success comes from the teachers involved. For example, "since discipline is outside the cognitive domain and has greater bearing on the affective domain, teacher testimony is required to validate

## **Classroom Instruction Program**

---

success in this area." According to the principal, discipline is more positive in the ungraded program. "I see fewer children for disciplinary action, and there is a more gentle attitude between children and staff."

When asked about the effectiveness of Stanton's ungraded primary program, King replied: "A paramount issue is that the school is engaging and interesting. Children are developing a love for learning that is lasting."

### **Parent Involvement/Public Awareness**

Home visits and semiannual parent-teacher conferences are used to communicate the program's philosophy, goals, organization, and advantages to par-

ents. The pupil progress reporting system, which is flexible and can be altered according to feedback from parents, is explained at parent-teacher conferences. Parents, too, are encouraged to provide information on their children's achievement to teachers. Orientation gatherings are held yearly, and an open invitation to visit classrooms is extended to parents.

### **Contact Information**

Juanita King, Principal  
Kelly Ann Marcum, Teacher  
Stanton Elementary School  
Stanton, KY 40380  
606/663-4334

## Townsend Continuous Progress School Milwaukee, Wisconsin

School type: Public  
Community served: Urban  
Student enrollment: 510  
Grade levels: Preschool through fifth  
Age range: 3 through 12 years old  
Students enrolled in ungraded primary program: 400  
Faculty involved in program: 16  
Grades involved in program: First through fifth  
Grades and types of faculty/aides involved: 16 classroom teachers, 3 paraprofessional aides (1 library aide, 1 general aide)  
Pupil-teacher ratio: There are two ratios: grade 1, 25:1; grades 2 through 5, 27:1.  
Years of program operation: 15

### Philosophy/Goals

The philosophy of the ungraded primary program at Townsend School is based on the needs to recognize and address the varied learning rates of students and to establish positive pupil attitudes. Teaching and administrative procedures have been adjusted to meet the differing social, mental, and physical capabilities among students. Students progress continuously as appropriate to developmental levels and rates of learning. Diversity is a recognized strength at Townsend, and every opportunity to foster positive social interaction in classrooms and school activities is encouraged.

### Program Background/Implementation

The ungraded primary program began in Milwaukee Public Schools as an alternative to the traditional lock-step graded structure. The program was designed to allow for varied learning rates and promote positive pupil attitudes. Townsend is one of several schools in the district that are using the ungraded primary pro-

gram. Townsend began its ungraded program for grades 1 through 6 in response to a desegregation order that resulted in the establishment of magnet schools.

In preparation for program implementation, all teachers participated in district-provided inservice. School-initiated staff development, focused on particular areas such as software evaluation, was offered to all staff members on a voluntary basis. Additionally, teachers currently have the following resources available to assist them in preparing and improving ungraded instruction: facilities that support team teaching and flexible grouping, parent volunteers, peer coaching and teacher mentors, school-based teacher assistance, curriculum specialists, and opportunities to observe colleagues.

### Grouping/Organization

The principal, with input from classroom teachers and reading specialists, assigns students to self-contained classrooms on the basis of reading and math achievement levels. Parent requests for particular teachers are reviewed and then granted if appropriate. Most classes contain a two-year age range of students, two reading levels, and proper racial balance. However, first grade students are usually grouped together, and multiage grouping is kept to a minimum at this level. Students generally remain with their teacher for one year.

Although classes are self-contained, students who need instruction in reading or math outside the scope of their assigned class may be assigned to another group. For example, a kindergarten student may be assigned to a first grade class, or an intermediate student to a primary class for instruction.

### Curriculum/Instruction

Teachers at Townsend use individually paced lessons, cooperative learning techniques, peer tutoring,

learning stations, and computer-assisted instruction to meet diverse student needs. Mastery Learning curricular materials are modified for children at, above, or below a prescribed grade level. Basals are used in reading, math, social studies, English, spelling, science, health, and penmanship. To enhance individualized instruction, each classroom contains a computer center and a number of interest centers.

### Student Assessment

Student progress reports are sent to parents six times each year. These reports include both letter grades and narratives. Curricular and skill areas taught during each grading period are assessed.

Townsend has a nonretention policy. Retention is not considered until students have completed the fifth year of the program. Most students complete the program in five years. In school year 1990-91, only two students completed a sixth year in the program.

### Remediation/Enrichment

Paraprofessional aides and the reading resource teacher assist regular education students with remediation in reading and language arts in the regular education classrooms. Special education students are self-contained but are mainstreamed for music, art, and physical education.

There are no alternative programs offered for gifted students at Townsend. Most are accommodated in the regular program. Some may choose to enroll in other magnet school gifted programs offered in the district.

The principal offered this observation: "The program has done much to challenge gifted students, motivate all students, and provide additional time for some students to reach desired achievement levels in reading and math."

### Teacher's Role

Teachers collaborate with the principal on student placement in the program. They are also responsible for individual student schedules and daily class schedules.

Staff members develop and evaluate cognitive and affective student performance goals for the annual school effectiveness plan, which is based on the Mid-Continent Regional Educational Laboratory's model. Teachers also design in-school staff development fo-

cused on particular staff-identified needs and participate in peer coaching and mentoring activities.

### Program Progress to Date

Ongoing evaluation of the program is provided by the district superintendent, who annually issues a report card for each school in the district. Results of student achievement based on the Iowa Test of Basic Skills and the Wisconsin statewide testing program are published in the media. An evaluation by the North Central Association of Colleges and Schools is conducted annually, and staff members evaluate school goals utilizing specific levels of performance in cognitive and affective areas.

Principal Robert Johnson added the following statement on the effectiveness of Townsend's ungraded primary program: "The failure rate at Townsend is far below the average for all other Milwaukee public schools. Usually two to five students need a sixth year to complete the program."

### Parent Involvement/Public Awareness

To promote public awareness and gain educator support for the ungraded program, the public relations department of the Milwaukee Public School System sends regular news releases to the media. Periodically, the public relations department also sends publications explaining school program options to parents.

Townsend staff and parent volunteers publish both a school newspaper and a weekly school newsletter. Information packets on the school's program are provided for prospective students.

Parent volunteers assist in classrooms.

### Contact Information

Robert T. Johnson, Principal  
Townsend Continuous Progress School  
3360 N. Sherman Boulevard  
Milwaukee, WI 53216  
414/449-3710

For information on other Milwaukee schools using the ungraded primary program, contact:

Millie Hoffmann, Curriculum Specialist  
Early Childhood/Elementary Education  
Milwaukee Public Schools  
P. O. Box 10-K  
Milwaukee, WI 53201-8210  
414/475-8094

## The Wheeler School Louisville, Kentucky

School type: Public

Community served: Suburban/rural

Student enrollment: 516

Grade levels: nongraded elementary school, Kindergarten through fifth

Age range: 5 to 11 years old

Students enrolled in ungraded primary program: 306

Faculty involved in program: 18

Grades involved in program: Kindergarten through fifth

Grades and types of faculty/aides involved: 10 primary, 8 intermediate teachers; 1 instructional assistant for primary team

Pupil-teacher ratio: 24:1 (primary)

Years of program operation: 3

### Philosophy/Goals

Wheeler School's philosophy reflects the principles of appropriate practice for primary-age children developed by the National Association for the Education of Young Children (1988):

- Teachers of primary children must always be cognizant of the "whole child."
- Throughout the primary grades, the curriculum should be integrated.
- Primary-age children should be engaged in active, rather than passive activities.
- The curriculum should provide many developmentally appropriate materials for children to explore and think about, and opportunities for interaction and communication with adults and other children.

- The content of the curriculum should be relevant, engaging, and meaningful to the children themselves.
- Primary-age children are provided opportunities to work in small groups on projects that provide rich content for conversation, and teachers facilitate discussion among children by making comments and soliciting children's opinions and ideas.
- The younger the children and the more diverse their backgrounds, the wider the variety of teaching materials required.
- Curriculum and teaching methods should be designed so that children not only acquire knowledge and skills, but also the disposition and inclination to use them.

Wheeler's stated values are creativity, self-direction, purposefulness, and respect. Their motto is: "Expecting the Best . . . Producing Success."

### Program Background/Implementation

In 1985 Wheeler staff and community committed to becoming part of a collaborative project between the Jefferson County Public Schools and the Greens Professional Development Academy. The project's defined objective is to review the American educational process. Its primary focus is the exploration of opportunities for staff and students to feel more successful in the public elementary school setting. An additional objective is to alleviate the isolation of elementary teachers and to promote teacher collegiality by improving school climate and work place conditions.

Currently, Wheeler has six teaching teams—three

primary and three intermediate. These teams were created to provide greater success for students and to increase significant learning opportunities for students as well as to alleviate teacher isolation.

Teachers on the ungraded primary teams received training in literature-based reading, cooperative learning, "Box It, Bag It Math," teamed instruction, and consensus building/shared decisionmaking. Teachers utilized the expertise of administrative staff from Jefferson County Public Schools/Gheens Academy in beginning implementation procedures for the ungraded program.

### Grouping/Organization

All children in kindergarten through third grade participate in Wheeler's ungraded primary program. Classes are multiage and heterogeneous in grouping. Students remain with the same teaching team for more than one year.

After volunteering for the program, teachers are assigned to groups through a shared decisionmaking process involving teachers and the principal. Teaching teams design instruction using a flexible daily schedule, which includes learning blocks for language arts, math, science, and social studies; a teacher-based guidance period; and common team planning time. Learning support specialists and special education teachers are assigned to work collaboratively with each teaching team.

### Curriculum/Instruction

Each teaching team delivers interdisciplinary, multiage instruction with curricular alignment that focuses on continuous progress. Teachers utilize various instructional methods including cooperative learning, peer coaching, hands-on science, literature-based reading, manipulative math, process writing, integrated thematic units, and whole language instruction. Basals are used as a resource at a teacher's discretion.

Basic skills acquisition is addressed with emphasis on development of critical thinking skills as well as problem solving. Information gathering is a focal point rather than rote memorization, because it better equips students to function more effectively in a high-tech society. Creativity, understanding, and appreciation for the fine arts are also emphasized to further provide

students with an eclectic learning experience.

A teacher-based guidance component provides students and teachers with the opportunity for intensive communication. Students are instrumental in selecting discussion topics such as friendship, anger, fear, and sharing, as well as for devising the presentation.

### Student Assessment

Weekly progress reports and quarterly cumulative progress reports are distributed to parents, and parent-teacher conferences are scheduled as needed. The grading system reflects a noncompetitive, no-fail philosophy: R = rapid progress; S = satisfactory progress; and PH = progressing with help. Students experience fluid transition from one academic level to another and are expected to complete the primary program in three to four years.

### Remediation/Enrichment

Enrichment and remediation are provided through the individual continuous progress approach. Learning support specialists also provide assistance to teaching teams.

### Teacher's Role

Teachers working in teams are instructing to their strengths and have an opportunity to increase small group and individualized instruction. Higher teacher expectations in specialized areas, in particular science and social studies, have resulted in greater academic achievement. Also, common planning time permits teachers to base student academic and behavioral decisions on a variety of viewpoints.

### Program Progress to Date

A research team from Michigan State University has selected The Wheeler School as one of three schools in the nation for investigation and evaluation. Annual school-community surveys provide feedback on the program from parents. The school is continually accountable to the Jefferson County school district and the state of Kentucky, with achievement tests, performance-based assessments, and attendance analysis being part of the accountability process.

The following progress has been noted, documented, and reported by Principal Charlene Bush:

- Student collaboration, rather than student competition, has increased.
- Students have assumed greater responsibility at an earlier point in their school lives as the need for organizational skills has increased.
- Student success is indicated by an increase in student attendance, a significant decrease in disciplinary referrals, and an increase in student achievement based on interim progress reports and daily student work.
- Parental satisfaction with student and teacher performance has increased based on conferences, conversations, and written correspondence. Parents have become more involved in school activities, and the frequency of parental contact has increased.

### **Parent Involvement/Public Awareness**

School newsletters, open houses, forums, teas, brunches, news releases, and an annual report to parents are used to promote community understanding of and support for the program. Through several of these vehicles, research on developmentally appropriate practices for teaching young children is shared with the community. Also, a school-community survey is conducted to solicit parental input, and the results are included in the annual report to parents. A School Action Plan is developed and shared with the community prior to the annual report to parents.

Parents volunteer in the classroom and the school.

### **Contact Information**

Charlene Bush, Principal  
Wheeler Elementary School  
5410 Cynthia Drive  
Louisville, KY 40291  
502/473-8349

## FINDINGS ACROSS PROGRAMS

Study group members determined that item analysis and summarizing of frequently reported responses to program description form questions regarding obstacles to establishing an ungraded primary program (#16), program-related accomplishments described by respondents (#17), advantages and disadvantages (#18), and recommendations to future implementers of such programs (#20) would be the most authentic and meaningful method of reporting this data. Three study group members were provided with all program description form responses (total of 11 forms for 10 programs) for the questions listed and agreed to report categories of responses most frequently identified. This section summarizes their findings.

### Obstacles Overcome in Establishing Ungraded Primary Programs

Question #16 of the KEA-AEL Ungraded Primary Program Description Form asked participants, "What were the biggest obstacles to overcome in establishing an ungraded primary program?" Respondents most frequently reported that lack of parent and teacher understanding and acceptance of the ungraded primary program concept was the biggest obstacle to implementation. The education of parents to the concept of continuous progress and its differences from the traditional graded school organization was mentioned as essential by six respondents. "Changing the way we think about school structures, rules, roles, and responsibilities," reported by one respondent, illustrates the frustration involved in educating educators to the differences. This quote also echoes the importance that the respondents placed on teacher training and on understanding how to organize and implement such programs. Other obstacles mentioned included the difficulty in getting parents to

understand the assessment process used; the lack of time for teachers to plan together for instruction; weakness in administrative support, scheduling, and management; and "the idea that developmental education is only for slow or weak students."

### Accomplishments Realized from Ungraded Primary Programs

Student success was the phrase most often used in response to question #17, "What have been your program's greatest accomplishments?" A majority of the respondents cited increased student academic achievement as the greatest accomplishment of their ungraded primary program's implementation. One principal stated that the program at his school "...has done much to challenge gifted students, motivate all students, and provide additional time for some students to gain desired achievement levels in reading and mathematics." Accomplishments greatly outnumbered obstacles and included: the development of cooperative attitudes among children and greater sensitivity to each other's needs, meeting the needs of each child, fewer discipline referrals, parent satisfaction, improved standardized test scores, reduced student retention, improved student attitudes toward school, enhanced student social skills, elimination of teacher isolation, and increased teacher empowerment.

### Advantages and Disadvantages of Ungraded Primary Programs

Individualized student progress was the most frequent response when respondents were asked question 19.a.: "What are the advantages of using an ungraded primary program?" Other responses mentioned by more than one respondent included many cited above as program accomplishments, including

emphasis on student collaboration rather than competition, increase in student attendance and decrease in discipline referrals, improvement in language development, improved student social development, decreased risk of failure, and enhanced self-esteem. Three respondents described advantages that seem to result from the teacher reflection necessary to implement innovative programs. For example, "Teachers refocus on students and on teaching (not on management, discipline, and control) and students refocus on learning and accomplishment (not on failure and escape)." "Children can proceed to learn according to their developmental needs without artificial and arbitrary judgment of their capabilities.... Children's learning is supported in a family atmosphere." "Students see early on what 'mature' work looks like and can use their primary learning tool, imitation, to learn basic skills."

