DOCUMENT RESUME

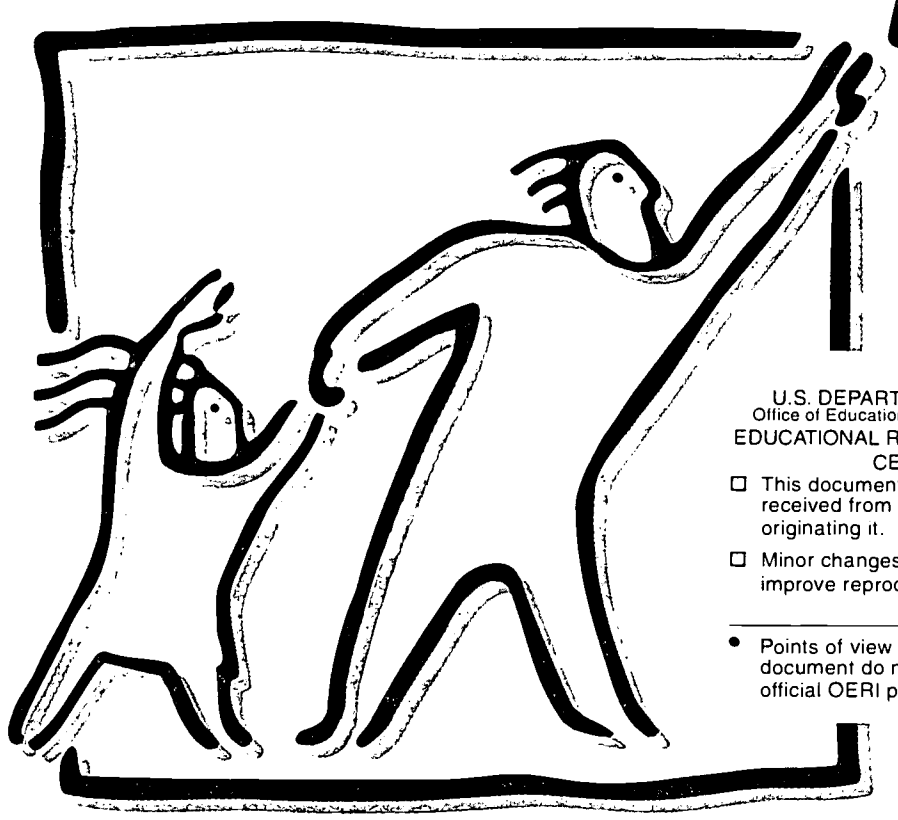
ED 400 348 TM 026 359

TITLE	The National Education Goals Report. Commonly Asked Questions about Standards and Assessments. Executive Summary, 1996.
INSTITUTION	National Education Goals Panel, Washington, DC.
REPORT NO	ISBN-0-16-048885-)
PUB DATE	96
NOTE	44p.; For the core report, see TM 026 358; for the 1995 executive summary, see ED 389 100.
AVAILABLE FROM	U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	*Academic Achievement; Educational Improvement; *Educational Objectives; *Elementary Secondary Education; Federal Programs; Mathematics Instruction; *National Surveys; Reading Instruction; Science Instruction; *Standards; State Programs; State Standards; *Student Evaluation
IDENTIFIERS	*National Education Goals 1990

ABSTRACT

This executive summary of the National Educational Goals Report 1996 serves as a barometer of the U.S.'s progress toward the National Education Goals defined in early 1990. This year's report, sixth in a series of annual reports planned through the year 2000, focuses on standards and assessments, two areas of educational reform which are currently of interest to state and local communities. The report also updates information reported in 1991-1995 to indicate changes since the baseline reporting year whenever additional data has become available. Part 1 of the summary takes each of the national goals and highlights a few key findings in that area since 1991. Part 2 answers frequently asked questions about setting standards and creating assessments at the state and local level and provides knowledge so that parents and students can actively participate in discussions and the decision making process in their communities. Examples of challenging state assessment programs and activities from Maryland, Connecticut, and Kentucky are given. Part 3 outlines the U.S.'s progress since the baseline year on a set of core indicators in each National Education Goal area. Overall, the Goals Panel stresses that it will be impossible to achieve the National Education Goals unless states and local communities demand more from their students by setting rigorous standards for student achievement and by designing new forms of assessment to determine whether students have mastered challenging subject matter. (MAK)

THE NATIONAL EDUCATION GOALS REPORT



EXECUTIVE SUMMARY

Commonly Asked Questions About Standards and Assessments

1996

National Education Goals Panel

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ISBN 0-16-048885-0

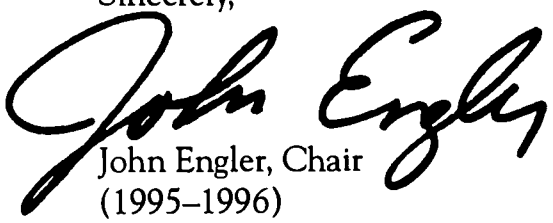
Foreword

On behalf of the National Education Goals Panel, I am pleased to present the *1996 National Education Goals Report*. This is the sixth in a series of annual reports published by the National Education Goals Panel to measure the amount of progress made by the nation and the states toward the eight National Education Goals. This year's *Goals Report* consists of two documents, a *Core Report* and an *Executive Summary*. The *Core Report* highlights approximately two dozen core indicators to convey to parents, educators, and policymakers how much progress we have made in each Goal area. The *Executive Summary* presents this information in a condensed version.

This year the *Goals Report* focuses on two areas of education reform which are currently of great interest to states and local communities: standards and assessments. The Goals Panel remains convinced that it will be impossible to achieve the National Education Goals unless states and local communities demand more from their students by setting rigorous standards for student achievement and by designing new forms of assessment to determine whether students have mastered challenging subject matter. The good news is that the majority of states and a number of local school districts, both large and small, have been engaged in standards-setting and assessment development for quite some time. And those which are in the earlier stages of standards-setting and assessment development can expect increased support from the nation's Governors and business leaders, who pledged in March 1996 to help states set their own standards and develop assessments within the next two years.

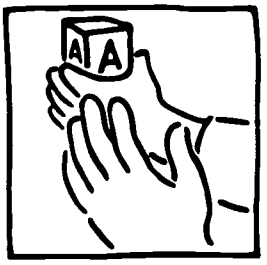
While much has been written about the process of setting standards and developing assessments for policymakers and educators, little has been available until now to help parents understand how higher standards and new forms of assessments will affect their own children. This *Goals Report* hopes to fill that need by providing information to parents about standards and assessments so that they can be knowledgeable participants in these important policy decisions.

Sincerely,



John Engler, Chair
(1995–1996)
National Education Goals Panel, and Governor of Michigan

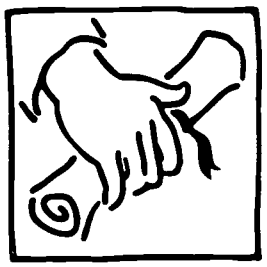
THE NATIONAL EDUCATION GOALS



Goal 1: Ready to Learn

By the year 2000, all children in America will start school ready to learn.

Did you know... that between 1990 and 1994, the United States was successful in reducing the proportion of infants born with one or more health risks from 37% to 34%—representing at least 72,700 children who were born with a healthier start in life?



Goal 2: School Completion

By the year 2000, the high school graduation rate will increase to at least 90 percent.

Did you know... that 2,833 students drop out of school each day, and that within two years high school graduates can expect to earn 25 percent more than dropouts?

Goal 3: Student Achievement and Citizenship

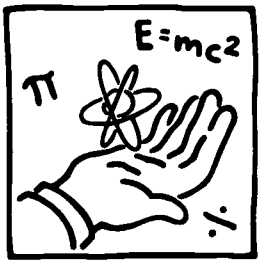
By the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.

Did you know... that at the 1996 National Education Summit, Governors and business leaders from across the country made commitments to set rigorous state academic standards and create assessments to measure student attainment of those standards within the next two years?

Goal 4: Teacher Education and Professional Development

By the year 2000, the Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.

Did you know... that in 1994, only about half of all teachers reported participating in professional development activities in the use of educational technology and student assessment strategies in the previous year, despite rapidly changing knowledge and practice in those areas?



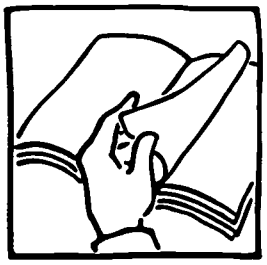
Goal 5: Mathematics and Science

By the year 2000, United States students will be first in the world in mathematics and science achievement.

Did you know . . . that students who take algebra are 2½ times more likely to enter college than those who do not take algebra?

Goal 6: Adult Literacy and Lifelong Learning

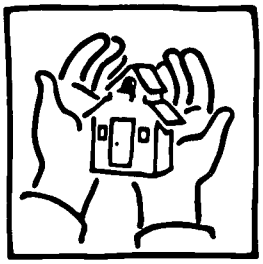
By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.



Did you know . . . that between 1992 and 1995, the gap in college completion rates between White and Hispanic students increased from 15 percentage points to 21 percentage points?

Goal 7: Safe, Disciplined, and Alcohol- and Drug-free Schools

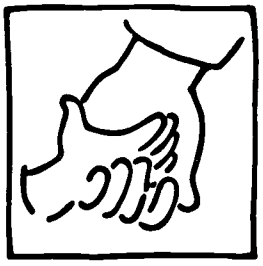
By the year 2000, every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.



Did you know . . . that between 1992 and 1995, the percentage of students who reported that someone attempted to give or sell them drugs at school increased from 18% to 28%?

Goal 8: Parental Participation

By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.



Did you know . . . that parents of students in Grades 3–5 are more likely to report that they participate in activities in their child's school than are parents of students in Grades 6–8 or Grades 9–12?

