

BALTIMORE CITY PUBLIC SCHOOLS
REFORM INITIATIVES

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BALTIMORE CITY PUBLIC SCHOOLS
200 EAST NORTH AVENUE
BALTIMORE, MARYLAND 21202

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SCHOOL REFORM INITIATIVES

THE ALLIANCE FOR SCHOOLS THAT WORK PROGRAM

The Alliance for Schools that Work Program is comprised of Educational Alternatives Incorporated (EAI), KPMG Peat Marwick and Johnson Controls World Services, Inc. EAI takes the lead as the general contractor for the Alliance in the implementation and administration of the Tesseract Model.

The Baltimore City Public Schools entered into a five year private-public contract with the Alliance to manage eight elementary schools and one inner city middle school in July, 1992. In 1993, EAI expanded its contract to consult at three additional Baltimore schools. It was termed a private-public contractual partnership because the contract delegated to EAI the responsibility to meet educational goals with the school district overseeing EAI's operation. This contract became one of the largest private- public school partnerships in the country.

The Tesseract Model has a student-teacher ratio of 15 to 1. This was accomplished with interns. An intern was assigned to every teacher. The Tesseract Model emphasizes an individualized approach in which students direct their own learning. Students work toward achieving the goals set in their "personal education plan (PEP)" instead of earning grades. The PEP is developed by teachers with students and parents early in the school year. Students decide themselves how they will approach an assigned task. The Tesseract model relies heavily on the use of computers to implement PEPs.

Baltimore's school board severed its contract with the Alliance after 3.5 years. The board set March 4, 1996 as the date the business-education partnership would end. The decision to sever the contract was a financial one.

The Center for Educational Research at the University of Maryland in Baltimore County was hired to do an independent evaluation of the experiment. They found that schools managed by EAI made only modest progress in improving student achievement. However, they did find that they made up a decline in standardized test scores that occurred during the first year of the contract. The study noted that EAI schools increased two National Curve Equivalency points over the 1993-94 scores on the Comprehensive Test of Basic Skills during the 1994-95 school year. Overall the report was positive and it suggested that the experiment was worth continuing. However, it did point out a few areas that needed strengthened including the staff development program for both staff and interns. The report also praised the cleanliness of the EAI managed buildings.

SYLVAN LEARNING CENTERS

Baltimore City Public Schools contracted with Sylvan Learning Systems, Inc. in 1993 to form a public/private partnership designed to provide supplemental education services through the establishment of Sylvan Learning Centers on the premises of some of the lowest performing Chapter I elementary schools. This occasion marked the first time that Sylvan, the nation's largest private sector provider of education services with over 500 Sylvan Learning Centers throughout North America, has opened learning centers within public schools.

Each student assigned to the Sylvan Learning Center has direct instruction with a 3 to 1 student-teacher ratio. After being individually assessed using the firm's extensive diagnostic assessment capabilities, an instructional program is designed based on identified needs and correlated with computer-assisted skill reinforcement. Mathematic skills are developed utilizing a conceptual/problem-solving approach. Continuous instruction is held throughout the calendar year during normal school hours, after school, weekends and summers. Formative assessment follows every hour of instruction.

Parent conferences are held prior to assessment, after assessment and after every 12 hours of instruction. Furthermore, parent communication forms are sent home weekly. Additionally, parent seminars are conducted on a routine basis.

Student outcomes are evaluated using the pre/post CTBS. Students are guaranteed to gain state-mandated minimum academic growth provided they attend 80% of the sessions, or the company will provide free additional instruction.

By the Fall of 1995, Sylvan had Learning Centers in 25 schools. Schools have reported better grades and improved attitudes.

CALVERT/BARCLAY PROGRAM

The Calvert/Barclay Program involves a partnership with a private school, the Calvert School. A public inner-city school, Barclay Elementary/Middle School uses the Calvert School curriculum, lesson plans and teaching strategies. The program requires a full time coordinator to monitor and oversee its implementation, inservice training for staff members, additional teacher aides and a reduction in class size. Mental discipline, good study habits, hard work, and respect for learning is expected, encouraged and rewarded on a daily basis.

A core curriculum--mathematics, history, science, English (including literature and writing), foreign language, computer and the fine arts is required. The curriculum places a daily emphasis on reading and writing and challenges children with subjects typically introduced by public schools in later grades. The program exposes children to reading in kindergarten and writing script in the first grade. By

the third grade the students are writing daily compositions, poems and letters. Students begin their study of geography, science and mathematics in kindergarten, history in the third grade and algebra in the sixth grade. Fourth graders read a classic, study world history and learn geometry.

Writing is the backbone of the curriculum. Students write about what they are reading or studying. Students start each day by correcting mistakes from the day before. All written work is kept in a portfolio that is sent home monthly. This serves as the student's report card.

A three-year evaluation, conducted by external evaluators indicates the Calvert program students are leading their nonprogram counterparts in achievement, attendance and referrals to Gifted and Talented Education programs. Additionally, pupil referrals to Chapter 1, a federal funding effort for disadvantaged students, and special education services have dropped. The principal evaluator attributed much of the program's success to careful implementation and community support.

This program is currently operating in two schools, but a Calvert-like program will be implemented in kindergarten and first grade in all elementary schools beginning in the Fall of 1996.

EFFICACY

For the past three years the BCPS has been involved in an effort to train all system leaders, staff, and interested stakeholders in the principles of Efficacy. The mission is to provide a model for human development that is based on the belief that the children in the BCPS can learn and develop to meet 21st century standards and that the adults in their lives can manage the process.

The BCPS is preparing its students for success in a technological age, where even entry level jobs require a high level of transferable skills. These skills are embodied in the 21st century standards adopted by the BCPS. When educators and parents are trained in the Efficacy approach and apply it in their daily practices, we can achieve the following student outcomes:

- * Students will exhibit increased confidence.
- * Students will take greater responsibility for their own learning.
- * Students will recognize feedback as information that can help them, rather than viewing feedback as an indication of failure or as a limit to their ability.
- * Students will use effective effort in employing various strategies for learning new material.
- * Students will attribute their successes to effort-and their failures to ineffective effort-thereby leaving confidence intact and stimulating more intensive effort.

One of the keys to develop students to their full potential as productive citizens is intellectual development. Intellectual development requires commitment, mastery

of academic material, and more fundamentally, the acquisition of positive attitudes toward learning. Additionally, students need a set of behavioral skills associated with development, including risk-taking, goal-setting, focused effort, and the capacity to build supportive relationships. These process skills do not come automatically; they are the products of confidence building, support, and a sense of being valued, which are often not sufficiently available to children in large urban settings. Deficits in these process skills have hindered the ability of many students to master basic academic material and to view the school setting as a challenging but rewarding environment. Efficacy offers an operating principle that structures policies and practices constituting a coherent approach to educating and developing people.

The chief objective of Efficacy is to improve the academic performance of pre-kindergarten through twelfth grade students in the BCPS. Teaching the Efficacy principles will result in improved academic performance in targeted populations. Measures for assessing performance will include documented improvement in student attitudes toward academic endeavors, improved report card grades, improved attendance rates and improved scores on performance tests.

The overall goal of Efficacy is to provide students with the tools and perspectives necessary to take a pro-active and responsible stance toward their performance and development. Efficacy expects that students will do this not only in their school work, but throughout their lives. Moreover, Efficacy will enable students to pursue the kind of vigorous action that will send them through life with a feeling of strength and confidence. Teachers will view all students as capable learners. Such a positive perspective will impel teachers to examine their instructional practices, their attitudes and their policies to create better learning opportunities for all students.

NETWORK OF ENTERPRISE SCHOOLS

BCPS is in the process of recasting itself as a system of Enterprise schools. In doing so the system is increasing decision-making authority and participatory management at the school level. Through difficult to establish a direct link between decentralizing decision making and improving student achievement, it is clear from what is known about effective management that shared decision making contributes substantially to school improvement for the following reasons.

*If student achievement is to improve, responsibility and accountability must be clear. Because schools are accountable for greater student achievement, they must have the necessary authority and flexibility to achieve such results.

*Because they are so familiar with their students, school staffs and other school stakeholders know best how to operate within the school setting and use resources to achieve desired results, particularly in terms of student achievement.

* With clear accountability in place, schools have the incentive to use

their resources wisely and to conserve.

- * When those who do the work at the school level are involved in deciding how to meet objectives and accomplish goals, the processes tend to become more efficient.
- * Central office staff members offer technical assistance and support to improve the quality of the decision made at the school level.

All schools are a part of the Network of Enterprise Schools.

CORE KNOWLEDGE SEQUENCE

The Core Knowledge Sequence is a model of specific content and guidelines that forms the basis of about 50% of a school's curriculum. Therefore, 50% of the time, the local district curriculum is still used. The Core Knowledge Foundation worked on building a consensus about the content of diverse groups and interests, including parents, teachers, scientists and experts on American's multicultural traditions. It takes into account the recommendations of professional curricular organizations such as the National Council of Teachers of Mathematics and the American Association for the Advancement of Science. It also reflects research into the knowledge and skills expected of children in successful educational systems of other countries. Since Core Knowledge is meant to comprise only 50% of a school's curriculum, it does not presume to stipulate everything American schoolchildren should know. Rather, it leaves ample room for local requirements and a variety of teaching approaches. It is possible to implement Core Knowledge in varying ways and degrees. Some schools have begun by supplementing existing lessons with selected items from the Sequence.

The program comes in six books called the Core Knowledge Series (based on a sequence). The books, titled *What Your First (Second, Third, etc.) Grader Needs to Know*, are published by Doubleday and edited by E.D. Hirsch, Jr. They are available at bookstores nationwide, or they may be ordered from the Core Knowledge Foundation by calling 1-800-238-3233. *The Core Knowledge Resource Guide*, an annotated listing of a variety of resources relevant to the knowledge specified in the Sequence, is available from the Core Knowledge Foundation. Also the *School's Guide to Core Knowledge* is a helpful guide to integrating and connecting topics from both curricula.

Parents have been some of the strongest advocates of the Core Knowledge Program. Since the books are available in book stores, some parents have decided to use it to educate their children at home. There is also a book designed especially for parents entitled *A Parent's Guide to Core Knowledge*.

The three Sandtown-Winchester Schools plus five other schools have implemented the Core Knowledge Program this year. The teachers are excited about it and have transferred that excitement to their students.

Science, Mathematics, and Health Initiatives

Baltimore Urban Systemic Initiative

The Baltimore Urban Systemic Initiative in Science and Mathematics is a cooperative agreement between the BCPS, Morgan State University, and the National Science Foundation. Over a five year period, 1994-1999, nearly \$15 million will be targeted to

- improve the scientific and mathematical literacy of all students,
- provide the mathematics and science fundamentals that will permit all students to participate fully in a technological society, and
- increase significantly the number of graduates prepared to pursue a major in science and mathematics.