While most respondents chose to report both accomplishments and advantages in terms of student benefits, a few teacher advantages were mentioned. These included: reduced preparations, the opportunity to teach all ability levels, improved teacher-student bonding, and increased teacher familiarity with students' families and student skill development.

Disadvantages of implementing an ungraded primary program, like obstacles, were fewer than advantages and accomplishments. Increased time and effort on the part of teachers was the most frequent response to question #19.b., "What disadvantages have you identified?" The difficulty in arranging planning time for teams of teachers was cited along with the inability to secure additional needed help. An additional student-focused disadvantage was described as "...when standards or expectations are not high. Students should be expected to make at least a year's growth in a year, recognizing that some will not, but a number will make more (progress)."

### Recommendations to Implementers of Ungraded Primary Programs

In addition to discussing the obstacles to forming ungraded primary programs, the major accomplishments achieved, and the advantages and disadvantages identified by implementers of such programs, study group members also summarized the many recommendations implementers included on their program

description forms or in telephone interviews. The most frequently mentioned recommendations advise future implementers to:

Involve teachers and principals who really want to participate in the program.

Educate teachers about a variety of ungraded primary programs.

Inform parents about the program and involve them as volunteers.

Establish a mission or philosophy for the school that focuses on the student and the ungraded primary program.

Allow plenty of time for teachers to plan and share.

Encourage team teaching in the program.

Share your successes and your failures.

Emphasize continuous progress; although a small number of students may spend an additional year in the program.

Inform teachers of other grades about the program and provide basic skill progress information for all students as they leave the program.

"A nongraded primary is not going to make everybody smart." You will need to make some adjustments for some students and for some teachers.

"You don't do it in a day." Approach the program slowly. Begin by piloting some aspects of an ungraded primary program.

Additional recommendations made by individual respondents included: use a student placement plan, incorporate cooperative learning, avoid grouping students, develop curriculum for the program, be flexible, and keep trying!

Study group members, KEA, AEL, and representatives from the case study schools encourage you to begin an ungraded primary program and wish you much success. Please phone AEL (800-624-9120) or KEA (800-292-9480 or 502-875-2889) if you would like to share information on your school's program.

## BIBLIOGRAPHY

- Adair, J. H. (1978). An attitude and achievement comparison between kindergarten and first grade children in multi and single grade classes. *Dissertation Abstracts International*, 39, 659A-660A.
- Adams, J. J. (1953). Achievement and social adjustment of pupils in combination class enrolling pupils of more than one grade level. *Journal of Educational Research*, 47, 151-55.
- Ames, C. (1984). Goal structures and motivation. *The Elementary School Journal*, 85(1), 39-52.
- Anderson, R. H. (1966). Theory and practice in the nongraded school. In *Teaching in a world of change*, pp. 45-70. New York: Harcourt, Brace & World.
- Anderson, R. H. (1973). *Opting for openness*. Arlington, VA: National Association of Elementary School Principals.
- Anderson, R. H. (1987). Shaping up the shop: How school organization influences teaching and learning. *Educational Leadership*, 44(5).
- Ascher, C. (1986). *Cooperative Integrated Learning in the Urban Classroom* (Report No. 10). Center for Research on Elementary and Middle School Education. Adapted for ERIC/CUE Digest, No. 30. NY: ERIC Clearinghouse on Urban Education. (ERIC Document Reproduction Service No. ED 273 717)
- Azmitia, M. (1988). *Expertise as a moderator of social influence on children's cognition*. Symposium of the Society for Research in Child Development, April 1987, Baltimore, MD.
- Bandy, H., & Gleadow, N. (1980). *The identification of skills and characteristics needed by country school teachers*. Victoria, B.C.: University of Victoria.
- Barker, B. (1986). Teachers in the nation's surviving one-room schools. *Contemporary Education*, 57(3), 158-150.
- Berliner, D. (1988, January). Peer tutoring: A new look at popular practice. *Instructor*, 14-15.
- Berliner, D., & Casanova, U. (1988, October). Are grades undermining motivation? *Instructor*, 18-19.
- Bernagozzi, T. (1988). The new cooperative learning and one teacher's approach. *Learning*, 16(6), 38-43.
- Bierman, K., & Furman, W. (1981). Effects of role and assignment rationale on attitudes formed during peer tutoring. *Journal of Educational Psychology*, 73, 33-40.
- Bierman, K., & Furman, W. (1981). Effects of role and assignment rationale on attitudes formed during peer tutoring. *Journal of Educational Psychology*, 73, 33-40.
- Bloom, B. S. (1981). *All our children learning: A primer for parents, teachers, and other educators*. New York: McGraw-Hill.
- Bossert, S. T. (1979). *Tasks and social relationships in classrooms*. New York: Cambridge University Press.
- Bossert, S. T., Barnett, B. G., & Filby, N. N. (1984). Grouping and instructional organization. In Good & Marshall, *The social context of instruction* (pp. 39-51). University of Wisconsin.
- Bredenkamp, S. *Accreditation Criteria and Procedures of the National Academy of Early Childhood Programs*. Washington, DC: National Association for the Education of Young Children.
- Brody, G. H., & Stoneman, Z., & MacKinnon, C. E. (1982). Role asymmetries in interaction among school aged children, their younger siblings and their friends. *Child Development*, 53, 1364-1370.

- Brown, A. L., & Palincsar, A. (1986). *Guided cooperative learning and individual knowledge acquisition* (Technical Report No. 372). Champaign, IL: Center for the Study of Reading.
- Brown, A. L., & Reeve, R. A. (1985). *Bandwidths of competence: The role of supportive contexts in learning and development* (Technical Report No. 336). Champaign, IL: Center for the Study of Reading.
- Brown, J. F. (Ed.). (1982). *Curriculum planning for young children*. Washington, DC: National Association for the Education of Young Children.
- Bryan, B. (1986). Rural teachers' experiences: Lessons for today. *The Rural Educator*, 7(3), 1-5.
- Burns, R., & Squires, D. (1987). *Curriculum Organization in Outcome-Based Education*. San Francisco, CA: Far West Laboratory for Educational Research and Development.
- Calkins, L. (1986). *The Art of Teaching Writing*. Portsmouth, NH: Heinemann Publishers.
- Center for Research on Elementary & Middle Schools. (1989, February). Success for all. *CREMS Report*. Baltimore, MD: Author.
- Chace, E. S. (1961). *An analysis of some effects of multiple-grade grouping in an elementary school*. Unpublished doctoral dissertation, University of Tennessee.
- Cohen, D. (1989, December 6). First stirrings of a new trend: Multiage classrooms gain favor. *Education Week*, pp. 1, 13-15.
- Cohen, D. (1990, August 1). Elementary principals issue standards for early-childhood program quality. *Education Week*, p. 14.
- Cohen, D. L. (1990, August 1). N.A.E.Y.C. criticizes school-'readiness' criteria. *Education Week*.
- Cohen, E. (1980). *A multi-ability approach to the integrated classrooms*. (ERIC Document Reproduction Service No. ED 196 989)
- Cohen, E. G. (1984). Talking and working together: Status, interaction and learning. *In the Social Context of Instruction*. University of Wisconsin.
- Cohen, E. G. (1986). *Teacher application pamphlet: Designing change for the classroom*. (ERIC Document Reproduction Service No. ED 211 501)
- Cohen, E. G. (1986). *Designing groupwork*. New York: Teachers College Press.
- Cohen, E., & Anthony, B. (1982). *Expectation states theory and classroom learning*. (ERIC Document Reproduction Service No. ED 214 750)
- Cohen, E., Deel, T., Meyeyr, J., & Scott, R. (1976). *Organization and instruction in elementary schools: First results*. (ERIC Document Reproduction Service No. ED 132 656)
- Cohen, E., & Intili, J. (1982). *Interdependence and management in bilingual classrooms*. Final Report. (ERIC Document Reproduction Service No. ED 229 840)
- Cohen, E., Intili, J., & Robbins, S. (1978). Teachers and reading specialist: Cooperation or isolation? *The Reading Teacher*, 32(3), 291-287.
- Cohen, E., Lockheed, M., & Lohman, M. (1976). The center for interracial cooperation: A field experiment. *Sociology of Education*, 49, 47-58.
- Cohen, P. K., & Kulik, J. A. (December, 1981). Synthesis of research on the effects of tutoring. *Educational Leadership*, 227-229.
- Cohen, P. K., Kulik, J. A., & Kulik, C. (1982). Educational outcomes of tutoring: A meta-analysis of findings. *American Educational Research Journal*, 19(2), 237-248.
- Collins, J., & Calevro, M. (1974). *Mainstreaming special education using a peer tutoring system and minimum objective curriculum for nine eighth grade students*. (ERIC Document Reproduction Service No. ED 102 788)
- Connell, D. R. (1987, July). The first 30 years were the fairest: Notes from the kindergarten and ungraded primary (K-1-2). *Young Children*, 30-38.
- Connell, D. R. (1988, January). The case for an ungraded primary school program. *The Education Digest*, pp. 40-43.
- Conard, B. D. (1988). Cooperative learning and prejudice reduction. *Social Education*, 52(4), 283-86.

## Classroom Instruction Program

---

- Cuban, L. (1989). The "At-Risk" label and the problem of urban school reform. *Phi Delta Kappan*, 70(10), 780-784, 799-801.
- Cushman, K. (1990). The whys and hows of the multi-age primary classroom. *American Educator*, 28-32, 39.
- Day, B., & Hunt, G. H. (1975). Multiage classrooms: Analysis of verbal communication. *Elementary School Journal*, 75, 458-464.
- Devin-Sheehan, L., Feldman, R., & Allen, V. (1976). Research on children tutoring children: A critical review. *Review of Educational Research*, 46(3), 355-386.
- Dillon, J. T. (1988). *Questioning and teaching: A manual of practice*. New York: Teachers College Press.
- DiLorenzo, L. T., & Salter, R. (1965). Co-operative research on nongraded primary. *Elementary School Journal* 65, 269-277.
- Dodendorf, D. M. (1983). A unique rural school environment. *Psychology in the schools*, 20, 99-104.
- Doyle, W. (1986). Classroom organization and management. In *Handbook of Research on Teaching*. MacMillan Publishing Company, pp. 392-431.
- Drier, W. H. (1949). The differential achievement of rural graded and ungraded school pupils. *Journal of Educational Research*, 43, 175-185.
- Durkin, D. (1983). What classroom observations reveal about reading comprehension instruction. In L. M. Gentile, M. L. Kamil, & J. S. Blanchard (Eds.), *Reading Research Revisited*. Columbus, OH: Charles Merrill.
- Dyer, T. A. (1989). *Teaching splits: Strategies for combination classrooms*. Bly, OR: Author.
- Elkind, D. (1987). *Miseducation: Preschoolers at Risk*. New York: Knopf.
- Elkind, D. (1990). *The Hurried Child*. Reading, MA: Addison-Wesley Publishing, Inc.
- Ellison, A. (1972). The myth behind graded content. *Elementary School Journal* 72, 212-221.
- Embry, J. (1981). *Utah's country schools since 1896*. Provo, UT: Brigham Young University. (ERIC Document Reproduction Service No. ED 221 273)
- Emmer, E. T. (1987). Classroom management and discipline. In Virginia-Richardson-Koehler (Ed.) *Educators' handbook*. White Plains, NY: Longman, Inc., pp. 233-258.
- Englemann, S. (1985). *Preventing Failure in the Primary Grades*. Chicago, IL: Science Research Associates.
- Evangelou, D. (1989). *Mixed-age groups in early childhood education*. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.
- Evertson, C., Emmer, T., Clements, B., Sanford, Worsham, & Williams, E. (1981). *Organizing and managing the elementary school classroom*. Austin, TX: The Research and Development Center for Teacher Education.
- Fazzaro, C. J. (1975, Spring). The nongraded junior high school: A place for the young adolescent to grow. *The North Central Association Quarterly*, pp. 380-386.
- Fenton, R. J. (1988, February). *The effects of training in small group instruction*. Paper prepared for the Convention of the Western Speech Communication Association, San Diego, CA. (ERIC Document Reproduction Service No. ED 293 827)
- Fogarty, M. (1979). *Small schools: Organization and teaching methods*. (ERIC Document Reproduction Service No. ED 223 395)
- Fogarty, M. F. (July, 1982). A multiple progress plan for the small school? *Teachers' Forum* (Australia).
- Ford, B. (1977). Multiage grouping in the elementary school and children's affective development: A review of recent research. *The Elementary School Journal*, 78, 149-159.
- Freeman, J. (1984). How I learned to stop worrying and love my combination class. *Instructor*, 93(7), 48-49.
- French, D. C. (1984). Children's knowledge of the social functions of younger, older, and same age peers. *Child Development*, 55, 1429-1433.
- French, D. C., Waas, G. A., & Stright, A. L. (1986). Leadership asymmetries in mixed-age children's groups. *Child Development*, 57, 1277-1283.
- Gardner, Howard. (1985). *Frames of Mind: The theory of multiple intelligences*. New York: Basic Books, Inc.

- Gibbons, M., & Phillips, G. (1978). Helping students through the self-education crisis. *Phi Delta Kappan*, 296-300.
- Glassman, Phyllis. (1988, April). *A study of cooperative learning in mathematics, writing, and reading as implemented in third, fourth, and fifth grade classes: A focus upon achievement, attitudes and self-esteem for males, females, blacks, hispanics, and anglos*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA. (ERIC Document Reproduction Service No. ED 294 926)
- Glatthorn, A. (1987). *Curriculum leadership*. Glenview, IL: Good Year Books.
- Goldman, J. Social participation of preschool children in same versus mixed-age groups. *Child Development*, 52, 644-650.
- Good, T. L., & Brophy, J. E. (1987). *Looking in classrooms*. New York: Harper & Row.
- Goodlad, J. I. (1986). *A place called school: Prospects for the future*. New York: McGraw-Hill.
- Goodlad, J. I., & Anderson, R. H. (1987). *The nongraded elementary school*. New York: Teachers College Press.
- Goodman, K., Goodman, Y., & Hood, W. (1989). *The whole language evaluation book*. Portsmouth, NH: Heinemann Publishers.
- Graziano, W. G. (1978). Standards of fair play in same-age and mixed age groups of children. *Developmental Psychology*, 14(5), 524-530.
- Graziano, W. G., French, D., Brownell, C. A., & Hartup, W. W. (1976). Peer interaction in same-age and mixed-age triads in relation to chronological age and incentive condition. *Child Development*, 47, 707-714.
- Greenman, J. (1988). *Caring spaces, learning places: Children's environments that work*. Redmond, WA: Exchange Press.
- Griswold, C. (1987). *Topic development for multi-level classrooms K-5: Incorporating essential learning skills*. Salem, OR: Oregon Department of Education.
- Guglielmino, L. (1977). Development of the self-directed learning readiness scale. Doctoral dissertation, The University of Georgia.
- Hart, Leslie. (1983). *Human Brain and Human Learning*. New York: Longman, Inc.
- Hartup, W. W. (1976). Cross-age versus same-age interaction: Ethological and cross-cultural perspectives. In V. L. Allen (Ed.), *Children as teachers: Theory and research on tutoring* (pp. 41-54). New York: Academic Press.
- Harvey, S. B. (1974). A comparison of kindergarten children in multigrade and traditional settings on self concept, social-emotional development, readiness development, and achievement. (Doctoral dissertation, Virginia Polytechnic Institute and State University). *University Microfilms International*, 35, 3340-A.
- Heathers, Glen. (1966). School organization: Nongrading, dual progress, and team teaching. In John I. Goodlad (Ed.), *The changing American school* (pp. 110-134). Sixty-fifth Yearbook Part II, National Society for the Study of Education, pp. 110-134. Chicago: University of Chicago Press.
- Hiebert, E. (1980). Peers as reading teachers. *Language Arts*, 57, 877-881.
- Hill, J. C. & Tanveer, S. A. (1981, May). Kids teaching kids: It works. *The Educational Forum*, 425-432.
- Hoffman, A. (1973). A nice warm situation. *Teacher*, 91, 42-45.
- Hollifield, J. et al. (1989). *Children learning in groups: And other trends in elementary and early childhood education*. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.
- Holloway, S. D. (1988). Concepts of ability and effort in Japan and the United States. *Review of Educational Research*, 58(3), 327-343.
- Holt, B. (1977). *Science with young children*. Washington, DC: National Association for the Education of Young Children.
- Horn, J. G. (1983). *Attempting to develop a program response to the needs of those preparing to teach in rural/small schools*. (ERIC Document Reproduction Service No. ED 230-320)