SETTING STANDARDS AND CREATING ASSESSMENTS AT THE STATE AND LOCAL LEVELS

What should 4th graders know about American history? What kinds of computer skills should they be expected to master? Should all 8th graders be able to solve algebra problems? Should they be able to dissect a frog and identify its major organs? In order to receive a high school diploma, should school districts require their 12th graders to design and conduct chemistry experiments? Should high school graduates be expected to play at least one musical instrument? Should they be required to speak, read, and write a foreign language? Are these expectations too high? How do they compare to the expectations held for students in other countries? In today's world, what basics should all students learn?

These are the kinds of questions that are being discussed and debated throughout the United States as states and local communities decide what they want their own students to know and be able to do so that they are prepared to enter college or the workforce when they graduate. Mounting evidence suggests that far more rigorous levels of academic achievement will be required to equip American students for the kinds of jobs that will be available in the future—jobs that will demand increasingly sophisticated levels of literacy, communication, mathematical, and technical skills. Widespread concern that we do not ask enough from either our students or our schools has led to a resounding call for more challenging academic standards that clearly define what we expect all students to learn (content standards) and the levels of performance that we expect them to achieve (performance standards).

More rigorous education standards require students to master the basics and more. Challenging academic standards emphasize a thorough understanding of subject matter, plus problem-solving skills; integration and application of knowledge across different subject-matter disciplines; and thinking skills. For example, one of Colorado's standards for reading and writing requires students to "make predictions, analyze, draw conclusions, and discriminate between fact and opinion in writing, reading, speaking, listening, and viewing."[1] One of Virginia's science standards requires students in Grade 4 to "plan and conduct investigations in which appropriate metric measures are used to collect, record, and report data."[2] And one of New Jersey's standards for visual and performing arts

More rigorous education standards require students to master the basics and more.

expects that by the end of Grade 8, students will "create, produce, or perform works of dance, music, theater, or visual arts, individually and with others."[3]

These are not the kinds of knowledge and skills that can be easily tested with traditional multiple-choice examinations. It is not surprising, therefore, to find that many states and local communities are also hard at work creating new kinds of tests to measure whether students are meeting the new standards.

Why should these efforts by states and local school districts to set standards and to develop new assessments be of interest to parents? What does this mean for their own children? What kinds of skills and knowledge will they be expected to learn? What will these new tests look like? And what will happen if students do not meet the standards? This chapter will address these and related questions about standards and assessments so that parents can actively participate in these kinds of discussions and decisions in their own communities.

Why do we need to set standards? Haven't we had education standards all along?

Unlike some of our international competitors, the United States has never had a common set of education standards. This is because education is considered primarily a state or local responsibility (depending on the traditions of the state). It is true that the notion of establishing standards is not necessarily new to states and local school districts, since most have long held some sort of standards for promotion to a higher grade or for high school graduation. However, these kinds of standards have usually been set at very low levels to define the minimum acceptable levels of performance, rather than at high levels to define desirable, or expected, levels of performance. In addition, these kinds of standards have usually varied widely in both their scope and their quality from school district to school district. High performance standards for student achievement have been described as "part of an overall effort to improve instruction, increase the content of what is taught, and develop rigorous tests that measure progress toward high standards."[4]

Unlike some of our international competitors, the United States has never had a common set of education standards. This is because education is considered primarily a state or local responsibility (depending on the traditions of the state).

The push to set more challenging education standards was greatly influenced by several decades of international comparisons which suggested that U.S. students lagged behind their peers in other countries in mathematics and science achievement.[5,6] Interest in raising standards was further heightened when the National Commission on Excellence in Education warned in its 1983 report, *A Nation at Risk*, that the skills and knowledge of the U.S. workforce would have to increase dramatically in order for the nation to remain internationally competitive.[7]

In 1989, President Bush and the nation's Governors met in Charlottesville, Virginia, to address this problem collectively. The participants at this first

Education Summit agreed to set National Education Goals in order to provide a common direction for educational improvement in all states. Six National Education Goals were established in 1990, and were later expanded to eight by Congress. The Goals state that by the year 2000:

1. All children in America will start school ready to learn.
2. The high school graduation rate will increase to at least 90 percent.
3. All students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.
4. The Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.
5. United States students will be first in the world in mathematics and science achievement.
6. Every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.
7. Every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
8. Every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

The National Education Goals Panel was created in 1990 to monitor national and state progress toward these goals through the end of the decade. However, the members of the Goals Panel quickly concluded that it would not be possible to determine whether U.S. students had actually met the Goals (especially Goal 3) unless states set clear targets, or standards, to determine whether students had "demonstrated competency over challenging subject matter."

How much progress has been made so far?

Since that time, a tremendous amount of work has taken place at the national, state, and local levels to set higher standards in education and to develop new forms of challenging assessments. Over the past seven years, voluntary standards have been created by subject area experts such as the National Council of Teachers of Mathematics in eight of the nine core subject areas specified in Goal 3 (English, mathematics, science, foreign languages, civics and government, arts, history, and geography). Draft standards are currently under development in the ninth core area, economics. These voluntary standards have served as models or resources for the development of state and local standards. Physical education, social studies, English

as a Second Language, health, industrial arts, and technology are additional subject areas in which voluntary standards have been released in final or draft form.

As the voluntary subject-specific standards were being designed, many states were conducting similar work of their own. At least 32 states have developed state standards, and an additional 14 report that standards development is under way.[8,9] Forty-five states report that they have statewide assessment systems. Twenty-three states report that they have aligned* their assessments with their standards, and an additional 21 report that they are in the process of doing so.[10]

Local school districts also report that they have been busy setting their own standards and developing their own assessments. And this work has not been limited to small or wealthy school districts. Twenty-eight of the nation's largest urban districts recently reported that they were in the process of developing or adopting their own standards. Twenty-eight districts also reported that they were in the process of aligning their local assessment systems with national, state, or local standards.[11]

At least 32 states have developed state standards, and an additional 14 report that standards development is under way. Forty-five states report that they have statewide assessment systems.

Despite all of the work that has been done to date, policymakers and business leaders realize that a number of critical challenges still lie ahead. For example, translated copies of the standards, assessments, and curricula of the United States' chief economic competitors are not readily available to states to help ensure that the standards they set for their own students are comparable to the best in the world.[12] In addition, many states that have finished drafting their standards are now struggling with the complexity and expense of designing new assessments to determine whether students have met the standards. And limited information is available to let policymakers and business leaders know how their state standards and their students' performance measure up when compared to neighboring states.

Governors and business leaders convened a second Education Summit in Palisades, New York, in March 1996, in order to confirm their commitment to standards and assessments and to address these kinds of concerns. Two of the goals that participants agreed to achieve in their own states within the next two years were "to set clear academic standards for what students need to know or be able to do in core subject areas; and to assist schools in accurately measuring student progress toward reaching these standards."[13]

What do these new standards look like?

Some states, such as California, are setting standards at every grade.[14] Others, such as Washington, are setting standards by levels rather than grades. Most states, however, organize their standards by three or four grade clusters (for example, Kindergarten-Grade 4, Grades 5–8, and Grades 9–12). All states report that the first subject areas in which they developed or are developing standards are

* In other words, they are revising their assessment systems so that their tests will actually measure whether or not students have mastered the skills and knowledge specified in the standards.

English/language arts, mathematics, science, and social studies. Additional core subject areas that are frequently cited include civics, geography, the arts, history, economics, and foreign languages. There is quite a bit of variation from state to state, however, in the breadth of subject areas covered. A few of the additional areas in which standards are being developed include agriculture (Nebraska), business (North Dakota), vocational education (Alabama), environmental education (Wyoming), marketing education (Texas), workplace readiness (New Jersey), home and work skills (Hawaii), health promotion and wellness (District of Columbia), technology (Michigan), and Native American, foreign, and American sign languages (Oklahoma).

Four examples of state standards that were developed in the core academic subjects of English language arts, mathematics, history, and science follow. These examples were selected because each of the states that developed them—Virginia, Florida, California, and Delaware—met the American Federation of Teachers' criteria for "exemplary" standards.** According to the American Federation of Teachers, these standards are worthy of emulation by other states. They are "all written in clear, explicit language, they are firmly rooted in the content of the subject area, and they are detailed enough to provide significant guidance to teachers, curriculum and assessment developers, parents, students, and others who will be using them."[15]

SAMPLE STANDARDS

English Language Arts

Virginia: Grade 8

Writing

Standard: The student will write in a variety of forms, including narrative, expository and persuasive writings.

- Use prewriting strategies to generate and organize ideas.
- Focus on elaboration and organization.
- Select specific vocabulary and information.
- Use standard sentence formation, eliminating comma splices and other nonstandard forms of sentences that distract readers.
- Revise writing for word choice, appropriate organization, consistent point of view, and transitions among paragraphs.
- Edit final copies to ensure correct use of pronoun case, verb tense inflections, and adjective and adverb comparisons.
- Edit final copies to ensure correct spelling, capitalization, punctuation, and format.
- Use available technology.

Source: Commonwealth of Virginia Board of Education. (1995, June). *Standards of learning for Virginia public schools.* Richmond, VA: Author.

** While not all states agree with the criteria developed by the American Federation of Teachers (AFT) to evaluate standards, they are a starting point for discussing the quality of content standards. The complete list of states that met the AFT criteria for exemplary standards is as follows: California (social studies), Delaware (science), District of Columbia (social studies), Florida (mathematics, social studies), Indiana (mathematics), Massachusetts (science), Ohio (mathematics), Virginia (English, mathematics, science, social studies), and West Virginia (mathematics).

Mathematics

Florida: Grades 6–8

Measurement

Standard: The student measures quantities in the real world and uses the measures to solve problems.

1. Uses concrete and graphic models to derive formulas for finding perimeter, area, surface area, circumference, and volume of two- and three-dimensional shapes, including rectangular solids and cylinders.
2. Uses concrete and graphic models to derive formulas for finding rates, distance, time, and angle measures.
3. Understands and describes how a change of a figure in such dimensions as length, width, height, and radius affects its other measurements such as perimeter, area, surface area, and volume.
4. Constructs, interprets, and uses scale drawings such as those based on number lines and maps to solve real-world problems.