Policies, student achievement, curriculum, instructional support, staff development, equipment, supplies, facilities, partnerships, and financial support have been examined through a major self study involving all stakeholders. A multi-faceted plan has been developed to address each area. Changes in policies and procedures are being made to increase time allocation for science K-5 and to make graduation requirements in science and mathematics more rigorous. Curriculum K-12, aligned with national and state standards, has been updated. Additional funding has been secured from the National Science Foundation in cooperation with University of Maryland College Park for a \$6 million initiative for staff development in elementary mathematics. Instructional support in schools has been improved through the addition of seven elementary and four secondary catalysts for change, who are expert teachers working directly with classroom teachers in science and mathematics.

A comprehensive staff development plan K-12 in science and mathematics has been crafted, specifying the preparation necessary to deliver modern curriculum using effective instructional practices. All teachers must complete Level I Fundamentals (30-60 hours) and Level II (15-45 hours) Extension and Enrichment for their grade or subjects. Levels III and IV build school and system capacity for exemplary teachers through leadership development. Administrators also receive training in instructional leadership and management of science and mathematics programs. The Comprehensive Staff Development Plan is funded through NSF initiatives, the Eisenhower Mathematics and Science Grant, and school funds.

Involvement in the Baltimore Urban Systemic Initiative occurs in cohorts. Cohort I (1995) includes all high schools, half of the middle schools, and one third of elementary schools. Cohort II (1996) will involve all reconstitution-eligible schools K-12. Cohort III (1997) will involve remaining schools.

Health Initiatives

The Drug Free and Safe Schools Project focuses on drug and violence education, prevention, and intervention K-12. Funded at a level of \$1 million annually, 85% of which is managed by schools, this project empowers schools and their communities to address drug, alcohol, tobacco, and violence issues in a manner that meets their specific needs.

Comprehensive health education curriculum has been updated K-12 and extensive staff development is ongoing. There is a strong peer education component thorough elementary Just Say NO! groups, middle school SHOUT groups, and high school SHOP groups. Student assistance programs are operating in secondary schools to refer students for counseling and services for drug involvement. A major conflict resolution and violence prevention component has been added during the last two years and hundreds of staff members and students have been trained. These services are being targeted at reconstitution-eligible schools.

The AIDS/HIV Education and Prevention Project is funded through a grant from the Centers for Disease Control. The focus of this project is education, prevention, and intervention 3-12. The comprehensive Health Education Curriculum has been updated and ongoing staff development is occurring. At the elementary level disease prevention is the focus, and in middle and high school human sexuality, pregnancy prevention, and disease prevention are key. There are strong peer education components at the secondary level to bring risk-behavior prevention messages to youth. Numerous community agencies are involved in staff training and providing services to schools.

The BCPS has worked with interested stakeholders to design specific frameworks for reforming middle schools and high schools.

High School Reform

During the 1994-1995 school year, the BCPS undertook a study of its high schools. The process began with the establishment of the High School Reform Planning Council comprised of a broad cross section of individuals committed to school reform. Members include students, parents, teachers, principals, central office administrators, and representatives from the Baltimore Teachers Union, the Public School Administrators and Supervisors Association, institutions of higher learning, businesses, community and advocacy groups, and other city agencies. In December 1995, the Council published its report *High School Reform: A Foundation for Excellence in the 21st Century*, calling for the reform of Baltimore's nine zoned high schools. All reconstitution-eligible high schools are included in this reform.

Reform for the nine zoned high schools must include the following five essential elements.

1. Standards of Achievement for All Students

The notion that the expectations for zoned high school students are different from the expectations of citywide high school students must be eradicated. To do so the High School Reform Planning Council and the BCPS will

- define a core of rigorous content courses to be completed by all students;
- develop a single set of standards for each of the core courses. All students must demonstrate their mastery of the course standards to earn credit for completing the course; and
- integrate career and academic programs.

The process of transition has begun. In concert with the Maryland State Department of Education, a process involving all high school faculty in the review of standards for mathematics, English, science, and social studies has begun. A draft curriculum framework was issued in September to guide educators throughout the system as they teach courses required for high school graduation.

Over the next two years, systemwide assessments will be developed. The class that enters ninth grade in 1998 will be the first class required to demonstrate mastery of standards on systemwide assessments in order to earn course credit. During the 1996-1997 school year, a citywide assessment for algebra will be implemented.

2. Smaller Learning Communities in Each Zoned High School

Each zoned high school will be divided into smaller units (e.g., institutes, schools-within-schools, academies). Each smaller unit will have a strong instructional focus and career clusters. Teachers will assume the leadership as well as the responsibility for creating more challenging and supportive learning communities.

The smaller units will help to ensure a caring and safe learning environment. A team of teachers will work with a group of students for a span of years, and they will have the opportunity to "get to know" each student. In the smaller learning community, key adults will have students' welfare at heart and personally support their efforts to be successful. In addition, the school will provide student and family support services that address individual problems related to attendance, discipline, teenage parenthood, substance abuse, home conflicts, and other challenges faced by urban youth.

Within the smaller learning community, teachers will be able to provide a structured program of career development emphasizing the integration of career

and technology education with academic studies. Students will be engaged in a challenging program of study with an upgraded academic and career major. The fine arts will be an integral part of the academic program, and students will be given opportunities for participation in fine arts, both during and after the school day.

3. Professional Development Programs That Support Reform

Schools must establish a comprehensive professional development program for all staff members. The program should include teacher-level higher education arrangements and an infrastructure to support ongoing development of more rigorous integrated curricula, teacher research, and sharing of strategies for effective practice (e.g., instructional strategies, flexible scheduling, and ways to "create time" for educators to plan and assess progress).

4. Instructional Technology

Information processing technology is rapidly changing the world in which we live. Teachers are responsible for empowering students with the knowledge and skills they need to use information processing technology efficiently and effectively. Therefore, teachers will be expected to integrate instructional technology into all phases of the instructional program.

5. Transitions to and from High School

The school system must assure a strong bridge between eighth grade and high school — providing all students with career planning and using a variety of strategies to help students make the transition to high school. The Council's vision is that students will arrive at high school prepared for the rigorous new standards, meet those high standards throughout their high school experience, and graduate prepared for post secondary work and career development. Therefore, programs to assist students in the successful transition from middle to high school and to support them during the ninth grade must be developed and implemented.

Preparation for high school transition should begin no later than grade 6 when students enter middle school. Most support activities must occur during grades 8 and 9 and during the summer between these grades. Activities that middle and high schools may provide could include articulation activities such as a high school "open house" day for eighth-grade students and/or their parents and presentations by high school representatives at the feeder middle schools. Additional transition support activities could include middle school/high school pen pals, high school fairs, summer orientation programs, and upper class "buddies" for ninth graders.

In addition to assuring a bridge between middle school and high school, the school system must also ensure that pathways exist that lead students through high school and into the post secondary experience students and their families desire. To

help ensure that high school experiences are relevant to the world students will face after graduation, each zoned high school must develop stimulating, dynamic, and sustained "joint ventures" with institutions beyond the school, particularly civic, business, collegiate, and community-based organizations. These organizations help define effective schooling, and their personnel can be important resources to the school.

The high school reform effort will be supported in part by a grant developed by Baltimore City's Career Connections Team. The team is composed of representatives from the Baltimore City Public Schools, area businesses, post-secondary institutions, human services agencies, Mayor's Office of Employment Development, Baltimore City Private Industry Council, and community-based education advocacy groups.

Key components of the grant mirror the high school reform mandates, namely the transformation of the city's large impersonal schools into smaller learning communities; the development of relevant curriculum organized around career themes that represent growth industries; and uniform student expectations built upon rigorous standards that will prepare them for success in post secondary settings. A critical feature is that all students will participate in a full continuum of career development supported by quality work-based learning activities and connecting activities. Following the lead of Maryland's Career Connections team, Baltimore's strategy will be performance driven. Minimally three outcomes will be measured: (1) performance in the workplace following graduation, (2) student transition to employment and post-secondary education, and (3) performance in college. Baltimore is committed to promoting the state's goals as defined in Maryland's Goals 2000 Plan.

Baltimore city's plan revolves around the four organizing components of school to career: universal access for students to services; an integration of work-based and school-based learning; the development of a clearly defined set of educational and occupational skill standards; and strong parental, corporate and community involvement.

Another support for high school reform is BCPS involvement in the Southern Regional Education Board's *High Schools That Work* program. *High Schools That Work* is a nationally acclaimed total school restructuring program, aimed at combining challenging academic courses and modern vocational studies to raise the achievement of career-bound high school students. It is centered on the belief that schools can raise the achievement of all students: college-bound and especially career-bound students. Not limited to vocational/technical students, the program aims to improve the high school curriculum for all students. The goal for the integration of academic and technical education provides students with the capacity to interpret knowledge for a variety of disciplines as they apply to real-world problem-solving situations. Three reconstitution-eligible high schools are currently involved - Frederick Douglass, Lake Clifton-Eastern, and Northern.

Institute for Middle Grades Reform

Aware of the critical nature of the early adolescent years, the BCPS in 1992 initiated the Institute for Middle Grades Reform. The Institute was established to implement reform in the more than fifty BCPS schools that have middle grades components. Some are traditional middle schools, housing students in grades six through eight; others are K-eight settings. A few schools for students with special needs also house students in the middle grades.

The focus of middle grades reform has been on improving student achievement. The reform effort has several components.

1. Middle Grades Liaisons Teachers

All schools with middle grades components are invited to identify a middle grades liaison teacher. These teachers are charged with acting as change agents for reform at their own schools. While the specific responsibilities of the liaison teachers vary from school to school, all are expected to attend monthly system-wide meetings. At the meetings liaison teachers share successes and problems, receive curriculum updates, plan the details of further reform efforts, and participate in staff development on such topics as developing performance instruction strategies, using Dimension 5, Habits of Mind, how to meet service learning requirements at the middle grades level, and using a computer to write long range instructional plans. Under the Enterprise system some funds are allocated to each school for the support of this position. In the 1995-1996 school year, 46 schools, including the four newly-named reconstitution-eligible schools, have identified middle grades liaison teachers.

2. Middle Grades Curriculum

A state-of-the-art curriculum is in place in the BCPS middle grades. Begun in 1993, augmented by summer writing teams, and now almost completed, this curriculum, with its emphasis on changing instructional practices, is central to the reform effort.

The BCPS Middle Grades Curriculum is focused on the Maryland Learner Outcomes. The principles of Efficacy are applied in the curriculum. Students are expected to achieve at high levels: algebra is now to be taught to all students in grade eight, for example, and all students are expected to begin working toward fluency in a second language. *Dimensions of Learning*, with its expectation of "A Different Kind of Classroom," is the framework for this curriculum. Emphasis is placed on application of knowledge and effective habits of mind, so that students are often asked to initiate and plan projects using what they have learned. The Middle Grades Curriculum is multicultural. It is an inclusive curriculum: while modifications of activities are suggested for high achieving students and for students with special needs, there is no separate curriculum for such youngsters.

Cooperative learning is emphasized. The curriculum is intended to make learning a highly enjoyable and satisfying experience. The expectation is that effective implementation of the curriculum will lead to improved student performance on the Maryland School Performance Assessment Program.

