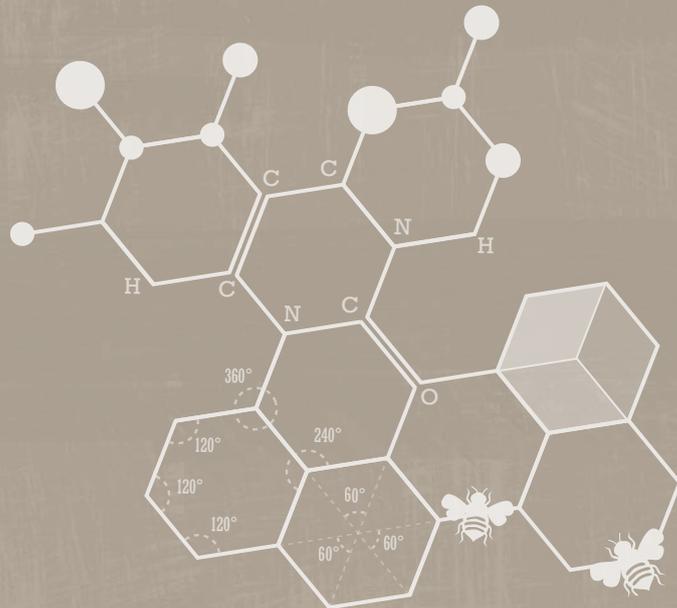


COLLEGE-READY WORK MONOGRAPHS

Fewer, Clearer, Higher:

Moving Forward with Consistent,
Rigorous Standards for All Students



BILL & MELINDA
GATES *foundation*



Fewer, Clearer, Higher:

Moving Forward with Consistent, Rigorous Standards for All Students

The new Common Core State Standards will bring consistency and clarity to American education. These college- and career-ready academic standards will provide a springboard for innovation in education. And, crucially, they will help educators improve student achievement levels, an outcome that will benefit students personally while also fueling our nation's future economic success.

The Bill & Melinda Gates Foundation and other philanthropies actively supported the Common Core State Standards Initiative, led by the Council of Chief State School Officers and the National Governors Association. But over the past several years, we've been thinking independently about the power of such standards, too.

We see these rigorous, clear standards as critical to better student results. But policymakers need to build on that foundation and ensure that teachers have what they need to do their jobs: things like rich assessment systems that yield useful, timely data; tools that help teachers translate such assessments into more-effective instruction; and evaluations and compensation systems that reward teachers for improved student results.

An Evidence-Based Approach



The new mathematics and literacy standards were built to be teachable and concrete—there are *fewer*, and they are *clearer*. And the standards were built on the evidence of what is required for success beyond high school—these standards aim *higher*.

When we at the Gates Foundation announced our education strategy in 2008, we embraced an ambitious goal: 80 percent of students graduating from high school in 2025 will be ready for college or careers. We define a college-ready student as one prepared to enter a four-year

college or a two-year college-transfer program and succeed in freshman-level core courses without remedial classes.

We knew that the work would have to begin with fewer, clearer, and higher standards—and with new assessment systems based on these standards.

We hope this paper, which shares our beliefs about the criteria for “fewer, clearer, higher,” will help state leaders wrestling with decisions as they implement new standards, assessments, and teaching tools.

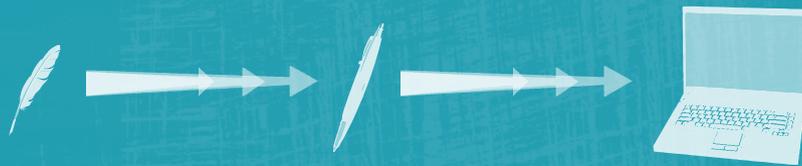
Unlike most previous state standards, the Common Core State Standards are based on evidence, and not merely on what people *thought* was appropriate to include. The standards' developers drew from sources like incoming freshmen's college expectations, studies measuring the time required to teach core content, and the academic demands made on students in other countries.