Source: Florida State Department of Education. (1996). *Sunshine State standards, 1996.* Tallahassee, FL: Author.

History

California: Grade 8

United States History and Geography: Growth and Conflict

Standard: The student will demonstrate an understanding of the principles underlying the American Revolution.

Examples of the type of work students should be able to do to meet the standard:

1. Describe major events and explain ideas leading to the War for Independence.
2. Analyze key phrases of the Declaration of Independence and explain how they justified revolution, with special emphasis on the natural rights philosophy and the concept of "consent of the governed."
3. Explain the Patriots' cause after studying passages from such sources as Thomas Paine's *Common Sense*, political sermons, or letters of the time.
4. Describe the arguments advanced by both Patriots and Loyalists and explain how they demonstrated different interests, beliefs, hopes, and fears.
5. Explain the contributions of Washington, Jefferson, Franklin, and others in establishing a new nation.
6. Explain how the principles which brought about the American Revolution influenced other nations in history and how they still have meaning today.

Source: California Department of Education. (1995). *Challenging standards for student success. Draft interim content and performance standards.* Sacramento, CA: Author.

Delaware: Grades 6–8

Energy and Its Effects: Interactions of Energy with Materials

Standard: By the end of eighth grade students should know that:

1. Energy can travel as waves which are characterized by wavelength, frequency, amplitude, and speed. Waves have common properties of absorption, reflection, and refraction when they interact with matter. They are either mechanical (e.g., sound, earthquake, tidal) or electromagnetic (e.g., sunlight, radio waves); only electromagnetic waves will travel through a vacuum.
2. The resistance to flow of an electric current through a material depends on the mobility of electrons in the material. In conductors (e.g., metals) the electrons flow easily, while in insulators (e.g., wood, glasses) they flow hardly at all. The resistance to flow converts electric energy to heat energy.

Source: State of Delaware Department of Public Instruction. (1995, June). *New directions: Delaware first in education. State of Delaware science curriculum framework, content standards. Vol. I.* Dover, DE: Author.

As a reminder, standards define the essential concepts and skills that we expect all students to know and be able to do. However, they should not prescribe *what* should be taught to enable students to reach the standard (curriculum), nor should they dictate *how* the material should be taught (instruction). These decisions are best left to teachers and other school staff who work most closely with students. For example, in the sample standards shown on the previous page, California distinguishes the essential concept, or standard ("The student will demonstrate an understanding of the principles underlying the American Revolution"), from sample curricular activities that students should be able to do in order to meet the standard (e.g., "analyze key phrases of the Declaration of Independence").

Does this mean that nearly all of the work on standards and assessments is already done and that there are no further opportunities for input?

No. A number of states are still in the early stages of creating standards or revising initial drafts. In addition, some of the standards that have been created are so lengthy that it would not be possible to cover them all within the course of a normal school year. It will be essential for states and local communities to seek public input to help them choose what is most important for students to know and be able to do so that the standards that are finally adopted are useful and feasible. Many states report that public participation at hearings and at town and regional meetings has been a critical component of their standards development process.[16] They claim that public participation has helped build support for setting higher standards in their states and has provided needed assistance during writing and review.

Moreover, despite the work that has already been done, in most cases we have limited information to tell us:

- whether standards are of high quality;
- whether standards are set high enough;

- how standards in one state compare with the standards set in other states or other countries;
- how student achievement compares across states or internationally;
- whether a state's assessment system is truly aligned with its standards;
- how states and local school systems are using assessment results to improve both student and teacher performance; and
- whether current assessments are actually measuring the knowledge and skills that children truly need to succeed.

How can we judge whether standards are of high quality?

Several organizations such as the American Federation of Teachers,[17] the Council for Basic Education,[18] the National Alliance of Business,[19] and an advisory group to the National Education Goals Panel[20] have recently developed criteria to judge the quality of standards.[21] Although each group's criteria differ slightly from the others, common to all are the notions that standards should be rigorous, comparable to the best in the world, and should be understood and supported by parents and the general public. One example of criteria to judge whether standards are of high quality is shown on the following page (see box).[22]

Standards should be rigorous, comparable to the best in the world, and should be understood and supported by parents and the general public.

Colorado is an example of a state that enlisted the assistance of its citizens to judge the quality of its standards. Over 3,000 copies of the first draft of Colorado's standards were mailed to groups and individuals such as parent organizations, teachers, superintendents, public libraries, presidents of school boards, college and university presidents, and the general public.[23] The standards included response forms that asked citizens to rate each standard on a scale of 1 to 5 according to five questions:

1. Is the content standard a statement of what a student should know or be able to do?
2. Is the content standard specific and clear?
3. Is the content standard meaningful for today's world?
4. Is the content standard inclusive (that is, something every child can learn)?
5. Is the content standard a worthy goal for student learning?

Between 700 and 1,300 responses were received in each subject matter area. These responses were used to revise and improve the quality of the final set of standards.

How do we know whether standards are set high enough?

Although we may desire to be the best in the world, information is not readily available that would enable states to compare their results easily to each other, to the nation, or to our international competitors. Simply setting standards does not ensure that they are sufficiently challenging. External benchmarks are needed to ensure that the standards are as demanding as those found elsewhere. But how can a state or a community benchmark its standards to know whether they are set high enough?

Standards Should Be:

1. **World-class:** at least as challenging as current standards in other leading industrial countries, though not necessarily the same.
2. **Important and focused:** parsimonious while including those elements that represent the most important knowledge and skills within a discipline.
3. **Useful:** developing what is needed for citizenship, employment, and life-long learning.
4. **Reflective of broad consensus-building:** resulting from an iterative process of comment, feedback, and revision including educators and the lay public.
5. **Balanced:** between the competing requirements for:
   - depth and breadth;
   - being definite/specific and being flexible/adaptable;
   - theory or principles and facts or information;
   - formal knowledge and applications; and
   - being forward-looking and traditional.
6. **Accurate and sound:** reflecting the best scholarship within the discipline.
7. **Clear and usable:** sufficiently clear so that parents, teachers, and students can understand what the standards mean and what the standards require of them.
8. **Assessable:** sufficiently specific so their attainment can be measured in terms meaningful to teachers, students, parents, test makers and users, the public, and others.
9. **Adaptable:** permitting flexibility in implementation needed for local control, state and regional variation, and differing individual interests and cultural traditions.
10. **Developmentally appropriate:** challenging but, with sustained effort, attainable by all students at elementary, middle, and high school levels.

Source: Goals 3 and 4 Technical Planning Group on the Review of Education Standards. (1993). *Promises to keep: Creating high standards for American students* (Publication 94-01), pp. iii–iv. Washington, DC: National Education Goals Panel.

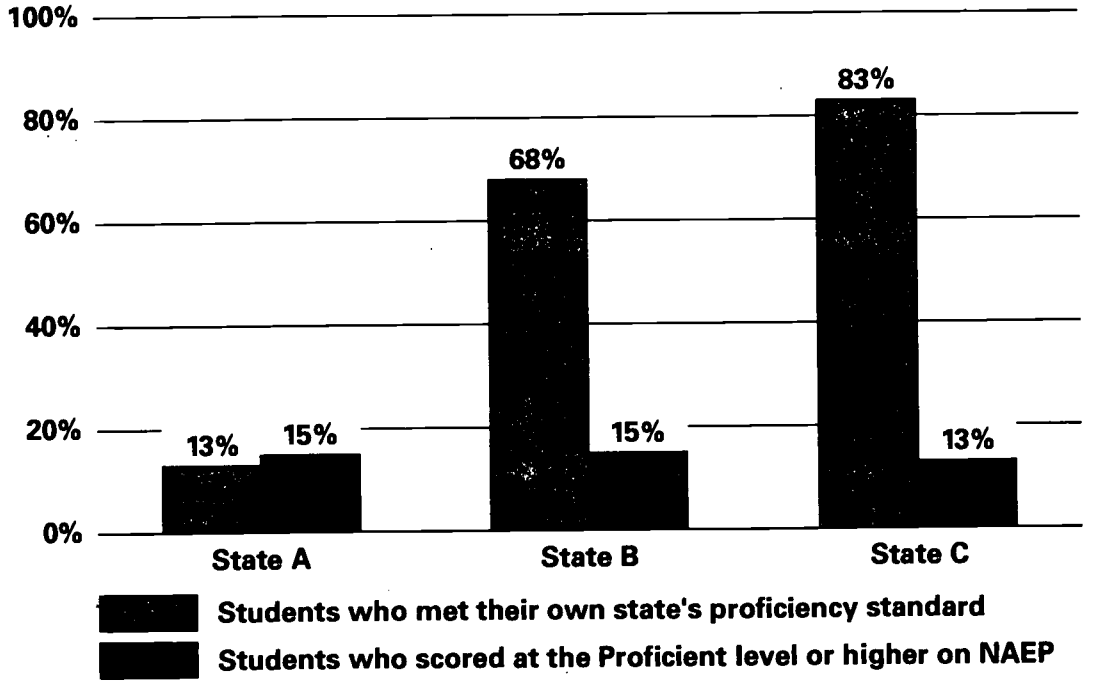
One way this could be done is by comparing the state standard with a high standard on another test. This type of comparison was recently done in mathematics and in reading, using the National Assessment of Educational Progress (NAEP).[24] NAEP is an assessment that is administered nationally at Grades 4, 8, and 12. Three levels are used to describe student performance: Basic, Proficient, and Advanced. The percentage of students who met their own state's performance standard was compared to the percentage of students in that state who scored at the Proficient or Advanced levels on NAEP. (The Goals Panel considers student performance at the Proficient or Advanced levels on NAEP as evidence of mastery over challenging subject matter.)