The Middle Grades Curriculum is delivered electronically using the BERRI (Baltimore's Electronic Resources Recommended for Instruction) system. Every middle grades teacher in BCPS has access to a computer, usually in the teacher's classroom, on which the curriculum is delivered. This system allows teachers to adapt instructional materials in the curriculum units (goals, objectives, learning activities, assessments, and background information about the content) to their own situations. When completed, the Middle Grades Curriculum will consist of some 250 units of instruction in 13 discipline areas, plus about twenty interdisciplinary units.

Implementation of the new Middle Grades Curriculum calls for radical change on the part of teachers. For many, it has meant that they must use a computer for the first time. For many, it has meant moving from "spewing information," as one teacher put it, to a facilitative teaching style. Teacher training in technology and in the content and instructional practices recommended in the Middle Grades Curriculum has been provided since 1993.

A survey of curriculum implementation at fifteen schools with middle grades components was conducted in January 1995. The curriculum was being implemented to the performance objective level in 139 of the 364 classrooms visited. Additional training is clearly indicated.

3. Citywide Middle Grades Demonstration Center: The Lombard Learning Academy

The purpose of the Lombard Learning Academy (LLA) is to demonstrate how implementation of the BCPS Middle Grades Curriculum can improve student achievement. The LLA is a school-within-a-school and is housed in the Lombard Middle School in the heart of East Baltimore. It serves about 130 students. These students are in no way specially selected; they represent the student population geographically assigned to the Lombard Middle School. The staff of six teachers and one facilitator has received extensive and intensive training in effective instructional strategies, classroom management, the explicit teaching of thinking, and use of technology.

In the fall of 1995 the Lombard Learning Academy (LLA) began a full schedule of demonstration lessons and staff development. As of March 15, 1996, 71 teachers have visited the LLA during this school year, including teachers from Hamilton, Chinquapin, Diggs-Johnson, Calverton, and Arnett J. Brown, Jr. middle schools. Priority for visits has been given to teachers from reconstitution-eligible and alert schools. Most visiting teachers stay at the Academy for five days. During this time

Educational Technology Initiatives

The Instructional Technology Plan for Baltimore City Public Schools is designed as a blueprint to assist the school system in making long-range decisions related to the purchase and use of educational technology. The value of this plan is that it will maximize the effects of educational technology by allowing the school system to make decisions based on the most cost effective method of delivering services in an integrated fashion rather than on isolated initiatives. This plan also serve as a training manual to assist local school personnel in their deliberations related to educational technology.

The need to improve the quality of instruction continues to be a major priority for the Baltimore City Public Schools. Educational technology has the potential for bringing about the necessary changes to improve instruction for students who will live their lives in the twenty-first century.

Instructional technology is an essential tool in the process of constantly improving curriculum, instruction and assessment methods in order to improve student achievement. Instructional technology is being integrated across all curriculum areas in order to provide teachers and students the ability to communicate effectively and process information to solve problems. Some of the instructional technology innovations provided to schools include

- microcomputers, related peripherals and adapted devices
- CD-ROM, laser discs and multimedia
- Teacher access to technology
- BERRI(Baltimore's Electronic Resources Recommended for Instruction): this is an alternative means of delivering curriculum
- Distance Learning classes available at nine sites including the following reconstitution-eligible school sites: Northern, Douglass, Northwestern, and Lake Clifton/Eastern
- Computer Assisted Instruction computer labs, Integrated Learning Systems (such as Wicat, CCC, Jostens, New Century, TRSO Plato, ...), Writing to Read, Teaching and Learning with Computers, Writing To Write
- computer labs
- Equipment repair programs established at Mergenthaler High School and Edmondson/Westside repair center
- Library/Media telecommunications Network. This is an electronic connection to SAILOR, Pratt/InForNet and/or commercial connections such as America on Line
- Access to the Teacher Resource Training Center located at 2500 East Northern Parkway.

Specific strategies are currently in place to enable the BCPS to implement the Instructional Technology Plan. They include

- Baltimore Learning Communities Technology Challenge Grant
- Fiber Optic Distance Learning
- Satellite Distance Learning
- Cable Television and Whittle Channel One
- The Regional Technology Training Center.

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*M*aryland Reaches for the Goals



*A Report on Maryland's Progress
Toward National Education Goals*

1995

MSDE Bulletin

Keeping You Current on Education Reform in Maryland

The 1995 Report Card: High Expectations Work

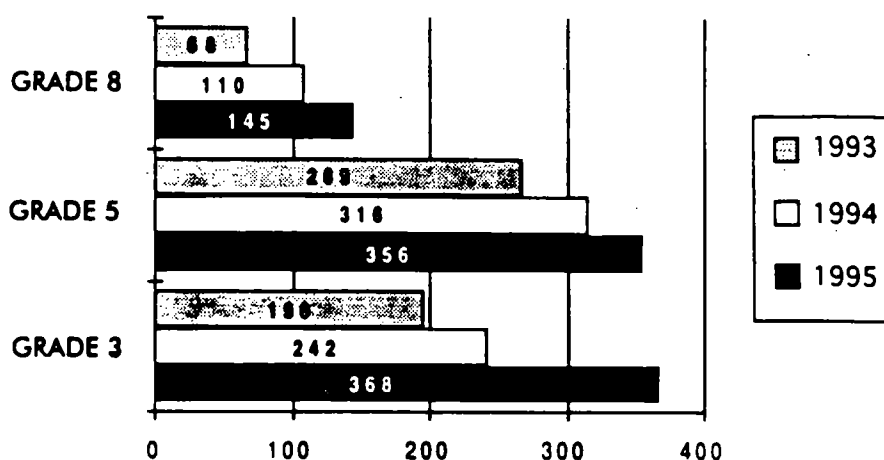
Like the long-distance runner hitting his stride, Maryland's school improvement effort is making steady progress toward its goal of meeting the state's rigorous standards for success by the year 2000.

With the Dec. 12 release of the 1995 Maryland School Performance Report, the state posted increases in 21 of 31 progress indicators on the annual "report card." And many of the improvements were dramatic, especially on the Maryland School Performance Assessment Program (MSPAP).

"Clearly, high expectations work," said State School Superintendent Nancy S. Grasmick. "When you set high academic expectations, schools, teachers, and students all can become high performers."

Dr. Grasmick noted that the 1995 report card shows a significant increase in the number of schools meeting the standards or moving within striking

MSPAP RESULTS 1993-1995
Schools Meeting or Approaching Standards in at Least One Category



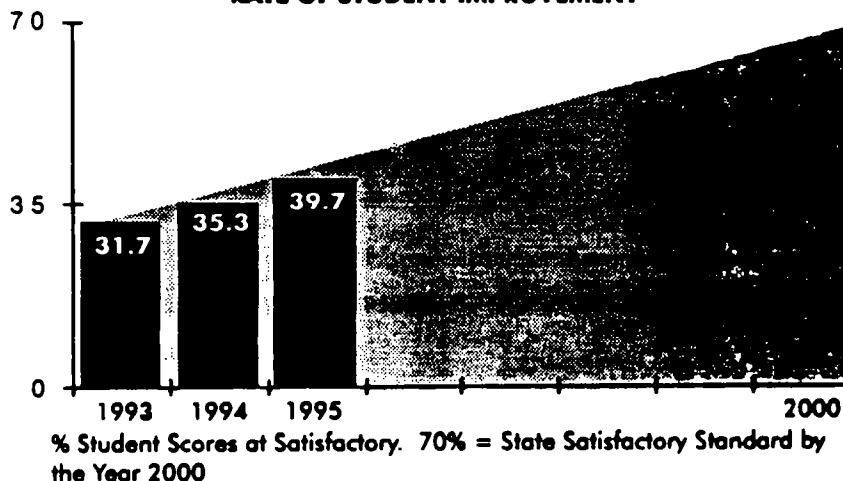
distance of them. The standards set a goal of 70% of students in each school performing at the satisfactory level.

Dr. Grasmick announced the results during a ceremony attended by U.S. Education Secretary Richard Riley, Maryland Governor Parris N. Glendening, and other dignitaries.

A closer look at the report card reveals significant progress over 1994 performance both on the state level and among Maryland's 24 school systems.

(Please see Report on back page.)

MSPAP RESULTS 1993 - 1995
RATE OF STUDENT IMPROVEMENT



MSPAP Highlights

Maryland's Performance Assessment at a glance.

- Nearly four out of 10 students in grades 3, 5, and 8 are reaching satisfactory standards levels.
- The numbers of schools meeting or nearing standards jumped 52.1% in grade 3, 13.3% in grade 5, and 31.8% in grade 8.
- Four school systems saw higher scores in all 18 MSPAP areas.
- Maryland is more than half way toward meeting its 70% MSPAP standard.

SPECIAL EDITION: THE 1995 REPORT CARD

Report Card *(Continued)*

The 1995 report card also points out the incremental progress needed to affect true school improvement.

For instance, the state last year was at least half way to its 70% MSPAP standard in eight of 18 categories. This year, Maryland reached that point

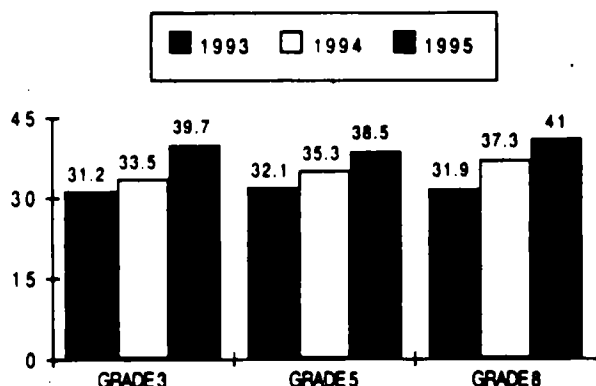
in 15 of the 18 categories. The jumps in composite MSPAP scores also are on target to reach 70% by the year 2000, according to MSDE projections.

On the state Functional Tests, most scores are far above where they were in the first report cards. Test scores have begun to level off in most areas, however, setting the stage for a

rigorous and comprehensive series of tests for high schoolers.

On the county level, all but one local school system improved in at least 10 of the 18 content area categories on the MSPAP, and four -- Allegany, Frederick, Harford, and Washington counties -- improved in all 18 areas on the test.

MSPAP GRADE LEVEL IMPROVEMENTS 1994-95
% Student scores at satisfactory



The MSPAP Made "Easy"

Have you ever wanted a quick, easy way to describe the MSPAP to curious parents or colleagues? Here's a good analogy, courtesy of Dr. Richard Bavaria of the Baltimore County Public Schools:

"For years, testing students has been like driving to a destination by looking out the back window of the car to see how far we've come. The MSPAP is like looking ahead, through the windshield, to see how far we must go before we reach our destination."