## Classroom Instruction Program

---

- Horn, J. G. (1985). *Recruitment and preparation of quality teachers for rural schools*. (ERIC Document Reproduction Service No. ED 258 785)
- Jeter, J. (Ed.). (1980). *Approaches to individualized education*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Johnson, D., & Johnson, R. (1987). *Learning Together and Alone* (2nd ed.). New York: Prentice Hall.
- Johnson, R. T., & Johnson, D. W. (1983, January). Cooperative learning groups: The power of positive interdependence. *Wingspan*, pp. 11-14. Tampa, FL: Pedamorphosis, Inc.
- Johnson, D. W., Johnson, R., & Scott, L. (1978). The effects of cooperative and individualized instruction on student attitudes and achievement. *Journal of Social Psychology*, 104, 207-216.
- Jones, B. J. (1987). Preservice programs for rural environments: Survey and recommendations. *Research in Rural Education*, 4, 3-8.
- Jones, E. *Teaching adults: An active learning approach*. Washington, DC: National Association for the Education of Young Children.
- Joyce, B., & Weil, M. (1980). *Models of teaching*. Englewood Cliffs, NJ: Prentice Hall, Inc.
- Junell, J. S. (1970). *An analysis of the effects of multigrading on a number of noncognitive variables*. Unpublished doctoral dissertation, University of Washington.
- Kantrowitz, B., & Wingert, P. (1989, April 17). How kids learn. *Newsweek*, pp. 50-56.
- Kaplan, S. N. et al. (1973). *Change for children*. Pacific Palisades, CA: Goodyear Publishing Company, Inc.
- Karweit, N. (1987). Diversity, equity, and classroom processes. In M. T. Hallinan (Ed.), *Social organization of schools: New conceptualization of learning* (pp. 71-102). New York: Plenum Press.
- Katz, L., Evangelou, D., & Hartman, J. (1989). *The case for mixed-age grouping in early childhood programs*. Washington, DC: National Association for the Education of Young Children.
- Kentucky Education Reform Act of 1990, S 25, 26, & 31. (H.B. 940).
- Kerry, T. (1984). Analyzing the cognitive demand made by classroom tasks in mixed-ability classes. In E. C. Wragg, (Ed.), *Classroom teaching skills* (pp. 163-178). New York: Nichols Publishing Company.
- Klausmeier, H. J. (1971). The multi-unit school and individually guided education. *Phi Delta Kappan* 53, 181-184.
- Klein, M. F. (1982). Independent study. In *Encyclopedia of education*. New York: New York Free Press, pp. 835-843.
- Klopf, G. J. (1979). *The principal and staff development in the school*. New York: Bank Street College of Education.
- Knight, E. E. (1938). A study of double grades in New Haven City schools. *Journal of Experimental Education*, 7, 11-18.
- Knowles, M. (1975). *Self-directed learning: A guide for learners and teachers*. Chicago: Follett.
- Kritchevsky, S., Prescott, E., with Walling, L. (1977). *Planning environments for young children: Physical space*. Washington, DC: National Association for the Education of Young Children.
- Lazerson, D. (1980). I must be good if I can teach peer tutoring with aggressive and withdrawn children. *Journal of Learning Disabilities*, 13, 43-48.
- Lewis, J., Jr. (1969). *A contemporary approach to nongraded education*. West New York, NY: Parker.
- Lincoln, R. D. (1981). *The effect of single-grade and multi-grade primary school classroom on reading achievement of children*. Unpublished doctoral dissertation, University of Connecticut.
- Lougee, M. D., & Graziano, W. G. (1986). *Children's relationships with non-age peers*. Unpublished manuscript.
- Ludeke, R. J., & Hartup, W. W. (1983). Teaching behavior of 9 and 11 year-old girls in mixed-age and same-age dyads. *Journal of Educational Psychology*, 75(6), 908-914.

- Lynian, L., & Foyle, H. C. (1988). *Cooperative learning strategies and children*. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.
- MacDonald, P. A., & Wurseter, S. R. (1974). *Multiple grade primary versus segregated first grade: Effects on reading achievement*. Bethesda, MD. (ERIC Document Reproduction Service No. ED 094 336)
- Marshall, H. H., & Weinstein, R. S. (1984). Classroom factors affecting students' self-evaluations: An interactional model. *Review of Educational Research*, 54(3), 301-325.
- Massachusetts Board of Education. (1990). *Structuring schools for student success: A focus on grade retention*. Boston, MA: Author.
- McLoughlin, W. P. (1967). *The nongraded school: A critical assessment*. New York: University of the State of New York, Office of Research and Evaluation, State Education Department.
- McLoughlin, W. P. (1969). *Evaluation of the nongraded primary*. Jamaica, NY: St. Johns University.
- McLoughlin, W. P. (1970). Continuous pupil progress in the nongraded school: Hope or hoax? *Elementary School Journal* 71, 90-96.
- McLoughlin, W. P. (1972). Individualization of instruction v. nongrading. *Phi Delta Kappan*, 53, 378-381.
- Meisels, S. J. (1990). *Developmental screening in early childhood: A guide*. Washington, DC: National Association for the Education of Young Children.
- Milburn, D. (1987). A study of multi-age or family-grouped classrooms. *Phi Delta Kappan*, 62(7), 513-514.
- Miller, B. A. (1988). *Teacher preparation for rural schools*. Portland, OR: Northwest Regional Educational Laboratory.
- Miller, B. A. (1989). *The multigrade classroom: A resource handbook for small, rural schools*. (Contract No. 400-86-0006). Portland, OR: Northwest Regional Educational Laboratory.
- Mississippi State Department of Education. (1990). *The primary guide for instructional planning*. Jackson, MS: Mississippi State Department of Education, Bureau of Instructional Services.
- Mitchell, A. W. (1990). Schools that work for young children. *The American School Board Journal*, 177(11), 25-27, 40.
- Mitchell, A., Seigson, M., & Marx, F. (1989). *Early childhood programs and the public schools: Between promise and practice*. Dover, MA: Auburn House Publishing Company.
- Multnomah Education Service District (1983). *Goal guide: Tri-County Course Development Project*. Portland, OR: Author.
- Murphy, J., Weil, M., & McGrew, T. L. (1986). The basic practice model of instruction. *The Elementary School Journal*, 87(1), 83-96.
- Muse, I., Smith, R., & Barker, B. (1987). *The one teacher school in the 1980s*. Las Cruces, NM: ERIC Clearinghouse on Rural Education and Small Schools.
- Muzi, M. (1980). What is meant by school environment: "Team teaching" and the "nongraded school." *Western European Education*, 12, pp. 5-37.
- Mycock, M. A. (1966). A comparison of vertical grouping and horizontal grouping in the infant school. *British Journal of Educational Psychology*, 37, 133-135.
- National Association for the Education of Young Children. *Early childhood teacher education guidelines: Basic and advanced*. Washington, DC: Author.
- National Association for the Education of Young Children. Compiled by M. Porzel. *Resources for early childhood training: An annotated bibliography*. Washington, DC: Author
- National Association for the Education of Young Children. (1988). NAEYC position statement on developmentally appropriate practice in the primary grades, serving 5- through 8-year-olds. *Young Children*, 43(2), 64-68, 81-84.

## Classroom Instruction Program

---

- National Association of Elementary School Principals. (1990). *Early childhood education and the elementary school principal*. Alexandria, VA: Author.
- Neve, C. D. (1985). Brain-compatible learning succeeds. *Educational Leadership*, 43(2), 83-85.
- Oakes, J. (1985). *Keeping track: How schools structure inequality*. New Haven & London: Yale University Press.
- Oberlander, T. M. (1989, May). A nongraded, multi-aged program that works. *Principal*, 29-30.
- Otto, H. J. (1969). Nongradedness: An elementary school evaluation. *Bureau of Laboratory Schools Monograph*, No. 21. Austin: University of Texas at Austin.
- Palincsar, A., & Brown, A. (1984). Reciprocal teaching of comprehension—fostering and comprehension—monitoring activities. *Cognition and Instruction*, 2, 117-175.
- Peck, J., McCaig, G., & Sapp, M. (1989). *Kindergarten policies: What is best for children?* Washington, DC: National Association for the Education of Young Children.
- Pierce, L. V. (Compiler). (1987). Cooperative learning: Integrating language and content-area instruction. *Teacher Resource Guide Series* (No. 2). Wheaton, MD: National Clearinghouse for Bilingual Education. (ERIC Document Reproduction Service No. ED 291 245)
- Pierce, M. (1982). *Partner learning: Concept and rationale*. Paper presented at the International Convention of the Council for Exceptional Children Meeting, Houston.
- Pietila, A. (Ed.). (1978). *Small schools and combined grades in Helsinki, Finland*. (ERIC Document Reproduction Service No. ED 161 564)
- Powell, D. R. (1989). *Families and early childhood programs*. Washington, DC: National Association for the Education of Young Children.
- Pratt, C., & Treacy, K. (1986). *A study of student grouping practices in early childhood classes in western Australia government primary schools*. (Cooperative Research Series No. 9). Nedlands, Australia: Education Department of Western Australia.
- Pratt, D. (1983). *Age segregation in schools*. Paper presented at annual meeting of the American Education Research Association, Montreal, Quebec, Canada. (ERIC Document Reproduction Service No. ED 231 038)
- Pratt, D. (1986). On the merits of multigrade classrooms. *Research in Rural Education*, 3, 111-115.
- Price, K., & Dequine, M. (1982). Peer tutoring: It builds skills and self-concept. *Academic Therapy*, 17, 365-371.
- Price, R., & others. (1986). *Levelized Educational Advancement Program*. Report.
- Professional Development Center Network. *The organization and management of split-grade classrooms: A report of principals' responses*. Bowling Green, KY: Western Kentucky University.
- Reed, F. (1976). *Peer tutoring programs for the academically deficient student in higher education*. (ERIC Document Reproduction Service No. ED 113 981)
- Roopnarine, J. L., & Johnson, J. E. (1984). Socialization in mixed-age experimental program. *Developmental Psychology*, 20(5), 828-832.
- Rosenbaum, J. E. (1980). Social implications of educational grouping. In David Berliner (Ed.), *Review of Research in Education*. American Educational Research Association, pp. 361-401.
- Rosenholtz, S. (1979). The classroom equalizer. *Teacher*, 97(1), 78-79.
- Rosenholtz, S. J., & Cohen, E. (1983). Back to basics and the desegregated school. *Elementary School Journal*, 83(5), 515-527.
- Rosenholtz, S. J., & Simpson, C. (1984a). The formation of ability conceptions: Developmental trend or social construction? *Review of Educational Research*, 54(1), 31-63.
- Rosenholtz, S., & Simpson, C. (1984b). Classroom organization and student stratification. *The Elementary School Journal*, 85(1), 21-37.
- Rule, G. (1983). *Effects of multigrade grouping on elementary student achievement in reading and mathematics* (Doctoral dissertation, North Arizona University). Dissertation Information Service No. 8315672.

- Sarason, S. B. (1982). *The culture of the school and the problem of change*. Second edition. Boston, MA: Allyn and Bacon.
- Schniedewind, N., & Davidson, E. (1987) *Cooperative Learning, Cooperative Lives*. Dubuque, IA: Wm. C. Brown Publishers.
- School Improvement Program. (1986). *Onward to excellence training manual for workshop 4: Prescription development*. Portland, OR: Northwest Regional Educational Laboratory.
- Schrankler, W. J. (1976). Family grouping and affective domain. *Elementary School Journal*, 76, 432-439.
- Schroeder, R., & Nott, R. E. (1974). Multiage grouping—it works! *Catalyst for Change*, 3, 15-18.
- Sharan, S. (1980). Cooperative learning in small groups: Recent methods and effects on achievement, attitudes, and ethnic relations. *Review of Educational Research*, 50, 588-597.
- Sharpley, A., & Sharpley, C. (1981). Peer tutoring: A review of the literature. *Collect Original Resources in Education (CORE)*, 5, 3, & C11, (fiche 7 & 8). 35 South Street, Hopkinton, MA 01748.
- Sherman, L. W. (1984). Social distance perceptions of elementary school children in age-heterogeneous and homogeneous classroom settings. *Perceptual and Motor Skills*, 58, 395-409.
- Slavin, R. E. (1980). Cooperative learning. *Review of Educational Research*, 50(2), 315-342.
- Slavin, R. E. (1983). *Cooperative Learning*. New York: Longman.
- Slavin, R. E. (1986a). *Ability grouping and student achievement in elementary schools: A best evidence synthesis (Report No. 1)*. Baltimore, MD: The Johns Hopkins University, Center for Research on Elementary and Middle Schools.
- Slavin, R. E. (1986b). *Using student team learning (3rd ed.)*. Baltimore, MD: Johns Hopkins University.
- Slavin, R. E. (1987). Cooperative learning: Where behavioral and humanistic approaches to classroom motivation meet. *Elementary School Journal*, 88(1), 29-37.
- Slavin, R. E. (1987). Developmental and motivational perspectives on cooperative learning: A reconciliation. *Child Development*, 58, 1161-1167.
- Slavin, R. E. (1988). *Student team learning: An overview and practical guide (2nd ed.)*. Urbana, IL. (ERIC Document Reproduction Service No. ED 295 910)
- Slavin, R. E. (1988). Synthesis of research on grouping in elementary and secondary schools. *Educational Leadership*, 46(1), 67-77.
- Slavin, R. E., & Madden, N. A. (1989). What works for students at risk: A research synthesis. *Educational Leadership*, 46, 4-13.
- Soloman, D., Watson, M. Delucchi, K., Schaps, E., & Battistich, V. (1988). Enhancing children's prosocial behavior in the classroom. *American Educational Research Journal*, 25(4), 527-554.
- Stevens, R. J., & others. (1987). *Cooperative reading and composition: Two field experiments*. (ERIC Document Reproduction Service No. ED 291 075)
- Thomas, J., Strage, A., & Curley, R. (1988). Improving students' self-directed learning: Issues and guidelines. *The Elementary School Journal*, 88(3), 313-326.
- Topping, K. (1988). *The peer tutoring handbook*. Cambridge, MA: Brookline Books.
- Tudge, J., & Caruso, D. (1988). *Cooperative problem-solving in the classroom*. Urbana, IL: ERIC Clearinghouse on Elementary and Early Childhood Education.
- Tyler, L. E. (1985). A proposal for reorganizing American public education. *Viewpoints*.
- Uttero, D. A. (1988). Activating comprehension through cooperative learning. *Reading Teacher*, 41(4), 390-95.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Edited by M. Cole, V. John-Steiner, S. Scribner, and E. Souberman. Cambridge, MA: Harvard University Press.
- Walberg, H. (May, 1984). Improving the productivity of America's schools. *Educational Leadership*, 19-27.

