

MATH AND READING ACHIEVEMENT

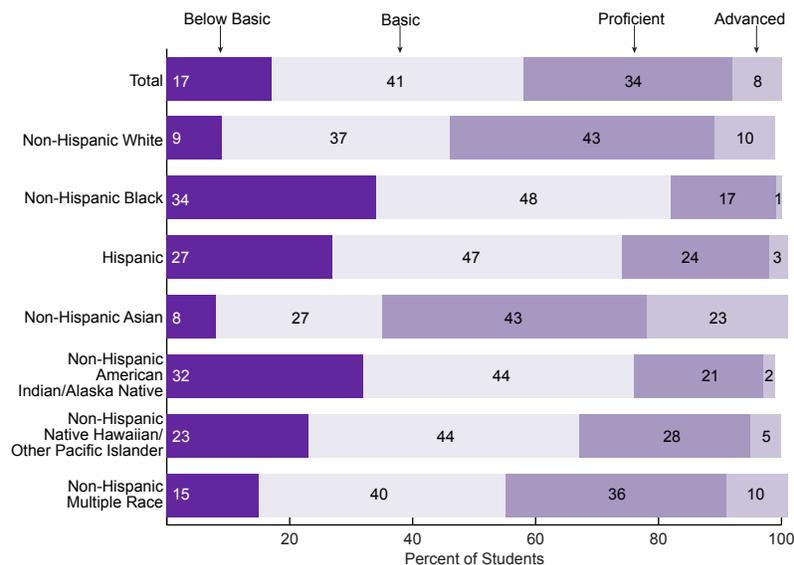
Students' achievement scores across school subjects are important indicators of their overall academic performance. The National Assessment of Educational Progress (NAEP) conducts periodic assessments to measure students' knowledge and skills and provides results on subject matter achievement.¹ For mathematics, the NAEP assessment measures students' knowledge in number properties and operations, measurement, geometry, data analysis and statistics, and algebra. The NAEP reading assessment measures students' comprehension of both literary and informational texts. For all subjects, the National Assessment Governing Board sets three achievement levels—basic, proficient, and advanced—based on what students should know and be able to do at each grade assessed.²

In 2013, 42 percent of fourth-graders and 36 percent of eighth-graders were at or above proficiency in mathematics. Math achievement levels varied widely by students' race and ethnicity. Among fourth-graders, the highest percentage of students performing at the advanced level were non-Hispanic Asians (23 percent), followed by non-Hispanic Whites (10 percent) and non-Hispanics of multiple

racess (10 percent; figure 1). Less than 6 percent of students from each of the other racial and ethnic groups performed at the advanced level. The highest percentage of fourth-grade students performing below the basic proficiency level were non-Hispanic Black students (34 percent), followed by non-Hispanic American Indians/Alaska Natives (32 percent) and Hispanics (27 percent). Fewer than 10 percent of non-Hispanic White and non-Hispanic Asian students performed below the basic proficiency level. Overall, similar patterns were observed among eighth-graders.

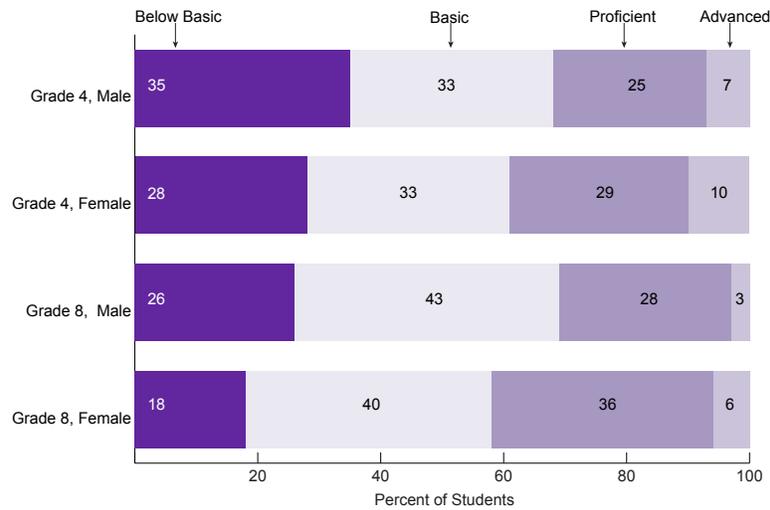
Reading achievement varies by grade level and sex. In 2013, 35 percent of fourth-graders and 36 percent of eighth-graders were at or above proficiency in reading. Among both fourth- and eighth-graders, a higher percentage of females performed at the proficient (29 and 36 percent, respectively) and advanced (10 and 6 percent, respectively) levels compared to their male counterparts (proficient: 25 and 28 percent, respectively; advanced: 7 and 3 percent, respectively). At both grade levels, a higher percentage of males performed below the basic proficiency level (figure 2).

Figure 1. Proficiency* in NAEP Mathematics Among Students in Grade 4, by Race/Ethnicity, 2013**



*Performance standards are set by the National Assessment Governing Board. Basic, proficient, and advanced levels measure what students should know and be able to do at each grade assessed. "Basic" denotes partial mastery of prerequisite knowledge and skills. "Proficient" reflects solid academic performance. "Advanced" denotes superior performance. Examples of knowledge and skills demonstrated by students at each achievement level are available in the Nation's Report Cards in Mathematics and Reading at <http://nces.ed.gov/nationsreportcard/subjectareas.asp>. **Black includes African American, and Hispanic includes Latino. Race categories exclude Hispanic origin.

Figure 2. Proficiency* in NAEP Reading Among Students, by Grade Level and Sex, 2013



*Performance standards are set by the National Assessment Governing Board. Basic, proficient, and advanced levels measure what students should know and be able to do at each grade assessed. "Basic" denotes partial mastery of prerequisite knowledge and skills. "Proficient" reflects solid academic performance. "Advanced" denotes superior performance. Examples of knowledge and skills demonstrated by students at each achievement level are available in the Nation's Report Cards in Mathematics and Reading at <http://nces.ed.gov/nationsreportcard/subjectareas.asp>.

Data Sources

Figure 1 and 2. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress.

Endnotes

1. National Center for Education Statistics. NAEP Overview. Washington, DC: U.S. Department of Education, Institute of Education Sciences. Available at: <http://nces.ed.gov/nationsreportcard/about/>. Accessed September 11, 2014.
2. National Center for Education Statistics. The Nation's Report Card. Washington, DC: U.S. Department of Education, Institute of Education Sciences. Available at: <http://www.nationsreportcard.gov/>. Accessed September 11, 2014.

Suggested Citation

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