

NCEA
NATIONAL CENTER
FOR EDUCATIONAL
ACHIEVEMENT

Arizona
**College and
Career
Readiness**

2010

ACT[®]



The National Center for Educational Achievement (NCEA) is a department of ACT, Inc., a not-for-profit organization committed to helping people achieve education and workplace success. NCEA builds the capacity of educators and leaders to create educational systems of excellence for all students. We accomplish this by providing research-based solutions and expertise in higher performing schools, school improvement, and best practice research that lead to increased levels of college and career readiness.

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Arizona College and Career Readiness 2010 presents a statewide view of students' level of preparedness for college and careers using research-based indicators of postsecondary success: NCEA's College and Career Readiness (CCR) Targets and ACT's College Readiness Benchmarks.

The key to all students having success in postsecondary opportunities is to be able to identify whether or not students, starting in elementary school, are on the path to college and career readiness. NCEA provides educators with the opportunity to monitor students' progress on this path for Grades 3-7 using CCR Targets, developed for the Arizona Instrument to Measure Standards (AIMS). NCEA's CCR Targets combined with ACT's College Readiness Benchmarks—achievement levels on the EXPLORE, PLAN, and the ACT test that indicate students' likelihood to have success in entry-level college courses—provide K-12 educators with a holistic approach to monitoring students' progress towards college and career readiness.

NCEA CCR Targets for Arizona

Grades 3–7 Arizona Instrument to Measure Standards (AIMS)

For reading and science, NCEA linked 2010 graduating class ACT and 2008 Grade 10 AIMS scores, for the same students, to identify the CCR Targets on the AIMS. NCEA established CCR Targets for Grades 3-7 by identifying comparable scores for those exams.

NCEA's Grades 3-7 CCR Targets in reading are between the state's Meets and Exceeds Standards performance levels. Those in science are above the Exceeds Standards performance level.

Since the updated AIMS math test was first administered in 2010, no direct link to ACT results was available. However, the Exceeds Standards performance level was chosen as an approximate CCR Target for math since the Target calculated for the previous math test was much closer to Exceeds than to the Meets Standards performance level. An updated set of CCR Targets for math are expected to be available in the fall of 2012.

Grades 3-7 CCR Targets on the AIMS

	Math			Reading			Science		
	Exceeds	CCR Target	Meets	Exceeds	CCR Target	Meets	Exceeds	CCR Target	Meets
Grade 3	406	n/a	347	516	488	431	n/a	n/a	n/a
Grade 4	416	n/a	366	536	505	450	547	587	500
Grade 5	436	n/a	381	556	520	468	n/a	n/a	n/a
Grade 6	446	n/a	398	571	529	478	n/a	n/a	n/a
Grade 7	460	n/a	411	587	547	489	n/a	n/a	n/a

ACT College Readiness Benchmarks for Arizona

EXPLORE, PLAN, and the ACT

ACT's College Readiness Benchmarks

Subject	EXPLORE Score	PLAN Score	The ACT Score
English	13	15	18
Mathematics	17	19	22
Reading	15	17	21
Science	20	21	24

The ACT College Readiness Benchmarks are scores on the ACT that represent the level of achievement required for students to have a high probability of success in selected credit-bearing, first-year college courses.

ACT has also established College Readiness Benchmarks for EXPLORE and PLAN. These scores indicate whether students, based on their performance on EXPLORE (Grade 8) or PLAN (Grade 10), are on target to be ready for first-year college-level work when they graduate from high school.¹

¹ Excerpt from: ACT. (2008). *The Forgotten Middle: Ensuring that All Students Are on Target for College and Career Readiness before High School*. Iowa City, IA: ACT, Inc.

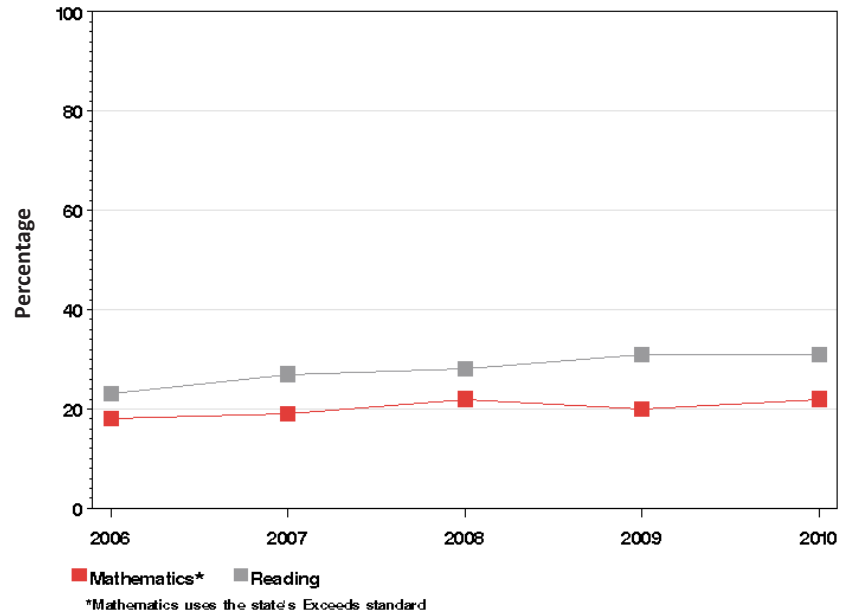
Percentage of Students Meeting NCEA CCR Targets

Grade 3 Arizona Instrument to Measure Standards

The percentage of students reaching the Exceeds Standards performance level for Grade 3 math reached 22% in 2010.