## Classroom Instruction Program

---

- Walker, N. W. (1984, Fall). Elementary-school grade retention: Avoiding abuses through systematic decision-making. *Journal of Research and Development in Education*, 18, pp. 1-6.
- Walker, R. (1990, February 21). Mississippi to mandate mixed-age classrooms. *Education Week*, p. 17.
- Way, J. W. (1969). *The effects of multiage grouping on achievement and self-concept*. Cortland: State University of New York, Cortland College, Institute for Experimentation in Teacher Education.
- Webb, N. M. (1982). Group composition, group interaction, and achievement in cooperative small groups. *Journal of Educational Psychology*, 74(4), 475-484.
- Weinstein, R. S., & Marshall, H. H. (1984). *Ecology of students' achievement expectations*. Final report. (ERIC Document Reproduction Service No. ED 257 820)
- Wellington Department of Education. (1977). *The rural school*. Wellington, New Zealand: E. C. Keating, Government Printer.
- Westinghouse Learning Corporation. (1973). *The PLAN<sup>®</sup> teacher's manual*. USA: Author.
- Whiting, B. B. (1983). The genesis of prosocial behavior. In D. Bridgeman (Ed.), *The nature of prosocial development*. New York: Academic Press.
- Widaman, K. F., & Kagan, S. (1987). Cooperativeness and Achievement: Interaction of student cooperativeness with cooperative versus competitive classroom organization. *Journal of School Psychology*, 25(4), 355-65.
- Wiersma, W. (1986). *Individually guided education: An alternative form of schooling*. Paper presented at the 67th annual meeting of the American Educational Research Association, San Francisco, CA.
- Wigginton, E. (1985). *Sometimes a shining moment*. Garden City: Doubleday.
- Wragg, E. C. (1984). Teaching skills. In E. C. Wragg (Ed.), *Classroom teaching skills*, pp. 1-20. New York: Nichols Publishing Company.
- Yarrow, A. (1979). Mathematics. In Fogarty, M. (Ed.). *Small schools: Organization and teaching methods* (pp. 41-59). (ERIC Document Reproduction Service No. ED 223 395)
- Yerry, M. J., & Henderson, E. (1964). *Effects of interage grouping on achievement and behavior: End of year report* (Experimental Program No. A27-63). Bethpage, NY: Plainedge Public Schools. (ERIC Document Reproduction Service No. ED 037 802)

## RESOURCES

Each case study in this publication includes a section on instructional methods and materials used in that school's ungraded primary program. Many of the same instructional tools are commonly used across programs. To assist readers in identifying, understanding, locating, and implementing these and other developmentally appropriate practices, the authors have included one- to two-page descriptions of recommended materials. The list includes programs ex-

tracted from the National Diffusion Network's publication *Educational Programs That Work*, programs that have been produced by publishers or school districts, and one that was developed jointly by the Kentucky Science and Technology Council and the Kentucky Department of Education. The authors anticipate that the program descriptions on the following pages will provide additional information and assistance to implementers of ungraded primary programs.

**Books And Beyond.** A program that improves the reading skills of students by motivating them to read more and watch less TV.



**Audience** Approved by JDRP for students in grades K-8.

**Description** *Books And Beyond* is a program designed to increase students' recreational reading and decrease indiscriminate TV viewing. Through success oriented reading incentive strategies, this highly motivating program produces positive long-lasting behavioral changes in students with regard to recreational reading. Success for each individual student is assured because the program is self-paced and allows for individual differences. Through parent education and student self-monitoring techniques, project participants become more aware of their TV viewing habits and learn to become more discriminate TV viewers.

Participants in the *Books And Beyond* Program demonstrated significant gains in reading achievement when compared with a control group study as measured by the CTBS Reading Test.

**Requirements** A one-half day training session and a *Books And Beyond* manual are necessary for successful adoption. The manual includes graphic designs for bulletin boards, reproducible forms for student and teacher materials, parent newsletters, instructions for implementation, student awards, ideas for adaptations and helpful hints. The training topics include: project history, description of need, recreational reading strategies, cost, evaluation, activities to develop discriminate TV viewing and stimulate recreational reading.

**Services** Awareness materials are available at no cost. An 18-minute awareness video tape available for \$10.00. A 5-minute training video is available for \$20.00. Visitors are welcome at the project site by appointment. Project staff is available for awareness meetings (cost to be negotiated). Full awareness and evaluation packet available—\$2.00.

**Contact** Ellie Topolovac, Project Director, Solana Beach School District, 309 North Rios Street, Solana Beach, CA 92075; (619) 755-6319; Ann Collins, Coordinator (619) 755-6319.

BOX IT or BAG IT Mathematics

Sample Lessons

FRACTIONS/DECIMALS

What kind of fractions can we write about our apples? ( $1/2$  are red,  $3/3$  are edible, etc.)

SORTING/GRAPHING

Sort apples brought in from home by children.

Graph apple types (with stems & without, size, color, weight, etc.)

ESTIMATION/PLACE VALUE COUNTING

How many apple jacks in a ziplock bag? Estimate and count by tens and ones.

PATTERNING

Place apples in a pattern according to an attribute (i.e. red, red, green, red, red, green)

MONEY

Have your children locate apple products in the newspaper. Work in cooperative groups to set out coins from a feely box to match the amount needed to purchase each product. What other coin combinations could be used?

PROBABILITY

If 5 red apples and 1 yellow apple were placed in a bag, which color is more likely to be pulled out first? Why? What would happen if repeated twenty times?

STORY PROBLEMS

Create a BIG BOOK of apple story problems written by your children.

MEASURING

Place an apple in a ziplock bag. Weigh it daily and record observations. (Consider making a timeline with adding machine tape.)

EXTENDED NUMBERS PATTERN

Cut an apple against the grain to reveal a 5 point pattern. Create a class chart of cut apples (either, drawn or stamped in tempera paint) to show how to count by 5's. Explore multiplication and division by 5's.

GEOMETRY/SPATIAL PROBLEM SOLVING

Partners play "copy cat" to draw an apple tree. Each addition made by Partner A is reflected by Partner B resulting in a symmetrical apple tree (use of symmetry).

RECEIVED

OCT 03 1990

OFFICE OF EDUCATION FOR EXCEPTIONAL CHILDREN  
STATE OF OHIO  
COLUMBUS, OHIO

SUCCESS in Reading and Writing

Sample Lessons



Children volunteer word phrases containing the letter clusters tr and pp to be recorded on class chart. Words are examined. Compound words and two syllable words are noted. Words related to apples are noted. Children copy a few favorite words and attempt to spell three of them independently.

WRITING

Children eat a slice of dried apple and write a descriptive paragraph about it following the steps of the writing process.

RESEARCH

Children work in groups of four to locate apple recipes in cookbooks. The recipe name, title, and page number are listed on paper. Information gathered is shared with other groups.

RECREATIONAL READING

Children read independently from a variety of apple-related literature (fiction, non-fiction, poetry, etc.) Teacher conferences individually.

LITERATURE



Review day one chart. Children create new chart of word phrases containing the letter clusters le and op. Words are examined. Descriptive, two-syllable, and words related to apples are noted. Children copy a few favorite words and attempt to spell three of them independently.

Children write a story following the steps of the writing process. Topic: "When I Woke Up ... My Head Was An Apple!"

Children work in groups of four to locate words related to apples in the newspaper. Words are written on index cards and saved for a classification lesson on day 3.

Children read independently from a variety of apple-related literature (fiction, non-fiction, poetry, etc.) Teacher conferences individually.

# SUCCESS FOR EVERY CHILD ... EVERY DAY

## BOX IT OR BAG IT MATHEMATICS

with

## SUCCESS IN READING AND WRITING

BOX IT OR BAG IT MATHEMATICS is based upon the following beliefs:

- Young children learn best when they are actively involved in hands-on experiences with a variety of materials.
- Understanding takes time; children need many experiences in a wide variety of contexts to acquire knowledge.
- Children cannot be expected to notice the same things or come to the same levels of understanding at the same time; individual differences should be anticipated and respected.
- Language is central to learning. Children who can tell, draw or act out story problems to illustrate an operation or explain to others how they solved a problem are closer to understanding a concept than children who labor silently over worksheets as a daily routine.

BOX IT OR BAG IT MATHEMATICS is a set of resources which are:

- geared for developmentally appropriate K-3 classrooms.
- developed to create rich, activity-centered, language-based classroom environments.
- created to allow a structure as well as freedom of choice for the teacher.
- designed with TEACHER RESOURCE GUIDES and concept packets to provide the teacher with monthly units, teacher directed lessons, and independent practice activities that help children extend and consolidate basic skills.
- in compliance with new NCTM Standards for Mathematics, conducive to curriculum integration.
- highly compatible with SUCCESS IN READING AND WRITING.

SUCCESS IN READING AND WRITING is based upon the following beliefs:

- Language arts should correlate, not separate reading and writing.
- Children learn best through an integrated curriculum based upon the whole language philosophy.
- Language arts instruction should follow a process which allows each child to move at a comfortable, developmentally appropriate pace.
- Children should be freed from the confinements of prescribed textbooks.
- Every child experiences success every day -- success for all -- thus creating a future culture of success.
- The teacher is the facilitator, setting the stage for learning.
- All forms of literature (including environmental literature) play an important role in learning.
- The gap between school and home can be bridged with these inexpensive, everyday materials.
- Children can enjoy learning, and teachers can recover the joy of teaching.

SUCCESS IN READING AND WRITING is a set of teacher resources which are:

- less expensive than basals, workbooks and textbooks.
- wide in variety. Printed materials common to life (such as newspapers, magazines, library books, cookbooks, telephone books, dictionaries, and encyclopedias) provide the source of learning.
- founded on the belief that children need to read and write using the daily language they speak.
- conducive to curriculum integration without the need for ability grouping in the non-graded primary school.
- highly compatible with BOX IT OR BAG IT MATHEMATICS.

50

50

BEST COPY AVAILABLE



# Early Prevention of School Failure

114 North Second Street  
Peotone, Illinois 60468

A Nationally Validated Developer-  
Demonstrator Model Project. Dissemi-  
nated Nationally and Internationally.

Luella Werner, National Program Director

Curriculum Services  
114 North Second Street  
Peotone, Illinois 60468

Phone: (312) 258-3478

## THE EARLY PREVENTION OF SCHOOL FAILURE

- Is validated as an innovative, cost effective, statistically significant, exportable, Nationally Validated Program.
- Is translated into several languages and has been validated as a Developmental Program, Chapter I and Migrant Program.
- Has been replicated by adopter districts in 49 states and 5 foreign countries.
- Helps SCHOOL DISTRICTS make more effective use of resource personnel.
- Shows TEACHERS how to identify learning styles and needs of all children as they enter school and provides in-service on effective teaching strategies.
- Helps CHILDREN master the pre-academic skills related to reading success.
- Helps PARENTS understand the importance of early identification of learning needs and effective ways to help their children.

### Program Evaluation

There are annual reviews, as well as several ongoing longitudinal studies, that provide evidence that the program works. New schools that become involved in the program must agree to submit pre-post test data the first year they field test the ESPF Program.

This Nationally Validated Program has received numerous recognition and approvals since the first national validation in 1974. Several of the more recent recognitions include: National Recertification, 1984; Recognition by U.S. Office of Education and by numerous states, 1984-87 as an effective "program to address the 'at risk' students". Awards include: Educational Pacesetter Award presented by the President's National Advisory Council on Supplementary Centers and Services, 1973; United States Office of Education for Outstanding Education Contribution to ESEA, Title I/NDN, 1978; Recognition as an Outstanding National Migrant Program, 1986.

Most Unique Element of the Program

The nationally validated program continues to produce documentation that it works for children in all types of settings and where English may be a child's second language. The program is committed to maintaining high expectations for the achievement of all students regardless of family background or social class characteristics.

Program Funding

The EPSF Program is funded by the U.S. Office of Education for dissemination to other schools through the National Diffusion Network. In addition, selected states have identified that the EPSF Nationally Validated Program qualifies for funding through Chapter II, Chapter I, Bilingual, Special Education, Gifted, "At Risk" and Migrant monies. The California Legislature has funded the program since 1985 at over \$400,000.00 yearly.

**ADOPTER BUDGET**

EPSF Computer Software--One per Corporation ----- \$ 165.00

Number of Staff to be Trained: ----- x \$11.00 = \$ \_\_\_\_\_

- Screening and Conferencing Manual (\$5.50)
- Implementing a Developmental Program (\$5.50)

Number of Screening Teams: ----- x 275.77 = \$ \_\_\_\_\_

- Preschool Language Kits (2 @ \$ 85.00)
- Screening Manual ( 4.00)
- Motor Activity Scale (\$5.00)
- Peabody Picture Vocabulary Test--PPVT Form L (\$42.50)
- Developmental Test of Visual-Motor Integration Manual & Test Booklets (\$54.27)

Number of Teachers using program: ----- x \$93.00 = \$ \_\_\_\_\_

- Management Guides--Set of five (\$35.00)
- Building Readiness Through Perceptual Skills (\$8.00)
- Portable Resource Kit Guide (\$7.00)
- Recipes for Homemade Teaching Materials (\$7.00)
- Parent Activity Cards (\$36.00)

All items are purchased from the EPSF Office in Peotone, Illinois with the exception of the Developmental Test of Visual-Motor Integration (VMI) which is available from Modern Curriculum Press, 13900 Prospect Road, Cleveland, OH 44136 and the Peabody Picture Vocabulary Test (PPVT) which is available from American Guidance Service, Inc., Publishers Bldg. Circle Pines, MN 55014. Also, the VMI and the PPVT may already be available somewhere within your school.

There are NO consumable materials to purchase each year.



**Hands-On Elementary Science. An instructional program intended to provide elementary students with hands-on instruction emphasizing the processes of science.**



**Audience** Approved by JDRP for elementary teachers and students, grades 1-5.

**Description** The *Hands-On Elementary Science* provides elementary students with instruction that emphasizes the development of science processes as an approach to problem solving. In fostering positive teacher attitudes toward teaching science, it increased both the amount of science taught and the proportion of instruction dedicated to the processes of science. The curriculum employs a set of higher order processes at each grade level consisting of four basic units. The units consist of lessons concerning a unifying topic. The topic is based upon the skills identified for that grade level. First grade students work primarily on observation in the four units of seeds, patterns and "magnetism." Second grade emphasizes classification skills through the study of insects, sink or float, and measurement. In the third grade, experimentation skills are developed by units on flight, measuring and plants. Fourth grade focuses on analysis in units on bio-communities, electricity and chemistry. The fifth grade curriculum emphasizes application and consists of units on earth science, soil analysis and small animals. Since this is not a text program, all lessons are based upon hands-on activities supported and defined by curriculum guides at each grade level. They provide a sequence of basic lessons and incorporate all necessary materials to support the program lessons. A unique feature of the program is an optional package of materials students may request to work on over the summer.

**Requirements** The *Hands-On Elementary Science* program is transportable to other sites where a commitment exists for hands-on science instruction. Adoption of this program requires at least a half year planning and preparation followed by a staff development program. Teacher preparation consists of two days training prior to the implementation of the program followed by at least two follow-up workshops to resolve problems of implementation. Materials required include both a curriculum guide and a kit of materials of the appropriate grade level for each teacher and copies of the voluntary summer program for dissemination to interested students.