A Sampler: The Maryland School Performance Report for 1995

The 1995 Maryland School Performance Report is full of facts. Here are some of them:

- On the MSPAP, 42% of students in all three grades met standards for math and science. Between 40% and 52% on average met the satisfactory standard in language usage across all three grades.
- One school system, Garrett County, met the Science grade 8 standard for satisfactory performance.
- More than 174,000 students in 1,020 schools took the MSPAP.
- Two years ago, 158 schools were far from meeting MSPAP standards in grade 3 math -- the equivalent of about 20% of all schools tested. This year, only 61 schools -- 7.7% -- are far from standards.
- Conversely, 113 schools were approaching or meeting standards in 1993 in grade 3 math. This year, nearly 300 schools have reached that status.
- In grade 1-6 attendance, 23 of 24 school systems achieved the state standard of 94%.
- Fifteen school systems met all 11th grade functional test standards in reading, writing, math, and citizenship.

MSDE BULLETIN

SCHOOL & COMMUNITY RELATIONS
OFFICE

MARYLAND STATE DEPARTMENT OF
EDUCATION

200 W. BALTIMORE ST.,
BALTIMORE, MD. 21201

RONALD PEPPER
ASSISTANT STATE SUPERINTENDENT

CHARLES HERNDON, EDITOR

(410) 767-0473 / 0476

What do you think?

The MSDE Bulletin welcomes readers' comments. Send them to the editor at the address to the left.

MARYLAND SCHOOL PERFORMANCE REPORT, 1995

State and School Systems

Division of Planning, Results, and Information Management
Maryland State Department of Education
200 West Baltimore Street
Baltimore, Maryland 21201-2595
(410) 767-0100

MARYLAND

Maryland, with a population of 4,983,900, ranks forty-second in size and nineteenth in population among the fifty states. The State Department of Education is housed in Baltimore. There are twenty-four local school systems and 1,286 public schools and centers.



STUDENT PERFORMANCE School Year 1994 -1995

ASSESSED STUDENT KNOWLEDGE

MARYLAND FUNCTIONAL TESTS	STANDARD PERCENT		1993** Percent Passing	1994 Percent Passing	1995						
	EX	SAT			NUMBER TAKING	NUMBER ABSENT	NUMBER EXEMPT	PERCENT PASSING	EX	SAT	NOT MET
Grade 9 Status											
Reading	97	95	97.4	96.9	57,127	1,359	1,054	97.1	o		
Mathematics	90	80	79.2	79.4	57,440	1,077	1,020	81.1		o	
Writing	96	90	93.5	88.0	54,681	3,272	1,280	88.3			o
Citizenship	92	85	83.8	86.7	50,962	1,863	886	84.1			o

MARYLAND FUNCTIONAL TESTS Grade 11 Status	STANDARD PERCENT		1991** Percent Passing	1994 Percent Passing	1995					
	EX	SAT			NUMBER REFUSED	NUMBER EXEMPT	PERCENT PASSING	EX	SAT	NOT MET
Reading	99	97	99.4	99.7	.	553	99.5	o		
Mathematics	99	97	96.5	96.1	.	562	96.4			o
Writing	99	97	97.7	98.6	.	801	98.5		o	
Citizenship	99	97	96.4	96.2	.	513	96.1			o
Passed All Tests	96	90	93.1	92.9	.	469	93.1		o	

MARYLAND SCHOOL PERFORMANCE ASSESSMENT PROGRAM			STANDARD PERCENT		1993** Percent at		1994 Percent at		1995						
									NUMBER TESTED	NUMBER ABSENT/ EXCUSED	NUMBER NOT REPORTED	Percent at		EX	SAT
			EX	SAT	EX	SAT	EX	SAT				EX	SAT		
3	Reading	25	70	----	----	3.6	30.6	54,273	2,580	5,788	4.7	34.1		o	
3	Writing	25	70	9.2	35.1	8.1	35.2	57,162	1,743	3,736	13.8	39.4		o	
3	Language Usage	25	70	9.0	29.4	11.4	34.2	55,969	1,476	5,196	10.7	43.1		o	
3	Mathematics	25	70	2.1	28.6	2.9	33.9	56,239	2,253	4,149	6.4	42.1		o	
3	Science	25	70	2.3	31.1	4.3	34.8	56,870	2,035	3,736	7.2	41.2		o	
3	Social Studies	25	70	1.1	31.9	1.2	32.4	57,136	1,769	3,736	2.5	38.1		o	
5	Reading	25	70	2.3	24.7	3.5	30.2	53,385	2,380	6,051	3.7	29.6		o	
5	Writing	25	70	11.7	36.8	10.7	33.2	56,160	1,803	3,853	14.8	36.7		o	
5	Language Usage	25	70	10.4	26.8	15.6	35.0	55,259	1,181	5,376	17.6	39.7		o	
5	Mathematics	25	70	5.8	39.5	8.0	42.1	55,065	2,898	3,853	8.8	44.9		o	
5	Science	25	70	4.0	33.3	5.7	38.7	56,349	1,614	3,453	6.9	41.3		o	
5	Social Studies	25	70	3.0	31.3	4.5	32.7	56,173	1,790	3,853	7.5	38.5		o	
8	Reading	25	70	1.2	24.6	1.9	24.0	50,509	3,738	2,736	1.5	27.6		o	
8	Writing	25	70	9.0	36.3	11.1	44.0	51,168	3,740	2,075	10.6	42.1		o	
8	Language Usage	25	70	8.6	36.9	13.4	43.6	51,281	3,188	2,514	17.1	52.2		o	
8	Mathematics	25	70	4.1	35.8	5.2	40.3	49,822	5,086	2,075	6.3	42.3		o	
8	Science	25	70	----	----	9.2	39.7	51,748	3,160	2,075	11.5	46.1		o	
8	Social Studies	25	70	2.8	25.9	3.3	31.9	51,706	3,202	2,075	3.8	35.9		o	

STUDENT PARTICIPATION

ATTENDANCE RATE (YEARLY)	STANDARD PERCENT		1990** PERCENT	1994 PERCENT	1995			
	EX	SAT			PERCENT	EX	SAT	NOT MET
Grades 1 - 6	96	94	94.2	95.3	95.0			o
Grades 7 - 12	96	94	90.1	91.3	91.0			o

STUDENTS ABSENT	1994 PERCENT	1995 PERCENT
Fewer than 5 days	34.0	31.5
More than 20 days	13.6	14.7

DROPOUT RATE (YEARLY)	STANDARD PERCENT		1990** PERCENT	1994 PERCENT	1995			
	EX	SAT			PERCENT	EX	SAT	NOT MET
Grades 9 - 12	1.25	3.0	6.5	4.95	4.95			o

STUDENT ATTAINMENT

PROMOTION RATE	STANDARD PERCENT		1990** PERCENT	1994 PERCENT	1995			
	EX	SAT			PERCENT	EX	SAT	NOT MET
Grades 1 - 6	98	96	97.5	99.0	98.9			o

HIGH SCHOOL PROGRAM COMPLETION	1992** PERCENT COMPLETED	1994 PERCENT COMPLETED	1995	
			NUMBER COMPLETED	PERCENT COMPLETED

University of Md System Requirements	42.6	47.7	21,253	49.7
Approved Occupational Prog. Requirements	17.6	14.7	5,617	13.1
University and Occupational Requirements	2.4	3.4	1,600	3.7

POST-SECONDARY DECISIONS

GRADE 12 DOCUMENTED DECISIONS TO:	1992** PERCENT	1994 PERCENT	1995	
			NUMBER	PERCENT
Attend a four year college	40.2	41.2	16,167	42.7
Attend a two year college	18.7	18.3	6,881	18.2
Attend a specialized school or specialized training	2.9	2.6	959	2.5
Enter employment (related to high school program)	5.4	4.8	1,597	4.2
Enter employment (unrelated to high school program)	8.5	8.0	3,140	8.3
Enter the military	3.7	3.6	1,355	3.6
Enter full-time employment and school	2.8	3.4	1,236	3.3
Enter part-time employment and/or school	12.5	12.5	4,553	12.0
Other and no response	5.3	5.7	1,995	5.3

SUPPORTING INFORMATION

School Year 1994-1995

Maryland

ENROLLMENT	1993 - 94	1994 - 95
Pre-Kindergarten	17,998	18,834
Kindergarten	60,300	62,341
Grades 1 - 6	370,347	375,752
Grades 7 - 12	309,989	321,124
Ungraded Special Education	12,743	12,887
TOTAL ENROLLMENT	771,377	790,938

FIRST GRADERS WITH KINDERGARTEN EXPERIENCE	1994		1995	
	NUMBER	PERCENT	NUMBER	PERCENT
	63,197	96.7	64,927	97.8

NORM-REFERENCED ASSESSMENT (Comprehensive Tests of Basic Skills-CTBS/4)									
Because of sampling in some school systems, state total is adjusted proportionally.	Reading Comprehension			Language Total			Mathematics Total		
	1994 Median Percentile	1995 Number Taking	1995 Median Percentile	1994 Median Percentile	1995 Number Taking	1995 Median Percentile	1994 Median Percentile	1995 Number Taking	1995 Median Percentile
Grade 3	53.6	59,233	53.5	49.1	60,374	50.0	48.8	59,312	48.8
Grade 5	48.4	59,033	48.0	51.4	59,782	52.1	51.2	58,832	52.3
Grade 8	54.5	55,456	55.0	49.4	55,020	49.9	47.9	54,589	48.9

STUDENT MOBILITY	1994		1995	
	NUMBER	PERCENT	NUMBER	PERCENT
Entrants	87,823	11.7	88,969	11.6
Withdrawals	93,269	12.4	97,011	12.7

STUDENTS RECEIVING SPECIAL SERVICES	1994		1995	
	NUMBER	PERCENT	NUMBER	PERCENT
Limited English Proficient	13,950	1.8	14,305	1.8
Chapter 1	60,907	7.9	53,583	6.8
Free/Reduced Price Meals	227,208	29.5	240,623	30.4
Special Education	90,185	11.7	92,175	11.7
Intensity I	6,860	7.6	6,566	7.1
Intensity II	31,537	35.0	31,808	34.5
Intensity III	18,947	21.0	20,188	21.9
Intensity IV	22,745	25.2	23,553	25.6
Intensity V	10,096	11.2	10,060	10.9

OTHER FACTORS	1994	1995
Wealth per pupil	\$229,445	234,091
Per pupil expenditure	\$5,978	\$6,106
Instructional staff per 1,000 pupils	59.8	57.9
Professional support staff per 1,000 pupils	9.2	8.8
Instructional assistants per 1,000 pupils	9.5	9.9
Average length of school day for pupils	6.5	6.5
Length of school year for pupils	178	180

School Improvement Notes

Maryland's Student Performance results are aggregates of the twenty-four local school systems' results. Overall, satisfactory standards were met for: Maryland Functional Tests--grade 9 in mathematics, and grade 11 in writing and passed all tests; and student attendance in grades 1-6. Excellent standards were met for: student promotions and Maryland Functional Tests--grades 9 and 11 in reading. As a state we did not meet the satisfactory standards for: writing and citizenship in grade 9, mathematics and citizenship in grade 11, student attendance in grades 7-12, dropouts, and all grades and subject areas in the Maryland School Performance Assessment Program (MSPAP). In the MSPAP, however, we increased our scores in sixteen of the eighteen areas assessed.