The percentage of students reaching the NCEA CCR Target for Grade 3 reading has slowly increased over the last five years. The rate increased from 23% in 2006 to 31% in 2010.

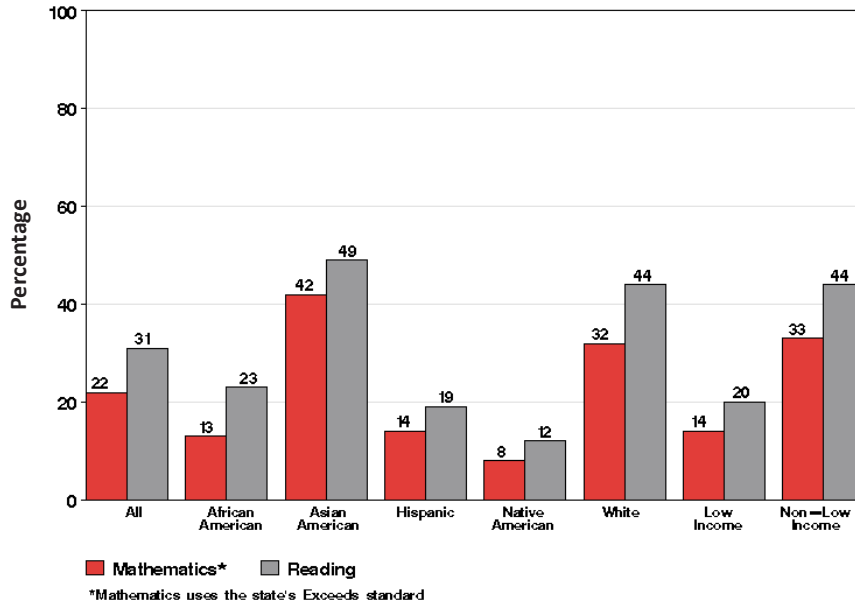
Percentage of Students Meeting NCEA CCR Targets in Grade 3, 2006–2010



Percentage of Students Meeting NCEA CCR Targets

Grade 3 Arizona Instrument to Measure Standards

Percentage of Students Meeting NCEA CCR Targets
by Demographics in Grade 3, 2010



The percentage of students reaching the Exceeds Standards performance level for Grade 3 math in 2010 varied by subgroup. White students met the standard at a rate of 32% while Hispanic students met the standard at a rate of 14%. The gap between Non-Low Income and Low Income students was 19%.

The percentage of students reaching the NCEA CCR Target for Grade 3 reading in 2010 varied by subgroup. White students met the Target at a rate of 44% while Hispanic students met the Target at a rate of 19%. The gap between Non-Low Income and Low Income students was 24%.

Percentage of Students Meeting NCEA CCR Targets

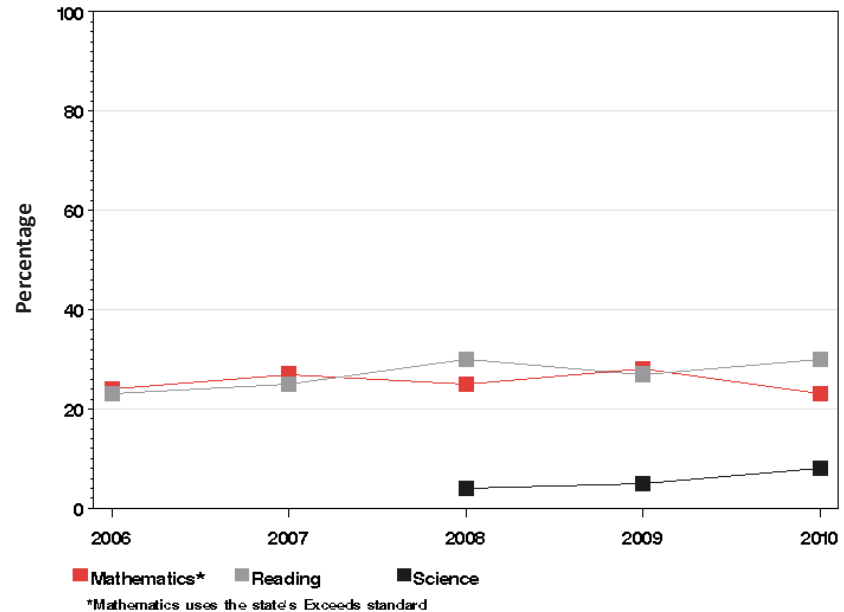
Grade 4 Arizona Instrument to Measure Standards

The percentage of students reaching the Exceeds Standards performance level for Grade 4 math fell from 28% in 2009 to 23% in 2010.

Except for 2009, the percentage of students reaching the NCEA CCR Target for Grade 4 reading has slowly increased over the last five years. The rate increased from 23% in 2006 to 30% in 2010.

The percentage of students reaching the NCEA CCR Target for Grade 4 science increased from 4% in 2008 to 8% in 2010.