**Costs** The cost of the program in the installation year is approximately \$27 per student (assuming 25 students per class in a school of 800 students and training 20 teachers at a grade level). Subsequent year costs to maintain the program through the replacement of consumable supplies equals \$1.50 per student. Teacher guides are available for \$15 each and kits are available from a national vendor at costs ranging from \$322 to \$532 depending upon the grade level.

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

**Contact** Dean A. Wood; Dissemination Center For Hands-On Elementary Science; Hood College, Frederick, MD 21701 (301) 663-3131, ext. 205 & 350.

Developmental Funding: Federal, State and Local

JDRP No. 86-19 (9/23/86)

## THE HIGH/SCOPE K-3 CURRICULUM

### The Basic Approach

The High/Scope K-3 Curriculum, an innovative, open-framework educational program, seeks to provide broad, realistic educational experiences for children. The curriculum is geared to the child's current stage of development to promote the spontaneous and constructive processes of learning and to broaden the child's emerging intellectual and social skills. Teachers in open-framework classrooms encourage active, generative, problem-focused learning, rather than the passive rote learning that can result from a preponderance of direct instruction in the classroom. Children become actively engaged in the learning process, exploring materials of interest in a self-directed manner, initiating activities, and taking responsibility for their outcomes.

However, unlike the child-centered classroom approach, where learning initiatives come only from the children, the High/Scope K-3 Curriculum, through a **plan-do-review**<sup>TM</sup> sequence and through content-focused instructional workshops, encourages both students and teachers to generate learning initiatives. In following the plan-do-review sequence, children choose, organize, and evaluate learning activities, under the observant eyes of a teacher trained to recognize a child's current level of development. Inasmuch as planning is a crucial component in problem-solving, the plan-do-review sequence prepares children to make effective responses to challenging situations, with the principal aim of helping them acquire a deeper and broader understanding of the world in which they live.

Teachers maintain an active role in the High/Scope K-3 Curriculum by arranging the room to promote the children's active learning, by making plans and reviewing activities with children, by interacting with and carefully observing individual children, and by leading small- and large-group workshops and other learning experiences. **The teacher's fundamental role is to assist the child's natural process of inquiry.**

Because the young child's preferred interaction with the world is through direct sensory experiences, **manipulation** and representation of direct experience become the principal means by which children form concepts and ideas. To support this **active learning process**, the High/Scope K-3 Curriculum requires a learning environment rich in opportunities for children to work with a variety of manipulative materials, to formulate practical problems, and to make thoughtful efforts to solve them. To facilitate this active learning process, the High/Scope K-3 Curriculum provides developmentally sequenced guidelines, called **key experiences**<sup>TM</sup>. Teachers include these key experiences in their daily planning and teaching to foster learning activities that are appropriate to each child's developmental level.

Further, the High/Scope K-3 Curriculum views learning as a **social experience** that involves the entire class. Thus, the curriculum approach encourages both students and teachers to engage in cooperative learning experiences.

### Psychological Foundations

The High/Scope K-3 Curriculum applies the insights of child development studies to the problem of understanding and supporting the educational process of children in early elementary grades. The "developmental" view of children's emerging cognitive processes has had a number of proponents in modern times, the most notable of whom is the Swiss psychologist and philosopher Jean Piaget. The High/Scope K-3 Curriculum incorporates the general Piagetian idea that education should be in accord with the child's particular state of development as well as his or her spontaneous processes of learning.

Perhaps more important, the High/Scope K-3 Curriculum embodies the Deweyan-Piagetian view that genuine progress in learning and development

## Highlights of the High/Scope K-3 Curriculum

### Foundations for Active Learning

- Understanding young children's learning styles
- Establishing an appropriate learning environment

### The High/Scope Curriculum Approach

- Using a whole language approach to help children develop emerging listening, speaking, writing, and reading skills
- Using manipulative and mental mathematics to help children gain an understanding of number, geometry and space, measurement, problem solving, and symbolic representations
- Helping children explore science concepts through activities in the broad areas of life and environment, structure and form, energy and change
- Integrating social studies, social skill development, music and movement, and the arts into the High/Scope K-3 Curriculum

### The High/Scope Plan-Do-Review Process

- Encouraging and supporting children's planning and decision making
- Helping children follow through on their plans and complete their projects
- Helping children review and reflect on what they've done

### Assessing Children's progress

- Using classroom observations, High/Scope's key experience checklists, student portfolios, and the High/Scope Progress Report to assess each child's learning and development

will not occur unless children are actively involved in the process. In support of this view, the High/Scope K-3 Curriculum encourages children's active attempts, in light of their own choices and interests, to construct knowledge and extract meaning from their world by working with, manipulating, and transforming materials and ideas. Inspired primarily by the child development theories of Piaget in the areas of logic and science, and by other researchers in emergent literacy, the fundamental premise of the High/Scope K-3 Curriculum is that children are active learners who learn best when they make their own choices and decisions, engage in problem solving, and express their own thoughts, feelings, and conclusions. In broader terms, the curriculum supports the notion that education should facilitate and extend the child's spontaneous attempts to make sense of the world.

## Specific Objectives

Both parents and teachers who participate in the High/Scope K-3 Curriculum seek to develop in children a broad range of skills, including the problem-solving, interpersonal, and communication skills that are essential for successful living in a rapidly changing society. The curriculum encourages student initiative by providing children with materials, equipment, and time to pursue activities they choose. At the same time, it provides teachers with a framework for guiding children's independent activities toward sequenced learning goals.

The teacher plays a key role in instructional activities by selecting appropriate, developmentally sequenced materials and by encouraging children to adopt an active, problem-solving approach to learning. In working with the children in this manner, the teacher first focuses on concrete experiences and then moves on to more abstract ones, relying throughout on each child's own language, experiences, and interests in formulating ideas. Based on observations of individual students, the teacher adjusts the teaching strategies as necessary to encourage children's active problem solving and to initiate or extend action-oriented learning processes.

This teacher-student interaction—teachers helping students achieve developmentally sequenced learning goals while also encouraging them to set many of their own goals—distinguishes the High/Scope K-3 Curriculum from direct-instruction and child-centered curricula. Teachers who implement the High/Scope Curriculum must be well informed about the growth and development of children, must be able to recognize individual differences in their students, and must be willing to use instructional methods, materials, and assessment techniques that support child-initiated learning.

## Summary

High/Scope K-3 Curriculum requires that teachers plan instructional activities on a daily basis and encourages students to initiate many of their own learning experiences, to interact cooperatively and productively with one another as well as with teachers, and to plan individual study projects. Students use their prior experiences and interests to initiate and construct their learning experiences, and teachers actively support and guide them in these efforts. The High/Scope K-3 Curriculum approach has three basic components:

- **Active participation of children** in choosing, organizing, and evaluating learning activities, which are undertaken with careful teacher observation and guidance in a learning environment replete with a rich variety of materials located in various classroom learning centers
- **Regular daily planning by teachers** in accord with a developmentally based curriculum model and careful child observations
- **Developmentally sequenced goals, materials, and assessment techniques** for children based on the High/Scope key experiences □

## K-3 Curriculum and training materials available from High/Scope Press

### Print Materials

- High/Scope K-3 Curriculum Series: *Language and Literacy*
- High/Scope K-3 Curriculum Series: *Mathematics*
- High/Scope K-3 Curriculum Series: *Science*
- High/Scope Progress Report & Student portfolio

### Videotapes

- *Active Learning*
- *Classroom Environment*
- *Language and Literacy*
- *Mathematics*

### 1990-91 Demonstration Sites

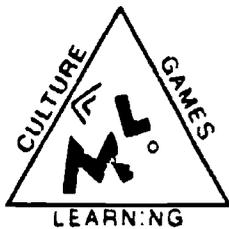
**South Side Elementary School,**  
Crestview, Florida  
Contact: Patricia Boyles  
904/833-3180

**Amanda Ely Elementary School,**  
Leflore County Schools  
Greenwood, MS  
Contact: Ann Adams  
601/453-8566

**Fairfield Court Elementary School,**  
Richmond Public Schools  
Richmond, VA  
Contact: Diane Watkins  
804/780-7800

### For Training and Cost Information

Contact Clay Shouse  
Office of Development and Services  
High/Scope Educational Research Foundation  
600 North River Street  
Ypsilanti, Michigan 48198  
313/485-2000  
FAX 313/485-0704 □



# INTERDEPENDENT LEARNING MODEL

This model uses instructional games and pupil self-management methods with children to teach them traditional academic skills, positive socio-cultural attitudes and behaviors.

**Audience:** Approved by the JDRP for grades K-3. The model may also be implemented in grades 4-6.

**Description:** The Interdependent Learning Model (ILM) is a comprehensive, structured approach to full-day instruction for children in preschool through the sixth grade. The model's developmental goals for children are to teach them cooperative, independent and interdependent behaviors; problem-solving skills, and positive attitudes toward learning. The model's teaching-learning methods are based on the principles of cognitive-developmental, group process, and programmed instructional theories. Instructional games, the primary vehicles for teaching and learning in ILM classrooms, are used to implement these principles. The games --- called Transactional Instructional Games --- are designed to further the acquisition of problem-solving skills, promote language development, and help children to become self-motivated, self-reliant learners. Teaching materials, based on children's cultures and environments, include Table Games, suitable for instruction in every subject; Conversation Games, which reinforce verbal fluency, creative expression and logical thinking; and Street/Folk/Musical Games, which develop physical dexterity and coordination, social and academic skills. The Integrated Skills Method (ISM), which emphasizes teacher responsiveness to children's interests and learning styles, is used to coordinate small group reading instruction.

The ILM uses a classroom management system that includes room arrangement, grouping, classroom rules, team teaching; pupil self-scheduling, recordkeeping, and evaluation. Model classrooms, arranged by interest areas, provide a variety of learning activities. Generally, children work in small groups, independently of direct adult participation. Mixed skill-level grouping is encouraged so that children can learn from their peers. The children schedule the majority of their own work, and record and evaluate the results of their efforts. Teachers and Instructional Assistants share the responsibility for facilitating the children's progress toward the developmental goals.

**Requirements:** The Program may be implemented in a single class, on a grade level, or in preschool kindergarten, and grades 1-6. Training in the model's methods may be arranged for one or more teacher trainers, for groups of teachers or supervisors. Three days are required to train new staff to adopt either the mathematics or the reading program. The cost of a mathematics adoption includes six manuals and classroom materials. The cost of a reading program adoption will vary according to the ages and grades of the children involved. The Integrated Skills Method reading program is an integral component of the educational model. The reading program has been employed with dramatic results in regular elementary school classes and in small special education classes. Educators who wish to adopt the entire model or the reading program should expect to implement the methods for at least one full year. That is sufficient time to produce significant positive results. ILM Adoption Projects are also expected to establish a formal plan to evaluate the effects of the adoption on the children.

**Services:** Awareness materials are available at no cost. Visitors are welcome by appointment for guided classroom visits at the ILM Atlanta, GA and District 18, New York Demonstration Projects. Training for administrators, supervisors, teacher trainers, teachers, and support staff is available at the adopter site or at the Demonstration Project. Implementation observation and follow-up services are available to adopters at nominal costs.

**For More Information:** Ms. Colleen McGorman  
Interdependent Learning Model  
Fordham University at Lincoln Center, Room 1003  
113 West 60th Street, New York, NY 10023  
(212) 841-5280/82

Extracted from *Education Programs That Work: National Diffusion Network, Edition 15*. Longmont, CO: Sopris West, Incorporated, Page F-9, 1989.

(See Reverse Side For Adoption Requirements And Costs.)

## ADOPTION REQUIREMENTS: GENERAL

Generally, the administration and staffs of school districts and schools that adopt the Interdependent Learning Model (ILM) are expected to cooperate with the Fordham staff to ensure that the model is fully implemented within a reasonable amount of time. Working together at all levels to assure rapid, high quality implementation is both educationally and economically efficient and sensible.

Detailed planning, involving all those who will participate in an adoption, is an essential prerequisite to establishing and implementing the ILM. School districts that adopt the model expect its methods to have an affirmative effect on the children, that is, to impact positively on their sense of self, their social, communication, academic and related skills. School district officials should know that to produce the desired effect the following needs and issues will have to be explored before an adoption begins:

- key school district administrators, school principals and coordinators will be required to participate in some training.
- some school district teaching and evaluation requirements may have to be waived or coordinated with the goals and philosophy of the model.
- An ILM project must have a coordinator and at least one teacher trainer.
- ILM projects have at least half-time paraprofessionals in all classrooms.
- Classroom teachers and paraprofessionals are trained together and are expected to share responsibilities and work as teams.
- Five-half days of training for all participating adoption project staff before a school year begins is a requirement; five additional half-days of training during the first four months of a school year are also required.
- The school district may have to modify some classroom environments so that they conform to the methods, philosophy and goals of the model.

## ADOPTION REQUIREMENTS AND COSTS

ADOPTING UNIT	START-UP MATERIALS	START-UP MATERIALS COSTS	TRAINING FEES
Per Project: *	Complete sets of ILM training materials for a Project Director, one or more Principals, Trainers, and other Supervisory Staff	\$68.00 per set	\$250.00/day **
Per Classroom: (25 Children)	<i>Adoption Manual</i> <i>Classroom Management Manual</i>	\$38.00	
	"Games Children Play . . ." <i>Catalog: For Mathematics, Science, Social Studies, Geography, Reading, Etc.</i>	\$25.00	
	<i>Conversation Games Manuals:</i> <i>Volume I - People Times</i> <i>Volume II - Experiences</i> <i>Volume III - Solutions</i>	\$47.00	
	<i>Street Folk Musical Games Manuals and Cassettes:</i> <i>Volume I - Song-Games</i> <i>Volume I - Cassette</i> <i>Volume II - Chants and Handclapping Games</i> <i>Volume II - Cassette</i> <i>Volume III - Street Games</i>	\$48.00	
	Nonconsumable: <i>one Specific Skills Series set</i> (Barnell Loft, Ltd.) <i>One Basal Reader per student.</i> <i>Enriched Library Area.</i>	\$200.00	\$1000.00 ***
	Consumable: <i>Linguistic Pattern Series Workbooks</i>	\$325.00 - \$550.00	
	<i>Mastery Tests</i>	\$37.50	

- \* A Project may range in size from one classroom to several grades in several schools.
- \*\* Adopters are responsible for the *per diem* fee, plus the Trainer's travel expenses, i.e., transportation, room and board.
- \*\*\* This amount includes the Trainer *per diem* fee for two days, training materials, and Implementation Guides for ten (10) to twenty (20) Trainees. The Adopter is also responsible for the Trainer's travel expenses, i.e., transportation, room and board.

## ADOPTION COST EXAMPLES

Educational decision-makers who believe the Interdependent Learning Model's (ILM) methods of instruction will improve their students' academic performance may select a mathematics adoption, a reading adoption, or an adoption of the entire model. Since the ILM was validated 12 years ago, a few schools have adopted its approach to teach mathematics; many more adopted the Integrated Skills Method, the model's reading program. However, because its U.S. Department of Education validation, and its continuing positive effects on children are based on the implementation of the whole model, most schools and school systems have chosen to re-create entire ILM learning environments --- at least in their kindergarten through third grade classrooms.

The costs of the three adoption options, of course, are different. Assume that a school needs to change its method of instruction in order to enhance the children's learning and performance in kindergarten and grades 1, 2, and 3; that there are two classes at each level, for a total of eight; that there are 200 children enrolled in the classes. The school's principal, a trainer, and the eight teachers will have to be trained, and all of the classes will need materials. Excluding the ILM trainer's travel expenses, which the Adopter pays, the start-up cost of a mathematics adoption would be approximately \$2200.00 (\$11.00 per student); a reading adoption would cost approximately \$4800.00 (\$24.00 per student); and an adoption of the entire model would cost approximately \$7000.00 (\$35.00 per student).