The results of this comparison suggest that what is considered "good enough" for student performance varies from state to state. Exhibit A profiles results for three states in which 8th graders performed similarly on the 1992 NAEP mathe-

Exhibit A

Proficiency in Mathematics, NAEP Standard vs. State Standards

Percentages of 7th and 8th grade students in three states who met their own state's proficiency standard[1] in mathematics in 1994–95, compared with percentages of 8th graders in the same states who scored at the Proficient level or higher in mathematics on the 1992 National Assessment of Educational Progress (NAEP)[2]



[1] The definitions for mathematics proficiency in the profiled states are as follows:
State A: The percentage of students meeting or exceeding the state standard (Level 1).
State B: The percentage of students meeting or exceeding the state standard.
State C: The percentage of students meeting or exceeding the "adequate and acceptable" performance standard.

[2] NAEP mathematics data have been revised.

Data source: Musick, M. (1996). *Setting education standards high enough: An open letter to educators, parents, governors, legislators, and civic and business leaders*. Atlanta: Southern Regional Education Board.

matics assessment—13% to 15% of the students in each state performed at the Proficient level or higher. However, the percentages of 7th and 8th graders in these three states who met the standard on their own state's assessment ranged from 13% to 83%. These large differences suggest that States B and C (and many others like them) have probably set their own standards too low.

Of course, as the author of the study acknowledges, one can reasonably argue that it is the NAEP standards that are set too high. The main point that he makes, however, is that unless states talk to each other about the processes they underwent to set standards, "the odds are great that 1) many states will set low performance standards for student achievement despite lofty sounding pronouncements about high standards, and 2) the standards for student achievement will be so dramatically different from state to state that they simply won't make sense."[25]

The National Education Goals Panel's Statement of Principles on State Systems of Assessment

The National Education Goals Panel strongly encourages states to:

1. Align state assessment systems with high academic state standards.
2. Report assessment results in a manner that is clear and meaningful to all interested parties—from parents to employers to policymakers—and that communicates whether all students are meeting the state's academic standards.
3. Use results for the continuous improvement of teaching and learning and for holding both the school system and the student accountable for progress.
4. Consider using the National Assessment of Educational Progress (NAEP) test frameworks and embedding test items voluntarily in their own systems of standards and assessments so that NAEP data can serve as an external benchmark for state results.
5. Consider benchmarking performance levels to those at the national level (such as those developed by NAEP), and to those developed by other states and countries.

The National Education Goals Panel strongly encourages states and local communities to hold these kinds of discussions. To aid in these discussions, the Goals Panel has developed a set of principles to serve as guides to states and local communities as they develop and revise their own academic standards and systems of assessment (see box above).

How can we tell whether standards are as challenging as those set in other states or other countries?

This is one of the most important questions that policymakers, business leaders, and parents should be asking. A state that demands little from its graduates creates few incentives to attract businesses, create jobs, and boost its economy. Moreover, a state that demands little from its graduates provides scant assurance to parents that their sons and daughters will be able to compete successfully for good jobs or for admission to college, especially when compared to students who have been held to much higher standards.

States have used a variety of formal and informal approaches to determine whether their standards are as challenging as others', but these efforts have been largely uncoordinated. At present, there is no single place where states and local communities can turn for help to see whether they have set their standards high enough, what they can learn from the experience of others, and how their standards compare to the best in the world. Participating Governors and business leaders at the second National Education Summit are in the process of establishing an independent, nongovernmental organization that can provide this very type of assistance.[26]

In the meantime, the majority of states have consulted standards documents developed by other states or by subject area experts when drafting their own standards. A more direct approach was tried by the North Dakota State Department of Education, which sent its standards to all 50 state departments of education for feedback.[27] Yet another approach is being studied on an experimental basis in four states that are working with the U.S. Department of Education's National Center for Education Statistics.[28] The purpose of the study is to develop a methodology to link individual state assessments to NAEP. If successful, it will enable states to report their own assessment scores in NAEP equivalents, and thus to compare student performance across states and to the high standards established for NAEP.

Other states and local school districts have formed collaboratives that allow them to pool resources and develop common standards and assessments that will permit state-to-state comparisons of student performance. One such example is the New Standards Project, developed by the Learning Research and Development Center at the University of Pittsburgh and the National Center on Education and the Economy. The New Standards Project is working with 17 states and urban districts representing nearly one-half of the students in the United States to develop a national system of standards and assessments that will allow state and local customization.[29] Another example is the State Collaborative on Assessment and Student Standards (SCASS), which was created by the Council of Chief State School Officers in 1991 to link states with common student standards and assessment needs, and to assist them with assessment design and development projects.[30]

While it is fairly common to find that states have reviewed standards and assessments developed by other states to see how theirs compare, few states have attempted any type of international comparisons. Only 12 states report that they actually examined standards, tests, or curricular materials from other countries when designing their own standards.[31] And those states that did attempt to review materials from other countries were generally limited to information from English-speaking countries, since translated materials were not readily available.

One state that has benchmarked its standards internationally by administering its own assessment to students in other countries is Maryland. Maryland did this in Germany and Taiwan to see whether the standards for student achievement on the Maryland School Performance Assessment were set too high, as some critics had argued.[32] The conclusion was that they were not. The state is also considering testing Maryland students with translated versions of student assessments that are given in Germany to see how Maryland students' performance compares.[33]

Only 12 states report that they actually examined standards, tests, or curricular materials from other countries when designing their own standards.

Another approach is being tried by Colorado, Delaware, and Massachusetts, in collaboration with the Council for Basic Education.[34] These states have begun working together to see how closely their standards align with each other's, and with the frameworks developed for NAEP and for the Third International Mathematics and Science Study (TIMSS).*** If the standards developed independently by the three states are fairly similar, the states hope to develop common test items so that eventually they can compare their students' performance across states and to national and international benchmarks.

Why do we need new types of assessments?

Testing is certainly one of the most common activities in U.S. schools and is used for a wide variety of purposes: for instruction; to screen students for disabilities or language differences; to hold students accountable for meeting high school graduation requirements; to provide student, teacher, or school awards or recognition; to make decisions about school accreditation; and to hold states, school districts, and schools accountable for improving student achievement. Forty-five states recently reported that they have statewide assessment systems.[35] All 45 states test students in mathematics and 39 test students in reading, primarily in Grade 4 (33 states), Grade 8 (40 states), and Grade 11 (32 states). Writing, science, and social studies are also frequently tested, and some states report that they test in spelling, health, and communication, as well. With all this testing, why do we need more new assessments?

The National Education Goals Panel believes that statewide assessment systems should do two things. In addition to providing a way to see how students' results measure up to others', assessment systems should answer the question, "Have students acquired the knowledge and skills that they will need as adults?" The goal is not to add more assessments, but to revise existing assessment systems to make sure that they test whether students have reached the standards and mastered the knowledge and skills that states and local communities want all of their students to learn. Since the adoption of standards is a very recent phenomenon in the majority of states, only about half of the states that have statewide assessment systems report that their assessment systems are currently aligned with their standards.[36]

Only about half of the states that have statewide assessment systems report that their assessment systems are currently aligned with their standards.

The good news is that many states have already moved away from sole reliance on norm-referenced tests. Norm-referenced tests tell us how well a student did in comparison to other students in the same grade, but they do not tell us whether students have reached the standard and mastered what they need to know. For example, an 8th grader can score "above average" on a norm-referenced test in mathematics, but this result is not encouraging if the average is very low.

*** The Third International Mathematics and Science Study (TIMSS) is an international comparative study of educational achievement in nearly 40 countries, including the United States. Students in Grades 3–4, 7–8, and 12 were assessed in mathematics and science in Spring 1995. Results will be available beginning in late 1996.

At present, only six states rely on norm-referenced tests exclusively.[37] Instead, states are supplementing norm-referenced testing with combinations of writing samples, open-ended test items that require students to produce short written responses, items that require students to explain their answers, portfolios of student work, and criterion-referenced tests (which measure student performance against established criteria that all students are expected to learn).

What do these new tests look like?

Three examples of challenging assessment items appear on the following pages. These items were developed for the state assessment systems used in Maryland, Connecticut, and Kentucky, and provide real-life examples of the kinds of knowledge and skills that these states have determined that all of their students should know and be able to do. The Kentucky item tests one subject area (mathematics) at Grade 8. The items from Maryland and Connecticut are interdisciplinary, meaning that they are designed to tap student knowledge in more than one area. The Maryland item incorporates science and language arts skills at Grade 5, and the Connecticut item incorporates language arts, mathematics, science, and social studies skills at Grade 10. Both require students to spend part of their time working in small groups and part of their time working individually.

Clearly, the kinds of test items shown in these examples require more time to develop, administer, and score than traditional, multiple-choice items. But in return, they provide far richer information about students' skills and knowledge than simply measuring their ability to discriminate among several potentially correct choices. In order to solve these kinds of challenging problems, students must apply previous knowledge to new situations, think critically and creatively, demonstrate their ability to reason, interpret and explain information, use evidence to support their arguments, and defend both their approach and their solution to the problem.

Maryland Example

Grade 5
Science, Language Usage

"Salinity"
Maryland School Performance Assessment Program (MSPAP)

Following is a brief description of four activities and excerpts from two activities from the MSPAP "Salinity" test item for Grade 5. Space for student responses and the map have been deleted. The complete test item can be obtained by calling the Maryland State Department of Education at (410) 767–0081.

This task measures the following outcomes:

- Students will demonstrate their acquisition and integration of major concepts and unifying themes from the life, physical, and earth/space sciences.
- Students will demonstrate the ability to interpret and explain information generated by their exploration of scientific phenomena.
- Students will demonstrate ways of thinking and acting inherent in the practice of science.
- Students will demonstrate the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting, and communicating information.
- Students will demonstrate the ability to apply science in solving problems and making personal decisions about issues affecting the individual, society, and the environment.

Students work individually and in groups of four to complete the following task. They are allowed 42 minutes to complete the entire task.

