

NAEP, PIRLS, TIMSS, and PISA At a Glance

	State NAEP	PISA	TIMSS	PIRLS
General Information				
Assessment Name	National Assessment for Educational Progress	Program for International Student Assessment	Trends in International Mathematics and Science Study	Progress in International Reading Literacy Study
Website	http://nces.ed.gov/nationalsreportcard/	www.pisa.oecd.org	http://timss.bc.edu/	http://www.pirls.org/
Primary Purpose	Benchmark for national standards; national and state estimates of student achievement in key subjects at key grades; reports results relative to nationally established benchmarks. Designed to mirror U.S. educational objectives and curricula.	Measure how well students near the end of compulsory education are prepared for life beyond the classroom. Focuses on “yield” of education systems, or what competencies students have acquired in and outside of school and can apply to problems with real-world contexts.	Provide countries with information to improve teaching and learning in mathematics and science. Conducted every four years on a regular cycle, TIMSS is designed to measure progress in educational achievement in mathematics and science and provide empirical information about the contexts for schooling.	Provide policy-relevant information about how to improve teaching and learning and help children become accomplished and self-sufficient readers; measure trends in the associated home and school contexts for reading. Focuses on experiences learning to read at school and at home.
Subject Areas Tested	Reading, mathematics writing, science, other subjects	Reading, mathematics, science, and problem solving	Mathematics, science	Reading
Responsible Organization	National Center for Education Statistics (NCES), National Assessment Governing Board (NAGB)	Organization for Economic Cooperation and Development (OECD)	International Association for the Evaluation of Educational Achievement (IEA)	International Association for the Evaluation of Educational Achievement (IEA)
History of Program	Began in 1969, expanded to some assessment every year with 2001 ESEA reauthorization; state-level assessments generally take place in odd years	Every 3 years since 2000	Every 4 years since 1995	Every 5 years, with first administration in 2001
Participating Jurisdictions	53 "states" (50 states plus Puerto Rico, District of Columbia, Dept. of Defense) and 21 large urban districts (TUDA)	60 countries and 5 subnational entities in 2009	66 countries and 14 subnational entities in 2011	55 countries and 7 subnational entities in 2011

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Administration and Sampling				
Test Length	50–60 minutes, plus 15 minute background questionnaire	120 minutes, plus 15 minute background questionnaire	72 minutes at grade 4; 90 minutes at grade 8; plus 15 minute background questionnaire	80 minutes per student, plus 15 minute background questionnaire
Assessment Window	Late January–early March	Fall	March–June	March–June
Parental Notification / Permission	Follows local guidelines; parents can opt out	Follows local guidelines; parents can opt out	Follows local guidelines; parents can opt out	Follows local guidelines; parents can opt out
Sampled population	Students within sampled schools	Students within sampled schools	Intact classrooms within sampled schools	Intact classrooms within sampled schools
Sampling Model	Probability proportional to size stratified sampling for schools	Probability proportional to size stratified sampling for schools	Probability proportional to size stratified sampling for schools	Probability proportional to size stratified sampling for schools
Population Assessed				
Grade/Age Assessed	Grades 4 and 8; national results and some state-level results at grade 12	15-year-olds	Grades 4 and 8	Grade 4; some countries use prePIRLS or assess at 5th or 6th grade (not included in general report)
Number of students assessed	More than 900,000 students in state or 'large' years (with state-, district- and national-level results, and special studies)	More than 5,000 students in each country/jurisdiction	At least 4,000 students in each country/jurisdiction	About 3,500–4,000 students in each country/jurisdiction
Accommodations for students with disabilities	Yes - Presentation, response, and setting accommodations are allowed; accommodations vary by subject assessed	Not provided	Not provided	Not provided
Accommodations for students with limited native language proficiency (ELL)	Yes - accommodations vary by subject, but may include direct and indirect linguistic accommodations; most students with limited English proficiency are tested after one year or more of instruction in the country	Not provided	Not provided	Not provided