The ILM staff is prepared to provide adoption training, materials and other services to school districts anywhere in the United States.

For more information, please contact:

Ms. Colleen McGorman  
Interdependent Learning Model  
Fordham University at Lincoln Center  
113 West 60th Street, Room 1003  
New York, NY 10023  
(212) 841-5280/82

# THE KENTUCKY ACTIVITY-CENTERED ELEMENTARY SCIENCE INITIATIVE

(Ky ACES)

A Partnership Project Sponsored by  
The Kentucky Science and Technology Council, Inc.  
and  
The Kentucky Department of Education

## PROGRAM DESCRIPTION

The Kentucky Activity-Centered Elementary Science Initiative (Ky ACES) is an instructional improvement project co-sponsored by the Kentucky Science and Technology Council and the Kentucky Department of Education. The purpose of the project is to identify a modular set of activities and investigations for elementary science, supported by a complete kit of science materials and implemented through a comprehensive staff development program. Because of its modular approach, the ACES materials can be integrated into an existing elementary curriculum, or can stand alone as the basic science program for a school.

ACES utilizes an activity-centered, problem solving approach which emphasizes development of science process skills within three basic science disciplines: life science, earth science, and physical science. The goals are consistent with the six goals for Kentucky students established by the Council on School Performance Standards and written into the Kentucky Educational Reform Act of 1990. The concepts and skills are aligned with the National Assessment of Educational Progress (NAEP) content strands and are consistent with recommendations of national elementary science reports. The integration of science with other content areas and with science/technology/society issues are also emphasized. A performance assessment will culminate each year's work, providing individual student data as well as a measure of group achievement.

The activities and materials are configured so they can be incorporated into a local district's existing science program, if desired. Content and process objectives, as well as recommended instructional materials and strategies, are clearly identified for each module. The program utilizes a "multiple resources" approach, identifying the best activities from numerous sources, and encouraging the use of computers, textbooks, and other media to support and extend the concepts developed in the activities. The emphasis on direct, hands-on student experiences allows teachers more flexibility in meeting the learning styles of individual students.

For more information about the Ky ACES Initiative, contact:

Michael N. Howard  
Director of Education Programs  
Kentucky Science and Technology Council, Inc.  
P.O. Box 1049  
Lexington, Kentucky 40588  
(606) 233-3502

or  
Dr. Stephen A. Henderson  
Associate Superintendent for Instruction  
Kentucky Department of Education  
1724 Capital Plaza Tower  
Frankfort, Kentucky 40601  
(502) 564-3010



A joint project of the Kentucky Science and Technology Council, Inc., and the Kentucky Department of Education

**PROGRAM FEATURES**

The strengths of the ACES program can be summarized as follows:

- \* based on goals that are consistent with the Kentucky Educational Reform Act.
- \* addresses content and skill objectives included in the National Assessment of Educational Progress (NAEP).
- \* identifies the concepts (or "big ideas") accepted as important for elementary science instruction.
- \* maintains an activity-centered focus, with direct student experience as the nucleus of the instructional process.
- \* consists of a series of articulated modules for grades K-6, allowing flexibility and future expansion.
- \* stresses the use of high interest, "teachable" units.
- \* emphasizes development and refinement of science process skills and thinking skills appropriate to each grade level.
- \* uses a variety of instructional strategies, and identifies additional resources to enhance and extend the concepts developed through the activities.
- \* utilizes performance assessments to evaluate student and class progress.
- \* integrates development of science skills and concepts with skills and concepts of other subject areas, applying them to students' everyday lives.
- \* packages all materials needed for the activities into a self-contained classroom kit.
- \* implemented through a comprehensive staff development program involving both the instructional staff and the building principal.

**PROGRAM GOALS**

After completing the ACES program, students will:

- \* Use critical thinking and information finding skills to analyze and solve problems.
- \* Exhibit curiosity about and appreciation for the world around them and the role that science plays in helping to understand it.
- \* Demonstrate an understanding of some of the important concepts of science, as well as connections between those concepts and their everyday experiences.
- \* Work individually and in groups to deal responsibly with issues and problems.
- \* Develop and demonstrate science process skills, such as observing, communicating, classifying, ordering, measuring, collecting data, graphing, inferring, predicting, identifying variables, forming hypotheses, and designing experiments.
- \* Use oral, written, and mathematical forms to communicate experiences with scientific phenomena.
- \* Explain connections between scientific ideas, technological applications, and the way our society functions.
- \* Maintain an interest in science, possibly leading to a science or technology related career.

**Keyboarding, Reading, and Spelling (KRS) (formerly Basic Literacy Through Microcomputers). 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 through grade six. Supporting data also were gathered from students in grades 7-8.

**Description** *Keyboarding, Reading, Spelling* is an instructional program that enhances reading achievement and keyboard skills. The program uses a phonetic approach to reading, with the microcomputer 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 micro-computer 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.

In a 1986 study significant growth ( $p < .01$ ) was demonstrated in reading and language skills as measured by the *Metropolitan Achievement Test*, and in computer usage and typing, for the KRS experimental students in grades one through six compared to a control group.

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.

The basic program which includes four disks costs \$180.00. Five sets of the four disks cost \$465.00.

**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 Apple IIe, IIc, or IIgs computers available. It is desired that data from pre- and post-tests are sent to the Developer-Demonstrator. KRS is also available on 3½" and 5¼" disks for IBM PC and compatible computers. Trainees can use either Apples or IBM PC compatible computers.

**Services** Awareness materials are available at no cost. Visitors are welcome by appointment at project site and additional sites in other states. Project staff is 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. At initial awareness sessions, time is provided without cost, and expenses are negotiated. Training and awareness can take place the same day.

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

MEDIA

Product  
Code

**KEYBOARDING, READING, SPELLING (KRS) PRICELIST**  
formerly known as  
**Basic Literacy Through Microcomputers (BLTM)**  
for Apple IIe, IIc, or IIgs Computers  
and IBM PC and compatible computers

M19	KRS Program, full set with four disks (Apple Computers)	\$180.00
M195	KRS Program, full set with four disks (IBM PC and compatible — 5¼" disks)	180.00
M193	KRS Program, full set with four disks (IBM PC and compatible — 3½" disks)	195.00
M20	KRS Program, full set with four disks plus one set of 4 backup disks (Apple)	270.00
M205	KRS Program, full set with four disks plus one set of 4 backup disks (IBM — 5¼" disks)	270.00
M203	KRS Program, full set with four disks plus one set of 4 backup disks (IBM — 3½" disks)	300.00
M21	Lab Pack (Apple) Includes Teacher's Guide and other printed materials plus 5 sets of the four disks	468.00
M215	Lab Pack (IBM — 5¼" disks)	468.00
M213	Lab Pack (IBM — 3½" disks)	543.00
M22	Additional Teacher's Guide (Apple)	10.00
M221	Additional Teacher's Guide (IBM)	10.00
M23	Additional Practice Reading, Speed, Accuracy (Apple or IBM)	10.00
M24	Demonstration Packet (Apple)	40.00
M25	KRS flashcards (337 flashcards for 10 units)	35.00
M26	KRS keyboard charts (includes other charts such as proper posture and hand position)	10.95
M27	KRS Awareness Videotape Rental (14 minutes)	20.00
M28	KRS Awareness Videotape Sale (14 minutes)	20.00
M29	KRS Awareness Videotape Rental (30 minutes)	30.00
M30	KRS Awareness Videotape Sale (30 minutes)	75.00
P453	KRS Brochure	1.00
IA16	Blue Ribbon Awards for passing Mastery Tests - "I Passed a Mastery Test -- Special Super Learner"	.30/ea
M31	Apple II Plus program is still available at \$198	
M32	Backup Disks (set of four) for Apple II Plus program are \$60.	

**TEACHER TEXTS REQUIRED TO TEACH NEW WORDS, LETTER NAMES, SOUNDS  
AND ELICIT RESPONSES:**

T1	Teaching Letter Names and Sounds	7.95
T2	Teaching New Words Through Phonics	8.95
T3	Teaching New Words Through the Word Structure Methods	10.95
T7	Eliciting Responses and Teaching Proofing Through Dictation	7.95

# KIDS KITS

## Kids Interest Discovery Studies KITS

A Multimedia Approach to Gifted and Talented, Special Education, Regular Classroom Instruction, and Library Media Center Activities.

### *The Program*

KIDS KITS, organized sets of multimedia materials, are designed to elicit active student involvement in learning by motivating students of all abilities in grades one through eight to ask and answer questions on topics of interest to them. Each kit includes high interest materials which vary in terms of difficulty and learning style. Kits can be used in the library media center, in the classroom, or in special program areas. Students prepare a product or presentation to share their learning in a variety of ways.

### *KIDS KITS Promotes*

- Thinking and questioning skills
- Independent, self-directed learning
- Research and study skills
- Awareness and use of learning resources
- Enthusiasm for research activities

### *Media for Kit Development*

- books
- filmstrips
- tapes
- models
- slides
- computer software
- study prints
- real objects
- transparencies
- student projects

### *Evaluation Results*

- Schools with higher levels of kit usage demonstrate:
  - greater specificity, complexity, and multiplicity in their descriptions of the purpose of their learning activities
  - more awareness and use of learning resources
  - greater number of applications of the information gained
  - greater enthusiasm and involvement in their learning activities

All of these results were statistically significant at the .001 level.

### *Materials and Services Available*

- Program Manual
- Discovery Cards
- Activity Cards
- Kit Development Guidelines
- Staff Training
- Evaluation Guidelines
- Technical Assistance
- Follow-up Contacts
- Overview videotape

### *Implementation Requirements*

- Staff member(s) to serve as program coordinator/team
- Development of 6-10 kits – cost depends on materials already available
- Appropriate audiovisual equipment

### *For More Information*

Jo Ann C. Petersen  
Project Director  
The KIDS KITS Project  
13200 W. 32nd Avenue  
Golden, CO 80401  
(303) 279-7418  
Or your state facilitator

BARBIE HAYNES  
STATE FACILITATOR  
NATIONAL DIFFUSION NETWORK  
CAPITAL PLAZA TOWER  
FRANKFORT, KY 40601  
(502) 564-6720

Fran Catlett, Librarian  
Goshen Elementary School  
P. O. Box 116  
Goshen, Kentucky 40026

# KITE

Certified Trainer: Cheryl S. Smith

KITE (Kindergarten Integrated Thematic Experiences) is a success-oriented program which integrates the entire kindergarten day through developmentally appropriate thematic units emphasizing language, cognitive, physical and social-emotional development. KITE incorporates the key elements of two previously validated kindergarten programs - *Alphaphonics* and *Astra's Magic Math*.



**AUDIENCE** Approved by PEP for kindergarten in both regular education and educationally disadvantaged, at risk and Chapter I students. In addition to traditional classroom settings, this program has been used for migrant, first grade, preschool, special education, bilingual education (Spanish) and ESL students in primary grades.

**DESCRIPTION** KITE increases reading and math achievement by promoting the acquisition of basic reading and problem-solving math skills while working positively to develop children's self-images.

This program effectively combines child-initiated and teacher directed activities within a planned environment. This multi-sensory program utilizes oral language, manipulation, and writing activities.

The varied KITE experiences integrate art, music, literature, social studies, science, drama, and physical education experiences that appropriately offer a planned balance of child-initiated and teacher directed activities.

The program utilizes discovery, mystery, and memory aids with a game-like presentation of materials and positive teacher feedback. There is positive recognition of and a belief in the ability of each child to succeed. Literature, large poems, and math charts are used for whole language development. The program includes interactive large and small group activities and a minimal use of worksheets. Interest is stimulated by the use of imaginary outer space characters -- Astro and Astra. Through developmentally appropriate activities children use concrete objects, have meaningful interactions with materials, adults, and each other; and experience structured and informal oral language. These interactions enable children to assimilate abstract concepts.

The KITE Theme Pack provides essential program motivation, contains lesson materials for the day and stimulates curiosity in the children. The children believe Astro and Astra are the source of homework and badges awarded to them. Astro and Astra display feelings of happiness, sadness, fear, excitement, and frustration, thus enabling the children to identify with them. The program promotes a thematic, developmentally appropriate, integrated curriculum.

**Interpretation of PEP submittal results** The data presented in this document provide strong testimony to the continued effectiveness of KITE. Data from 605 KITE students drawn from 25 different classrooms across several years of administration consistently show gains in the area of 30 NCEs or 50%ile points over the normative expectation. Economically disadvantaged students who enter kindergarten with an academic disadvantage, leave kindergarten to embark on their scholastic years with mathematics and reading abilities above the national average.

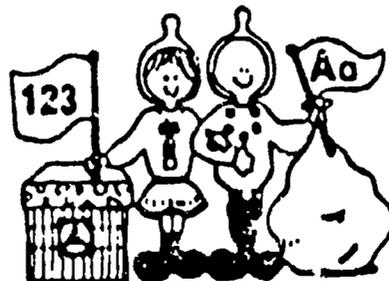
Start up costs for basic non-consumable materials - KITE are \$370 per classroom. Additional non-consumable supplementary materials which enhance the program are available. Contact project for detailed list. Suitable as basic or supplemental program.

This program is also available in a D'Nealian version, \$16 extra.

**REQUIREMENTS** The program can be implemented in a typical classroom using regular teachers. A one-day training session is necessary for adoption. The entire KITE program may be implemented. The reading or math components may be implemented separately.

**SERVICES** Awareness materials, grant writing packet, correlation to your state requirements, and awareness video tapes are available at no cost - contact your State Facilitator or KITE Project. A three-hour training tape (VCR) is also available for rent or purchase. Visitors are welcome by appointment at project site and additional demonstration sites in home state and out of state. Project staff is available to attend out-of-state awareness meetings (costs to be negotiated). Training is conducted at project site (adopters pay only their own costs). Implementation and follow-up services are available to adopters (costs to be negotiated). A two-day Certified Trainer workshop is held in the San Francisco area end of June.

**CONTACT** Jeanne Stout Burke, Director; KITE; Sunshine Gardens School,  
1200 Miller Avenue, South San Francisco, CA 94080, 415/588-8082.



CERTIFIED TRAINER: CHERYL S. SMITH

Route 14, Box 592-A  
Jonesborough, TN. 37659

PHONE: (615) 753-8005 (home)  
(615) 753-4511 (work)

## Miquon Math & More

Student Workbooks  
Teacher's Guides  
Cuisenaire Rods

Miquon Math Materials  
Key Curriculum Press  
2512 Martin Luther King Jr. Way  
P.O. Box 2304 Berkeley, CA  
94702 1-800-338-7638

Chip Trading Activity Books  
Teacher's Guides  
Chip Trading Sets  
\* For demonstrating addition,  
subtraction, multiplication,  
division, and place value.

Cuisenaire Company of America  
12 Church Street Box D  
New Rochelle, N.Y. 10802  
1-800-237-3142

The Fraction Factory Program  
The Fraction Factory Pieces  
The Fraction Factory Games &  
Puzzles Binder  
\* Colorful plastic pieces are  
used in conjunction with  
worksheets, puzzles and games.  
Students identify fraction  
pieces, create equivalent fractions,  
add, subtract, multiply, and  
divide fractions.