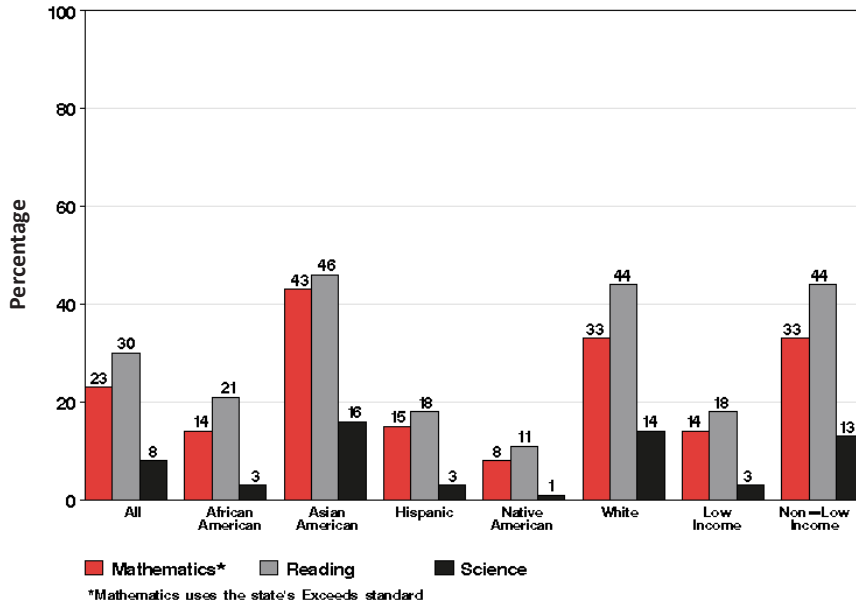
Percentage of Students Meeting NCEA CCR Targets
in Grade 4, 2006–2010



Percentage of Students Meeting NCEA CCR Targets

Grade 4 Arizona Instrument to Measure Standards

Percentage of Students Meeting NCEA CCR Targets by Demographics in Grade 4, 2010



The percentage of students reaching the Exceeds Standards performance level for Grade 4 math in 2010 varied by subgroup. Non-Low Income students met the standard at a rate of 33% while Low Income students met the standard at a rate of 14%. The gap between White and Hispanic students was 18%.

The percentage of students reaching the NCEA CCR Target for Grade 4 reading in 2010 varied by subgroup. White students met the Target at a rate of 44% while Hispanic students met the Target at a rate of 18%. The gap between Non-Low Income and Low Income students was 26%.

For Grade 4 science, the percentage of Non-Low Income students reaching the NCEA CCR Target in 2010 was only 13%.

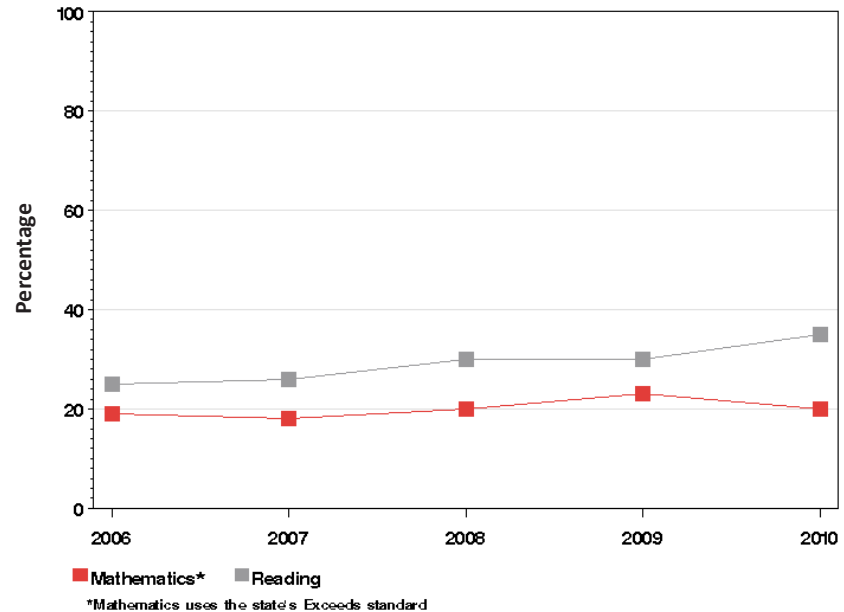
Percentage of Students Meeting NCEA CCR Targets

Grade 5 Arizona Instrument to Measure Standards

The percentage of students reaching the Exceeds Standards performance level for Grade 5 math fell from 23% in 2009 to 20% in 2010.

The percentage of students reaching the NCEA CCR Target for Grade 5 reading has slowly increased over the last five years. The rate increased from 25% in 2006 to 35% in 2010.

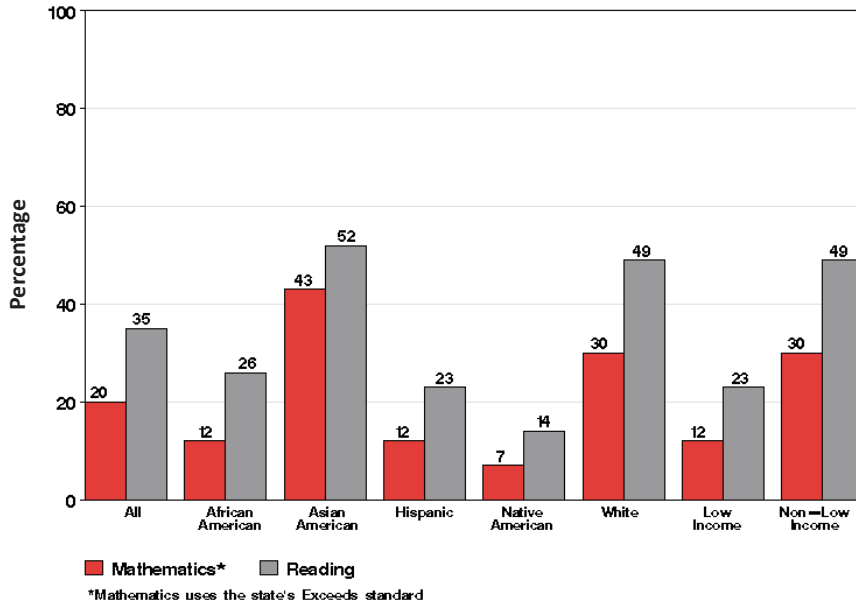
Percentage of Students Meeting NCEA CCR Targets
in Grade 5, 2006–2010