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Development and Design				
Development Process	The National Assessment Governing Board develops the framework and test specifications. This bipartisan group includes governors, state legislators, school officials, educators, business representatives, and others, appointed by the Secretary of Education. Items are developed based on the framework and specifications.	Developed by international experts and the PISA Consortium test developers. The assessment items are reviewed by representatives of each country for any possible cultural bias and for relevance to PISA's goals.	TIMSS National Research Coordinators (NRCs), national experts in each participating country and the TIMSS 2011 Science and Math Item Review Committee (SMIRC) develop and revise frameworks through an iterative process.	The PIRLS Reading Development Group (RDG) and National Research Coordinators (NRCs) from participating countries update the frameworks for each PIRLS administration. Each country reviews all test items to minimize the chances of cultural bias.
Skills Measured	Depends based on subject matter assessed; NAEP measures skills and abilities as defined by subject framework.	Focuses on assessing processes, understanding concepts, and ability to function in various situations within each topic.	Math and science concepts learned in school.	Reading for literary experience, which is defined as the ability to understand language usage and to comprehend the plot of fictional stories.
Type of Test	Criterion-referenced	Criterion-referenced	Criterion-referenced	Criterion-referenced
Item Types or Formats	Multiple choice, short constructed response, extended constructed response	Multiple choice, short constructed response, extended constructed response	Multiple choice, short constructed response, extended constructed response	Multiple choice, short constructed response, extended constructed response
Block Design	Matrix Sampling	Matrix Sampling	Matrix Sampling	Matrix Sampling
Data Scaling	IRT	IRT	IRT	IRT
Other Data Collected	Responses from questionnaires distributed to students, teachers of assessed students, and principals. Questionnaires are intended to provide a context for the performance scores focusing on such topics as student attitudes and beliefs, class size and organization, instructional experience and practices, factors outside of school, and other data.	Responses from questionnaires distributed to students and principals with the purpose of identifying social, cultural, economic, and educational factors associated with student performance.	Responses from questionnaires distributed to students, teachers of assessed students, and principals. Questionnaires are intended to provide a context for the performance scores focusing on such topics as student attitudes and beliefs, class size and organization, instructional experience and practices, factors outside of school, and other data.	Responses from questionnaires distributed to students, teachers of assessed students, and principals. Questionnaires are intended to provide a context for the performance scores focusing on such topics as student attitudes and beliefs, class size and organization, instructional experience and practices, factors outside of school, and other data.

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Scoring and Reporting				
Level of Report	State, tribal urban district (TUDA), nation	Nation or other jurisdiction assessed	Nation or other jurisdiction assessed	Nation or other jurisdiction assessed
Scale and Scoring	Reading: 0 to 500 in grades 4, 8, and 12; Math: 0 to 500 in grades 4 & 8; Math: 0 to 300 in grade 12; science and writing: 0 to 300 in grades 4 & 8.	Scale of 0 to 1000 with a mean of 500 and a standard deviation of 100.	Scale of 0 to 1000 with a mean of 500 and a standard deviation of 100.	Scale of 0 to 1000 with a mean of 500 and a standard deviation of 100.
Subscales	Mathematics: numbers and operations; measurement; geometry; data analysis, statistics, and probability; and algebra. Science: physical science, life science, earth and space sciences. Reading: literary, informational	Reading: reading literacy scale and three reading literacy subscales (access and retrieve, integrate and interpret, and reflect and evaluate) Mathematics: space and change, change and relationships, quantity, and uncertainty Science (2006) related to identifying scientific issues, explaining phenomena scientifically and using scientific evidence	Grade 4: Mathematics: Number, Geometric Shapes, Data Display Science: Life Science, Physical Science, Earth Science Grade 8: Mathematics: Number, Algebra, Geometry, Data, Chance Science: Biology, Chemistry, Physics, Earth Science	Reading: reading for literary experience, reading to acquire and use information reading comprehension: retrieval and straightforward inferencing; interpreting, integrating, and evaluating
Types of Scores Reported	Scale scores, achievement levels	Scale scores, achievement levels	Average scale scores, international benchmarks (achievement levels)	Average scale scores, international benchmarks (achievement levels)
Achievement Levels Reported	Basic, proficient, advanced	Reading has seven: 1b through 6; mathematics and science have 6 achievement levels	Low, intermediate, high, advanced	Low, intermediate, high, advanced