Undoubtedly tensions surfaced in the process of identifying a common core that meets all the criteria of fewer, clearer, and higher. We believe it is important to recognize these tensions; to use evidence in making hard choices

about what is included in and excluded from the standards; to validate those choices; and to revisit decisions, again using evidence. In the long run, states should base their decisions on the performance of students over time—in other words, on whether students now deemed college- and career-ready actually succeed after high school without remediation. In short, like the states leading this effort, we recognize that the core will evolve over time and are ready to be supportive of states in that process.



Developing Tools and Courses



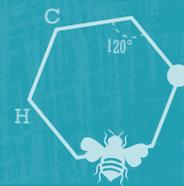
States adopting the common core know that standards cannot be isolated from the larger system of assessments and courses that put these standards into action. Assessment systems tell us *what students know and how well they know it*. Given that teachers are ultimately responsible for teaching the standards in their classrooms, we believe that a critical area of focus for states will be to build assessment systems that support teachers in this task. Part of our work at the foundation is to provide grants to organizations developing the tools teachers need to be successful, as well as grants to states and districts working on implementing such tools.

We also want to help states provide students with innovative ways to access college-preparatory work outside the traditional high school courses and sequences. Our investments in Early College High Schools, in which students are successfully completing two years of community college during their last two years of high school, demonstrate that there are pathways to college other than through a traditional four-year high school sequence. Quality high-tech programs and career academies, which provide career courses with strong standards in math and literacy, also offer early transitions to community colleges. But students who want to take advantage of such

alternatives must enter high school ready for college-preparatory work; this means taking more-demanding courses, accompanied by instructional supports, in the middle grades.

The Bill & Melinda Gates Foundation is also investing in the development of new courses in both middle and high school with content aligned to the common-core standards, and in reinventing and realigning traditional courses like Algebra I and Geometry to the common core. It will also invest in next-generation courses that leverage technology to create hybrid- and online-learning environments that are student-centered and student-driven.

The Criteria for Fewer, Clearer, Higher



Given states' commitments to moving toward consistent and rigorous expectations for all students, we asked ourselves what it would take to achieve fewer, clearer, and higher standards and assessments. Those criteria are noted below, and serve to guide the investments we'll make to support states as they move to meaningfully implement these expectations. As you will see, their explanations often include questions rather than declarations.

FEWER

- **Necessary for Access and Success**

Using our definition of college readiness, we assume that students must possess, at a minimum, the math and literacy skills to pass demanding course-placement exams at two- and four-year colleges, and, once they have access to those courses, to succeed in them. In this context, *fewer*

means giving students enough academic preparation, without exceeding the math and literacy requirements that evidence demonstrates are necessary to enter two-year colleges.

What adjustments in course content and sequencing at the high school need to be made to give students full access to all post-

secondary pathways? Is the level of rigor expected in credit-bearing courses the same in two-year colleges and four-year colleges? Do these two college pathways require the same math and literacy levels? If not, what is the evidence base for setting these requirements?

The definition of *fewer* should also include giving students the option to enter any major. Normally, the mathematics requirements for science, technology, engineering, and math majors differ from those for humanities majors. But students should be able to pass all core courses common to various college majors before the courses of study diverge into different requirements. As states think about building new course pathways aligned to the common core, we encourage states to ask questions like: At what grade level does that divergence occur? And what evidence do we have about the high school work that sufficiently prepares students for college-level work?

- **Teachable and Measurable**

States and school districts should use the *fewer* criterion to create courses that can actually be taught by a competent teacher in the time allowed. Do states know whether all their current standards can be mapped into a course sequence in middle and high schools? Is there enough time for students to master material, especially those who are struggling to achieve at grade level? How long should the course sequence be for students who are “on track” compared to students who are further behind? How will districts need to reorganize their current courses to meet the demands of the common core?





CLEARER

- **Coherent**

The new standards represent a coherent body of knowledge, and the assessments and other tools built off them must do the same. There is minimal repetition within the standards. Assessments should, therefore, highlight the links between various kinds of material and skills. Many of these next-generation standards are elegant and multidimensional. For example, they often map learning progressions and the relationships between big and

small ideas graphically rather than linearly.