Summary of student activities:

Students work in a group to construct a hydrometer (a device used to measure the saltiness of different water samples) from a drinking straw, clay, and BBs. They place the hydrometer in fresh- and salt-water samples, and then draw and label their observations. They devise a method of quantitatively measuring the levels at which the hydrometer floats in fresh and salt water, and then measure and record results. They describe the observed differences and offer reasons that might explain them.

Students then work individually, using what they have learned to predict how the hydrometer might float in a mixture of fresh and salt water, and provide a rationale for their prediction. The student groups mix samples of fresh and salt water and place the hydrometer in the new samples. They record their observations and measurements to determine whether the prediction they made in the previous step was correct and then explain why.

(Students work individually to complete the remainder of the task.)

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 Crappie	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	

Instructions to students:

You have just completed an investigation that involved water with different salinity values. In the next activity you will use this information to solve some problems that might occur when you are keeping animals and plants in an aquarium.

In the Chesapeake Bay, salinity determines the types of animals and plants that can survive in a particular zone. Some types of fish can only be found in areas that have a certain amount of salt in the water. Salinity can be measured in parts per thousand, or "ppt." Higher ppt measurements indicate greater salinity.

A. The chart above represents several species of organisms that are common to the bay. It also includes the range of salinity in which the organisms can live. Open your Resource Book to page 10 and use the map of the Chesapeake Bay and the chart to the right to complete the last column in the chart. *(Map and accompanying chart show zones of the Chesapeake Bay where tidal fresh water, brackish waters, moderately salty waters, and salty bay waters can be found, along with their salinity ranges.)*

B. The saltwater aquarium in your school has a salinity range of 16 to 30 ppt. From the list of organisms above, identify the plants or animals that would NOT be able to survive in the aquarium and explain your reasons for not including these organisms.

Note: ***In addition to science measures, the student's response to the following activity is scored for language usage.***

On a recent field trip to the Chesapeake Bay, your class caught several small black sea bass for the school aquarium. Write a paragraph for your teacher describing how you could use the hydrometer to make sure that these fish stay alive. Use observations and data from what you did today to help you write your response below.

Source: Maryland State Department of Education. (1994, July). *MSPAP public release task: Salinity. Maryland School Performance Assessment Program: Resource Library.* Baltimore: Author.

Connecticut Example

Grade 10
Interdisciplinary

"Space Station"
Connecticut Academic Performance Test (CAPT)

Following is a brief description and excerpts from the CAPT "Space Station" test item for Grade 10. Space for student responses and a drawing of the space station have been deleted. The complete test item can be obtained by calling the Connecticut State Department of Education at (860) 566–5323.

The issue for this activity is whether the United States should fund the development of a space station. Students begin with a brief, 10-minute discussion in groups of three or four. They then work individually to review source documents and write a speech in which they take a stand on the issue. This interdisciplinary activity requires students to use skills and knowledge they have learned in language arts, mathematics, science, social studies, and other classes. They are allowed 90 minutes to complete the entire task.

A Guide to Group Discussion

Directions to students:

Working with members of your group, discuss the following questions:

- How important do you think space exploration is to our country?
- What are the advantages of space exploration?
- What are the disadvantages of space exploration?

Summarize the group's ideas in the chart below:

Advantages of Space Exploration	Disadvantages of Space Exploration

Your Task

Imagine that hearings are to be held in the United States Congress to decide whether or not to fund the space station Freedom in next year's budget. Prior to the meeting, members of the House Committee are holding town meetings in various parts of the country. One of the meetings will be held in your community.

Your task is to write a speech to be presented at the meeting stating your position on this issue. However, before taking a position it is important that you consider a variety of viewpoints. You have been provided with source materials containing several pieces of information related to the space station. You must read these source materials and use the information contained in them to choose and support the position you take in your speech. Take a minute now to locate the source materials.

Preparing to Write Your Speech

As you read the source materials, you may underline important information or write notes on the articles themselves. You have been given two charts to help you consider the various arguments for and against funding the space station. In addition, scratch paper has been included for any additional notes or outlining you may wish to do in preparation for writing your speech.

Any notes that you take or information that you place in the charts will not be scored, but they will help you later when you state and support your position in your speech. Only your speech will be scored.

(Students are provided the following types of source materials: magazine articles, graphs on U.S. domestic spending, budgetary information for the National Aeronautics and Space Administration (NASA) and the space station, and excerpts from the 1991 "Congressional Record" when the U.S. Senate and House of Representatives were debating the funding of the space station for fiscal year 1992).

Writing Your Speech

Write a speech for the town meeting either supporting or opposing funding of the space station. In your speech you should take a clear stand on the issue and support your position with evidence from the readings as well as your own background knowledge.

You won't have time to do extensive revising or to get the reactions of others to your speech, as you might if you were really going to speak at the town meeting. So, consider this a first draft or an initial attempt. However, express your thoughts as completely and clearly as possible so that those listening to your speech understand your ideas.

How Your Speech Will be Evaluated

Your score will be based on how well you:

- ✓ take a clear stand on the issue and support your position;
- ✓ organize your speech so others will follow your reasoning;
- ✓ support your ideas with accurate and relevant information from the source materials; and
- ✓ express your ideas clearly so that others will understand what you mean.

In drafting your speech, you should refer to the source materials and any notes you have taken. You may use the scratch paper to plan your speech, **but you must write your speech in your answer booklet.**

Source: Connecticut State Board of Education. (1996). *Connecticut Academic Performance Test (CAPT) interdisciplinary assessment*. Hartford, CT: Author.

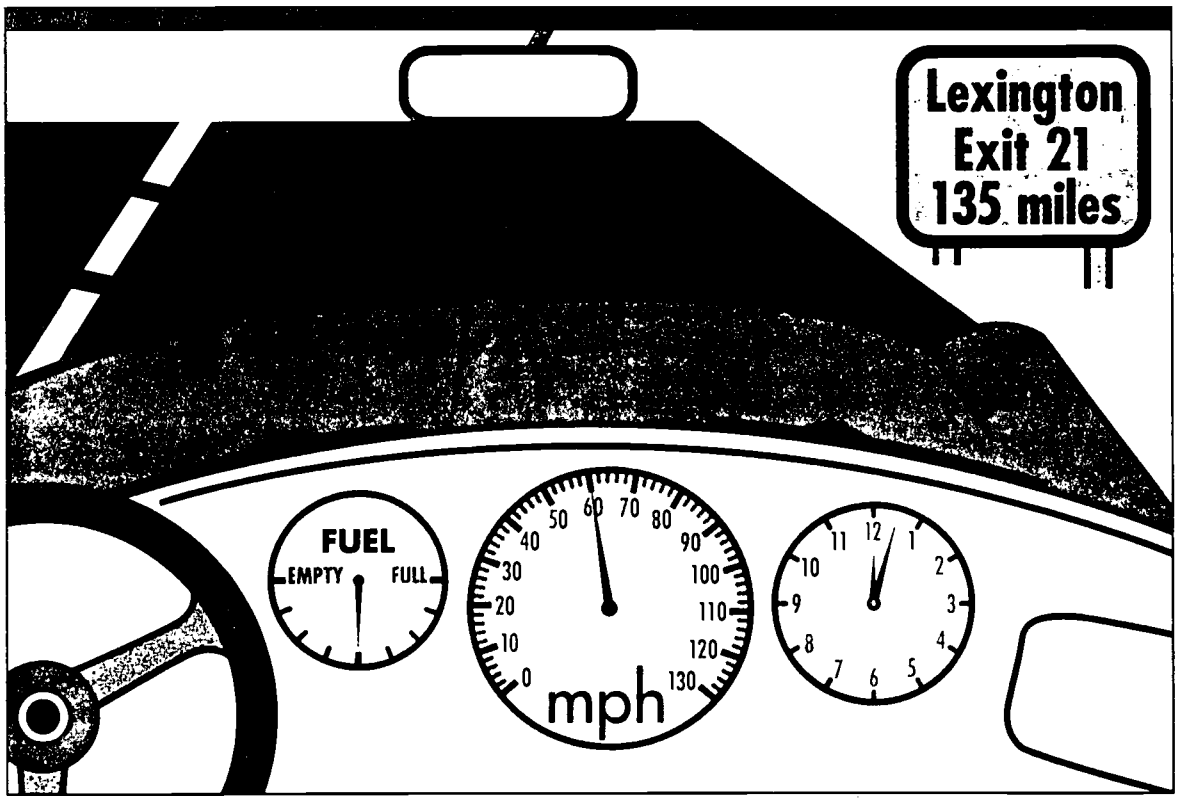
Kentucky Example

Grade 8
Mathematics

"Trip to Lexington"
Kentucky Instructional Results Information System (KIRIS)

Note: *Space for student responses for this item have been deleted.*

Use the picture below to answer the following question.



Imagine that you live in Lexington and your parents are driving on I-75 returning from a trip to Knoxville. They would like to surprise you by picking you up at school when you are released at 3:00. On the highway their car averages 23 miles to the gallon. The gas tank holds 12 gallons of gasoline.

a. Based on the information above and in the diagram, do you think that your parents will need to stop and buy some gasoline? Explain your reasoning.

b. If they do stop and purchase gasoline, will they have enough time to get to the school before you get out of school? Assume they average the speed shown on the speedometer. Explain your reasoning.

c. If you think that they will arrive early or late, how early or late will they be? Explain your answer.

Be sure to label your responses (a), (b), and (c).

Source: Kentucky Department of Education. (1995–96). *Kentucky Instructional Results Information System (KIRIS) student test booklet*. Frankfort, KY: Author.

How can I help my child prepare for these tests?

1. Set high expectations for your child.
2. Talk with your child's teachers regularly to discuss how your child is doing in school and what you can do to help your child improve.
3. Meet with your child's teacher or the school principal to discuss your child's scores or the school's scores on the test(s).
4. Read and write with your child and take time to read aloud to him or her, no matter how young or how old your child is.
5. Provide a quiet place for your child to study. Help your child with his or her homework.
6. Show interest in what your child is doing in school.
7. Limit the amount of television your child watches and discuss what he or she sees on TV.
8. Volunteer to help with school activities.