Creative Publications  
Order Department  
5040 West 11th Street  
Oak Lawn, IL 60453  
1-800-624-0822

### Mathematics Their Way Workjobs

\* An activity centered  
mathematics program that  
emphasizes concept development  
through use of manipulatives.  
Includes, patterning, place  
value, sorting and  
classifying, counting, graphing,  
and much more... A MUST for  
every Primary classroom.

Addison-Wesley Publishing Co.  
2725 Sand Hill Road  
Menlo Park, CA 94025

Cuisenaire Rods  
Student Activity Cards for  
Cuisenaire Rods  
Unifix Cubes  
Rod Trains (Cuisenaire)  
Pattern Block Tiles  
Geoboards & Abacuses  
Attribute Blocks  
\* Catalog contains a variety of  
manipulatives, too numerous to  
list here.

Cuisenaire Company of America  
(see above listing)

---

MIQUON MATH & MORE (K-3) Miquon Math Materials form a developmen-  
tally appropriate instructional program. Emphasis on Cuisenaire  
Rods and individualized, nongraded instruction. Incorporates a  
variety of other manipulatives which include: Trading Chips,  
abacuses, Fraction Factory, Unifix Cubes, balances, containers for  
liquid measurement, tools for linear measurement, etc..

## MIQUON MATH & MORE

Maureen B. Mc Avinue  
Chance School, Inc.  
4200 Lime Kiln Lane  
Louisville, Ky. 40222  
(502) 425-6904

### Miquon Math Materials

The Miquon Math Materials were developed by Lore Ramussen at the Miquon School in Pennsylvania. Six student workbooks containing over 650 lab sheets for first to third grade students cover the following topics:

- Counting
- Odd-Even
- Addition
- Subtraction
- Multiplication
- Fractions
- Division
- Equalities & Inequalities
- Place Value
- Number Lines & Functions
- Factoring
- Squaring
- Simultaneous Equations
- Graphing Equations
- Geometric Recognition
- Length, Area & Volume
- Series & Progressions
- Grid & Arrow Games
- Mapping
- Clock Arithmetic
- Sets
- Word Problems

Miquon Math introduces all four arithmetic operations and work with fractions in the first year. By third year students are graphing algebraic equations. Miquon Math gives children the basic tools early so that they can be independent problem solvers from the first day of school. Miquon Math is based on the use of manipulatives and is designed to individualize learning. Children are encouraged to explore a variety of learning styles and often develop unconventional ways of arriving at correct results through their own investigations.

Cuisenaire Rods form the foundation of the Miquon Math Program. These wooden rods, one square centimeter in cross-section, increase by one-centimeter steps from one to ten centimeters in length, and are of different colors according to their lengths. Yet with them can be expressed an almost unlimited range of mathematical relationships. These rods guide the students from the concrete to the abstract by bridging the early experience gained through play and observation with the stage of systematic work.

M. Georges Cuisenaire, a Belgian school teacher, invented the Cuisenaire colored rods in the early 1930's. Since that time these remarkable tools have been used in private schools, public schools and schools for the blind throughout the world. They have been used effectively in programs for gifted students as well as programs for the mentally and emotionally handicapped.

These rods, when used with the Miquon Math Materials, afford the Primary teacher an individualized method of instruction well suited to the non-graded classroom setting. Other benefits include:

- Seeing & doing lead to conviction and retention.
- Students check their own results & correct their mistakes.
- Visual, muscular and tactile images are created.
- Creativity and problem solving are enhanced.
- Students work individually and at their own pace.
- Activities are developmentally appropriate.

What follows is a listing and brief summaries of other developmentally appropriate materials, and ordering information.

## WHAT IS PROJECT CLIMB?

Project CLIMB is a teacher developed program focused on integrating reading, writing and mathematics across the curriculum. It is a coordinated non-fragmented curriculum overlay that:

- Identifies reading, mathematics, and study skills for grades K-12 in the form of skills arrays.
- Provides a process for applying and synthesizing these skills in a meaningful way for the students involved.
- Provides an evaluation system in the form of survey diagnostic tests and criterion referenced tests for each skill identified.
- Provides a simplified record keeping system that monitors continuous student progress grades K-12.
- Provides for alternative teaching strategies within the classroom using a diagnostic-prescriptive approach.
- Provides strategies in content reading and study skills for all disciplines.
- Provides a writing component linking reading/writing/thinking skills to all content areas.
- Provides a design for coordination of classroom instruction with supportive services - Chapter 1, special education, remediation specialists, etc., to address those skills.

Our goal is to improve student performance in reading/writing and mathematics and to coordinate instructional services in the delivery of skills instruction. We offer a well planned and carefully structured teacher training segment for schools adopting the program. Our materials (skills arrays, criterion referenced tests, diagnostic survey tests, record keeping, and bank of activities) are not available without our teacher training.

The CLIMB program is flexible and is used with any basal series, whole language and/or literature based approach. For each adopting school we correlate CLIMB to the materials and instructional approaches, state and district objectives so each school has a coordinated system to meet their particular needs.

Our instructional approach in reading is a blend of diagnosis and whole language so that skills are not taught in isolation. We connect the reading process to writing. In math, we emphasize the use of concretes, moving gradually to the symbolic, and stress problem solving.

Materials development is part of our teacher training component. Teachers are trained to use existing materials or to develop their own to match the CLIMB skills arrays. They create small groups for instruction. Thus the materials are directed at the level of each small group. Teachers are trained to share their materials through the use of CLIMB-developed Instructional Materials Catalogs. During training teachers receive a bank of activities and strategies to use with their instructional materials.

The CLIMB management system integrates and coordinates personnel, materials and services within the classroom and the school. The project meets the needs for total school improvement and specifically basic and advanced skills improvement on a school-wide basis,

Project CLIMB can be an easily adapted and cost-effective way to meet the needs of schools because it does not impose an add-on curriculum to a school. It provides a structure and a continuum to a curriculum and materials that a school is currently using. In this way, teachers can be efficient managers of instructional planning.

Project CLIMB has been adopted in over 3000 schools. Training has been conducted for regular classroom instruction, special education, Chapter 1, ESL, migrant programs, adult education and compensatory education programs for public and non-public schools. CLIMB has been identified in the research as an effective program for students at risk of school failure. The program can be adopted in either reading/writing and/or mathematics at any or all grade levels.



## I. Introduction

STAMM presents an elementary mathematics program delivered through a variety of concrete manipulatives, practice, problem solving and enrichment strategies. STAMM provides students with varied opportunities to develop underlying concepts before skills are practiced, and can be used in a variety of teaching styles (large group, cooperative grouping, departmentalization, individualized or labs) with any basal textbook.

This program is delivered through a management system which is organized around carefully designed learner outcomes. Student growth is monitored through pre and post assessment strategies. Specifically, the program is delivered through the following STAMM materials:

- Teacher Manual (TM) - a resource book of activity oriented ideas to assist the teacher in delivering the learner outcomes.
- Student Workbook - a set of student materials from which a teacher selects activities as needed to enhance development and practice of the learner outcomes by the students after they have received initial instruction.
- Student Test Booklet - criterion referenced assessment to provide information about the student's progress on the learner outcomes utilizing alternative testing strategies.

Similar products have been developed having the basic STAMM components for middle and secondary students. Program and materials can service regular as well as Chapter I, special education, and gifted/talented students.

## II. Statement of Goals and Objectives for Using STAMM

### Goals:

A teacher, school or district is seeking materials and means to further align math instruction with the National Council of Teachers of Mathematics (NCTM) "Standards" in order to provide teachers with a) increased math knowledge, b) upgraded teaching skills, c) new math curriculum, d) specific learner outcomes, and/or e) additional approaches for math instruction.

### Objectives:

- a carefully devised approach to assure instructional delivery of a broad mathematics curriculum including core competencies and key skills;
- a mathematics program that will improve student learning as proven by increased standardized test scores;
- a systematic format that will enhance articulation of student progress in all ability and grade levels;
- a mathematics program aligned with philosophy, instruction, methodology and content proposed by the NCTM in its 1989 publication "Standards for School Mathematics";
- a means to increase awareness and understanding by staff about what is taught in math at varying grade levels;
- a way to inservice staff on teaching math since many of them do not have a strong background in mathematics;
- a mathematics program providing teachers with means to increase concrete manipulative usage and problem solving strategies;
- a well coordinated mathematics curriculum fitting with many textbook series.

### III. Description of Planned Activities

- When the decision is made to implement STAMM, the adopters pledge an effort to teach and monitor the STAMM learner outcomes.
- All teachers who will be implementing STAMM plus their immediate supervisor attend a two-day training workshop; this workshop enables the staff to maximize the effectiveness of the program materials and includes 'nuts and bolts' processes.
- Continuing weekly or monthly meetings are recommended for local staff members who are using STAMM to discuss progress and address questions.
- An on-site trainer is to be identified by the school for conducting training of new staff in subsequent years.

### IV. Suggested Evaluation Plans

- Student proficiency on learner outcomes to be analyzed to determine the flow of students through the STAMM program.
- Standardized tests to be reviewed for the year prior to implementation of the STAMM program to establish a baseline.
- Standardized test data to be collected each succeeding year to assess student progress; data will be collected for two or three years from the training date to examine long-term impact on pupil achievement.

### V. Projected Budget

- Materials and Supplies - beginning expenses average approximately \$6.00 per student. Continuation costs will be approximately \$4.00 per student per year if the student workbook is used. Adopters may wish to allocate additional funds for manipulatives as needed at their particular site. Note: per the guidelines of U. S. Department of Education, teacher and student materials are sold only in conjunction with staff attending a two-day training workshop since guided usage of the materials is as significant in improving learning as the materials themselves.
- Purchased Services - Project STAMM personnel are available for on-site training and follow-up; expenses for the adopter will include actual expenses for travel, lodging, meals plus a training fee. Every effort is made to minimize these expenses.
- Funds for purchase of materials and services can often be obtained through Chapter I, Eisenhower Math-Science or block grant sources.

### VI. Preview Materials Available without Charge

- Fifteen (15) minute videotape overviews program and program materials
- Listing of Learner Outcomes for each grade
- Listing of Learner Outcomes across grades by math topic

### VII. Conclusion

STAMM has been recognized by the U. S. Department of Education as an exemplary mathematics program and is part of National Diffusion Network of OERI (Office of Education Research and Improvement). STAMM was developed by a local school district in Colorado and is shared with other schools per the guidelines of a non-profit agency.

Per federal guidelines, please note, "The contents of this were reproduced or are being distributed under a grant from the U.S. Department of Education. However, these contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government."

# P.S. MET



## Problem Solving with Manipulatives for Elementary Teachers

**P.S. MET**

**PROBLEM SOLVING WITH  
MANIPULATIVES FOR ELEMENTARY  
TEACHERS**

**Developed by:**

**Sheila Vice  
K-12 Mathematics Consultant  
Kentucky Department of Education  
1828 Capital Plaza Tower  
Frankfort, KY 40601**

**and**

**Judy Tabor  
Mathematics Teacher  
Franklin County High School  
1100 E. Main Street  
Frankfort, KY 40601  
(formerly Mathematics Consultant, Ky. Dept. of Ed.)**

**1989**

**Trainers:**

**Nancy Allen, Johanna Strange, Judy Tabor, Sheila Vice**

**Teams from 40 schools in Kentucky have been trained  
as trainers. For information, call Sheila Vice at  
(502) 564-2672.**

# NOTES FOR USING THIS PROGRAM

## P.S.MET: PROBLEM SOLVING WITH MANIPULATIVES FOR ELEMENTARY TEACHERS

This program consists of activities related to the following subsections of the NCTM Curriculum and Evaluation Standards:

Numeration and Computation

Geometry and Measurement

Fractions and Decimals

Probability and Statistics

Patterns, Relationships and Algebra

This manipulative program is intended for teacher training, with the activities being performed by teachers as they will in turn expect students to perform. The general format of each section of the program includes the general teacher objective, the general expected student outcome, the title of the activity, materials needed, and the procedure/s for accomplishing the activity. In at least one activity in each section, reference in the title is made to one of the strands woven throughout the NCTM Standards--Communication as Mathematics, Mathematical Connections, Reasoning as Mathematics, and Technology. All activities are expected to be performed in a cooperative learning group of at least 2 participants/students.

The procedures are written in three types of forms:

Plain text gives directions for doing the activity directly to the participants/students;

*Italics text* gives suggestions of questions for trainer/teacher to ask participants/students to point out important ideas or to solicit additional solutions;

(Text in parentheses) gives directions or ideas to the trainer/teacher.

N<sup>o</sup> grade levels are designated for activities;  
they can be adapted for many grades.

It is recommended that teachers observe one another teaching with manipulatives so that they may better internalize the concepts and strategies for teaching the lessons. An observation checklist is provided on the back of this page which outlines the key components from the program. After observations, teachers should discuss and share their ideas, so as to make changes or improvements in the lessons.

**P.S. MET**  
**Observation Checklist**

Observer: \_\_\_\_\_ Date: \_\_\_\_\_

During your observation, the teacher:

- \_\_\_\_\_ 1. developed a concept using manipulatives  
\_\_\_\_\_
- \_\_\_\_\_ 2. allowed students to experiment, discover, or explore mathematical concepts  
\_\_\_\_\_
- \_\_\_\_\_ 3. allowed students to work cooperatively in small groups or pairs  
\_\_\_\_\_
- \_\_\_\_\_ 4. demonstrated a problem-solving strategy (modeling, drawing a diagram, making a table or graph, writing a number sentence, guessing and checking, restating, working backwards, finding a pattern or simplifying the problem)  
\_\_\_\_\_
- \_\_\_\_\_ 5. posed a real-life problem and allowed students to solve  
\_\_\_\_\_
- \_\_\_\_\_ 6. encouraged students to estimate answers before computing  
\_\_\_\_\_
- \_\_\_\_\_ 7. allowed students to communicate mathematics (let students justify their answers and explain methods of solution, both orally and written )  
\_\_\_\_\_
- \_\_\_\_\_ 8. made a connection between mathematical topics or between math and other subjects  
\_\_\_\_\_
- \_\_\_\_\_ 9. involved students in a reasoning activity  
\_\_\_\_\_
- \_\_\_\_\_ 10. involved students in an activity from the last workshop or from same topic  
\_\_\_\_\_
- \_\_\_\_\_ 11. allowed students to use calculators or computers to facilitate problem solving  
\_\_\_\_\_ If so, which? \_\_\_\_\_
- \_\_\_\_\_ 12. allowed students to generate their own problems or extend problems  
\_\_\_\_\_

## **Reading Recovery. A one-to-one intervention program for the least able readers in first grade classrooms.**

**Audience** The least able readers in first grade as determined by a comprehensive battery of individually administered diagnostic instruments.

**Description** Reading Recovery reduces reading failure through early intervention, and helps children become independent readers. The goal is to bring the children to the average of their class through individually tailored 30-minute lessons. Reading Recovery supplements the regular reading program in a classroom. The specially trained teacher and child work together daily for one half hour, in which the child is involved in reading and writing experiences. Techniques include the reading of many "little" books to build confidence, daily writing, the re-reading of favorite books, and learning to hear sounds in words by writing simple stories. Reading Recovery focuses on providing opportunities for children to make their own links between reading and writing—and discover meaning. The integrated reading and writing lessons are tailored to build on what the child already knows while strengthening a self-improvement system which leads to continued growth. The elements of the lesson are the same for each child, although the content differs with each child.

First grade children improved their reading and writing ability after an average of 16.4 weeks, with 86% of the children reaching average levels of achievement for their class in reading. Growth in reading and writing is evidenced by statistically significant scores relative to an equivalent control group using a variety of writing and reading test elements. In addition, follow-up studies indicate that children released from the program continue to make progress and read with the average of their class through the second and third grades without additional help.