- **Aligned to Curriculum and Assessments**

States and districts should align the content of high school standards to the syllabus for a course, the assessments connected to the course, and the teacher's instructional materials and guides. This already happens, for example, in the United Kingdom. There, a qualifications authority monitors the alignment of these

various materials, and passing the national exams actually leads to a certification indicating post-secondary readiness. The International Baccalaureate system in many U.S. high schools uses a similar structure. But most states and school districts can better align their standards, their assessments, and what is taught in classrooms. We want to help states align the common core with other parts of their system, including state assessments and graduation policies.



- **Clear about Proficiency**

Finally, the requirements for meeting the standards must be clear to students and to teachers. Most standards fail to explain how good is good enough. Clarity should come from an assessment system that includes scoring guides and samples of exemplary student work. Additionally, assessment consortia and states should consider what kinds of assessments help teachers, students, and parents understand performance expectations. Too often, standards focus exclusively on summative assessments for accountability. We hope the focus shifts to a more balanced assessment system, with formative assessments that provide teachers with information about their students' knowledge and abilities and that allow them to adjust their instruction to ensure that students fully master the content.

HIGHER

- **Focused on Applied Knowledge**

Ultimately, employers and institutions of higher learning are looking for people with the ability to apply knowledge. The choice between knowledge and its application is a false one. The Common Core State Standards include a section on Standards for Mathematical Practice. Math assessments should ask students to apply knowledge in various ways: conducting a data study, designing a physical structure, or carrying out a mathematical investigation. The results of these assessments will capture both the students' knowledge of math and the way they apply that knowledge. Furthermore, students should be able to clearly communicate what they have learned, especially in writing.

- **Transferable**

Another criterion for *higher* is the ability to transfer knowledge and skills to different situations and under different conditions. A student who can solve a problem in a math class, for example, should be able to recognize and solve the same kind of problem in a science class. This kind of transfer can be measured. The Programme for International Student Assessment requires students to transfer what they have learned in one context to another by applying what they know in a new and unfamiliar setting, and states should look to these international exemplars as they build their own assessment systems.

Problem #1:

Maria makes square tables, then sticks tiles to the top.

She uses

The size

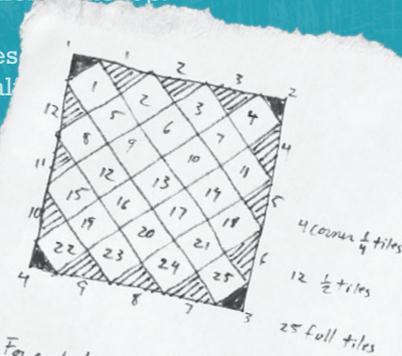
Maria

The

1

square

2) Describe a method for calculating how many tiles of each type she needs for larger, square tabletops.



For each time the tabletop gets 10cm higher, Mary needs the same number of quarter tiles, because there is one quarter tile at every corner and those will always be four corners.



- **World-class**

Finally, *higher* can be interpreted as meeting an international standard. The Common Core State Standards are aligned with international benchmarks. Some states already compared their standards to our international competitors', and many districts use curriculum materials developed abroad. But because it can be risky to adopt specific standards from other countries, since those countries usually employ different assessments and have varying post-secondary education and training systems, care must be taken in implementation. Some states may choose to pilot a program like the Cambridge Assessment, which is used in more than 150 countries around the world. The advantage of using an entire exam system is that it includes the standards, the assessments, and a course-taking sequence. States can then turn more quickly to providing professional development and supports for students.

The Work Ahead

The Common Core State Standards will be adopted and pressure-tested by states. States are already entering into collaborations around assessment systems, and these assessments will better define the standards and clarify expectations for students and teachers.

The Bill & Melinda Gates Foundation intends to continue investing in the assessments and tools that will make the standards real and productive—primarily those targeted for classroom use. This commitment is crucial to our goal of substantially increasing student achievement. One way we hope to further this important

work is by investing \$250 million over eight years to develop next-generation instructional tools and assessments that will help states and school districts implement the standards. We will also fund research that uses hard evidence to identify ways that states can adjust standards and assessments to better help students succeed.



Bill & Melinda Gates Foundation

Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life. Based in Seattle, Washington, the foundation is led by CEO Jeff Raikes and Co-chair William H. Gates Sr., under the direction of Bill and Melinda Gates and Warren Buffett.

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