We shall continue to work with local school systems to improve the quality of instruction to move us closer to our goal of achieving all standards.

BALTIMORE CITY

Baltimore City, with a population of 736,000, ranks thirteenth in population in U.S. cities. The Board of Education is housed on North Avenue. The one hundred eighty public schools include one hundred twenty elementary, twenty-eight middle, fourteen high, ten special education, five alternative, and three vocational/technical schools.



STUDENT PERFORMANCE

School Year 1994 -1995

ASSESSED STUDENT KNOWLEDGE

MARYLAND FUNCTIONAL TESTS	STANDARD PERCENT		1993** Percent Passing	1994 Percent Passing	1995						
	EX	SAT			NUMBER TAKING	NUMBER ABSENT	NUMBER EXEMPT	PERCENT PASSING	EX	SAT	NOT MET
Grade 9 Status											
Reading	97	95	91.4	89.3	8,295	633	139	90.5			o
Mathematics	90	80	48.2	45.1	8,450	478	139	43.7			o
Writing	96	90	75.5	63.6	7,836	973	137	59.4			o
Citizenship	92	85	62.3	-----	5,023	482	108	73.1			o

MARYLAND FUNCTIONAL TESTS Grade 11 Status	STANDARD PERCENT		1991** Percent Passing	1994 Percent Passing	1995					
	EX	SAT			NUMBER REFUSED	NUMBER EXEMPT	PERCENT PASSING	EX	SAT	NOT MET
Reading	99	97	97.9	98.6	0	102	98.1		0	
Mathematics	99	97	86.4	85.1	0	102	84.6			0
Writing	99	97	90.2	93.6	0	97	92.6			0
Citizenship	99	97	89.6	88.4	0	102	86.4			0
Passed All Tests	96	90	78.0	76.8	0	91	75.9			0

MARYLAND SCHOOL PERFORMANCE ASSESSMENT PROGRAM		STANDARD PERCENT		1993** Percent at		1994 Percent at		1995						
								NUMBER TESTED	NUMBER ABSENT/ EXCUSED	NUMBER NOT REPORTED	Percent at		EX	SAT
		EX	SAT	EX	SAT	EX	SAT				EX	SAT		
3	Reading	25	70	----	----	0.3	9.2	7,362	787	785	1.0	12.1		o
3	Writing	25	70	2.7	18.1	1.9	16.0	7,547	603	784	4.5	17.4		o
3	Language Usage	25	70	2.4	13.7	2.5	14.5	7,592	558	784	2.8	19.4		o
3	Mathematics	25	70	0.1	7.1	0.7	12.4	7,441	707	786	1.7	16.2		o
3	Science	25	70	0.2	8.0	0.8	12.5	7,508	642	784	1.6	15.2		o
3	Social Studies	25	70	0.0	9.4	0.2	11.6	7,571	579	784	0.8	14.2		o
5	Reading	25	70	0.3	7.3	0.8	10.0	7,030	683	1,025	0.7	9.6		o
5	Writing	25	70	3.0	17.6	1.9	13.6	7,200	513	1,025	3.6	13.7		o
5	Language Usage	25	70	2.8	10.4	4.2	14.7	7,276	436	1,026	4.6	15.0		o
5	Mathematics	25	70	0.5	11.8	1.1	13.3	6,920	793	1,025	1.5	17.6		o
5	Science	25	70	0.4	7.7	0.5	10.6	7,239	474	1,025	0.7	13.0		o
5	Social Studies	25	70	0.4	9.6	0.8	9.8	7,178	535	1,025	1.4	13.8		o
8	Reading	25	70	0.1	5.1	0.2	5.4	5,860	1,269	411	0.2	7.4		o
8	Writing	25	70	1.7	13.2	2.1	15.3	5,791	1,339	410	1.8	13.8		o
8	Language Usage	25	70	1.6	13.8	2.2	15.1	5,886	1,242	412	3.5	21.6		o
8	Mathematics	25	70	0.2	5.4	0.2	9.4	5,574	1,556	410	0.4	12.4		o
8	Science	25	70	----	----	0.8	9.1	5,926	1,204	410	1.4	13.2		o
8	Social Studies	25	70	0.4	6.1	0.4	7.7	5,910	1,220	410	0.5	10.8		o

*Fewer Than 20 Students **Indicates Baseline Year Data

KEY: EX = Excellent, SAT = Satisfactory

STUDENT PARTICIPATION

ATTENDANCE RATE (YEARLY)	STANDARD PERCENT		1990** PERCENT	1994 PERCENT	1995			
	EX	SAT			PERCENT	EX	SAT	NOT MET
Grades 1 - 6	96	94	90.4	93.6	92.5			o
Grades 7 - 12	96	94	79.4	82.7	80.7			o

STUDENTS ABSENT		1994 PERCENT	1995 PERCENT
Fewer than 5 days		25.4	22.4
More than 20 days		29.2	33.2

DROPOUT RATE (YEARLY)	STANDARD PERCENT		1990** PERCENT	1994 PERCENT	1995			
	EX	SAT			PERCENT	EX	SAT	NOT MET
Grades 9 - 12	1.25	3.0	18.8	15.19	14.23			o

STUDENT ATTAINMENT

PROMOTION RATE	STANDARD PERCENT		1990** PERCENT	1994 PERCENT	1995			
	EX	SAT			PERCENT	EX	SAT	NOT MET
Grades 1 - 6	98	96	91.1	96.6	96.6			0

HIGH SCHOOL PROGRAM COMPLETION	1992** PERCENT COMPLETED	1994 PERCENT COMPLETED	1995	
			NUMBER COMPLETED	PERCENT COMPLETED

University of Md System Requirements	29.4	31.7	1,264	30.3
Approved Occupational Prog. Requirements	19.7	19.5	857	20.6
University and Occupational Requirements	1.0	0.7	79	1.9

POST-SECONDARY DECISIONS

GRADE 12 DOCUMENTED DECISIONS TO:	1992** PERCENT	1994 PERCENT	1995	
			NUMBER	PERCENT
Attend a four year college	35.6	33.7	1,057	34.8
Attend a two year college	15.0	17.7	543	17.9
Attend a specialized school or specialized training	4.5	4.0	103	3.4
Enter employment (related to high school program)	5.9	5.4	156	5.1
Enter employment (unrelated to high school program)	10.1	9.6	319	10.5
Enter the military	5.1	3.6	121	4.0
Enter full-time employment and school	3.2	5.2	149	4.9
Enter part-time employment and/or school	15.0	16.1	437	14.4
Other and no response	5.7	4.8	154	5.1

SUPPORTING INFORMATION

School Year 1994-1995

Baltimore City

ENROLLMENT	1993 - 94	1994 - 95
Pre-Kindergarten	5,165	5,113
Kindergarten	9,092	9,260
Grades 1 - 6	57,534	56,742
Grades 7 - 12	40,302	42,313
Ungraded Special Education	0	0
TOTAL ENROLLMENT	112,093	113,428

STUDENT MOBILITY	1994		1995	
	NUMBER	PERCENT	NUMBER	PERCENT
Entrants	15,969	15.0	15,340	14.5
Withdrawals	25,422	23.8	25,002	23.6

STUDENTS RECEIVING SPECIAL SERVICES	1994		1995	
	NUMBER	PERCENT	NUMBER	PERCENT
Limited English Proficient	399	0.4	433	0.4
Chapter 1	22,020	19.6	20,239	17.8
Free/Reduced Price Meals	77,753	69.4	77,908	68.7
Special Education	16,301	14.5	16,235	14.3
Intensity I	460	2.8	*	0.1
Intensity II	3,031	18.6	3,212	19.8
Intensity III	3,036	18.6	3,161	19.5
Intensity IV	8,175	50.2	8,275	51.0
Intensity V	1,599	9.8	1,569	9.7

OTHER FACTORS	1994	1995
Wealth per pupil	\$124,486	\$124,290
Per pupil expenditure	\$5,391	\$5,566
Instructional staff per 1,000 pupils	56.6	54.2
Professional support staff per 1,000 pupils	8.1	7.7
Instructional assistants per 1,000 pupils	8.7	11.0
Average length of school day for pupils	6.2	6.2
Length of school year for pupils	180	180

FIRST GRADERS WITH KINDERGARTEN EXPERIENCE	1994		1995	
	NUMBER	PERCENT	NUMBER	PERCENT
	9,757	90.4	10,050	96.3

NORM-REFERENCED ASSESSMENT (Comprehensive Tests of Basic Skills-CTBS/4)									
Census- Grades 3, 5 Sample- Grade 8 and Lang. Total (All Grades)	Reading Comprehension			Language Total			Mathematics Total		
	1994 Median Percentile	1995 Number Taking	1995 Median Percentile	1994 Median Percentile	1995 Number Taking	1995 Median Percentile	1994 Median Percentile	1995 Number Taking	1995 Median Percentile
Grade 3	39.0	8,008	36.3	39.0	263	37.0	39.0	7,868	38.3
Grade 5	32.0	7,622	28.9	40.0	268	43.0	41.0	7,868	38.3
Grade 8	38.0	239	32.8	38.0	236	34.8	29.0	228	31.8

School Improvement Notes

The mission of the Baltimore City Public School System is to create a pathway of successful learning for all students. We are committed to shared decision making.

We continue to perform at a satisfactory level in the areas of elementary promotions and eleventh grade functional reading. We are encouraged by the reduction in the dropout rate. The increase in the percent of our seniors completing an approved occupational program means that more of our seniors are better prepared to enter the world of work. We are concerned about the lack of progress in meeting functional test performance standards. Although our MSPAP scores have improved in a number of areas, we are still a long way from meeting the standards.

Our school improvement initiatives include: Challenge Schools Program, Alternative Middle School, Early Learning Years Initiative, Middle School Reform Institute, Enterprise Schools, and Efficacy. We remain among the poorest subdivisions of Maryland, but serve the largest population of students with special needs, incidences of poverty, and mobility. We continue to work toward meeting the needs of children.

A Message from the State Superintendent of Schools

Welcome to Maryland's 1995 School Performance Report!

With this year's report, you will find improvements in the progress our students and schools are achieving. You will also note areas that we all must work harder at improving. Only through continual progress and evaluation, including this annual report, can we continue to provide excellent schools, a first-class education for our young people, and a plan for school reform that is a model for state systems across the nation.

School reform in Maryland began in 1989 when the Governor's Commission on School Performance recommended changing the state's educational system. The Maryland State Board of Education then began **Schools for Success**, a comprehensive reform plan that made Maryland one of the first states to develop a strategy for improving its schools and for supporting the national education goals.

This report, the *Maryland School Performance Report, 1995: State and School Systems*, presents performance information and the standards of performance that provide the basis for school improvement. It presents a rich resource for parents, students, teachers, and citizens to examine achievement in our school systems.

Through this report, which is an important part of the Maryland School Performance Program (MSPP), we as Maryland educators are accountable for moving our state toward high quality education for all of our children. We are guided by three fundamental premises:

- * All children can learn.
- * All children have the right to attend schools in which they can progress and learn.
- * All children shall have a real opportunity to learn equally rigorous content.