**Requirements** For effective implementation, school systems should release one or two experienced individuals to attend a one year teacher-leader training program at The Ohio State University in Columbus. They will learn procedures for implementation, evaluation, and administration of the Reading Recovery program.

The teacher-leaders, upon returning to their home site, train other teachers in the Reading Recovery model. Release time for trained teacher-leaders and teachers in training (including arrangements for a weekly 2 1/2-hour class after school hours) is required.

**Services** In addition to negotiable costs for release time for teachers, installation of the one-way glass at the training site costs about \$2,000 and books and materials cost about \$500.

Awareness materials are available at no cost. Project staff is available for awareness presentations and training with all costs negotiable.

**Contact** Dr. Gay Su Pinnell, Dr. Carol A. Lyons, or Dr. Diane E. DeFord, Martha L. King Center for Language and Literacy, The Ohio State University, 200 Ramseyer Hall, 29 West Woodruff Avenue, Columbus, OH 43210; (614) 292-0711.

Developmental Funding: State of Ohio, Columbus Public Schools, National Council of Teachers of English, and private foundations.

## SUCCESS UNDERSTANDING MATHEMATICS (SUM)

The SUM program began in 1972 when math teachers in Des Moines, Iowa began developing books containing strategies used in the Title I (now Chapter I) supplementary program. They based their methods on Piaget's research on the way children learn mathematics.

These strategy books were used to train new teachers, to keep the program consistent from school to school, and to provide a way of sharing the ideas that worked, says Kathleen Bullington, director of the SUM program. "But by 1980, we had statistics on the progress our students were making and results were good...so good that we knew we had found methods that could be used by any teacher in any classroom," says Bullington. So they sent the data to the Joint Dissemination Review Panel. SUM was declared exemplary in 1981, and in 1985 was accepted by the NDN for dissemination.

Research supporting the SUM approach is cited in the U.S. Department of Education booklet, What Works. It says (1) young children learn mathematics more effectively when they use physical objects in their lessons, (2) physical objects are important because they help the student visualize abstract concepts, (3) the type of object is not important - students do as well with inexpensive homemade materials as with costly commercial versions, and (4) student achievement rises when teachers ask questions that require students to apply, analyze, synthesize, and evaluate information - not simply recall facts.

During SUM program training, teachers learn how to structure math lessons using concrete objects. They learn why children need concrete objects, what objects to use, when to use them, and which children benefit most from manipulating objects.

The trainers use roleplaying to teach instructional methods. The teachers become the students as SUM trainers give them kits of objects and ask questions. The teachers answer the questions by moving the objects. Then the trainers show them how to record the process on paper. To practice, the teachers pair up and take turns questioning each other. Initial training is usually scheduled for 2 days, but can be done in 1 day if necessary, with additional material taught at the follow-up sessions.

Teachers learn techniques for teaching numeration, addition/subtraction, multiplication/division, fractions, problem solving, and decimals, and how to prevent error patterns which sometimes develop when children memorize rules for math processes they don't understand. SUM strategy books, NDEO FAKs, and testing and record keeping materials are provided to adopting schools.

Schools in Nebraska, Oregon, Alaska, Iowa, Indiana, New Mexico, Alabama, Kentucky, Illinois, Louisiana, Idaho, Kansas, and Florida have adopted the SUM program. Teachers in these schools are enthusiastic about the program. They have written: "Thank you for coming. People like you make me feel good about my profession"; "Math is something I've never understood. Thank you for this opportunity to learn a technique with promise"; and "You're opening up the world of mathematics to children."

For more information on SUM, contact Barbie Haynes, National Diffusion Network Coordinator, Kentucky Department of Education, Frankfort, Kentucky 40601, (502) 564-6720

# PROGRAM

## SUCCESS UNDERSTANDING MATHEMATICS (SUM) MAKING MATH MEANINGFUL AND MOTIVATIONAL FOR CHILDREN

### GOAL

To increase the level of mathematics achievement of children in grades 2-6.

### PHILOSOPHY

Philosophy of the program is based on Piaget's research which showed that elementary school children can develop logical thinking by manipulating concrete materials.

Students' achievement in mathematics is improved when:

- Teacher expectations are high.
- Teaching techniques help students to understand concepts.
- Understanding precedes drill.
- Instruction is planned to meet students' needs.
- Instruction is based on sequential learning objectives.
- Parent involvement and interest are high.

### SUM INCLUDES

- Emphasis on developing student understanding of concepts.
- Guided group instruction with interaction.
- Mathematical algorithms developed by student use of concrete objects.
- Teaching objectives for mathematical skills including problem solving.
- Criterion referenced tests for objectives.
- Record keeping.
- Parent involvement.
- On-going inservice program.

### MATERIALS

After training a teacher package can be purchased for \$25.00; it includes:

- 1 Strategies Book -- Computation Skills
- 1 Strategies Book -- Problem Solving Skills
- 1 Student Record Folder
- 1 Set Classroom Record Sheets
- 1 Set Folder Tests
- 1 Set Blackline Masters

## **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.

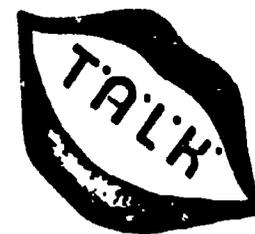
**Services** Awareness materials are available at no cost. Visitors are welcome at project site on the first Monday and Tuesday of every month. Project staff is available to attend out-of-state awareness meetings (travel and per diem to be negotiated). Training is conducted at project site (adopter pays 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 Replogle; Talents Unlimited; 1107 Arlington St.; Mobile, AL 36605.  
(205) 690-8060.

Developmental Funding: USOE ESEA Title III

JDRP No. 74-32 (6/8/74)

**TALK: Teaching Activities for Language Knowledge.** A program improving expressive and receptive vocabulary skills and language, grades K-3. TALK encourages the use of positive reinforcement, active participation, creative thought and fun in learning.



**Audience** TALK was validated by the Joint Dissemination Review Panel for all elementary students grades K-3. Due to the current emphasis on oral language, TALK is now used in grades K-6, bilingual education, migrant education, special education, gifted education, and in some areas for adult education programs.

**Description** TALK was designed to improve the oral language skills of children kindergarten through third grades in lower socio-economic area schools where there is an established need. Although the original program began in a lower socio-economic school in Rockford, Illinois, it has been beneficial to children from all strata.

The methodology includes training a language specialist and participating classroom teachers of an adopting school district in the use of the TALK Manual and suggested materials. The language specialist conducts 30 minute oral language lessons twice each week in each participating classroom. In addition, participating classroom teachers utilize the TALK Manual of activities to conduct 30 minute follow-up oral language lessons twice each week. The approach encourages teachers to use a variety of techniques, implementing all modalities and utilizing positive reinforcement, as a means of stimulating oral language. A TALK Manual includes lessons in listening skills, grammatical skills, describing and defining, personal and social awareness, choral speaking, story telling, creative dramatics and puppets.

At the end of a six month period, the teacher should be capable of interfacing TALK with the classroom instructional program.

TALK students have shown gains of 30% to 80% on standardized tests for receptive and expressive language. These highly significant gains have been obtained at all grade levels.

**Requirements** The adopting district provides a speech and language clinician or teacher with a background in language development or reading, one hour per week for each classroom receiving TALK. The TALK program can be utilized by a classroom teacher if speech and language staff are not available. After language specialists and classroom teachers have been trained in the program, they can train other personnel in the local district. TALK staff assist adopting districts in evaluating the effectiveness of the program as it is implemented.

**Costs** Each language specialist and classroom teacher must have a copy of the TALK Instructional Manual, \$50. A TALK Training Manual, \$25, is suggested for each school district. TALK staff and Certified Trainers are available for trainings. Costs for these sessions are negotiable.

**Services** Awareness materials are available at no cost. Visitors are welcome at project site anytime by appointment. Demonstration sites are available for visitation in most states. Project staff is available to attend out-of-state awareness meetings (costs to be negotiated). One-day training sessions are conducted at project site or adopter site (costs to be negotiated). Implementation and follow-up services are available to adopters (costs to be negotiated). Video tapes for awareness and/or training are available on a no cost loan basis. Statistical analysis of evaluation data is provided to all school districts submitting pre/post test scores to program office.

**Contact** Stephanie Hendee, Project Director; National Training Network; 1140 Boston Avenue, Longmont, CO 80501. (303) 651-0833.

Developmental Funding: USOE ESEA Title III

JDRP No. 78-189 (7/11/79)

Recertified (1/85)

Ungraded Primary Program  
Provisions of the Kentucky Education Reform Act  
House Bill 940

Primary School Reform

A primary school program will be started to replace that part of elementary school from the beginning of school to the beginning of fourth grade; successful completion of the program will be required before a student is allowed to enter fourth grade. (Section 25)

1992-93 School Year

The ungraded primary program will be implemented.  
(Section 31)



### KEA-AEL Ungraded Primary Program Description Form

The Kentucky Education Association (KEA) and Appalachia Educational Laboratory (AEL) are cosponsoring the work of a study group of elementary teachers investigating ungraded primary programs, a school organizational approach also known as nongraded, continuous progress, multi-age, and family approach. Your school has been identified as an implementor of such a program. We would appreciate your completing and returning this Form to KEA. Your responses will be aggregated in reporting recommendations in a guide for Kentucky faculties who are mandated to begin ungraded primary programs with the 1992-93 school year. A model program section of the guide, based upon the information provided on this Form, additional materials you attach, and the results of a telephone interview will be included. The survey can be completed in 20-30 minutes. Attach additional pages or information if needed. Thank you for your help.

Name \_\_\_\_\_

School name \_\_\_\_\_ District \_\_\_\_\_

School address \_\_\_\_\_

School phone (\_\_\_\_\_) \_\_\_\_\_

School type (check one):  public  private  other \_\_\_\_\_

Type of community served (check one):  rural  suburban  urban

Total student enrollment \_\_\_\_\_ Student enrollment in program \_\_\_\_\_

Grades served in the school \_\_\_\_\_ Grades involved in the program \_\_\_\_\_

Age range of students in program \_\_\_\_\_ Years of operation of program \_\_\_\_\_

Number of faculty involved in program \_\_\_\_\_

Grades and types of faculty or aides involved in program \_\_\_\_\_

Pupil : teacher ratio- \_\_\_\_\_

Teacher : aide ratio- \_\_\_\_\_

1. Please list the goals or objectives of your ungraded primary program. (Please attach any documents such as mission statements or brochures which explain and/or expand on the goals and objectives.)  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Why did your school begin implementing an ungraded primary program? Please explain.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





6. Please check any instructional practices used routinely by ungraded primary teachers in your school. Add any other frequently used practices that are not listed.

- Learner Capacity Paced (individualized pacing of lessons)
- Cooperative Learning
- Learning Centers
- Computer Assisted Instruction
- Peer Tutoring
- Team Teaching
- Skill Sequence Levels
- Other

---



---

7. a. Please check any of the following curricular approaches that are currently used in your program.

- Integrated Thematic Units
- Mastery Learning
- Multilevel
- Whole Language Instruction
- Individual Guided Education
- Ungraded
- Wide Variety Available

b. Have you modified the curriculum to incorporate the ungraded program?

- Other \_\_\_\_\_

c. If so, please explain and describe any curricular modifications made.

---



---



---



---

8. a. Is a basal text used?

b. For which subjects?

c. What additional instructional materials have been added as a result of the ungraded primary program?

---



---



---



---

9. a. By what means and how regularly is pupil progress measured?

b. What grading system (e.g. letter grades, percentages, satisfactory, satisfactory, skill mastery, etc.) is used to report progress?

c. How is pupil progress reported?

---



---



---



---

10. a. What factors determine student promotion from or retention in the program?

b. What is the average number of years needed for a student to complete the program?

---



---



---



---



- 14. a. By what means and how frequently is the program evaluated?
- b. Who or what groups of people evaluate the program?
- c. How are evaluation results communicated and recommendations used?

---

---

---

---

---

---

---

---

- 15. a. What methods are used to gain educator support for the program?
- b. How is the program communicated to the public and public support gained?

---

---

---

---

---

---

---

---

- 16. What were the biggest obstacles to overcome in establishing an ungraded primary program?

---

---

---

---

---

---

---

---

- 17. What have been your program's greatest accomplishments?

---

---

---

---

---

---

---

---

18. a. Will your ungraded primary program be implemented in future years? If no, please explain why. If yes, please describe any modifications you anticipate.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

19. a. What are the advantages of using an ungraded primary program?  
b. What disadvantages have you identified.  
c. Please explain.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

20. Please list any recommendations you have for others beginning to organize an ungraded primary program.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

A followup telephone interview may be necessary for respondents from schools selected as having model programs. Study group members hope you will agree to a brief interview. Please provide the following information regarding the most convenient time/place to contact you.

Time: \_\_\_\_\_ Telephone: ( \_\_\_\_\_ ) \_\_\_\_\_ - \_\_\_\_\_  School  Home

Thank you for your assistance in completing and returning this form to the Kentucky Education Association, attn: Rene Aniton, 401 Capitol Avenue, Frankfort, KY 40601. One copy of the final publication will be provided for each school responding.



KEA-AEL Ungraded Primary Programs Study  
Telephone Interview Guide

Please introduce yourself and explain that you are phoning to collect additional information for their school's case study in the KEA-AEL publication of information on ungraded primary programs. Ask if it is a convenient time to conduct the 10-15 minute interview and, if not, make an appointment and obtain the phone number for a return call. Please record responses as accurately and completely as possible, checking with your interviewee for clarity. Use back of page and additional sheets, if necessary. The completed guide(s) and audio tape(s) (if you choose to use them) become files for project completion; please send them to AEL with your case study(ies). Please review all the following questions and the Program Description Form(s) for the school carefully before phoning. Ask probing questions if you feel you need further information for any Form question. Note all responses.

A. Please describe how the ungraded primary program at your school was initiated. Whose idea was it? Were outside resource people or readings useful instigators? What were the steps in development of the program? Who was involved?

B. What classroom management practices have teachers in your ungraded primary program found useful? Has discipline differed because of multiage grouping?

C. Are special services, classes, or other assistance sources provided for gifted and talented students? Please describe any such services.

D. Were inservice or staff development sessions provided for teachers in the ungraded primary program? Are such sessions ongoing? (If interviewee responds with "yes", please continue.) What topics have been addressed? Who identified the topics? How useful have the sessions been? How have teachers used information from staff development sessions in their classrooms? Do faculty members conduct staff development sessions for your school or others? If so, on what topics?

E. What is a typical teaching assignment for a teacher in the ungraded primary program? Please describe subjects, student assignment, and schedule. Are teachers involved in planning teaching assignments?

F. How is the effectiveness of your ungraded primary program evaluated? What measures of success are most important to teachers, to administrators, and to parents? How do you know if the program has made a difference for students?

G. How are parents informed about the ungraded primary program? Are parents involved in at-school or at-home assistance to the program? If so, please explain in what ways.

Check the school address, phone number, and contact person information (including spelling) with your interviewee. Ask if he/she has anything to add to any response or would like to have you review responses. Thank your interviewee for his/her contributions to the KEA-AEL publication. If he/she has questions about the study that you cannot respond to, refer him/her to Becky or me at 800-624-9120. Each school described in the publication will receive a copy of the document which should be available in April.

**BEST COPY AVAILABLE**

**Funded by**

**OERI**

**Office of Educational Research and Improvement  
U.S. Department of Education**

---