Source: Maryland State Department of Education. (n.d.). *Maryland School Performance Assessment Program (MSPAP) parent handbook: Raising expectations for Maryland students.* Baltimore: Author.

Adapted with permission.

What are the consequences if a student does not meet the standard?

The majority of Americans believe that high standards will have positive results for students: 71% say that if students are held to high expectations, they will "pay more attention to their school work and study harder." Seventy-two percent believe that students "will actually learn more." Not only does the public support higher standards, but they firmly believe that they should be enforced—81% say that students should not be passed unless they have mastered the required subject matter.[38]

A recent state survey concluded, however, that making standards "count" by tying them to meaningful consequences for students is not receiving sufficient attention in most states:[39]

- only three states require districts to use state standards and assessments as factors when considering whether to promote students at certain grades;
- fewer than half of the states require students to pass high school graduation examinations linked to the state standards; and
- only nine states require students to pass graduation examinations linked to the state standards in all four core subject areas of English/language arts, mathematics, science, and social studies.

Enforcement of higher standards by the public schools, higher education, and business appears to be increasing, however. While only four states currently require students to pass graduation examinations that are set at least at a 10th-grade proficiency level, eleven more states plan to do so in the future. And even though only

ten states currently require students to pass graduation examinations tied to the state standards, twenty plan to make this a graduation requirement in coming years.[40]

In Minnesota, for example, students in the graduating class of 2000 must meet minimum competency requirements in reading, writing, and mathematics in order to earn a high school diploma. In addition to basic competencies, students who graduate four years later will also be required to demonstrate high-level competencies in ten broad areas, such as complex writing skills, advanced science, social studies/history, and problem solving.[41]

In Maryland, students may soon have a harder time getting into college if they do not meet state standards during high school. Maryland is developing new tests in core subject areas that students will have to pass in order to receive a high school diploma. As currently planned, students will be required to pass the state graduation tests at even higher levels in order to be accepted at Maryland state colleges and universities.[42]

Oregon is another state that has recently tied its college admissions policies more closely to student mastery of essential skills in elementary and secondary

Household projects: A way to help your child learn

Helping your child prepare for new types of assessments does not necessarily mean buying the latest in computer software or other instructional materials. Household projects and family trips can help your child to learn some of the most basic problem-solving, communication, and thinking skills they will need, not only to do well on assessments, but for the future.

In the kitchen: Have your child help you cook. Cooking usually requires reading, gathering together the proper materials, measuring out exact amounts, and organizing steps in the proper order.

Traveling: When planning a trip, get out the map and have your child plot the route and determine the distance you have to travel. If you're taking public transportation, let your child help pick the best bus route. If you're taking a car, tell your child how many miles per gallon your car gets and ask him or her to figure out how many gallons of gas you will need for the trip. During or after the trip, help your child create a written travel log to share with family and friends.

Gardening: If you are planting a garden, first go to the library with your child and read more about what you might want to plant and how to do it. Together, find out about different plants and let your child help pick some seeds which would grow well in your area. Ask your child to help figure out how much space you will need depending on which seeds you plant.

Source: Maryland State Department of Education. (n.d.). *Maryland School Performance Assessment Program (MSPAP) parent handbook: Raising expectations for Maryland students.* Baltimore: Author.

Adapted with permission.

school. The Oregon State System of Higher Education has created the Proficiency-based Admission Standards System, or PASS, in partnership with high schools, community colleges, and the Oregon Department of Education.[43] This new approach to college admissions replaces grade-point averages with proficiencies—clearly specified statements of the knowledge and skills students must master to be accepted. Starting in the fall of 2001, to be admitted to Oregon's public 4-year colleges, a student must demonstrate proficiency in six content areas: mathematics, science, social sciences, foreign languages, humanities/literature, and fine and performing arts. In addition, students must demonstrate mastery of skills grounded in the required subject areas, such as reading, writing, analytic thinking, and problem solving.

Employers, too, are taking steps to make standards count. Participating business leaders at the Second Education Summit in March 1996 pledged to implement new hiring practices within one year that would require students to show evidence of high academic achievement (such as high school transcripts) when applying for jobs. Business leaders also made a commitment to consider a state's academic standards and student performance when deciding where to locate or expand their businesses.[44]

Will higher standards and tougher assessments unfairly penalize students with disabilities or those who have limited English proficiency? What about students who attend schools with fewer resources?

Public opinion polls show that most Americans support the idea that the same standards should apply to all children.[45] After all, if standards represent the essential knowledge and skills that students will need as adults, why should some children be expected to learn less than others? In the long run, won't lower expectations for some groups of students only hurt them by diminishing their chances for success?

At the same time, valid arguments can be made that applying the same standards to all children, regardless of circumstances, is inherently inequitable. How can poor children who attend schools with outdated science textbooks and no laboratory equipment be expected to achieve the same level of proficiency in science as students who attend schools with state-of-the-art equipment and materials? How can a Spanish-speaking student who enters a U.S. school in 10th grade be expected to learn sufficient English and academic content within two years to pass mandatory high school graduation examinations that were written for native English speakers? Is it fair to expect students with learning disabilities to score at the same levels as other students in order to qualify for admission to college?

Public opinion polls show that most Americans support the idea that the same standards should apply to all children.

One argument that has been proposed is that if a state expects all students to achieve the same standards, then it is incumbent upon that state to devise a way to identify struggling students early on and provide them with the necessary support that will enable them to meet the standards.[46] However, only ten states currently

require and fund intervention strategies, such as after-school tutoring or Saturday school, to help low-achieving students reach the state standards. An additional eight states require intervention but provide no money to help schools and school districts implement programs.

At present, states use a variety of approaches to determine whether students with disabilities and those with limited English proficiency should participate in statewide testing. Forty-two states report that they provide testing accommodations for students with disabilities, such as Braille and large-print, audiotaped responses, the use of a word processor, or extra time. Twenty-seven of these states provide testing accommodations for limited English proficient students as well. Nine states report that they provide alternative tests to students with disabilities or limited proficiency in English.[47]

Many states have indicated that providing appropriate and reliable accommodations for limited English proficient and special needs students is an important challenge. Delaware, Maryland, Minnesota, Oregon, and Pennsylvania have received assessment development grants from the U.S. Department of Education to either develop or modify their new assessment systems for students with disabilities or limited English proficiency.[48]****

For example, Delaware's Inclusive Comprehensive Assessment System is designed to measure how well all students are meeting the state content standards in language arts, mathematics, social science, and science. Delaware has targeted its assessment development grant to design, develop, and evaluate mathematics assessments in Grades 3 and 8 and science assessments in Grades 5 and 10 for students with disabilities or limited English proficiency. Minnesota is using its grant to ensure that all students in the state can be assessed against its new set of rigorous graduation standards. Minnesota is also modifying its assessments so that students with disabilities or limited English proficiency can participate.[49]

The Goals Panel strongly encourages all states to take similar steps to ensure that they, too, are designing sound policies on standards and assessments that include all students. Whether states decide to allow students extra time to meet the standards, to administer alternative assessments, to test in students' native languages, or to provide other kinds of appropriate testing accommodations, it is extremely important that parents and the general public be involved in setting these kinds of policies. And it is absolutely critical that they be involved in setting any policies about "high-stakes" testing (that is, testing that has serious consequences for students who do not meet the standards, such as denial of grade promotion, a high school diploma, or college admission).

**** In 1995, the U.S. Department of Education funded nine states and one multistate consortium to develop and field-test new forms of assessment aligned with state content standards.

How have states and local communities effectively engaged parents, teachers, and the public in the development of standards and assessments?

A recent publication by the Education Commission of the States documented some of the common obstacles that states encountered and the lessons that they learned as they moved toward standards-based education systems. At the top of the list of recommendations was "involve the public in making decisions about standards."[50]

Public involvement has taken many forms across the country, from town meetings, to small focus groups, to the use of television and print media. The vast majority of states report that attempts were made throughout the different stages of the standards-development process to include teachers, school administrators, and representatives of the community, such as parents; representatives of business, industry, and labor; members of the legislature; and higher education faculty. In some states, combinations of individuals from these groups served directly on teams to write the standards. In other states, they served on review panels or advisory boards overseeing standards development.[51]

In a number of states, regional conferences and public hearings were held to review and discuss the draft standards. A strategy used in Colorado was to recruit community groups such as the League of Women Voters to host public meetings across the state to provide opportunities for citizens to discuss draft standards.[52]

How can parents participate in the development of standards and assessments?

1. Read the standards your school or community has drafted and encourage other parents to do so. Ask questions.
2. Attend community meetings and public forums.
3. Make sure that all voices are heard. Invite parents and other community members whose opinions you may not agree with.
4. Challenge assumptions about what we can expect from students.
5. Volunteer your services to "get the word out" (by distributing flyers, writing opinion pieces, printing documents, etc.).
6. Encourage your school or district to hold meetings to explain assessment methods and to take part in actually doing assessment tasks. Find out what work that meets the standards looks like.
7. Encourage your school or district to plan programs to help students meet high standards.

A nine-step process to create high-performance schools

Step 1. Build demand for standards and reform.

Step 2. Set high academic standards.

Step 3. Conduct an "education inventory" to identify the school system's strengths and weaknesses.

Step 4. Build community consensus.

Step 5. Reorganize for change.

Step 6. Develop new student assessments.

Step 7. Build staff capacity.

Step 8. Create an accountability system.

Step 9. Set checkpoints and make adjustments as needed.

Source: Doyle, D.P., & Pimental, S. (forthcoming). ***Setting standards, meeting standards: Creating high performance schools.*** Washington, DC: Author.