Similar to the 1994 report, this year's report includes results from the Maryland School Performance Assessment Program (MSPAP), along with standards for performance in mathematics, science, reading, social studies, writing, and language usage in grades 3, 5, and 8. These standards reflect the performance we should expect from our schools as we prepare students for the twenty-first century.

Changes in teaching methods are now underway across the state. Changes are crucial to achieving our demanding but attainable standards. Because the standards are progressive and rigorous, we should not be discouraged if the data, as reflected in this report, show that we still have a long way to go before we reach our vision of excellence.

Thank you for examining this report and for your interest in education. The success of our state and local efforts to improve every Maryland school depends upon your continued interest and involvement in our schools each and every day.

Nancy S. Grasmick
December 1995

Introduction

The Maryland State Board of Education approved the Maryland School Performance Data-Based Areas on April 25, 1990 (*Resolution Number 1990-5*); standards for the Data-Based Areas on August 29, 1990 (*Resolution Number 1990-30*); additional standards on July 31, 1991 (*Resolution Number 1991-17*); and Public School Standards (COMAR 13A.01.04), effective December 20, 1993.

The first *Maryland School Performance Report* was published in November 1990, but presented limited student performance information. Since 1991, the annual report has been released in two parts:

- * **State and School Systems:** Published by the Maryland State Department of Education, this booklet contains summaries for the state and for each of Maryland's twenty-four school systems.
- * **School System and Schools:** Published by each local school system shortly after release of the State and School System report, these reports include school-by-school summaries.

In addition to the areas listed in this booklet, several school systems have added other statistical information which is published in their local reports.

Data-Based Areas are essential tools for measuring how well schools, school systems, and the state prepare each student for higher education and successful careers. This information tells us how students are performing and helps to guide decisions about

how best to improve schools. The areas also provide information about factors that influence school performance. The Data-Based Areas are divided into two parts in this booklet: *Student Performance and Supporting Information*.

Why were these areas chosen? Data-Based Areas for Student Performance were chosen for statewide reporting because they:

- * can be influenced by the school;
- * are comparable across the state;
- * are essential for student and school improvement;
- * can help improve classroom instruction;
- * can be measured by statewide standards of satisfactory and excellent.

The Data-Based Areas for Supporting Information were chosen because they help describe school, school system, and state characteristics. School populations differ greatly in Maryland, and this information describes those differences.

The goal of the Maryland School Performance Program is for each school to offer an excellent education to its students. Thus, the performances of school systems and individual schools are judged against their own growth from year to year, not against growth in other school systems or in other schools. This is an important point to remember as you review the data contained in this booklet and in its companion reports.

How to use this booklet

For each school system, you will find sections labeled Student Performance and Supporting Information.

STUDENT PERFORMANCE

Part 1: ASSESSED STUDENT KNOWLEDGE

*** *Maryland Functional Tests***

In order to graduate from a Maryland high school, all students must achieve basic competencies in reading, mathematics, writing, and citizenship. Functional tests, which reflect classroom instruction, assess whether a student has attained these competencies.

This section reports functional test results in Grades 9 and 11: the number of students taking (or refusing to take) the test, the number absent or exempt, and the percentage of students passing each test by the end of the school year. (Results are reported for the citizenship test at the end of grade 10 for Baltimore City, Frederick, Howard, Montgomery, and Washington school systems.)

*** *Maryland School Performance Assessment Program (MSPAP)***

These annual tests require students in grades 3, 5, and 8 to apply what they know in reading, mathematics, science, social studies, writing, and language usage. Unlike functional tests, which measure basic knowledge, the MSPAP tests set high expectations and demand high levels of performance.

During the MSPAP, students must apply knowledge in and across subject areas. Working independently or in groups, they must show that they understand reading selections, can develop written responses, solve multi-step mathematics problems, conduct science investigations, and demonstrate their understanding of social studies concepts.

This section reports the number of students tested, the number absent or excused from the test, and the number not reported (including exemptions for special education, limited English proficiency, and second semester transfer students). Results are reported as the percentage of students scoring at the satisfactory level and the percentage scoring at the excellent level.

Part 2: STUDENT PARTICIPATION

*** *Attendance Rate***

Yearly Rate: The percentage of students in school for at least half the average school day during the school year. Attendance rates are reported for elementary (Grades 1-6) and secondary (Grades 7-12) students.

Students absent fewer than 5 or more than 20 days: The percentage of students absent from school fewer than 5 and more than 20 days during the school year. Only students enrolled for 91 or more days during the school year are included.

*** *Dropout Rate***

The percentage of students in grades 9-12 who withdrew from school before graduation or before completing a Maryland approved educational program during the July-to-June academic year.

Part 3: STUDENT ATTAINMENT

*** *Promotion Rate***

The percentage of students who moved to a higher grade or instructional level at the end of the school year in Grades 1-6 including special education students under 12 years of age.

*** *High School Program Completion***

The number and percentage of 1995 graduates who completed minimum course requirements needed to enter the University of Maryland system, who completed an approved occupational program, and who completed both university and occupational requirements.

Part 4: POST-SECONDARY DECISIONS

- * The number and percentage of 1995 graduates who have indicated that they plan to attend a two- or four-year college, attend a specialized school, or pursue specialized training. Also included are those graduates who intend to enter employment related or unrelated to their high school program, enter the military, or enter full- or part-time employment and school. Students indicate their plans through a pre-graduation survey.

SUPPORTING INFORMATION

Part 1: ENROLLMENT

The number of students enrolled in grades pre-kindergarten through 12, including special education students, as counted on September 30, 1994.

Part 2: MOBILITY

Entrants include the number and percentage of students who transferred into or within a system, while withdrawals include the number and percentage of students who transferred to other schools or who dropped out of school. Mobility is reported as a percentage of the system's average daily enrollment.

Part 3: STUDENTS RECEIVING SPECIAL SERVICES

*** *Limited English Proficiency***

Students who have a primary or home language other than English and who have limited or no age-appropriate ability to understand, speak, read, or write English.

*** *Chapter 1***

Students in pre-kindergarten through grade 6 who receive services funded wholly or in part by the Chapter 1 federal education act. Percentages are based on the September 30, 1994 enrollment.

*** *Free/Reduced Price Meals***

Students whose applications for free or reduced price meals met family size and income guidelines of the United States Department of Agriculture as of June 30, 1995.

*** *Special Education***

Handicapped students who had current Individualized Education Programs (IEPs) and who were being served by the school system as of December 1994. Data are presented both as a total and by the level of service (Intensity I-V).

Part 4: OTHER FACTORS

*** *Financial Information***

Wealth per pupil--the taxable wealth in relation to the September 30, 1994 enrollment--provides an indication of potential resources for each school system.

Per pupil expenditure is the average cost of providing education to each public school student. Data reported in this publication are 1992-93 and 1993-94 figures.

*** *Staffing per 1,000 Students* (as of October 30, 1994)**

Instructional staff: Those who perform professional activities related to teaching students. These staff members include classroom, resource, home and hospital, television and radio, and reading teachers.

Professional Support Staff: Those who provide auxiliary services to students or to the instructional program. These staff members include librarians, guidance counselors, school psychologists, therapists, principals, assistant principals, and administrative assistants.

Instructional Assistants: Those who assist teachers with routine activities such as monitoring students, conducting rote exercises, operating equipment, and performing clerical duties. These staff members include regular program, special education, Chapter I, and library assistants.

*** *Instructional Time***

Average Length of School Day: The average number of student hours to the nearest quarter hour between the first and final bell of a full school day.

Length of School Year: The number of days that school was open and students were expected to attend.

Part 5: FIRST GRADERS WITH KINDERGARTEN EXPERIENCE

The number and percentage of first graders who attended a public or non-public kindergarten prior to entering the first grade.

**Part 6: NORM REFERENCED ASSESSMENT--
COMPREHENSIVE TESTS OF BASIC SKILLS (CTBS/4)**

The numbers of grade 3, 5, and 8 students who have taken the CTBS/4, and their system-wide median national percentile ranks in reading, language arts, and mathematics. Some school systems test all students (census) while others test only a portion (sample).

Part 7: SCHOOL IMPROVEMENT NOTES

This area, submitted by local school systems, presents information about local programs and improvements designed to reach the standards. It also lists efforts made by local school systems to address Data-Based Areas which need improvement.

Standards

The State Board of Education approved the standards reported in the Student Performance sections. The challenge now is to reach these standards by the year 2000. Standards are measures of performance against which results are compared. Standards are not used in the Supporting Information area.

Standards do several things for schools, systems, and the state:

- * They help to examine critical aspects of instructional programs.
- * They help to ensure that all students receive quality instruction.
- * They help educators to be accountable for quality instruction.
- * They help to guide efforts toward school improvement.

Maryland has divided its standards into three areas:

- * **Excellent:** A highly challenging and exemplary level of achievement indicating outstanding accomplishment in meeting the needs of students.
- * **Satisfactory:** A realistic and rigorous level of achievement indicating proficiency in meeting the needs of students.
- * **Not Met:** A level of achievement indicating that more work is needed to attain proficiency in meeting the needs of students.

Reaching the excellent or satisfactory level is difficult, for the standards have been set at high levels. We expect school systems to continue to progress and to reach the standards by the year 2000.

State Data-Based Areas

Functional Tests

		Standards	
		Satisfactory	Excellent
Reading	Grade 9	95%	97%
	Grade 11	97%	99%
Mathematics	Grade 9	80%	90%
	Grade 11	97%	99%
Writing	Grade 9	90%	96%
	Grade 11	97%	99%
Citizenship	Grade 9	85%	92%
	Grade 11	97%	99%
All Tests	Grade 11	90%	96%

Attendance Rate (Yearly)

Grades 1-6 and 7-12	94%	96%
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Promotion Rate

Grades 1-6	96%	98%
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Dropout Rate (Yearly)

Grades 9-12	3%	1.25%
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Maryland School Performance

Assessment Program (MSPAP)

Grades 3, 5, and 8 on all tests	70%	25%
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(A school meets the excellent standard on the MSPAP only when 70% or more of its students achieve at satisfactory or above and 25% or more of its students achieve at the excellent level.)

This report for December 1995 contains data from the baseline year, the previous year (1994), and current data.

DISAGGREGATED DATA

State data are disaggregated by sex and race/ethnicity for all student performance areas if 20 or more students are included in one of the following race/ethnicity categories: American Indian/Alaskan Native; Asian/Pacific Islander; African-American; White (not of Hispanic origin); and Hispanic. School system data are not disaggregated in the State/System report. The disaggregated MSPAP standards data reflect students with defined gender and race/ethnicity.

USE AND VERIFICATION OF DATA

Data provide a snapshot of each school, school system, and the state. Schools, school systems, and the state use the data to make instructional improvement decisions; to improve performance; and to measure improvement from year to year. The picture is complete only when all information is considered. It is the sum of the parts that is valuable for school improvement decisions.