Percentage of Students Meeting NCEA CCR Targets

Grade 5 Arizona Instrument to Measure Standards

Percentage of Students Meeting NCEA CCR Targets
by Demographics in Grade 5, 2010



The percentage of students reaching the Exceeds Standards performance level for Grade 5 math in 2010 varied by subgroup. Asian American students met the standard at a rate of 43% while Native American students met the standard at a rate of 7%. The gap between Non-Low Income and Low-Income students was 18%.

The percentage of students reaching the NCEA CCR Target for Grade 5 reading in 2010 varied by subgroup. Non-Low Income students met the Target at a rate of 49% while Low Income students met the Target at a rate of 23%. The gap between White and Hispanic students was 26%.

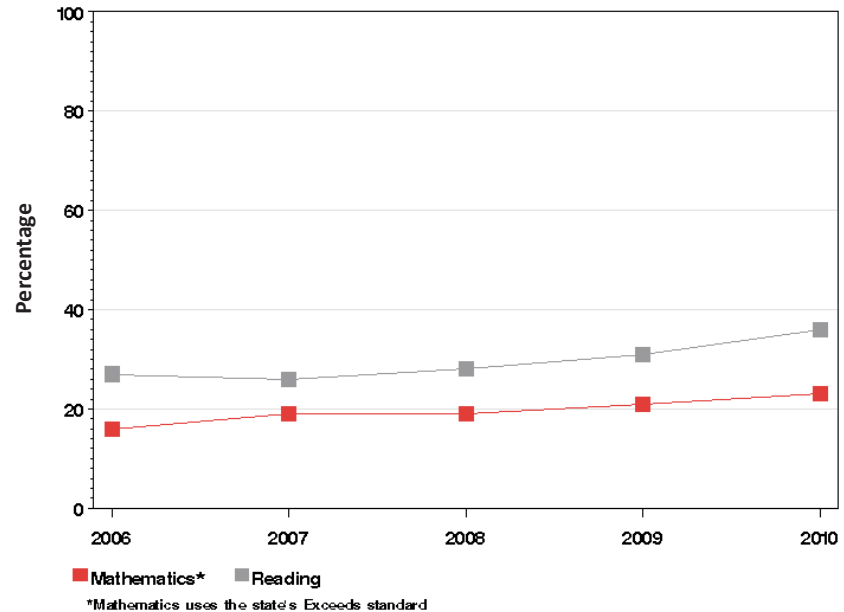
Percentage of Students Meeting NCEA CCR Targets

Grade 6 Arizona Instrument to Measure Standards

The percentage of students reaching the Exceeds Standards performance level for Grade 6 math has increased from 16% in 2006 to 23% in 2010.

After a slight decline in 2007, the percentage of students reaching the NCEA CCR Target for Grade 6 reading has risen and reached 36% in 2010.

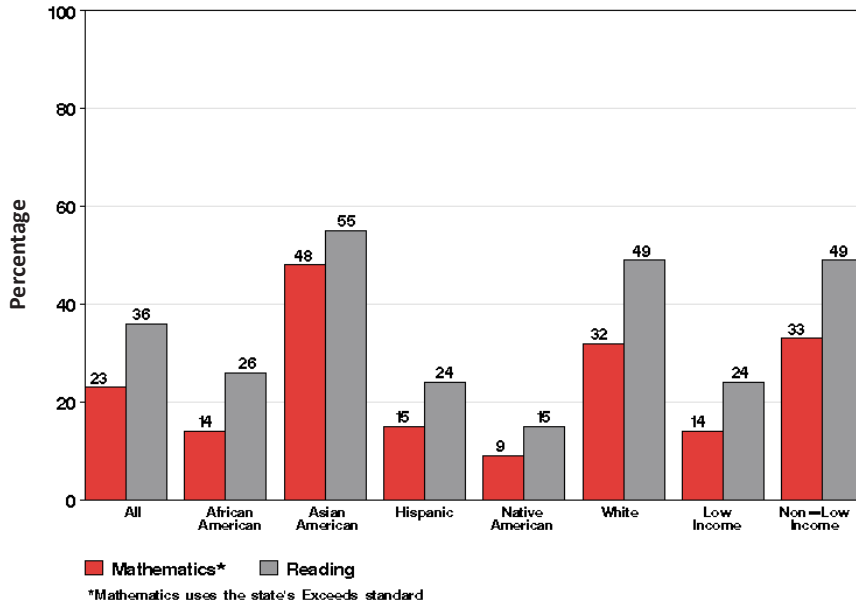
Percentage of Students Meeting NCEA CCR Targets
in Grade 6, 2006–2010



Percentage of Students Meeting NCEA CCR Targets

Grade 6 Arizona Instrument to Measure Standards

Percentage of Students Meeting NCEA CCR Targets
by Demographics in Grade 6, 2010



The percentage of students reaching the Exceeds Standards performance level for Grade 6 math in 2010 varied by subgroup. Non-Low Income students met the standard at a rate of 33% while Low Income students met the standard at a rate of 14%. The gap between White and Hispanic students was 17%.