In addition to public hearings and conferences, states and local school districts have used a variety of formats to make information more widely available to the public. Arkansas has sought input on its standards via the Internet and public television conferences, and Ohio has solicited public comment through the Ohio Educational Computer Network. Wisconsin plans to make its standards available on CD-ROM.[53] Chicago, Los Angeles, and San Diego increased the level of public participation in the development of their standards by disseminating draft standards to residents in both English and Spanish.[54, 55, 56] And in Colorado, a cable television company helped gather public response by producing a half-hour special on the state's standards and proposed assessments.[57]

What can states and school districts learn from others who have successfully involved parents and the public in efforts to set higher standards?

There are many different approaches that states and communities can take to set their own standards. While no single model will work for everyone, states and local districts can save considerable time and money by learning from others who have already been through the standards-setting process. One example of a community that has successfully involved parents and the public in efforts to set higher standards is Beaufort County, South Carolina. Beaufort was one of the first school districts in the nation to organize around world-class academic standards. Beaufort's approach is based on three principles:

- rigorous academic standards;
- clear assessments for students and schools; and
- community action.

Beaufort began by asking citizens, "Where do we want our school system to be?", "Where are we now as a school system?", "What will it take to get us to where we want to be?", and "How will we know when we are there?" Beaufort used the following nine-step process to answer these questions and to create community support and approval for more challenging academic standards and assessments. Although the steps appear in linear fashion, many can be executed simultaneously or in quick succession.[58]

1. Build demand for standards and reform

One of the first lessons that Beaufort County learned was that in order to achieve change successfully, a community must be convinced that it is both necessary and desirable to have standards. Beaufort realized that building demand takes time, good will, and sound ideas. Beaufort held a series of town meetings to encourage open discussion and listen to what was on the public's mind. Holding the meetings in different places in the community and at different times helped maximize public participation, and acting on concerns quickly demonstrated genuine commitment to change.

2. Set high academic standards

Fortunately, the tremendous amount of work that has been done to date to set more challenging academic standards has resulted in a wealth of models and resources. States and local communities can and should borrow liberally from the standards developed by other states and districts, other countries, professional associations, and universities. However, one of the most important lessons learned by the Beaufort community was that it could not borrow another district's standards in their entirety and simply add its own school district's name to them. The standards had to be customized to reflect community consensus on what Beaufort children should know and be able to do, so that parents, teachers, and the general public would feel ownership for the standards and insist upon their implementation in the schools.

Beaufort involved teachers, parents, and other members of the community from the beginning by recruiting representatives to serve on eight content-specific design teams. The design teams were composed of 19 members each: ten teachers, two parents, two community leaders, two business leaders, one school administrator, and two students. The teams met over a period of six months to draft standards in mathematics, language arts, natural sciences, social studies, foreign languages, the arts, health and wellness, and community service. The teams then presented the draft standards at community-wide meetings for public review and critique. States and districts that do not go through this kind of consensus-building process to create ownership may quickly find that their standards sit on the shelf, unused.

3. Conduct an "education inventory"

An education inventory answers the question, "How are we doing?" Beaufort identified the strengths and weaknesses of its system by analyzing a variety of

student, school, and district data such as test scores, course-taking patterns, and student absenteeism and truancy. The purpose of conducting the education inventory was to take academic stock and to set the stage for informed policy formation.

4. Build community consensus

Community consensus comes from an honest exchange of ideas and opinions about what all students should know and how well they should know it. Beaufort began by displaying the district's student achievement for all to see, through a series of focus groups and public meetings. Citizen committees were then formed to build further support in the community for establishing world-class standards and a system that holds students and schools accountable for reaching them.

Graduation requirements must change to ensure that diplomas are awarded on the basis of hard work and mastery of required subject matter, not simply the number of hours spent in school.

5. Reorganize for change

Setting higher expectations is a necessary, but not sufficient, step to increase student achievement. Beaufort realized that the school system itself must also reorganize in many ways. For example, curricula had to be redesigned to eliminate courses that required minimal student effort. Steps had to be taken to ensure that students had access to higher level courses that prepared them to meet the standards. Teachers had to be trained to teach the new knowledge and skills. And graduation requirements had to change to ensure that diplomas were awarded on the basis of hard work and mastery of required subject matter, not simply the number of hours spent in school.

6. Develop new student assessments

It is unlikely that the assessments currently used by a school district will be appropriate once the community has decided collectively what students should know and be able to do. New assessments will have to be created to measure student mastery of the essential knowledge and skills so that the standards and assessments are aligned. Communities cannot hold their schools accountable for helping all students achieve the standards if there is no way to determine what students have actually learned. Beaufort, for example, moved quickly to construct criterion-referenced tests tied directly to the new standards to give teachers, parents, and students precise information about which essential objectives a child had already mastered and which had yet to be mastered.

7. Build staff capacity

Building staff capacity simply means training new teachers and re-training experienced teachers. Teacher professional development should not be seen as an "add-on," but should be central to the process. Beaufort's approach to professional training is highly focused and incorporated into the school day. Commitment to building staff capacity continues to be demonstrated by including educators on

committees to set standards and to create and review test items, and by designing appropriate training and development sessions. Other strategies are giving teachers time to observe one another's classrooms, critique lessons, and pick up pointers; giving teachers time to work with other teachers; and giving teachers time to plan and polish instruction.

8. Create an accountability system

Answering the questions, "How are we doing?" and "Where do we want to go?" is really just the first step in creating an accountability system. Setting ambitious long-term goals that are specific, achievable, and results-oriented is a second step. An accountability system requires communities to measure and report student progress to the public regularly. As the Goals Panel recommends, districts should report assessment results in a manner that is clear and meaningful to all interested parties—from parents to employers to policymakers—and that communicates whether all students are meeting the standards.

9. Set checkpoints and make adjustments as needed

Finally, it is important to realize that not all change may be positive, and adjustments may be needed. Furthermore, not all positive accomplishments may be moving at a pace that is satisfactory to the community. By creating an accountability system and setting checkpoints (or desired goals within a specified period of time), communities can see how much progress they have made and can use their results for the continuous improvement of teaching and learning.

Districts should report assessment results in a manner that is clear and meaningful to all interested parties—from parents to employers to policymakers—and that communicates whether all students are meeting the standards.

Conclusions

The National Education Goals Panel remains convinced that the kinds of changes necessary to bring student performance in this nation up to world-class levels begin with standards and assessments. Although we have seen marked progress in some areas, we still have far to go before we can rest assured that U.S. students have acquired the necessary knowledge and skills that will enable them to compete in a global economy, obtain meaningful employment, succeed in college, be good citizens, and lead productive lives. Governors and business leaders have pledged to accelerate progress by setting higher standards and creating challenging assessments in all states within the next two years. With the support and involvement of parents, teachers, policymakers, and the public, these promises can be fulfilled and all students can learn at significantly higher levels. We owe it to our children to expect nothing less.

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HOW MUCH PROGRESS HAVE WE MADE?

National progress on 25 core indicators selected to measure progress toward the National Education Goals is very similar to that characterized in the *1995 Goals Report*. Overall, we have seen some modest improvements. More infants are being born with a healthier start in life. More families are reading and telling stories to their children on a regular basis. Mathematics achievement has improved among 4th and 8th graders. More students overall and more female students are receiving degrees in mathematics or science. Incidents of threats and injuries to students at school have declined.

The 1996 U.S. Scorecard (pp. 36–39) indicates that national performance has improved in five areas and declined in eight.

In other areas the news is not as encouraging. Reading achievement at Grade 12 has decreased. Fewer secondary school teachers hold a degree in their main teaching assignment. The gap in college completion rates between White and Hispanic students has increased. Student drug use and attempted sale of drugs at school have increased. Threats and injuries to teachers have increased. More teachers are reporting that disruptions in their classrooms interfere with their teaching.

In addition, there are still many areas where we have simply seen no change. For example, the gap in preschool participation rates between high- and low-income families has not decreased. The nation has not reduced the percentage of high school students who report using alcohol. The high school completion rate has not increased. And the percentage of parents who report being involved in activities in their child's school has not increased.

The following pages summarize the nation's progress toward each of the Goals. Baseline measures of progress, which appear in the first column, were established as close as possible to 1990, the year that the National Education Goals were officially adopted. The most recent measures of performance for each indicator appear in the second column. The arrows in the third column show our overall progress on each indicator:

- ↑ Arrows which point upward indicate where we have made significant progress.
- ↓ Arrows which point downward indicate where we have fallen further behind.
- ↔ Horizontal arrows indicate where we have seen no discernible change in our performance.

Additional information about the nation's and individual states' progress can be found in the *1996 National Education Goals Report*.

UNITED STATES

	Baseline	Most Recent Update	Overall Progress
GOAL 1 Ready to Learn			
1. **Children's Health Index:** Has the U.S. reduced the percentage of infants born with 1 or more health risks? (1990, 1994)	37%	34%	↑
2. **Immunizations:** Has the U.S. increased the percentage of 2-year-olds who have been fully immunized against preventable childhood diseases? (1994)	75%	—	
3. **Family-Child Reading and Storytelling:** Has the U.S. increased the percentage of 3- to 5-year-olds whose parents read to them or tell them stories regularly? (1993, 1996)	66%	72%	↑
4. **Preschool Participation:** Has the U.S. reduced the gap in preschool participation between 3- to 5-year-olds from high- and low-income families? (1991, 1996)	28 pts	29 pts[ns]	↔
GOAL 2 School Completion			
5. **High School Completion:** Has the U.S. increased the percentage of 18- to 24-year-olds who have a high school credential? (1990, 1995)	86%	85%[ns]	↔
GOAL 3 Student Achievement and Citizenship			
6. **Reading Achievement:** Has the U.S. increased the percentage of students who meet the Goals Panel's performance standard in reading? (1992, 1994)			
■ Grade 4	29%	30%[ns]	↔
■ Grade 8	29%	30%[ns]	↔
■ Grade 12	40%	36%	↓
7. **Writing Achievement:** Has the U.S. increased the percentage of students who can produce basic, extended, developed, or elaborated responses to narrative writing tasks? (1992)			
■ Grade 4	55%	—	
■ Grade 8	78%	—	
■ Grade 12	—	—	

— Data not available.
ns Interpret with caution. Change was not statistically significant.