School system data contained in this report were submitted to the Maryland State Department of Education by local school systems. Local superintendents agreed with data reconciliation reached by local system and State Department of Education personnel. In cases where differences of more than five percent occurred between 1994 and 1995 data, additional procedures were used to verify accuracy. State data are an aggregation of local system data.

CTBS/4 data were submitted to the Maryland State Department of Education by CTB Macmillan/McGraw-Hill, the publisher of CTBS/4.

YOUR NOTES

EDUCATION WEEK

Bucking a Trend, Md. Assessments Emerge as Model School-Reform Tool

By Karen Diegmüller

Baltimore

In this new era of testing, while other states' assessment programs have run into brick walls—occasionally with fatal results—Maryland has bounced over the bumps, doctored the bruises, and emerged with a system that appears to be strong enough to lead its public schools into the next century.

The Maryland School Performance Assessment Program in many ways resembles the pioneering California Learning Assessment System. But while CLAS was abandoned last year under intense political pressure, the Maryland assessment has progressed.

"They have a good, open-ended assessment system," said Edward Roeber, the director of the state collaborative on assessment and student standards for the Council of Chief State School Officers. "They have good people there, they have taken time to do it, and they haven't oversold it."

And, Mr. Roeber added, "They have gone out and talked to people about why it was important."

Launched in 1991, the school performance assessment program is the keystone of Maryland's broader plan to improve student and school performance and make the schools more accountable.

The assessment grew out of a system of academic outcomes in which Maryland spells out what it expects of its students. By basing the assessment on high achievement levels, Maryland officials believed the M.S.P.A.P. would elevate curriculum and instruction.

"There are a lot of educators out there who think that is a bad idea, but

we have demonstrated that you can model good instruction through assessment," Steven Ferrara, the director of state assessment, said in a recent interview at the Maryland education department here.

"But," he added, "the assessment alone cannot do the job."

Although labor intensive, some say the teachers' involvement in both the creation and grading of the test has helped them accept the changes it has brought to their classrooms.

Teacher Involvement

The other central elements are teacher participation and professional development. Teams of teachers create the assessments, devise the scoring guidelines, and score the tests in consultation with education department personnel.

"The process is labor intensive, but the labor is all Maryland teacher labor," said Mark Moody, the assistant state superintendent for planning, results, and information management. "What that does for us is get them to buy into it and to think about things differently," he said.

The Maryland program is part of the new breed of measures known as performance assessments. Although this type of test varies considerably, students typically are asked to execute tasks and answer questions, generally in writing. There are no bubbles to be filled in on multiple-

choice sheets. Nor is there one correct answer to most of the questions. Sometimes the tasks are carried out in groups and sometimes individually.

Half the states had performance assessments as of the 1993-94 school year, though such tests have faced increasing criticism in recent months.

Repeating a memorized historical fact or mathematical formula is insufficient. Maryland students are expected to be able to explain events, analyze situations, and solve problems.

The tests are administered for a week each spring to 3rd, 5th, and 8th graders who are assigned randomly to groups in their schools and tested in reading, writing, language usage, mathematics, science, and social studies. Some tasks are confined to a single subject; others integrate disciplines.

The assessment is designed to measure school performance rather than student performance, although the state is conducting a pilot to determine the best and most accurate way to present parents with meaningful data about their children.

However, another, perhaps tougher, challenge may lie ahead. The state is trying to develop high-stakes performance assessments for high school students, whose diplomas are likely to hinge on how they do. Last week, a task force recommended to the state school board that the tests be given at the end of classes in such core courses as English, math, science, and social studies. The assessments, which would be mandated beginning with the class of 2002, might also include student portfolios.

Now, the major consequence of poor performance for schools "is the threat of state intervention," said

Ronald A. Peiffer, the assistant state superintendent for school and community outreach. That fate has befallen five Baltimore schools.

Early Problems

Many problems surfaced in the first year or two of the Maryland assessment. Teachers were inadequately trained to administer the tests. Because examination packets were withheld until immediately before testing began, teachers were unfamiliar with the materials, and experiments went awry. Some test questions proved faulty. And the children were unaccustomed to taking such tests.

Joan L. Goodwin, an elementary-reading specialist in the Title I program in Allegany County in largely rural western Maryland, said 3rd graders there "literally cried because they couldn't express what they were thinking."

The problems all showed up in the district report cards that the state issues each December. Even wealthy districts with nationwide reputations for excellence, such as the systems in Montgomery and Howard counties in the Washington suburbs, could not, as a whole, meet a single standard.

James R. McGowan, the associate superintendent for instruction and school administration in Howard County, said his district is making steady gains. "There are a few [schools] that have met them and exceeded them."

Fewer Complaints

Many of the problems have been corrected. Training has been intensified, teachers get the exams earlier, and assessment tasks are screened more thoroughly. And, after five years, students are more comfortable with the process: None of the students Ms. Goodwin encountered this year cried because of the tests.

Test scores have risen, but there still is not a district in the state that has met a standard, although more schools have improved their scores. Had many of the schools already met

the standards, said Mr. Ferrara, "we would have failed our mission."

Complaints from the public have decreased, also, Mr. Peiffer said, because people now have a better understanding of the assessment and more teachers and administrators have been drawn into the process.

Mr. Ferrara said: "One of the things that we have managed to do is avoid some of the controversies that other states have gotten caught up in. We [bypass] topics you can deal with in a classroom that you can't deal with in a state assessment."

Maryland officials learned their lesson after a 5th-grade task about constitutional rights incorporated a political cartoon depicting a movie marquee promoting an all-nude dance review.

What remains to be seen is whether the M.S.P.A.P. is doing what it is intended to do—improve student achievement through curriculum and instruction reform.

The federally financed National Reading Research Center, a consortium of university researchers, has found evidence suggesting that the program has had consistently positive effects on classroom practice. Yet, researchers from the University of Maryland and the State University of New York at Buffalo tempered their remarks because they studied schools that were considered exemplars of instructional change.

In another study, the researchers found a number of barriers to implementation: lack of time and resources, unclear communication and test materials, and an inadequate fit between the model of good instruction and assessment and teachers' beliefs and practices.

The study was conducted in schools that had shown relative success and a positive reaction to the state's mandate.

"If this is the stuff that is being encountered in those schools, it might be a little more difficult in districts that don't feel they have enough resources or teacher cooperation," said Peter P. Afflerbach, a principal investigator at the research center and an

associate professor of curriculum and instruction at the University of Maryland.

Fewer Blanks in Booklets

Those involved in the program acknowledge mixed results.

Last spring, Gail Lynn Goldberg noticed a test about Martin Luther King Jr. on a teacher's desk. It posed such questions as, In what year did Dr. King deliver his "I Have a Dream" speech? Ms. Goldberg, the state's test-development specialist, would have preferred a question that asked students how their dreams were similar or dissimilar to the civil rights leader's.

Over all, though, Ms. Goldberg said there has been tremendous progress that does not always show up in the published data—an observation made repeatedly by teachers scoring tests last month at Randallstown High School in Baltimore County.

Numerous teachers reported such encouraging signs as fewer blanks showing up in test booklets and more reasoning in the responses. And the teachers said that they had changed their practices.

Others are less optimistic. Though a booster of the program, Doralynn Jacobs, an elementary school librarian, said many teachers in her school have been resistant to changing the way they teach.

In a recent phone interview, Ms. Goodwin of Allegany County said that many of the teachers in her district are veterans who were not eager to change. Now that they realize that the state assessment is not a flash in the pan, however, they have acquiesced.

"I don't know of many people who do like the test," Ms. Goodwin said. In part, she said, that sentiment is due to the realization that unlike multiple-choice examinations, "you can't help the children pass the test." But, she continued, teachers can help them prepare for the test, beginning in the earliest grades.

"We have to teach children to think, which is a lifelong skill."

High School Assessments

1

REVISED JULY 1995

1. How does the proposed High School Assessment relate to the Maryland School Performance Assessment Program (MSPAP)?

The High School Assessment is an extension of the Maryland School Performance Assessment Program, which Maryland has already implemented in grades 3, 5 and 8 to determine the performance level of individual schools. The State Board of Education has asked the Maryland State Department of Education to develop a testing program that will measure the performance level of individual high school students as part of student graduation requirements. Schools will also use results of the assessments to help plan appropriate improvements. While the primary focus of MSPAP 3, 5, and 8 is the school and secondarily the individual student, the high school component focuses primarily on the student, secondarily on the school.

2. How is the Maryland State Department of Education developing the High School Assessment?

A 30-plus member Assessment Task Force representing professional education-related organizations in Maryland is overseeing the assessment. The task force is coordinating the work of five content teams made up of about 15-40 public school and business professionals. The content teams are identifying essential learning or core learning goals in each area. The five content areas are: English, mathematics, science, social studies, and a fifth that is termed "skills for success." The task force is also responsible for relating the state assessment to local reform practices.

3. What are "skills for success?"

In September of 1993, a statewide Performance-Based Graduation Requirement task force recommended that Maryland develop an assessment to test students' knowledge and application of knowledge in specific subject areas, and, at the same time, test for abilities in general skill areas, such as problem solving skills, that are essential to success in life, post-secondary education, and the world of work.

4. What models from outside Maryland are being used to formulate the high school assessments?

The content teams are reviewing available research on high school performance across the country and internationally. National and international standards will be used as touchstones in the development of the Maryland program.

5. Who are members of the content teams?

The members of each content team are public school, higher education, and business professionals who are recognized as leading specialists in each content area. They have been selected because of their extensive experience and knowledge.

6. What happens after each content team identifies the core learning goals for each area?

Each content team will submit its recommendations to the Assessment Task Force. The task force will report a draft of the core learning goals to the State Board of Education at its December 1994 meeting.

7. How are possible formats for the assessment being developed?

A coordinating team comprised of 10 to 15 Maryland State Department of Education professionals is in the process of reviewing possible formats for the assessments. The team will then coordinate with the content teams and submit its recommendations to the task force. These recommendations will be included in a late spring report to the State Board of Education no later than June, 1995.

8. If the State Board of Education endorses the core learning goals recommended by the task force, will test development begin immediately?

No. Indicators of achievement for each core learning goal would have to be finalized. After that, a match of the core learning goals with existing test instrumentation nationwide will occur before any decision is made to develop a customized Maryland High School Assessment Program. A comprehensive proposal including the core learning goals, assessment instrumentation, professional development, a fiscal note, and multi-year timeline is expected to be presented to the State Board of Education.

9. What are some of the options for putting the assessments in place once they are approved?

Options include:

- ❖ Adopting existing testing procedures already in place;
- ❖ Modifying existing testing procedures to best implement the assessments;
- ❖ Participating in a partnership development with national groups and/or other states in test development;
- ❖ Customizing Maryland test development.