The percentage of students reaching the NCEA CCR Target for Grade 6 reading in 2010 varied by subgroup. Non-Low Income students met the Target at a rate of 49% while Low Income students met the Target at a rate of 24%. The gap between White and Hispanic students was 25%.

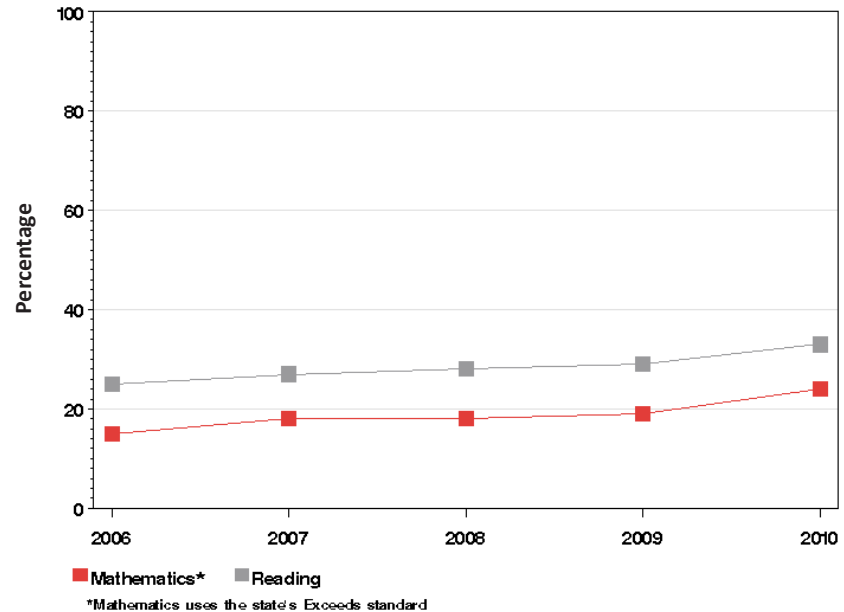
Percentage of Students Meeting NCEA CCR Targets

Grade 7 Arizona Instrument to Measure Standards

The percentage of students reaching the Exceeds Standards performance level for Grade 7 math has increased from 15% in 2006 to 24% in 2010.

The percentage of students reaching the NCEA CCR Target for Grade 7 reading increased slowly from 25% in 2006 to 33% in 2010.

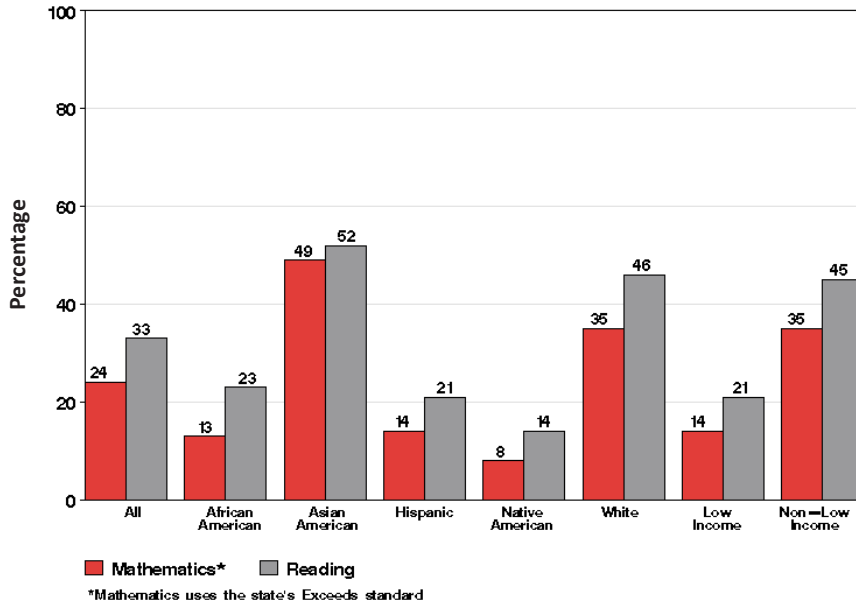
Percentage of Students Meeting NCEA CCR Targets
in Grade 7, 2006–2010



Percentage of Students Meeting NCEA CCR Targets

Grade 7 Arizona Instrument to Measure Standards

Percentage of Students Meeting NCEA CCR Targets
by Demographics in Grade 7, 2010



The percentage of students reaching the Exceeds Standards performance level for Grade 7 math in 2010 varied by subgroup. White students met the standard at a rate of 35% while Hispanic students met the standard at a rate of 14%. The gap between Non-Low Income and Low Income students was 21%.

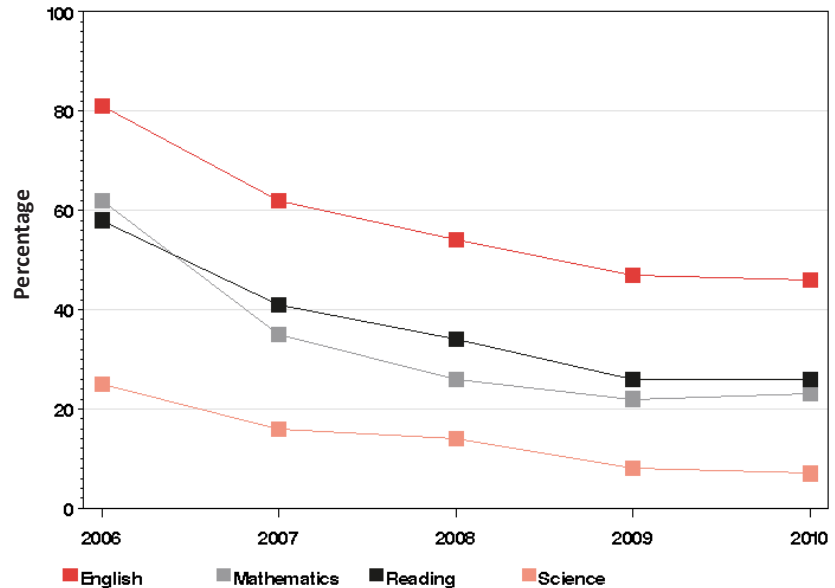
The percentage of students reaching the NCEA CCR Target for Grade 7 reading in 2010 varied by subgroup. Asian-American students achieved the Target at a rate of 52% while Native American students achieved the Target at a rate of 14%. The gap between Non-Low Income and Low Income students was 24%.