	Baseline	Most Recent Update	Overall Progress
8. Mathematics Achievement: Has the U.S. increased the percentage of students who meet the Goals Panel's performance standard in mathematics? (1990, 1992) ▲			
■ Grade 4	13%	18%	↑
■ Grade 8	15%	21%	↑
■ Grade 12	12%	15%[ns]	↔
9. History Achievement: Has the U.S. increased the percentage of students who meet the Goals Panel's performance standard in U.S. history? (1994)			
■ Grade 4	17%	—	
■ Grade 8	14%	—	
■ Grade 12	11%	—	
10. Geography Achievement: Has the U.S. increased the percentage of students who meet the Goals Panel's performance standard in geography? (1994)			
■ Grade 4	22%	—	
■ Grade 8	28%	—	
■ Grade 12	27%	—	
GOAL 4 Teacher Education and Professional Development			
11. Teacher Preparation: Has the U.S. increased the percentage of secondary school teachers who hold an undergraduate or graduate degree in their main teaching assignment? (1991, 1994)	66%	63%	↓
12. Teacher Professional Development: Has the U.S. increased the percentage of teachers reporting that they participated in various in-service or professional development programs on 1 or more topics since the end of the previous school year? (1994)	85%	—	

— Data not available.
ns Interpret with caution. Change was not statistically significant.
▲ Mathematics data have been revised since the *1995 Goals Report*.

	Baseline	Most Recent Update	Overall Progress
GOAL 5 Mathematics and Science			
13. International Mathematics Achievement: Has the U.S. improved its standing on international mathematics assessments of 13-year-olds? (1991)	U.S. is 6th out of 6 countries	—	
14. International Science Achievement: Has the U.S. improved its standing on international science assessments of 13-year-olds? (1991)	U.S. is 6th out of 6 countries	—	
15. Mathematics and Science Degrees: Has the U.S. increased mathematics and science degrees as a percentage of all degrees awarded to: (1991, 1994)			
■ all students?	39%	41%	↑
■ minorities (Blacks, Hispanics, American Indians/Alaskan Natives)?	39%	39%	↔
■ females?	35%	38%	↑
GOAL 6 Adult Literacy and Lifelong Learning			
16. Adult Literacy: Has the U.S. increased the percentage of adults who score at or above Level 3 in prose literacy? (1992)	52%	—	
17. Participation in Adult Education: Has the U.S. reduced the gap in adult education participation between adults who have a high school diploma or less, and those who have additional postsecondary education or technical training? (1991, 1995)	27 pts	32 pts	↓
18. Participation in Higher Education: Has the U.S. reduced the gap between White and Black high school graduates who:			
■ enroll in college? (1990, 1994)	14 pts	12 pts[ns]	↔
■ complete a college degree? (1992, 1995)	16 pts	15 pts[ns]	↔
Has the U.S. reduced the gap between White and Hispanic high school graduates who:			
■ enroll in college? (1990, 1994)	11 pts	9 pts[ns]	↔
■ complete a college degree? (1992, 1995)	15 pts	21 pts	↓

— Data not available.
ns Interpret with caution. Change was not statistically significant.

	Baseline	Most Recent Update	Overall Progress
GOAL 7 Safe, Disciplined, and Alcohol- and Drug-free Schools			
19. Overall Student Drug and Alcohol Use: Has the U.S. reduced the percentage of 10th graders reporting doing the following during the previous year:			
■ using any illicit drug? (1991, 1995)	24%	36%	↓
■ using alcohol? (1993, 1995)	63%	64%[ns]	↔
20. Sale of Drugs at School: Has the U.S. reduced the percentage of 10th graders reporting that someone offered to sell or give them an illegal drug at school during the previous year? (1992, 1995)	18%	28%	↓
21. Student and Teacher Victimization: Has the U.S. reduced the percentage of students and teachers reporting that they were threatened or injured at school during the previous year?			
■ 10th grade students (1991, 1995)	40%	35%	↑
■ public school teachers (1991, 1994)	10%	15%	↓
22. Disruptions in Class by Students: Has the U.S. reduced the percentage of students and teachers reporting that disruptions often interfere with teaching and learning?			
■ 10th grade students (1992, 1995)	17%	17%	↔
■ secondary school teachers (1991, 1994)	37%	46%	↓
GOAL 8 Parental Participation			
23. Schools' Reports of Parent Attendance at Parent-Teacher Conferences: Has the U.S. increased the percentage of K–8 public schools which report that more than half of their parents attended parent-teacher conferences during the school year? (1996)	78%	—	
24. Schools' Reports of Parent Involvement in School Policy Decisions: Has the U.S. increased the percentage of K–8 public schools which report that parent input is considered when making policy decisions in three or more areas? (1996)	41%	—	
25. Parents' Reports of Their Involvement in School Activities: Has the U.S. increased the percentage of students in Grades 3–12 whose parents reported that they participated in two or more activities in their child's school during the current school year? (1993, 1996)	63%	62%[ns]	↔

— Data not available.
ns Interpret with caution. Change was not statistically significant.

What is the National Education Goals Panel?

The National Education Goals Panel is a unique bipartisan body of federal and state officials created in July 1990 to monitor national and state progress toward achieving the National Education Goals. The national and state leaders who established the Goals Panel believed that adopting the Goals without providing any process for measuring their success would be an empty gesture.

With the passage by Congress of the 1994 *Goals 2000: Educate America Act*, the Goals Panel became an independent executive branch agency. Panel members include eight Governors, four members of Congress, four state legislators, the U.S. Secretary of Education, and the President's Domestic Policy Advisor.

Resources Available from the National Education Goals Panel:

1996 National Education Goals Report. In addition to the information provided in this *Executive Summary*, the *1996 Goals Report* includes exhibits on the national indicators and state-level data.

1995 National Education Goals Report: Executive Summary. The *1995 Executive Summary* focuses on the essential role that families play in helping to achieve the National Education Goals and suggests ways in which schools can involve them in partnerships to increase our chances of reaching the Goals.

Inventory of Academic Standards-Related Activities. This inventory explores the work of 26 organizations in promoting and strengthening the movement toward the development of state academic standards and performance assessments.

Electronic Resources:

World Wide Web. The annual *Goals Reports* and other Goals Panel publications are available on the World Wide Web at http://www.negp.gov.

CD-ROM. The *1995* and *1994* annual *Goals Reports* are available on CD-ROM for users of both IBM and Macintosh computers. The CD-ROM permits users to create a customized Goals report—enabling users to view, search (by state, Goal, or indicator), copy, and print any portion of the Report, as well as allowing users to edit text.

GOAL LINE. Through the Coalition for Goals 2000, the Goals Panel has created a customized area on GOAL LINE, the Coalition's education reform online network. Facts and information about the Goals Panel are available online, as well as many of the Goals Panel's more popular publications, including: the annual *Goals Reports*, the *Community Action Toolkit*, and the *Profile of 1994–95 State Assessment Systems and Reported Results*. Also available are selected state standards and assessment frameworks.

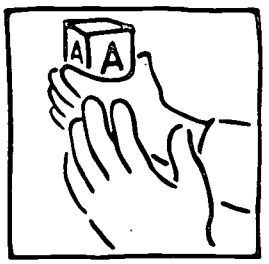
Daily Report Card. Through the *Daily Report Card*, an online education newsletter, the Goals Panel supports the distribution of information on how state and local education reforms are progressing nationwide to help communities find ways to meet the National Education Goals.

U.S. Department of Education's Online Library. Selected Goals Panel publications are available, as well as a variety of other resources, through the U.S. Department of Education's online library. To get to the Department's online library and the Goals Panel's publications, use the World Wide Web: http://www.ed.gov/G2K or Gopher: gopher://gopher.ed.gov:10001/11/initiatives/goals/national.

For more information on any of these resources, or to request additional copies of the *Executive Summary*, please contact the Goals Panel at the address on the back cover.

ISBN 0-16-048885-0

THE NATIONAL EDUCATION GOALS



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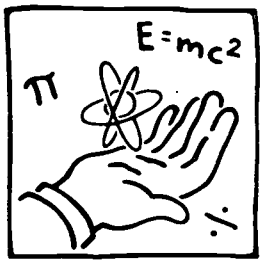

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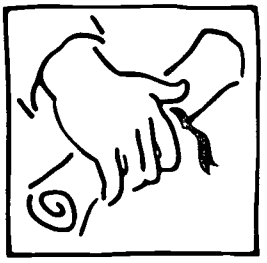

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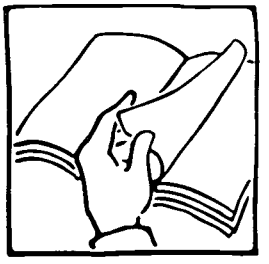

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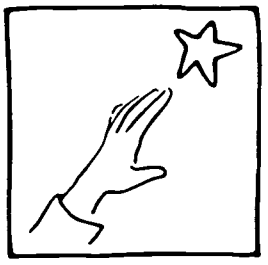

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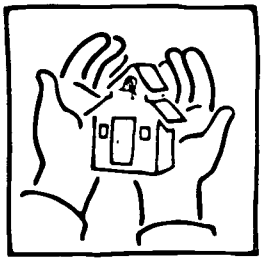
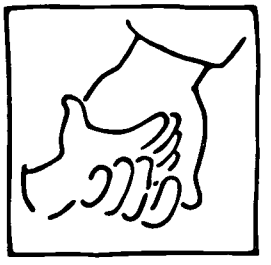


SAFE, DISCIPLINED, AND ALCOHOL- AND DRUG-FREE SCHOOLS

TEACHER EDUCATION AND PROFESSIONAL DEVELOPMENT



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