For more information, contact: Ron Peiffer (410) 767-0473

MSPAP THROUGH THE EYES OF A 3RD GRADE STUDENT

12

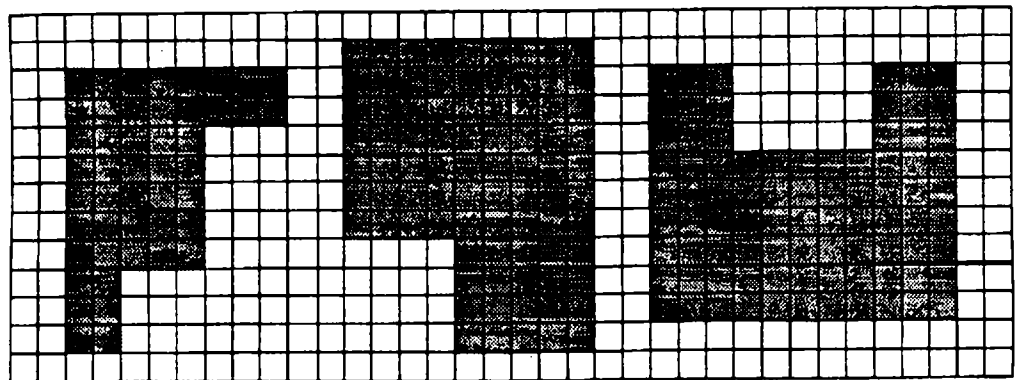
FEBRUARY 1995

How might a Maryland School Performance assessment item--or task--be described by a student taking the MSPAP? Here is how the steps in a task on "Planning a Zoo" might be viewed by a 3rd grader.

1. The teacher gives us floor plans.

◆ My teacher says we're going to imagine that some people planning a new zoo in our town have asked our class to help. In our activity papers, there are pictures of three floor plans for three different animals in our zoo - a giraffe, a polar bear, and an elephant. The key says that each little square on the plan is equal to one square foot of real space. Next, we have to build a fence around each cage and figure out how much it will cost. Fencing costs \$8.00 per foot, so we have to count each side of a square going around the cage. Once we find this number, it's easy to multiply it by 8 on our calculators to find out how much putting a fence around each cage will cost.

Floor Plan



Cage A: Giraffe

Cage B: Polar Bear

Cage C: Elephant

Key: 1 □ = 1 square foot

2. More measuring and multiplying.

◆ Now we have to put some flooring in the cages to make the animals more comfortable. Each square foot of flooring costs \$4.00. We have to figure out how much the flooring for each cage will cost. The easy way is just to count the squares. Then we multiply that number by 4 to find out how much it will cost to put a floor in each cage.

CAGE	AREA	COST
A		\$
B		\$
C		\$

3. Each animal has special needs.

◆ The giraffe needs a square feed box measuring 4 square feet, and it has to be placed in the cage so the animal can get around it on all sides. I draw a box around four squares in the cage. Since the box isn't touching any walls, the giraffe will be able to move around it on all sides. The polar bear needs a swimming pool with a perimeter of twelve feet, and the pool should be in a corner of the cage. I draw a figure against one of the corners of the cage, making sure that the perimeter equals 12. The elephant needs two trees. The elephant is easy to please. I just draw two boxes that have the same size and shape.

CAGE	PERIMETER	COST
A		\$
B		\$
C		\$

4. Creating a tile pattern.

◆ Our zoo will have an information office, and since we want everything to look nice, we have to make up a repeating pattern for the tiles on the floor of the office. I remember the pattern of our tiles in the kitchen at home. They look like a checkerboard. So I color in every other box in the rows of squares until it looks like our kitchen at home. I write a sentence about how I came up with the pattern.

◆ Then we're finished. Everybody had a lot of fun planning our zoo. It doesn't seem so hard now to plan something like a zoo, or maybe something else, like a bridge or a building. I bet that's not as hard as it looks either.

For more information, contact: Ron Peiffer (410) 767-0473

MSPAP THROUGH THE EYES OF A 5TH GRADE STUDENT

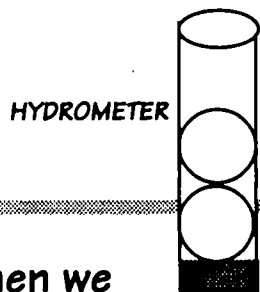
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DECEMBER 1994

How might a Maryland School Performance assessment item--or task--be described by a student taking the MSPAP? Here is how the steps in a task on "Salinity" might be viewed by a 5th grader.

1. The teacher sets the stage

◆ My teacher tells us how important water is to life on planet earth and how the differences in the amount of salt (salinity) in the water affect the kinds of life that can exist in certain places. So we can understand salinity better, my teacher gives us the tools my classmates and I need to construct a hydrometer, a device that measures the amount of salt in the water. We do this using a drinking straw cut in half with one end sealed with clay and two BBs at the bottom to weight it down. We also get rulers, pen, tape, salt, and fresh water in cups from the teacher. As we start to work, she writes on the board how much time we have to complete each part of our task.



2. Then we work in groups

◆ Next, my classmates and I work together in a group, using our newly fashioned hydrometer to test two samples of water, one fresh and one salty. When we place the hydrometer in the fresh water, the teacher asks us to observe what occurs and then each of us draws a picture of what we see. Then we do the same thing when we put the hydrometer in the salt water.

◆ Now we are asked to decide what is the best way to measure the differences between the ways the hydrometer acts in different types of water. Once we have agreed on a method, we each write a description of how to measure.

3. We gather more information

◆ We then put the hydrometer in fresh water and salt water samples again. Only this time, instead of drawing a picture, we use our group's way of measuring the results and write these down instead. Then our teacher asks each of us to describe the difference between the two measurements and try to come up with possible explanations for the differences our group has observed between salt and fresh water. We write all these down in the space provided in our test booklets.

4. I put what I know to work

◆ Now, I try to predict the future. What do I think will happen when equal amounts of salt water and fresh water are mixed? How will the hydrometer react to this "brackish" water? The teacher asks each of us to make predictions, and for every prediction I make, I have to come up with a reason.

◆ It's time to put the predictions to the test. Working together, the teacher asks us to mix equal amounts of salt and fresh water, then test the mixture with the hydrometer. We record what happens. Did this investigation cause me to either accept or reject my predictions? Using evidence from the investigation, each of us must explain whether it did or not.

5. I use what I know to solve a problem

◆ Now our teacher explains that, in science, the salinity of water is measured in parts per thousand or "ppt." Certain types of water animals can only live in water that has the proper salinity level. We work individually, using a chart listing some examples of these creatures and the range of salinity "ppt" in which they can thrive. We also use a copy of a real salinity map of the Chesapeake Bay. The test booklet explains that the saltwater aquarium in our school has a salinity of between 16 and 30 ppt. Based on the information on the chart, we are asked which creatures would not be able to thrive in our aquarium, and which creatures require a lesser or greater salinity. Next, using the salinity map of the Chesapeake Bay, I must determine in which areas of the Chesapeake each animal might live. Now the whole idea of salinity makes a little more sense and is connected to the natural world.

SALINITY SURVIVAL ZONES		
ORGANISM	SALINITY RANGE	ZONES WHERE THE ORGANISM CAN BE FOUND
Blue Crab	0-30 ppt	
Black Sea Bass	15-30 ppt	
Sea Nettle	7-30 ppt	
White Crapple	0 ppt	
Striped Bass	0-30 ppt	
Common Sea Star	18-30 ppt	
Marsh Periwinkle	0-15 ppt	
Waterweed	0-9 ppt	
Yellow Pond Lily	0 ppt	

◆ My final assignment is to write a paragraph describing how I would use a hydrometer so that, if our class went on a field trip and caught some small sea bass, we could make sure that the salinity in our aquarium would be right for our fish. The instructions in the test booklet tell me that I should write carefully and proofread my work.

For more information, contact: Ron Peiffer (410) 767-0473

MSPAP THROUGH THE EYES OF AN 8TH GRADE STUDENT

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MARCH 1995

How might a Maryland School Performance assessment item--or task--be described by a student taking the MSPAP? Here is how a task on "Planetary Patterns" might be viewed by an 8th grader.

1. Exploring a new solar system.

♦ Today, my teacher asked us to imagine that we were scientists working at the Goddard Space Flight Center in Greenbelt, Maryland. The Voyager spacecraft has been sending back data on a newly discovered solar system. There are four planets in this new system, and they have nearly circular orbits that do not overlap. A chart tells us the surface temperature, number of moons, tilt of axis and chemical composition of each planet. Based on this data and an orbit diagram, we have to identify similarities between patterns present in this new solar system and our own solar system. Looking at the model provided, I see that the planets in the new solar system orbit around a sun which is at the center of the system, just like ours. I also notice that the surface temperature of any planet in the system decreases as its distance from the sun increases.

2. More questions, more patterns.

♦ Next we are asked to come up with at least three questions about the new solar system which are not answered by the chart. I have quite a few questions about the system, including the size of each planet, each planet's distance from the sun, the atmospheric pressure of each planet, and the age of the planet. Next, I am asked to identify and write about three repeating patterns of astronomical change that occur in the sky. I remember that the moon goes through phases regularly, the sun rises and sets each day, and there is a difference in the position of the stars in the sky as the seasons change.

3. Completing the orbit data logs and predicting planet positions.

♦ My classmates and I are given a chart listing the position of the four planets in the new solar system for the months of January, February, March and April. Working with three other students, we must complete the orbit data logs, also provided in our packet, to show in a picture form where each planet is at each of these times. Working carefully, we pinpoint the position of each planet in each of

the four months using the data given. Then, on our own, we use what we have learned about the rate of the orbit of each planet to predict the position of all four planets in the month of May. We are allowed to use pennies on our chart to represent planets and move them around the diagram to help make our predictions. Once our predictions are made, we write about our methods. I figured out how far each planet moved around its orbit in a month and moved the penny representing each planet the right distance, and there it was, at the right spot.

4. Reserving time on the orbiting space telescope.

◆ The next instructions I read ask me to imagine that *Space and Telescope Magazine* wants to record the next planetary alignment of this new solar system. To do this, I need to figure out when the planets will be aligned so I can reserve time on the orbiting space telescope. This takes a little more doing than the last task, and I find that using the pennies on my diagram helps me keep track of the motion of the planets. Carefully keeping track of which month I am in, I move each planet around its orbit the right number of spaces. Finally, after moving all the planets around their orbits several times, I come to a month when they are all in a row, or aligned. This is the month I predict should be reserved for the use of the orbiting space telescope.

5. Conclusions and explanations for younger students.

◆ Next, I write about how predicting the alignment of the planets was different from predicting their position in the month of May, one month after our data ended. It was a little more difficult to predict the alignment, but I found that by moving the pennies around the diagram one at a time and keeping track of the month, I was able to find the answer. In the space on our worksheet I write a paragraph for a younger student describing how the model of the solar system using orbit diagrams and pennies helped with my predictions. Finally, I write about how working with others in a group influenced or changed our beginning ideas about the position of the planets. My group basically agreed on how to go about predicting the positions of the planets, and our idea worked.

6. When we put it to the test, it was confirmed.

◆ Planetary Patterns was challenging, I had to think carefully and logically. I also got a chance to use information I learned in my science class.

For more information, contact: Ron Peiffer (410) 767-0473