Percentage of Students Meeting EXPLORE College Readiness Benchmarks

The percentage of students achieving EXPLORE College Readiness Benchmarks leveled off within each subject area between 2009 and 2010. Increasing participation in EXPLORE in Arizona must be considered when examining the decline in the percentage of students achieving EXPLORE College Readiness Benchmarks between 2006 and 2010.

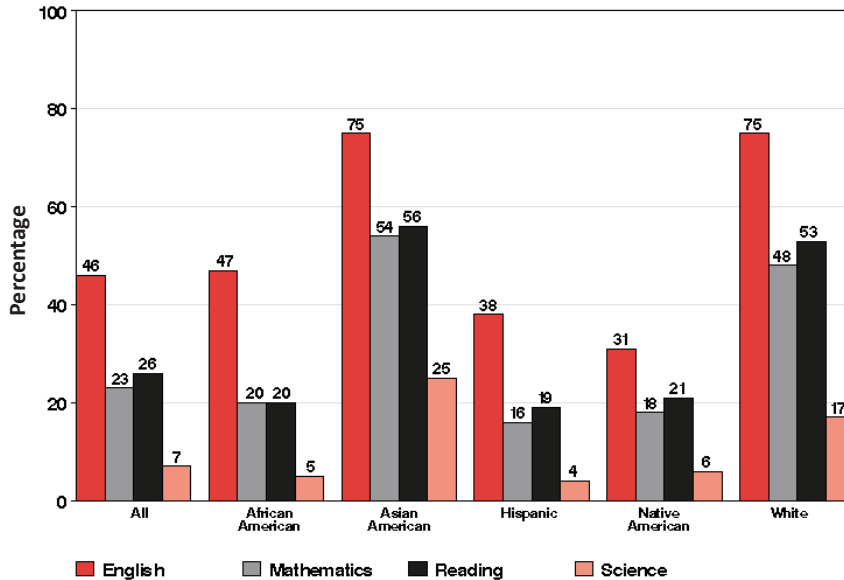
For English, 46% of students met the EXPLORE College Readiness Benchmark in 2010. The corresponding results were 26% for reading, 23% for mathematics, and 7% for science.

Percentage of Students Meeting
EXPLORE College Readiness Benchmarks, 2006–2010



Percentage of Students Meeting EXPLORE College Readiness Benchmarks

Percentage of Students Meeting
EXPLORE College Readiness Benchmarks,
by Demographics, 2010



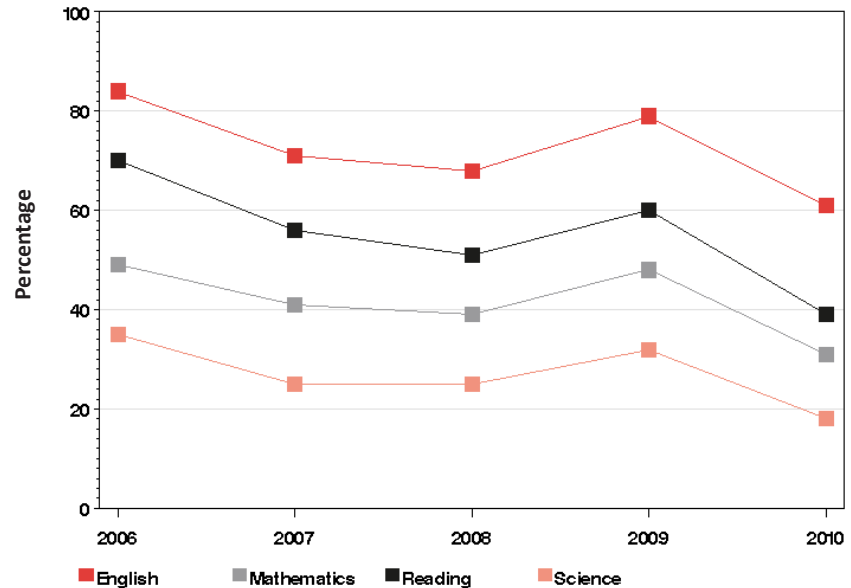
In 2010, 75% of Asian-American and White students met the EXPLORE College Readiness Benchmark in English while 31% of Native American students did. In mathematics, 48% of White students met the EXPLORE College Readiness Benchmark while 16% of Hispanic students met the same standard. In reading, 56% of Asian-American students met the EXPLORE College Readiness Benchmark compared to 19% of Hispanic students. In science, 17% of White students met the EXPLORE College Readiness Benchmark compared to 4% of Hispanic students who did.

Percentage of Students Meeting PLAN College Readiness Benchmarks

The percentage of students achieving PLAN College Readiness Benchmarks decreased within each subject area between 2009 and 2010. Fluctuating participation in PLAN in Arizona should be considered when examining the decline in the percentage of students achieving PLAN College Readiness Benchmarks between 2006 and 2010.

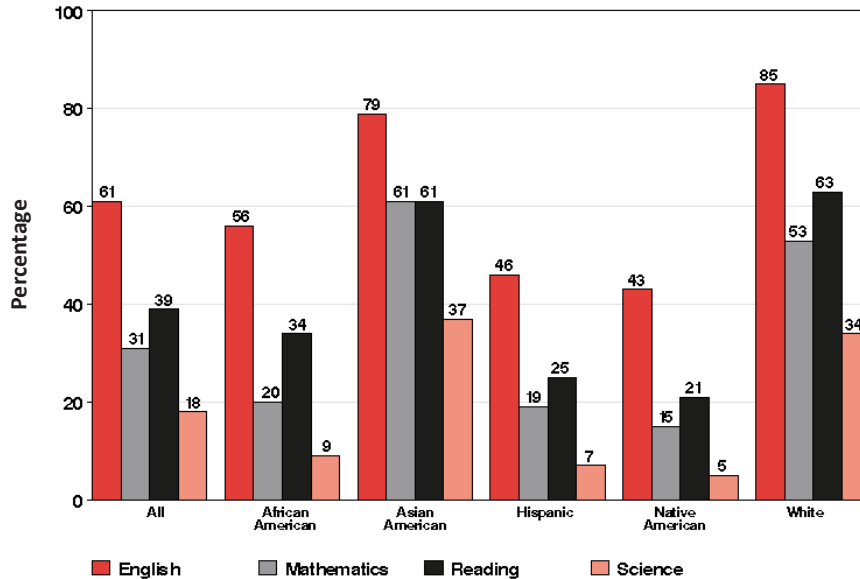
For English, 61% of students met the PLAN College Readiness Benchmark in 2010. The corresponding results were 39% for reading, 31% for mathematics, and 18% for science.

Percentage of Students Meeting PLAN College Readiness Benchmarks, 2006–2010



Percentage of Students Meeting PLAN College Readiness Benchmarks

Percentage of Students Meeting
PLAN College Readiness Benchmarks,
by Demographics, 2010



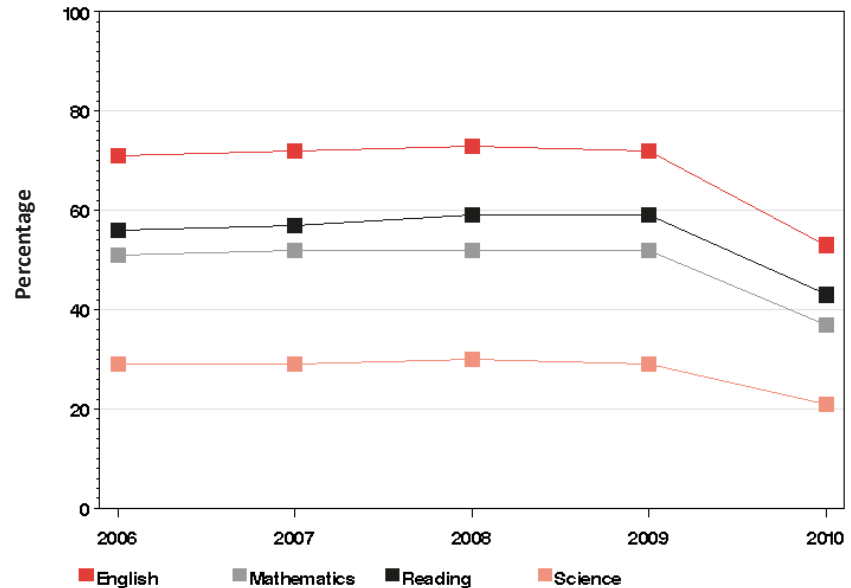
In 2010, 85% of White students met the PLAN College Readiness Benchmark in English while 46% of Hispanic students did. In mathematics, 61% of Asian-American students met the PLAN College Readiness Benchmark while 15% of Native American students met the same standard. In reading, 63% of White students met the PLAN College Readiness Benchmark compared to 25% of Hispanic students. Finally in science, 37% of Asian American students met the PLAN College Readiness Benchmark compared to 5% of Native American students who met the Benchmark.

Percentage of Students Meeting ACT College Readiness Benchmarks

After holding steady between 2006 and 2009, the percentage of students achieving ACT College Readiness Benchmarks fell between 2009 and 2010. A possible explanation for the decline may be increased student participation in the ACT in Arizona. Eighteen percent of graduating Arizona students took the ACT in 2009 and 33% took it in 2010.

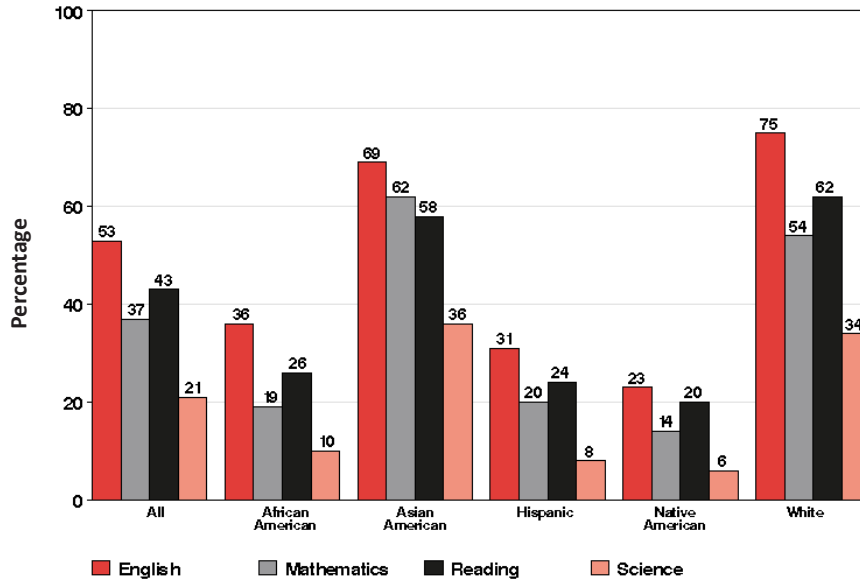
In English, 53% of students met the ACT College Readiness Benchmark in 2010. The corresponding results were 43% for reading, 37% for mathematics, and 21% for science.

Percentage of Students Meeting ACT College Readiness Benchmarks, 2006–2010



Percentage of Students Meeting ACT College Readiness Benchmarks

Percentage of Students Meeting ACT College Readiness Benchmarks, by Demographics, 2010



In 2010, 75% of White students met the ACT College Readiness Benchmark in English while 31% of Hispanic students did. In mathematics, 62% of Asian-American students met the ACT College Readiness Benchmark while 14% of Native American students met the same standard. In reading, 62% of White students met the ACT College Readiness Benchmark compared to 24% of Hispanic students. Finally in science, 36% of Asian-American students met the ACT College Readiness Benchmark compared to 6% of Native American students who did.

NCEA College and Career Readiness Targets

NCEA linked ACT reading and science scores for the 2010 graduating class to the 2008 Grade 10 AIMS scores, for the same students. Grade 10 reading and science scores associated with a 50% chance that the student would score at or above the ACT College Readiness Benchmark identified College and Career Readiness (CCR) Targets on the Arizona Instrument to Measure Standards.

To develop Targets for the lower grades, NCEA identified scores on AIMS for Grades 3-7 that were comparable to the Targets for Grade 10. NCEA based its calculation on the scores' locations in the statistical distribution relative to average scores in the appropriate grade-levels.

Since the updated AIMS math test was first administered in 2010, no direct link to ACT results was available. However, the Exceeds Standards performance level was chosen as an approximate CCR Target for math since the Target calculated for the previous math test was much closer to Exceeds than to the Meets Standards performance level. An updated set of CCR Targets for math are expected to be available in the fall of 2012.

Note: Content standards for state assessments may not cover the full range of College Readiness Standards measured by EXPLORE, PLAN, and the ACT. Therefore, performance trends observed on state assessments and EXPLORE, PLAN, and the ACT may not align.

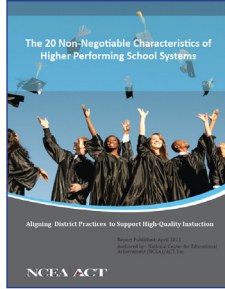
ACT College Readiness Benchmarks

ACT has compiled an extensive database of course grade and test score data from a large number of first-year students and across a wide range of postsecondary institutions. These data provide an overall measure of what it takes to be successful in selected first-year college courses. Data from 98 institutions and over 90,000 students were used to establish the Benchmarks. The data were weighted so that they would be nationally representative of two and four-year postsecondary institutions nationwide.

The College Readiness Benchmarks for EXPLORE and PLAN were developed using about 150,000 records of students who had taken EXPLORE, PLAN, and the ACT. First, ACT estimated the probabilities at each EXPLORE and PLAN test score point associated with meeting the appropriate Benchmark for the ACT. ACT then identified EXPLORE and PLAN scores on English, Reading, Mathematics, and Science that corresponded most closely to a 50 percent probability of success at meeting each of the four Benchmarks established for the ACT.²

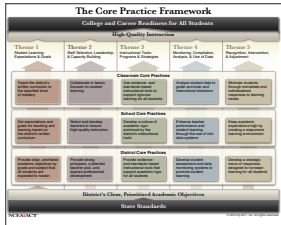
² Excerpt from: ACT. (2010). *What Are ACT's College Readiness Benchmarks?* Iowa City, IA: ACT, Inc.

Additional Resources



The 20 Non-Negotiable Characteristics of Higher Performing School Systems: Aligning District Practices to Support High-Quality Instruction

NCEA has researched over 550 school systems across the nation to determine the 20 hard-hitting, non-negotiable characteristics that make school systems successful at preparing students for college and careers. In this report, educators have the opportunity to: 1) develop a deeper understanding of their district's role in supporting student achievement at the school and classroom level, 2) gain valuable insights on how to create an aligned, cohesive system, and 3) discover the initial steps to begin the path to district excellence. Visit www.nc4ea.org/20characteristics to access the report.



The Core Practice Framework Fact Sheet

As our work at NCEA suggests, no single program or isolated reform can substitute for a coherent, long-term, system-wide approach to improving teaching and learning. The Core Practice Framework is built upon the study of over 550 schools across 20 states, and it identifies the core practices that distinguish higher performing school systems from their average-performing counterparts. This one-page fact sheet provides a brief overview of the fundamental teaching and learning practices of higher performing school systems and can serve as a guide for educators during the school improvement planning process.

For more on NCEA's latest research and findings, please visit our online library at www.nc4ea.org.



The National Center for Educational Achievement (NCEA) is a department of ACT, Inc., a not-for-profit organization committed to helping people achieve education and workplace success.

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